IUGG 2011 PROGRAM

Welcome to the Scientific Program of 2011 International Union of Geodesy and Geophysics (IUGG) General Assembly. On behalf of the Scientific Program Committee we hope you find the program exciting and a great way to discuss areas of science that are both of direct interest to you and which also extend your horizons.

The following index provides you with various ways to view the IUGG 2011 program. The program within this handbook is correct at time of printing, 6 June 2011.

Program Overview . . . . . .page 46

This provides a basic overview of symposia and session codes within the 10 days of the General Assembly.

Room Overview . . . . . .page 66

This provides a schedule of the program by room allocation. Rooms are spread across 3 levels of the Melbourne Convention Centre (Ground, First and Second Levels). Please see page 4 for a map of the venue. This overview also includes business meetings and workshops held at the Melbourne Convention Centre.

Association Overview . . . . . .page 70

This provides information on the full symposia title, the organisers and co-sponsors, along with names of symposia lead convenors. This overview is sorted by Association then Symposia.

Union Plenary Lecture information . . . . . .page 29

These pages include Union Plenary Speaker biographies, presentation details along with their presentation abstract.

All Union Plenary Lectures are held in Plenary Hall 2 between 1030 – 1200 on Thursday 30 June, Sunday 3 July and Tuesday 5 July. No other sessions are held during these times.

Index for Detailed Program . . . . . .page 77

This index is sorted by Date, Time Frame and by Association for oral sessions within the program. Each session listing provides information on the name of the Symposium, Session Title, Room Code, and Chairpersons, followed by presentations by starting time.

Presenting authors are listed first, followed by Co-Authors (upto 4 authors only). A full list of Co-Authors can be found via the abstract proceedings.

These session structures have been developed in conjunction with Lead Convenors. Please note only accepted and registered presenting author presentations are listed within the program as per time of printing, 6 June 2011.

All program changes since 6 June 2011 are displayed on the Program Updates boards, located on the ground level and on level 2 of the Melbourne Convention Centre.

Index for Poster Program . . . . . .page 226

A dedicated poster session is held each day of the General Assembly between 1500 – 1630. Poster Presenters will be available at posters scattered through the Exhibition Area on the Ground Level.

This index provides you will the date, authors and poster board numbers for reference.

These poster listings are sorted by Date, Association and Symposia. The first number within the listing is the Poster Board number and then the Abstract Number. Please see page 7 for the poster floorplan.

ePresenter terminals are also available amongst the ground level for viewing of electronic versions of posters. Note: Not all posters will be viewable via these terminals. This is an optional extra for poster presenters.

Presenting Author Index. . . . . .page 277

This index only lists the Presenting author. All co-authors can be found on the abstracts proceedings.

An index legend provides reference to understanding which symposium, session code, date etc oral presenters are scheduled for, along with symposia, date and board numbers that poster presentations are displayed on. See the detailed poster program index on page 226 for further details on their poster presentations.

DON'T FORGET TO CHECK THE PROGRAM UPDATES BOARD ON THE GROUND LEVEL OR ON LEVEL 2 FOR PROGRAM CHANGES.

ALL PRESENTING AUTHORS – ORAL & POSTER – ARE REQUIRED TO VISIT THE SPEAKERS PREPERATIONS ROOM, MEETING ROOM 202, LOCATED ON LEVEL 2, AT LEAST 24 HOURS BEFORE THEIR PRESENTATION.

IUGG 2011 PROGRAM OVERVIEW

The following overview of the IUGG 2011 program is correct at time of printing. Any updates will be displayed on the program updates message board by the program desk on level 2.

The below is sorted by Association and Symposia. The day the Poster presentations are displayed along with the oral symposia session codes eg. Symposium U02's second session is U02S2 and is held on Wednesday 29 June during AM2 (1020-1200).

Please refer to the following pages for further information:

page 70	Assocation Overview
page 66	Room Overview
page 29	Union Plenary Lecture information
page 77	Detailed Program Index
page 4	Venue/Room map

DON'T FORGET TO CHECK THE PROGRAM UPDATES BOARD ON LEVEL 2 FOR PROGRAM UPDATES

Combined Symposia

Cancelled Symposia

Workshops

Printed on the:00/00/00

Association	Symposia Codes	Posters Displayed	Tues 28-Jun-11 0830-1000 AM1	Tues 28-Jun-11 1030-1200 AM2	Tues 28-Jun-11 1330-1500 PM1	Tues 28-Jun-11 1630-1900 PM2	Wed 29-Jun-11 0830-1000 AM1	Wed 29-Jun-11 1030-1200 AM2	Wed 29-Jun-11 1330-1500 PM1	Wed 29-Jun-11 1630-1800 PM2
UNION	U01	Sun 3 July 2011				Opening Ceremony and Welcome Reception				
	U02	Wed 29 June 2011 & Sat 2 July 2011					U02S1	U02S2	U02S3	U02S4
	U03	Sat 2 July 2011								
	U04	Fri 1 July 2011								
	U05	Thurs 7 July 2011								
	U06	Fri 1 July 2011								
	U07	Mon 4 July 2011								
	U08	Thurs 30 June 2011								
	U09	Mon 4 July 2011								
	U10	Sat 2 July 2011								
	U11	Wed 6 July 2011								
	U12	Tues 28 June 2011	U12S1	U12S2	U12S3					
IACS	C01	Wed 29 June 2011					C01S1	C01S2	C01S3	C01S4
	C02	Tues 28 June 2011	C02S1	C02S2	C02S3		C02S4			
	C03	Wed 29 June 2011					C03S1	C03S2		
	C04	Wed 29 June 2011						C04S1	C04S2	C04S3
	JC01	Sat 2 July 2011								
	JC02/ JC03	Fri 1 July 2011								
	JC04	Sat 2 July 2011								
IAG	Opening						GOS1	GOS2		
	G01	Wed 29 June 2011							G01S1	G01S2
	G02	Sun 3 July 2011								
	G03	Tues 5 July 2011								
	G04	Wed 29 June 2011							G04S1	G04S2
	G05	Thurs 30 June 2011								
	G06	Mon 4 July 2011								
	G07	Fri 1 July 2011								
	JG01	Sat 2 July 2011								
	JG02	Fri 1 July 2011								
	JG03	Mon 4 July 2011								
	JG04	Sun 3 July 2011								
	JG05	Sun 3 July 2011								
	JG06/ JS06	Mon 4 July 2011								
	Closings									

	Thu				Fri				Sat				Symposia Codes	Association
	30-Jun-11				1-Jul-11				2-Jul-11					
	0830-1000	1030-1200	1330-1500	1630-1800	0830-1000	1030-1200	1330-1500	1630-1800	0830-1000	1030-1200	1330-1500	1630-1800		
	AM1	AM2	PM1	PM2	AM1	AM2	PM1	PM2	AM1	AM2	PM1	PM2		
													U01	UNION
											U02S5	U02S6	U02	
													U03	
					U04S1	U04S2							U04	
													U05	
							U06S1	U06S2					U06	
													U07	
			U08S1	U08S2									U08	
													U09	
									U10S1	U10S2			U10	
													U11	
													U12	
													C01	IACS
													C02	
													C03	
													C04	
										JC01S1	JC01S2	JC01S3	JC01	
		3A				JC0203S1	JC0203S2	JC0203S3			JC0203S4	JC0203S5	JC02/ JC03	
									JC04S1	JC04S2	JC04S3	JC04S4	JC04	
													Opening	IAG
G01S3			G01S4										G01	
													G02	
													G03	
													G04	
G05S1			G05S2										G05	
													G06	
				G07S1		G07S2	G07S3	G07S4					G07	
									JG01S1	JG01S2	JG01S3	JG01S4	JG01	
					JG02S1	JG02S2	JG02S3						JG02	
													JG03	
													JG04	
													JG05	
									JG06JS06S1	JG06JS06S2			JG06/ JS06	
													Closings	

Association	Symposia Codes	Posters Displayed	Tues 28-Jun-11 0830-1000 AM1	Tues 28-Jun-11 1030-1200 AM2	Tues 28-Jun-11 1330-1500 PM1	Tues 28-Jun-11 1630-1900 PM2	Wed 29-Jun-11 0830-1000 AM1	Wed 29-Jun-11 1030-1200 AM2	Wed 29-Jun-11 1330-1500 PM1	Wed 29-Jun-11 1630-1800 PM2
IAGA	A011	Sat 2 July 2011				Opening Ceremony & Welcome Reception				
	A012	Sat 2 July 2011								
	A013	Sat 2 July 2011								
	A021	Wed 6 July 2011								
	A022	Wed 6 July 2011								
	A031	Thurs 7 July 2011								
	A032	Thurs 7 July 2011								
	A033	Thurs 7 July 2011								
	A034	Thurs 7 July 2011								
	A041	Mon 4 July 2011								
	A042	Tues 5 July 2011								
	A043	Mon 4 July 2011								
	A044	Wed 6 July 2011								
	A050	Sun 3 July 2011								
	A061	Tues 5 July 2011								
	A062	Mon 4 July 2011								
	A063/ A065	Wed 6 July 2011								
	A071	Wed 6 July 2011								
	A072	Thurs 7 July 2011								
	A081	Thurs 7 July 2011								
	A082	Thurs 7 July 2011								
	A083	Tues 5 July 2011								
	A091	Tues 5 July 2011								
	A092	Wed 6 July 2011								
	A093	Tues 5 July 2011								
	A101	Sat 2 July 2011								
	A102	Wed6 July 2011								
	A111	Sun 3 July 2011								
	A112	Tues 5 July 2011								
	A113	Thurs 7 July 2011								
	A121	Tues 5 July 2011								
	A122	Wed 6 July 2011								
	A131	Mon 4 July 2011								
	A132	Tues 5 July 2011								
	A141	Wed 6 July 2011								
	A142	Tues 5 July 2011								
	A143	Wed 6 July 2011								
	A144	Tues 5 July 2011								
	A151	Wed 6 July 2011								
	A152	Mon 4 July 2011								
	A153	Mon 4 July 2011								
	A161	Tues 5 July 2011								
	A162	Wed 6 July 2011								
	JA01	Sat 2 July 2011								
	JA02	Mon 4 July 2011								
	JA03	Mon 4 July 2011								
	JA04	Mon 4 July 2011								
	JA05	Sat 2 July 2011								

	Thu				Fri				Sat				Symposia Codes	Association
	30-Jun-11				1-Jul-11				2-Jul-11					
	0830-1000	1030-1200	1330-1500	1630-1800	0830-1000	1030-1200	1330-1500	1630-1800	0830-1000	1030-1200	1330-1500	1630-1800		
	AM1	AM2	PM1	PM2	AM1	AM2	PM1	PM2	AM1	AM2	PM1	PM2		
									A011S1				A011	IAGA
													A012	
											A013S1	A013S2	A013	
													A021	
													A022	
													A031	
													A032	
													A033	
													A034	
													A041	
													A042	
													A043	
													A044	
													A050	
													A061	
													A062	
													A063/ A065	
													A071	
													A072	
													A081	
													A082	
													A083	
													A091	
		3A											A092	
													A093	
									A101S1	A101S2	A101S3	A101S4	A101	
													A102	
													A111	
													A112	
													A113	
													A121	
													A122	
													A131	
													A132	
													A141	
													A142	
													A143	
													A144	
													A151	
													A152	
													A153	
													A161	
													A162	
									JA01S1	JA01S2	JA01S3		JA01	
													JA02	
													JA03	
													JA04	
									JA05S1	JA05S2	JA05S3		JA05	

Association	Symposia Codes	Posters Displayed	Tues 28-Jun-11				Wed 29-Jun-11			
			0830-1000 AM1	1030-1200 AM2	1330-1500 PM1	1630-1900 PM2	0830-1000 AM1	1030-1200 AM2	1330-1500 PM1	1630-1800 PM2
IAHS	H01	Wed 6 July 2011				Opening Ceremony & Welcome Reception				
	H02	Tues 5 July 2011								
	H03	Tues 5 July 2011								
	H04	Tues 5 July 2011								
	HW01	Sun 3 July 2011								
	HW02	Tues 5 July 2011								
	HW03	Tues 5 July 2011								
	HW04	Wed 6 July 2011								
	HW05	Thurs 7 July 2011								
	HW06	Mon 4 July 2011								
	HW07	Wed 6 July 2011								
	HW08	Mon 4 July 2011								
	HW09	Wed 6 July 2011								
	HW10	Thurs 7 July 2011								
	HW11	Thurs 7 July 2011								
	HW12	Tues 5 July 2011								
	HW13	Wed 6 July 2011								
	HW14	Mon 4 July 2011								
	JH01	Sun 3 July 2011								
	JH02	Sun 3 July 2011								
	JHW01	Mon 4 July 2011								
	JHW02	Sun 3 July 2011								
	JHW03	Mon 4 July 2011								
	JHW04	Sun 3 July 2011								
	S-A-VJW01						See S-A-VJW01 under IASPEI			
IAMAS	JM01	Sat 2 July 2011								
	JM02	Sat 2 July 2011								
	JM03	Fri 1 July 2011								
	JM04	Tues 5 July 2011								
	JM05	Thurs 30 June 2011								
	JM06	Sat 2 July 2011								
	JM07	Fri 1 July 2011								
	JM08	Fri 1 July 2011								
	JM09	Mon 4 July 2011								
	JM10	Please refer to Poster Program for the following sessions – Thursday 30 June – Session JM10PS1, Monday 4 July – Session JM10PS2, Tuesday 5 July – Session JM10PS3								
	JM11	Fri 1 July 2011								
	JM12/ A06.4	Fri 1 July 2011								
	JM13	Sun 3 July 2011								
	M01	Wed 6 July 2011								
	M02	Sat 2 July 2011								
	M03	Wed 29 June 2011					M03S1	M03S2	M03S3	M03S4
	M04	Wed 6 July 2011								
	M05	Thurs 30 June 2011								
	M06	Wed 29 June 2011					M06S1	M06S2	M06S3	M06S4
	M07	Wed 29 June 2011					M07S1	M07S2	M07S3	M07S4
	M08	Wed 29 June 2011					M08S1	M08S2	M08S3	M08S4
	M09	Tues 5 July 2011								
	M10	Tues 5 July 2011								
	M11	Tues 28 June 2011	M11S1	M11S2	M11S3					
	M12	Wed 29 June 2011						M12S1	M12S2	M12S3
	M13	Wed 29 June 2011					M13S1	M13S2	M13S3	M13S4
	M14	Mon 4 July 2011								

	Thu				Fri				Sat				Symposia Codes	Association
	30-Jun-11				1-Jul-11				2-Jul-11					
	0830-1000	1030-1200	1330-1500	1630-1800	0830-1000	1030-1200	1330-1500	1630-1800	0830-1000	1030-1200	1330-1500	1630-1800		
	AM1	AM2	PM1	PM2	AM1	AM2	PM1	PM2	AM1	AM2	PM1	PM2		
													H01	IAHS
													H02	
													H03	
													H04	
													HW01	
													HW02	
													HW03	
													HW04	
													HW05	
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													HW07	
													HW08	
													HW09	
													HW10	
													HW11	
													HW12	
													HW13	
													HW14	
											JH01S1	JH01S2	JH01	
					JH02S1	JH02S2	JH02S3	JH02S4	JH02S5	JH02S6	JH02S7	JH02S8	JH02	
													JHW01	
											JHW02S1	JHW02S2	JHW02	
													JHW03	
													JHW04	
													S-A-VJW01	
										JM01S1	JM01S2		JM01	IAMAS
	3A								JM02S1	JM02S2	JM02S3	JM02S4	JM02	
					JM03S1	JM03S2	JM03S3	JM03S4					JM03	
													JM04	
JM05S1		JM05S2	JM05S3										JM05	
					JM06S1	JM06S2	JM06S3	JM06S4	JM06S5	JM06S6	JM06S7	JM06S8	JM06	
					JM07S1	JM07S2							JM07	
							JM08S1	JM08S2	JM08S3	JM08S4	JM08S5	JM08S6	JM08	
													JM09	
JM10S1		JM10S2	JM10S3		JM10S4	JM10S5	JM10S6	JM10S7	JM10S8	JM10S9	JM10S10	JM10S11	JM10	
			JM11S1		JM11S2	JM11S3							JM11	
							JM12A64S1	JM12A64S2					JM12/A06.4	
													JM13	
													M01	
													M02	
M03S5		M03S6	M03S7										M03	
													M04	
		M05S1	M05S2										M05	
													M06	
M07S5		M07S6	M07S7										M07	
													M08	
													M09	
													M10	
													M11	
													M12	
													M13	
													M14	

Association	Symposia Codes	Posters Displayed	Tues 28-Jun-11				Wed 29-Jun-11			
			0830-1000	1030-1200	1330-1500	1630-1900	0830-1000	1030-1200	1330-1500	1630-1800
			AM1	AM2	PM1	PM2	AM1	AM2	PM1	PM2
IAPSO	Prince Albert					Opening Ceremony & Welcome Reception				
	JP01	Sun 3 July 2011								
	JP02	Fri 1 July 2011								
	JP03	Sat 2 July 2011								
	P01	Tues 28 June 2011	P01S1	P01S2	P01S3		P01S4	P01S5	P01S6	P01S7
	P02	Thurs 30 June 2011								P02S1
	P03	Tues 28 June 2011	P03S1	P03S2	P03S3		P03S4	P03S5	P03S6	P03S7
	P04	Fri 1 July 2011								
	P05	Sat 2 July 2011								
	P06	Wed 29 June 2011						P06S1	P06S2	P06S3
	P07	Sat 2 July 2011								
IASPEI	Opening									
	JS01	Sun 3 July 2011								
	JS02	Mon 4 July 2011								
	JS03	Sat 2 July 2011								
	JS04/ JV03	Fri 1 July 2011								
	JS05/ JV04	Fri 1 July 2011								
	JG06/ JS06	Mon 4 July 2011								
	JS07	Fri 1 July 2011								
	JV12/ JS08	Sat 2 July 2011								
	JS09	Mon 4 July 2011								
	JS10	Mon 4 July 2011								
	JS11/ JV09	Sun 3 July 2011								
	JS12	Sun 3 July 2011								
	S01/S03	Thurs 30 June 2011								
	S02	Mon 4 July 2011								
	S01/S03	Thurs 30 June 2011								
	S04	Thurs 30 June 2011								
	S05	Fri 1 July 2011								
	S06	Thurs 30 June 2011								
	S07	Mon 4 July 2011								
	S08	Sat 2 July 2011								
	S09	Mon 4 July 2011								
	S10	Sat 2 July 2011								
	S11	Fri 1 July 2011								
	S12	Mon 4 July 2011								
	S13	Sun 3 July 2011								
	S14	Fri 1 July 2011								
	S15	Thurs 30 June 2011								
	S16	Thurs 30 June 2011								
	S17/S18	Sat 2 July 2011								
	S19	Sun 3 July 2011								
	Closing									
	S-A-VJW01						9:00 am – 4:30 pm			

	Thu				Fri				Sat				Symposia Codes	Association
	30-Jun-11				1-Jul-11				2-Jul-11					
	0830-1000	1030-1200	1330-1500	1630-1800	0830-1000	1030-1200	1330-1500	1630-1800	0830-1000	1030-1200	1330-1500	1630-1800		
	AM1	AM2	PM1	PM2	AM1	AM2	PM1	PM2	AM1	AM2	PM1	PM2		
						PAS1							Prince Albert	IAPSO
													JP01	
							JP02S1	JP02S2	JP02S3				JP02	
							JP03S1	JP03S2	JP03S3	JP03S4	JP03S5	JP03S6	JP03	
													P01	
	P02S2		P02S3	P02S4									P02	
	P03S8		P03S9										P03	
				P04S1			P04S2	P04S3	P04S4				P04	
							P05S1	P05S2	P05S3	P05S4	P05S5		P05	
	P06S4		P06S5	P06S6									P06	
									P07S1	P07S2			P07	
	SOS1												Opening	IASPEI
							JS01S1	JS01S2	JS01S3	JS01S4	JS01S5	JS01S6	JS01	
													JS02	
											JS03S1	JS03S2	JS03	
			See JS04/JV03 under IAVCEI										JS04/JV03	
					JS-05V04S1	JS-05V04S2	JS-05V04S3	JS-05V04S4					JS05/JV04	
			See JG06/JS06 under IAG										JG06/JS06	
							JS07S1	JS07S2					JS07	
									JV12JS08S1	JV12JS08S2	JV12JS08S3		JV12/JS08	
		3A											JS09	
													JS10	
												JS-11JV09S1	JS11/JV09	
													JS12	
			S0103S1	S0103S2	S0103S3	S0103S4	S0103S5						S01/S03	
													S02	
			See S01/S03										S01/S03	
			S04S1	S04S2									S04	
					S05S1	S05S2							S05	
			S06S1	S06S2	S06S3								S06	
													S07	
									S08S1	S08S2	S08S3	S08S4	S08	
													S09	
									S10S1	S10S2	S10S3	S10S4	S10	
					S11S1	S11S2	S11S3	S11S4					S11	
													S12	
												S13S1	S13	
							S14S1	S14S2	S14S3	S14S4			S14	
			S15S1	S15S2	S15S3	S15S4							S15	
			S16S1	S16S2									S16	
									S1718S1	S1718S2			S17/S18	
													S19	
													Closing	
													S-A-VJW01	

Association	Symposia Codes	Posters Displayed	Tues 28-Jun-11				Wed 29-Jun-11			
			0830-1000	1030-1200	1330-1500	1630-1900	0830-1000	1030-1200	1330-1500	1630-1800
			AM1	AM2	PM1	PM2	AM1	AM2	PM1	PM2
IAVCEI	JV01	Fri 1 July 2011				Opening Ceremony & Welcome Reception				
	JV02	Mon 4 July 2011								
	JS04/ JV03	Fri 1 July 2011								
	JS05/ JV04	Fri 1 July 2011								
	JV05	Sat 2 July 2011								
	JV06	Wed 29 June 2011								
	JV07	Sun 3 July 2011								
	JV08	Sat 2 July 2011								
	JV09/ JS11	Sun 3 July 2011								
	JV10/ V19	Sun 3 July 2011								
	JV11	Sun 3 July 2011								
	JV12/ JS08	Sat 2 July 2011								
	V01/ V04	Wed 6 July 2011								
	V02	Tues 5 July 2011								
	V03	Thurs 7 July 2011								
	V04\V01									
	V05	Thurs 7 July 2011								
	V06	Wed 6 July 2011								
	V07	Mon 4 July 2011								
	V08	Wed 6 July 2011								
	V09	Tues 5 July 2011								
	V10	Tues 5 July 2011								
	V11	Thurs 7 July 2011								
	V12	Mon 4 July 2011								
	V13	Thurs 7 July 2011								
	V14	Tues 5 July 2011								
	V15	Wed 6 July 2011								
	V16	Thurs 7 July 2011								
	V17	Wed 6 July 2011								
	V18	Sun 3 July 2011								
	V19/ JV10	Sun 3 July 2011								
	V20	Mon 4 July 2011								
	VW01									
	VW02									
	VW03									
	S-A-VJW01						See S-A-VJW01 under IASPEI			

Multidisciplinary Workshops			Date(s)	TIME DETAILS (START & FINISH)	Location
	W01		26 & 27 June	DAY 1: 9:00 am – 4:30 pm DAY 2: 9:00 am – 4:30 pm	Travelodge Southbank
	W02		27 June	9:00 am – 4:30 pm	Melbourne University

	Thu				Fri				Sat				Symposia Codes	Association
	30-Jun-11				1-Jul-11				2-Jul-11					
	0830-1000	1030-1200	1330-1500	1630-1800	0830-1000	1030-1200	1330-1500	1630-1800	0830-1000	1030-1200	1330-1500	1630-1800		
	AM1	AM2	PM1	PM2	AM1	AM2	PM1	PM2	AM1	AM2	PM1	PM2		
							JV01S1	JV01S2					JV01	IAVCEI
													JV02	
									JS-04JV03S1	JS-04JV03S2	JS-04JV03S3	JS-04JV03S4	JS04/JV03	
			see JS05/JV04 under IASPEI										JS05/JV04	
											JV05S1	JV05S2	JV05	
			This symposia has been cancelled										JV06	
													JV07	
									JV08S1	JV08S2			JV08	
			see JS11/JV09 under IASPEI										JV09/JS11	
													JV10/V19	
													JV11	
			see JS12/JS08 under IASPEI										JV12/JS08	
													V01/V04	
													V02	
		3A											V03	
			see V01/V04										V04\V01	
													V05	
													V06	
													V07	
													V08	
													V09	
													V10	
													V11	
													V12	
													V13	
													V14	
													V15	
													V16	
													V17	
													V18	
			see JV10/V19										V19/JV10	
													V20	
	9:00am – 4:30pm												VW01	
					9:00am -12:00pm		1:30pm – 4:30pm						VW02	
					9:00am – 12:00pm								VW03	
													S-A-VJW01	

Association	Symposia Codes	Posters Displayed	Sun				Mon			
			3-Jul-11				4-Jul-11			
			0830-1000	1030-1200	1330-1500	1630-1800	0830-1000	1030-1200	1330-1500	1630-1800
			AM1	AM2	PM1	PM2	AM1	AM2	PM1	PM2
UNION	U01	Sun 3 July 2011		3B	U01S1	U01S2				
	U02	Wed 29 June 2011 & Sat 2 July 2011								
	U03	Sat 2 July 2011								
	U04	Fri 1 July 2011								
	U05	Thurs 7 July 2011								
	U06	Fri 1 July 2011								
	U07	Mon 4 July 2011					U07S1	U07S2		
	U08	Thurs 30 June 2011								
	U09	Mon 4 July 2011							U09S1	U09S2
	U10	Sat 2 July 2011								
	U11	Wed 6 July 2011								
	U12	Tues 28 June 2011								
IACS	C01	Wed 29 June 2011								
	C02	Tues 28 June 2011								
	C03	Wed 29 June 2011								
	C04	Wed 29 June 2011								
	JC01	Sat 2 July 2011								
	JC02/ JC03	Fri 1 July 2011								
	JC04	Sat 2 July 2011								
IAG	Opening									
	G01	Wed 29 June 2011								
	G02	Sun 3 July 2011	G02S1		G02S2	G02S3				
	G03	Tues 5 July 2011								
	G04	Wed 29 June 2011								
	G05	Thurs 30 June 2011								
	G06	Mon 4 July 2011					G06S1	G06S2	G06S3	G06S4
	G07	Fri 1 July 2011								
	JG01	Sat 2 July 2011								
	JG02	Fri 1 July 2011								
	JG03	Mon 4 July 2011					JG03S1	JG03S2		
	JG04	Sun 3 July 2011	JG04S1		JG04S2	JG04S3				
	JG05	Sun 3 July 2011	JG05S1		JG05S2	JG05S3				
	JG06/ JS06	Mon 4 July 2011					JG06JS06S3	JG06JS06S4	JG06JS06S5	JG06JS06S6
	Closings									

	Tues				Wed				Thu				Symposia Codes	Association
	5-Jul-11				6-Jul-11				7-Jul-11					
	0830-1000	1030-1200	1330-1500	1630-1800	0830-1000	1030-1200	1330-1500	1630-1800	0830-1000	1030-1200	1330-1500	1630-1800		
	AM1	AM2	PM1	PM2	AM1	AM2	PM1	PM2	AM1	AM2	PM1	PM2		
		3C										Closing Ceremony & Farewell Drinks	U01	UNION
													U02	
			U03S1	U03S2									U03	
													U04	
									U05S1	U05S2	U05S3		U05	
													U06	
	U07S3												U07	
													U08	
													U09	
													U10	
					U11S1	U11S2	U11S3						U11	
													U12	
													C01	IACS
													C02	
													C03	
													C04	
													JC01	
													JC02/ JC03	
													JC04	
													Opening	IAG
													G01	
	G02S4		G02S5	G02S6	G02S7	G02S8							G02	
	G03S1		G03S2	G03S3									G03	
													G04	
													G05	
													G06	
													G07	
													JG01	
													JG02	
													JG03	
													JG04	
													JG05	
													JG06/ JS06	
							GCS1	GCS2					Closings	

Association	Symposia Codes	Posters Displayed	Sun 3-Jul-11				Mon 4-Jul-11			
			0830-1000 AM1	1030-1200 AM2	1330-1500 PM1	1630-1800 PM2	0830-1000 AM1	1030-1200 AM2	1330-1500 PM1	1630-1800 PM2
IAGA	A011	Sat 2 July 2011		3B						
	A012	Sat 2 July 2011	A012S1		A012S2	A012S3				
	A013	Sat 2 July 2011								
	A021	Wed 6 July 2011								
	A022	Wed 6 July 2011							A022S1	A022S2
	A031	Thurs 7 July 2011								
	A032	Thurs 7 July 2011								
	A033	Thurs 7 July 2011								
	A034	Thurs 7 July 2011								
	A041	Mon 4 July 2011					A041S1	A041S2		
	A042	Tues 5 July 2011								
	A043	Mon 4 July 2011							A043S1	A043S2
	A044	Wed 6 July 2011								
	A050	Sun 3 July 2011	A050S1		A050S2	A050S3				
	A061	Tues 5 July 2011								
	A062	Mon 4 July 2011			A062S1	A062S2	A062S3	A062S4	A062S5	A062S6
	A063/ A065	Wed 6 July 2011								
	A071	Wed 6 July 2011								
	A072	Thurs 7 July 2011								
	A081	Thurs 7 July 2011								
	A082	Thurs 7 July 2011								
	A083	Tues 5 July 2011								
	A091	Tues 5 July 2011							A091S1	A091S2
	A092	Wed 6 July 2011								
	A093	Tues 5 July 2011								
	A101	Sat 2 July 2011	A101S5		A101S6	A101S7				
	A102	Wed6 July 2011								
	A111	Sun 3 July 2011	A111S1							
	A112	Tues 5 July 2011					A112S1	A112S2		
	A113	Thurs 7 July 2011								
	A121	Tues 5 July 2011								
	A122	Wed 6 July 2011								
	A131	Mon 4 July 2011					A131S1	A131S2	A131S3	A131S4
	A132	Tues 5 July 2011								
	A141	Wed 6 July 2011								
	A142	Tues 5 July 2011								A142S1
	A143	Wed 6 July 2011								
	A144	Tues 5 July 2011								
	A151	Wed 6 July 2011								
	A152	Mon 4 July 2011							A152S1	A152S2
	A153	Mon 4 July 2011								
	A161	Tues 5 July 2011								
	A162	Wed 6 July 2011								
	JA01	Sat 2 July 2011								
	JA02	Mon 4 July 2011					JA02S1	JA02S2	JA02S3	
	JA03	Mon 4 July 2011					JA03S1	JA03S2		
	JA04	Mon 4 July 2011					JA04S1	JA04S2	JA04S3	JA04S4
	JA05	Sat 2 July 2011								

	Tues				Wed				Thu				Symposia Codes	Association
	5-Jul-11				6-Jul-11				7-Jul-11					
	0830-1000	1030-1200	1330-1500	1630-1800	0830-1000	1030-1200	1330-1500	1630-1800	0830-1000	1030-1200	1330-1500	1630-1800		
	AM1	AM2	PM1	PM2	AM1	AM2	PM1	PM2	AM1	AM2	PM1	PM2		
													A011	
													A012	
													A013	
					A021S1	A021S2							A021	
													A022	
					A031S1	A031S2							A031	
							A032S1	A032S2					A032	
									A033S1	A033S2			A033	
													A034	
													A041	
A042S1		A042S2	A042S3										A042	
													A043	
					A044S1	A044S2	A044S3						A044	
													A050	
A061S1		A061S2	A061S3		A061S4	A061S5	A061S6						A061	
													A062	
					A063A065S1	A063A065S2	A063A065S3	A063A065S4	A063A065S5				A063/ A065	
								A071S1	A071S2	A071S3	A071S4		A071	
					A072S1	A072S2	A072S3						A072	
										A081S1			A081	
									A082S1	A082S2	A082S3		A082	
		A083S1	A083S2		A083S3	A083S4							A083	
A091S3		A091S4	A091S5		A091S6	A091S7	A091S8	A091S9					A091	
	3C					A092S1	A092S2	A092S3	A092S4	A092S5	A092S6		A092	IAGA
A093S1		A093S2	A093S3										A093	
													A101	
					A102S1	A102S2	A102S3	A102S4					A102	
													A111	
A112S3		A112S4	A112S5										A112	
									A113S1	A113S2	A113S3		A113	
A121S1		A121S2	A121S3		A121S4	A121S5	A121S6	A121S7					A121	
							A122S1	A122S2	A122S3	A122S4			A122	
													A131	
		A132S1	A132S2										A132	
					A141S1	A141S2							A141	
A142S2													A142	
							A143S1	A143S2					A143	
A144S1													A144	
					A151S1	A151S2	A151S3	A151S4					A151	
													A152	
										A153S1	A153S2		A153	
													A161	
					A162S1	A162S2							A162	
													JA01	
													JA02	
													JA03	
													JA04	
													JA05	

Closing Ceremony & Farewell Drinks

Association	Symposia Codes	Posters Displayed	Sun 3-Jul-11				Mon 4-Jul-11			
			0830-1000	1030-1200	1330-1500	1630-1800	0830-1000	1030-1200	1330-1500	1630-1800
			AM1	AM2	PM1	PM2	AM1	AM2	PM1	PM2
IAHS	H01	Wed 6 July 2011		3B						
	H02	Tues 5 July 2011								
	H03	Tues 5 July 2011								
	H04	Tues 5 July 2011							H04S1	H04S2
	HW01	Sun 3 July 2011	HW01S1		HW01S2	HW01S3	HW01S4	HW01S5		
	HW02	Tues 5 July 2011								
	HW03	Tues 5 July 2011								
	HW04	Wed 6 July 2011								
	HW05	Thurs 7 July 2011								
	HW06	Mon 4 July 2011			HW06S1	HW06S2	HW06S3	HW06S4		
	HW07	Wed 6 July 2011								
	HW08	Mon 4 July 2011						HW08S1	HW08S2	HW08S3
	HW09	Wed 6 July 2011								
	HW10	Thurs 7 July 2011								
	HW11	Thurs 7 July 2011								
	HW12	Tues 5 July 2011								
	HW13	Wed 6 July 2011								
	HW14	Mon 4 July 2011					HW14S1	HW14S2		
	JH01	Sun 3 July 2011			JH01S3	JH01S4	JH01S5	JH01S6	JH01S7	JH01S8
	JH02	Sun 3 July 2011			JH02S9	JH02S10				
	JHW01	Mon 4 July 2011					JHW01S1	JHW01S2	JHW01S3	
	JHW02	Sun 3 July 2011	JHW02S3							
	JHW03	Mon 4 July 2011					JHW03S1	JHW03S2	JHW03S3	JHW03S4
	JHW04	Sun 3 July 2011				JHW04S1				
	S-A-VJW01									
IAMAS	JM01	Sat 2 July 2011								
	JM02	Sat 2 July 2011	JM02S5		JM02S6	JM02S7	JM02S8	JM02S9		
	JM03	Fri 1 July 2011								
	JM04	Tues 5 July 2011							JM04S1	JM04S2
	JM05	Thurs 30 June 2011								
	JM06	Sat 2 July 2011	JM06S9		JM06S10	JM06S11				
	JM07	Fri 1 July 2011								
	JM08	Fri 1 July 2011								
	JM09	Mon 4 July 2011						JM09S1	JM09S2	JM09S3
	JM10	Please refer to Poster Program for the following sessions - Thursday 30 June - Session JM10PS1, Monday 4 July - Session JM10PS2, Tuesday 5 July - Session JM10PS3	JM10S12		JM10S13	JM10S14	JM10S15	JM10S16	JM10S17	JM10S18
	JM11	Fri 1 July 2011								
	JM12/ A06.4	Fri 1 July 2011								
	JM13	Sun 3 July 2011	JM13S1		JM13S2	JM13S3	JM13S4	JM13S5		
	M01	Wed 6 July 2011								
	M02	Sat 2 July 2011	M02S1		M02S2	M02S3	M02S4	M02S5		
	M03	Wed 29 June 2011								
	M04	Wed 6 July 2011								
	M05	Thurs 30 June 2011								
	M06	Wed 29 June 2011								
	M07	Wed 29 June 2011								
	M08	Wed 29 June 2011								
	M09	Tues 5 July 2011								
	M10	Tues 5 July 2011							M10S1	M10S2
	M11	Tues 28 June 2011								
	M12	Wed 29 June 2011								
	M13	Wed 29 June 2011								
	M14	Mon 4 July 2011							M14S1	M14S2

	Tues				Wed				Thu				Symposia Codes	Association
	5-Jul-11				6-Jul-11				7-Jul-11					
	0830-1000	1030-1200	1330-1500	1630-1800	0830-1000	1030-1200	1330-1500	1630-1800	0830-1000	1030-1200	1330-1500	1630-1800		
	AM1	AM2	PM1	PM2	AM1	AM2	PM1	PM2	AM1	AM2	PM1	PM2		
				H01S1	H01S2	H01S3	H01S4	H01S5	H01S6				H01	IAHS
H02S1			H02S2	H02S3	H02S4	H02S5	H02S6						H02	
H03S1			H03S2	H03S3									H03	
H04S3			H04S4	H04S5									H04	
													HW01	
HW02S1													HW02	
HW03S1			HW03S2	HW03S3									HW03	
					HW04S1	HW04S2							HW04	
					HW05S1	HW05S2	HW05S3	HW05S4	HW05S5	HW05S6	HW05S7		HW05	
													HW06	
						HW07S1	HW07S2	HW07S3	HW07S4	HW07S5	HW07S6		HW07	
													HW08	
						HW09S1	HW09S2	HW09S3					HW09	
								HW10S1	HW10S2				HW10	
								HW11S1	HW11S2	HW11S3	HW11S4		HW11	
			HW12S1	HW12S2									HW12	
						HW13S1	HW13S2	HW13S3					HW13	
													HW14	
													JH01	
													JH02	
													JHW01	
													JHW02	
													JHW03	
													JHW04	
													S-A-VJW01	
													JM01	IAMAS
													JM02	
													JM03	
JM04S3			JM04S4	JM04S5									JM04	
													JM05	
													JM06	
													JM07	
													JM08	
													JM09	
			JM10S19	JM10S20									JM10	
													JM11	
													JM12/ A06.4	
													JM13	
							M01S1	M01S2					M01	
													M02	
													M03	
M04S1			M04S2	M04S3	M04S4	M04S5	M04S6	M04S7	M04S8	M04S9	M04S10		M04	
													M05	
													M06	
													M07	
													M08	
M09S1			M09S2	M09S3									M09	
M10S3			M10S4	M10S5	M10S6	M10S7	M10S8						M10	
													M11	
													M12	
													M13	
													M14	

3C

Closing Ceremony & Farewell Drinks

Association	Symposia Codes	Posters Displayed	Sun 3-Jul-11 0830-1000 AM1	Sun 3-Jul-11 1030-1200 AM2	Sun 3-Jul-11 1330-1500 PM1	Sun 3-Jul-11 1630-1800 PM2	Mon 4-Jul-11 0830-1000 AM1	Mon 4-Jul-11 1030-1200 AM2	Mon 4-Jul-11 1330-1500 PM1	Mon 4-Jul-11 1630-1800 PM2
IAPSO	Prince Albert			3B						
	JP01	Sun 3 July 2011	JP01S1		JP01S2	JP01S3	JP01S4	JP01S5		
	JP02	Fri 1 July 2011								
	JP03	Sat 2 July 2011								
	P01	Tues 28 June 2011								
	P02	Thurs 30 June 2011								
	P03	Tues 28 June 2011								
	P04	Fri 1 July 2011								
	P05	Sat 2 July 2011								
	P06	Wed 29 June 2011								
	P07	Sat 2 July 2011								
IASPEI	Opening									
	JS01	Sun 3 July 2011	JS01S7		JS01S8	JS01S9	JS01S10	JS01S11	JS01S12	
	JS02	Mon 4 July 2011			JS02S1	JS02S2	JS02S3	JS02S4		
	JS03	Sat 2 July 2011	JS03S3							
	JS04/ JV03	Fri 1 July 2011								
	JS05/ JV04	Fri 1 July 2011								
	JG06/ JS06	Mon 4 July 2011								
	JS07	Fri 1 July 2011								
	JV12/ JS08	Sat 2 July 2011								
	JS09	Mon 4 July 2011						JS09S1	JS09S2	
	JS10	Mon 4 July 2011					JS10S1			
	JS11/ JV09	Sun 3 July 2011	JS11JV09S2							
	JS12	Sun 3 July 2011	JS12S1		JS12S2	JS12S3				
	S01/S03	Thurs 30 June 2011								
	S02	Mon 4 July 2011			S02S1	S02S2	S02S3	S02S4		
	S01/S03	Thurs 30 June 2011								
	S04	Thurs 30 June 2011								
	S05	Fri 1 July 2011								
	S06	Thurs 30 June 2011								
	S07	Mon 4 July 2011					S07S1	S07S2	S07S3	
	S08	Sat 2 July 2011								
	S09	Mon 4 July 2011					S09S1	S09S2		
	S10	Sat 2 July 2011								
	S11	Fri 1 July 2011								
	S12	Mon 4 July 2011							S12S1	
	S13	Sun 3 July 2011	S13S2		S13S3	S13S4	S13S5			
	S14	Fri 1 July 2011								
	S15	Thurs 30 June 2011								
	S16	Thurs 30 June 2011								
	S17/S18	Sat 2 July 2011								
	S19	Sun 3 July 2011	S19S1		S19S2					
	Closing									SC01
	S-A-VJW01									

	Tues				Wed				Thu				Symposia Codes	Association
	5-Jul-11				6-Jul-11				7-Jul-11					
	0830-1000	1030-1200	1330-1500	1630-1800	0830-1000	1030-1200	1330-1500	1630-1800	0830-1000	1030-1200	1330-1500	1630-1800		
	AM1	AM2	PM1	PM2	AM1	AM2	PM1	PM2	AM1	AM2	PM1	PM2		
		3C										Closing Ceremony & Farewell Drinks	Prince Albert	IAPSO
													JP01	
													JP02	
													JP03	
													P01	
													P02	
													P03	
													P04	
													P05	
													P06	
													P07	
													Opening	IASPEI
													JS01	
													JS02	
													JS03	
													JS04/ JV03	
													JS05/ JV04	
													JG06/ JS06	
													JS07	
													JV12/ JS08	
													JS09	
													JS10	
													JS11/ JV09	
													JS12	
													S01/S03	
													S02	
													S01/S03	
													S04	
													S05	
													S06	
													S07	
													S08	
													S09	
													S10	
													S11	
													S12	
													S13	
													S14	
													S15	
													S16	
													S17/S18	
													S19	
													Closing	
													S-A-VJW01	

Association	Symposia Codes	Posters Displayed	Sun				Mon			
			3-Jul-11				4-Jul-11			
			0830-1000	1030-1200	1330-1500	1630-1800	0830-1000	1030-1200	1330-1500	1630-1800
			AM1	AM2	PM1	PM2	AM1	AM2	PM1	PM2
IAVCEI	JV01	Fri 1 July 2011		3B						
	JV02	Mon 4 July 2011				JV02S1	JV02S2	JV02S3	JV02S4	
	JS04/ JV03	Fri 1 July 2011								
	JS05/ JV04	Fri 1 July 2011								
	JV05	Sat 2 July 2011								
	JV06	Wed 29 June 2011								
	JV07	Sun 3 July 2011			JV07S1					
	JV08	Sat 2 July 2011								
	JV09/ JS11	Sun 3 July 2011								
	JV10/ V19	Sun 3 July 2011	JV10V19S1		JV10V19S2	JV10V19S3				
	JV11	Sun 3 July 2011				JV11S1				
	JV12/ JS08	Sat 2 July 2011								
	V01/ V04	Wed 6 July 2011								
	V02	Tues 5 July 2011								
	V03	Thurs 7 July 2011								
	V04\V01									
	V05	Thurs 7 July 2011								
	V06	Wed 6 July 2011								V06S1
	V07	Mon 4 July 2011					V07S1	V07S2	V07S3	
	V08	Wed 6 July 2011					V08S1	V08S2	V08S3	
	V09	Tues 5 July 2011								
	V10	Tues 5 July 2011								V10S1
	V11	Thurs 7 July 2011								
	V12	Mon 4 July 2011					V12S1	V12S2		
	V13	Thurs 7 July 2011								
	V14	Tues 5 July 2011								V14S1
	V15	Wed 6 July 2011								
	V16	Thurs 7 July 2011								
	V17	Wed 6 July 2011								
	V18	Sun 3 July 2011			V18S1					
	V19/ JV10	Sun 3 July 2011								
	V20	Mon 4 July 2011	V20S1		V20S2	V20S3				
	VW01									
	VW02									
	VW03									
	S-A-VJW01									

	Tues				Wed				Thu				Symposia Codes	Association
	5-Jul-11				6-Jul-11				7-Jul-11					
	0830-1000	1030-1200	1330-1500	1630-1800	0830-1000	1030-1200	1330-1500	1630-1800	0830-1000	1030-1200	1330-1500	1630-1800		
	AM1	AM2	PM1	PM2	AM1	AM2	PM1	PM2	AM1	AM2	PM1	PM2		
													JV01	
													JV02	
													JS04/ JV03	
													JS05/ JV04	
													JV05	
													JV06	
													JV07	
													JV08	
													JV09/ JS11	
													JV10/ V19	
													JV11	
													JV12/ JS08	
			V01V04S1	V01V04S2	V01V04S3	V01V04S4	V01V04S5						V01/ V04	
V02S1			V02S2	V02S3									V02	
								V03S1	V03S2				V03	
													V04\V01	
	3C									V05S1	V05S2		V05	IAVCEI
V06S2													V06	
													V07	
													V08	
						V09S1	V09S2	V09S3					V09	
V10S2			V10S3	V10S4	V10S5								V10	
									V11S1	V11S2	V11S3		V11	
													V12	
									V13S1	V13S2	V13S3		V13	
V14S2			V14S3	V14S4	V14S5								V14	
						V15S1	V15S2	V15S3					V15	
									V16S1	V16S2	V16S3		V16	
					V17S1	V17S2	V17S3						V17	
													V18	
													V19/ JV10	
													V20	
													VW01	
													VW02	
													VW03	
													S-A-VJW01	

Closing Ceremony & Farewell Drinks

IUGG 2011 ROOM OVERVIEW

This provides a schedule of the program session codes by room allocation. Rooms are spread across 3 levels of the Melbourne Convention Centre (Ground, First and Second Levels). This overview also includes business meetings and workshops.

Please refer to the following pages for further information:

page 46	Program Overview
page 70	Assocation Overview
page 29	Union Plenary Lecture information
page 77	Detailed Program Index
page 4	Venue/Room map

IAPSO | IAMAS | UNION | IAVCEI | IASPEI | IAG | IAGA | IAHS | IACS | Workshops | Business Meetings

Room Code	Room Name	Location	Mon	Tues					Wed							
			27-Jun-11	28-Jun-11					29-Jun-11							
				0830-1000	1030-1200	1200-1330	1330-1500	1630-1900	0830-1000	1030-1200	1200-1330	1330-1500	1630-1800		0830-1000	1030-1200
			PM	AM1	AM2	LUNCH	PM1	PM2	AM1	AM2	LUNCH	PM1	PM2	B4hrs	AM1	AM2
PH1	Plenary Hall 1	Ground Level														
PH2	Plenary Hall 2	Ground Level						Opening								3A
PH3	Plenary Hall 3	Ground Level														
MR101	Meeting Room 101	Level 1	BM50	M11S1	M11S2		M11S3									
MR102	Meeting Room 102	Level 1							M06S1	M06S2		M06S3	M06S4		BM220	
MR103	Meeting Room 103	Level 1	BM60						M13S1	M13S2		M13S3	M13S4			
MR104	Meeting Room 104	Level 1								M12S1		M12S2	M12S3		JM05S1	
MR105	Meeting Room 105	Level 1							M08S1	M08S2		M08S3	M08S4		JM10S1	
MR106	Meeting Room 106	Level 1	BM40						M07S1	M07S2		M07S3	M07S4		M07S5	
MR107	Meeting Room 107	Level 1														
MR108	Meeting Room 108	Level 1														
MR109	Meeting Room 109	Level 1							M03S1	M03S2		M03S3	M03S4		M03S5	
MR110	Meeting Room 110	Level 1													VW01	
MR111	Meeting Room 111	Level 1														
MR112	Meeting Room 112	Level 1				BM280	BM75	BM75								
ER001**	Meeting Room 201.1	Level 2														
ER002**	Meeting Room 201.2	Level 2														
ER010**	Meeting Room 201.10	Level 2														
MR203	Meeting Room 203	Level 2		U12S1	U12S2		U12S3		U02S1	U02S2		U02S3	U02S4	BM170	SOS1	
MR204	Meeting Room 204	Level 2														
MR205	Meeting Room 205	Level 2		BM80	BM80	BM80	BM80	BM80			BM110	BM90	BM100			
MR206	Meeting Room 206	Level 2									BM150					
MR207	Meeting Room 207	Level 2		BM70	BM70						BM130	BM130	BM120			
MR208	Meeting Room 208	Level 2											BM140			
MR209	Meeting Room 209	Level 2														
MR210	Meeting Room 210	Level 2							GOS1	GOS2			P02S1		P02S2	
MR211	Meeting Room 211	Level 2		P01S1	P01S2		P01S3		P01S4	P01S5		P01S6	P01S7			
MR212	Meeting Room 212	Level 2		P03S1	P03S2		P03S3		P03S4	P03S5		P03S6	P03S7		P03S8	
MR213	Meeting Room 213	Level 2		C02S1	C02S2		C02S3		C02S4	P06S1		P06S2	P06S3		P06S4	
MR214	Meeting Room 214	Level 2														
MR215	Meeting Room 215	Level 2										G04S1	G04S2			
MR216	Meeting Room 216	Level 2							S-A-VJW01						G05S1	
MR217	Meeting Room 217	Level 2										G01S1	G01S2		G01S3	
MR218	Meeting Room 218	Level 2							C04S1			C04S2	C04S3			
MR219	Meeting Room 219	Level 2							C03S1	C03S2						
MR220	Meeting Room 220	Level 2							C01S1	C01S2		C01S3	C01S4		BM240	BM240

** These rooms are located within Meeting Room 201 on Level 2. There are a number of purpose built rooms within this large room. See page 6 for a detailed map of this room.

Thu					Fri						Sat					
30-Jun-11					1-Jul-11						2-Jul-11					
	1200-1330	1330-1500	1630-1800		0830-1000	1030-1200	1200-1330	1330-1500	1630-1800		0830-1000	1030-1200	1200-1330	1330-1500	1630-1800	
	LUNCH	PM1	PM2	A/hrs	AM1	AM2	LUNCH	PM1	PM2	A/hrs	AM1	AM2	lunch	PM1	PM2	A/hrs
						PAS1		P05S1	P05S2		P05S3	P05S4		P05S5		
					U04S1	U04S2		U06S1	U06S2		U10S1	U10S2		U02S5	U02S6	
					JH02S1	JH02S2		JH02S3	JH02S4							
			JM11S1		JM11S2	JM11S3						JM01S1	BM680	JM01S2		BM490
		BM200	BM200					BM915	BM915		P07S1	P07S2		JHW02S1	JHW02S2	BM450
				BM190				JV01S1	JV01S2		JM08S3	JM08S4		JM08S5	JM08S6	BM480
		JM05S2	JM05S3		JM03S1	JM03S2		JM03S3	JM03S4		JS-04JV03S1	JS-04JV03S2		JS-04JV03S3	JS-04JV03S4	BM460
		JM10S2	JM10S3		JM10S4	JM10S5		JM10S6	JM10S7		JM10S8	JM10S9		JM10S10	JM10S11	
		M07S6	M07S7		JM07S1	JM07S2	BM380	BM380	BM310			BM430		BM430	BM660	BM1380
		M05S1	M05S2					JM08S1	JM08S2	BM1300	JV08S1	JV08S2	BM570			BM500
					S05S1	S05S2	BM370	JM12A64S1	JM12A64S2	BM1270	S1718S1	S1718S2	BM650	JV05S1	JV05S2	BM510
		M03S6	M03S7				BM330			BM340	JM02S1	JM02S2		JM02S3	JM02S4	
	VW01				JM06S1	JM06S2		JM06S3	JM06S4		JM06S5	JM06S6		JM06S7	JM06S8	BM1340
												JC01S1	BM580	JC01S2	JC01S3	BM520
					VW02						JV12JS08S1	JV12JS08S2		JV12JS08S3		BM530
													BM1350	BM1350		
		S0103S1	S0103S2		S0103S3	S0103S4		S0103S5	BM410	BM410	JS01S3	JS01S4		JS01S5	JS01S6	BM325
		U08S1	U08S2					JS01S1	JS01S2		S08S1	S08S2		S08S3	S08S4	BM1360
				BM260			BM360			BM400	A011S1		BM600	A013S1	A013S2	
		S04S1	S04S2								A101S1	A101S2	BM590	A101S3	A101S4	
							BM290	JP02S1	JP02S2		JA01S1	JA01S2		JA01S3	JS-11JV09S1	BM470
				BM160	BM320	BM320	BM320			BM900	JA05S1	JA05S2		JA05S3	BM540	
		S15S1	S15S2	BM250	S15S3	S15S4		JS07S1	JS07S2	BM350						BM560
		P02S3	P02S4								JP02S3			JH01S1	JH01S2	
		S06S1	S06S2		S06S3			JP03S1	JP03S2		JP03S3	JP03S4		JP03S5	JP03S6	
		P03S9	P04S1					P04S2	P04S3		P04S4			JS03S1	JS03S2	
		P06S5	P06S6		S11S1	S11S2		S11S3	S11S4		S10S1	S10S2		S10S3	S10S4	BM1290
		S16S1	S16S2		JG02S1	JG02S2		JG02S3			BM425	BM425	BM425	BM425	BM425	BM1280
	BM161			BM270	VW03								BM610	BM420		BM630
		G05S2	G07S1			G07S2		G07S3	G07S4	BM390	JG01S1	JG01S2		JG01S3	JG01S4	BM640
		G01S4				JC0203S1		JC0203S2	JC0203S3		JG06JS06S1	JG06JS06S2		JC0203S4	JC0203S5	BM1370
			BM230	BM230							S14S3	S14S4			S13S1	BM1330
	BM180		BM210	BM210	JS-05V04S1	JS-05V04S2		JS-05V04S3	JS-05V04S4		JH02S5	JH02S6		JH02S7	JH02S8	
								S14S1	S14S2		JC04S1	JC04S2		JC04S3	JC04S4	

ROOM OVERVIEW WEEK 1

IUGG 2011 ROOM OVERVIEW

This provides a schedule of the program session codes by room allocation. Rooms are spread across 3 levels of the Melbourne Convention Centre (Ground, First and Second Levels). This overview also includes business meetings and workshops.

Please refer to the following pages for further information:

page 46	Program Overview
page 70	Assocation Overview
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IAPSO | IAMAS | UNION | IAVCEI | IASPEI | IAG | IAGA | IAHS | IACS | Workshops | Business Meetings

Room Code	Room Name	Location	Sun 3-Jul-11							Mon 4-Jul-11							
				0830-1000	1030-1200	1200-1330	1330-1500	1630-1800		0830-1000	1030-1200	1200-1330	1330-1500	1630-1800		0830-1000	1030-1200
			B4hrs	AM1	PM2	LUNCH	PM1	PM2	A/hrs	AM1	AM2	LUNCH	PM1	PM2	A/hrs	AM1	AM2
PH1	Plenary Hall 1	Ground Level						JV02S1		JV02S2	JV02S3		JV02S4				
PH2	Plenary Hall 2	Ground Level		S19S1	3B		S19S2			U07S1	U07S2		U09S1	U09S2		U07S3	3C
PH3	Plenary Hall 3	Ground Level								JG06 JS06S3	JG06 JS06S4		JG06 JS06S5	JG06 JS06S6			
MR101	Meeting Room 101	Level 1		A111S1				JH-W04S1	BM710		JM09S1		JM09S2	JM09S3		V02S1	
MR102	Meeting Room 102	Level 1		JH-W02S3			JH-W02S4	JH-W02S5	BM720	S09S1	S09S2		A022S1	A022S2	BM995	HW02S1	
MR103	Meeting Room 103	Level 1		JM13S1			JM13S2	JM13S3	BM890	JM13S4	JM13S5		JM04S1	JM04S2		JM04S3	
MR104	Meeting Room 104	Level 1				BM865	BM685	BM685	BM740	V08S1	V08S2		V08S3	V10S1		V10S2	
MR105	Meeting Room 105	Level 1		JM10S12			JM10S13	JM10S14		JM10S15	JM10S16		JM10S17	JM10S18			
MR106	Meeting Room 106	Level 1		M02S1			M02S2	M02S3		M02S4	M02S5		S12S1	SC01			
MR107	Meeting Room 107	Level 1		JV-10V19S1		BM901	JV-10V19S2	JV-10V19S3	BM820	V07S1	V07S2		V07S3	V06S1		V06S2	
MR108	Meeting Room 108	Level 1					HW06S1	HW06S2	BM730	HW06S3	HW06S4		M14S1	M14S2		M09S1	
MR109	Meeting Room 109	Level 1		JM02S5			JM02S6	JM02S7		S13S5	HW08S1		HW08S2	HW08S3		M04S1	
MR110	Meeting Room 110	Level 1		JM06S9			JM06S10	JM06S11		JM02S8	JM02S9	BM1000	M10S1	M10S2	BM980	M10S3	
MR111	Meeting Room 111	Level 1		HW01S1			HW01S2	HW01S3	BM670	HW01S4	HW01S5	BM1020			BM950	BM1090	
MR112	Meeting Room 112	Level 1					V18S1		BM850	HW14S1	HW14S2			BM930			
ER001**	Meeting Room 201.1	Level 2	BM440	BM440	BM440	BM440	BM440		BM780								
ER002**	Meeting Room 201.2	Level 2		BM700	BM700	BM860			BM690	A112S1	A112S2						
ER010**	Meeting Room 201.10	Level 2				BM550											
MR203	Meeting Room 203	Level 2		JS01S7			JS01S8	JS01S9	BM750	JS01S10	JS01S11		JS01S12	V14S1		V14S2	
MR204	Meeting Room 204	Level 2		V20S1			V20S2	V20S3		V12S1	V12S2				BM990		
MR205	Meeting Room 205	Level 2		A012S1			A012S2	A012S3	BM790	A041S1	A041S2		A043S1	A043S2		A144S1	
MR206	Meeting Room 206	Level 2		A101S5			A101S6	A101S7	BM840	JG03S1	JG03S2	BM620				A112S3	
MR207	Meeting Room 207	Level 2		JS-11JV09S2			JV07S1	JV11S1	BM830	JA02S1	JA02S2		JA02S3	A142S1	BM970	A142S2	
MR208	Meeting Room 208	Level 2		JG04S1			JG04S2	JG04S3	BM880	JA03S1	JA03S2		A152S1	A152S2	BM960	G03S1	
MR209	Meeting Room 209	Level 2		JS12S1			JS12S2	JS12S3	BM760	JA04S1	JA04S2		JA04S3	JA04S4	BM920	A093S1	
MR210	Meeting Room 210	Level 2					U01S1	U01S2	BM1310	S07S1	S07S2		S07S3			G02S4	
MR211	Meeting Room 211	Level 2		JP01S1			JP01S2	JP01S3		JP01S4	JP01S5		BM940	BM940		A121S1	
MR212	Meeting Room 212	Level 2		JS03S3			S02S1	S02S2		S02S3	S02S4		H04S1	H04S2		H04S3	
MR213	Meeting Room 213	Level 2		G02S1			G02S2	G02S3		JS10S1	JS09S1		JS09S2				
MR214	Meeting Room 214	Level 2		A050S1			A050S2	A050S3	BM800	G06S1	G06S2		G06S3	G06S4		A042S1	
MR215	Meeting Room 215	Level 2					A062S1	A062S2	BM810	A062S3	A062S4	BM1010	A062S5	A062S6	BM910	A061S1	
MR216	Meeting Room 216	Level 2					JS02S1	JS02S2	BM770	JS02S3	JS02S4		A091S1	A091S2		A091S3	
MR217	Meeting Room 217	Level 2					JH01S3	JH01S4	BM885	JH01S5	JH01S6		JH01S7	JH01S8	BM1320	HW03S1	
MR218	Meeting Room 218	Level 2		S13S2		BM870	S13S3	S13S4		A131S1	A131S2		A131S3	A131S4			
MR219	Meeting Room 219	Level 2								JH-W01S1	JH-W01S2		JH-W01S3			H02S1	
MR220	Meeting Room 220	Level 2		JG05S1			JG05S2	JG05S3		JH-W03S1	JH-W03S2		JH-W03S3	JH-W03S4		H03S1	

** These rooms are located within Meeting Room 201 on Level 2. There are a number of purpose built rooms within this large room. See page 6 for a detailed map of this room.

Tues					Wed							Thur					Fri
					6-Jul-11												8-Jul-11
1200-1330	1330-1500	1630-1800			0830-1000	1030-1200	1200-1330	1330-1500	1630-1800		0830-1000	1030-1200	1200-1330	1330-1500	1630-1800	
LUNCH	PM1	PM2	A/hrs	B4hrs	AM1	AM2	LUNCH	PM1	PM2	A/hrs	AM1	AM2	LUNCH	PM1	PM2	
					A151S1	A151S2		A151S3	A151S4	BM1190						
	U03S1	U03S2	BM1080		U11S1	U11S2		U11S3							Closing	
						HW13S1		HW13S2	HW13S3							
	V02S2	V02S3				V09S1		V09S2	V09S3			V05S1	BM1220	V05S2		
	HW12S1	HW12S2			HW04S1	HW04S2		M01S1	M01S2		BM1230	BM1230				
	JM04S4	JM04S5	BM1040	BM1180	A102S1	A102S2		A102S3	A102S4		V11S1	V11S2		V11S3		BM1250
	V10S3	V10S4			V10S5	HW07S1		HW07S2	HW07S3		HW07S4	HW07S5		HW07S6		BM1260, BM1240
	JM10S19	JM10S20				HW09S1		HW09S2	HW09S3							
BM1120	BM1120	BM1140			V17S1	V17S2		V17S3	BM1160	BM1185	V13S1	V13S2		V13S3		
	V01V04S1	V01V04S2			V01V04S3	V01V04S4		V01V04S5			Room In Use					
	M09S2	M09S3			BM1170	BM1170	BM1150				BM1225	BM1225				
	M04S2	M04S3			M04S4	M04S5		M04S6	M04S7		M04S8	M04S9		M04S10		
	M10S4	M10S5			M10S6	M10S7		M10S8			V16S1	V16S2		V16S3		
BM1030	BM1090		BM1070						V03S1		V03S2					
	BM1100	BM1110				V15S1		V15S2	V15S3			BM1210				
	V14S3	V14S4			V14S5						U05S1	U05S2		U05S3		
BM1050	BM1050				A141S1	A141S2		A143S1	A143S2							
	A083S1	A083S2			A044S1	A044S2		A044S3		BM1175	A033S1	A033S2		A081S1		
	A112S4	A112S5			A021S1	A021S2		A044S3		BM1390	A082S1	A082S2		A082S3		
	A132S1	A132S2			A063 A065S1	A063 A065S2		A063 A065S3	A063 A065S4		A063 A065S5					
	G03S2	G03S3			A072S1	A072S2		A072S3	A071S1		A071S2	A071S3		A071S4		
	A093S2	A093S3			A083S3	A083S4		A122S1	A122S2		A122S3	A122S4				
	G02S5	G02S6			G02S7	G02S8		GCS1	GCS2							
	A121S2	A121S3			A121S4	A121S5		A121S6	A121S7							
	H04S4	H04S5				A092S1		A092S2	A092S3		A092S4	A092S5		A092S6		
BM1060			BM1025		HW05S1	HW05S2		HW05S3	HW05S4		HW05S5	HW05S6		HW05S7		
	A042S2	A042S3			A031S1	A031S2		A032S1	A032S2							
	A061S2	A061S3			A061S4	A061S5		A061S6								
	A091S4	A091S5			A091S6	A091S7		A091S8	A091S9		A113S1	A113S2		A113S3		
	HW03S2	HW03S3				C04S1		C04S2	C04S3		A153S1	A153S2				
		H01S1			H01S2	H01S3		H01S4	H01S5		H01S6					
	H02S2	H02S3			H02S4	H02S5		H02S6	HW10S1		HW10S2					
	H03S2	H03S3			A162S1	A162S2			HW11S1		HW11S2	HW11S3		HW11S4		

IUGG 2011 ASSOCIATION OVERVIEW

The following overview of the IUGG 2011 Associations and Symposia is correct at time of printing. Any updates will be displayed on the program updates message board by the program desk on level 2.

The below is sorted by Association and Symposia. It contains Symposia Title, the Organisers (underlined), Co-Sponsors of the Symposium and the Lead Convenors. Co-Convenors are only listed on the General Assembly website (www.iugg2011.com/program.asp)

For individual session information for each symposium, please refer to the program overview for session codes. These sessions can then be located within the detailed program listing.

If you wish to check other information such as the Program Overview or Room Overview, please refer to the below:

page 46	Program Overview
page 66	Room Overview
page 29	Union Plenary Lecture information
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Association	Symposium	Symposia Title	Organisers & Co-Sponsors	Lead Convenors
UNION	U01	Science & Nuclear Test Ban Monitoring	IASPEI, IUGG, and Comprehensive Nuclear Test Ban Treaty Organization (CTBTO) IAMAS, IAPSO	L. Zerbo & Z. Wu
	U02	Grand Challenges in Natural Hazards Research and Risk Analysis	IUGG Commission for Geophysical Risk and Sustainability (GeoRisk Commission) and IUGG/ICSU Extreme Natural Hazards and Societal Implications (ENHANS) Project, American Geophysical Union (AGU), International Council for Science (ICSU), International Geographical Union (IGU), International Society of Photogrammetry and Remote Sensing (ISPRS), International Union of Geological Sciences (IUGS), International Union of Theoretical and Applied Mechanics (IUTAM), Integrated Research on Disaster Risk Scientific Committee (IRDR-SC), and UNESCO	K. Takeuchi & A. Ismail-Zadeh
	U021	Grand Challenges in Natural Hazards Research and Risk Analysis: Earth on the Edge – Recent Pacific Rim Disasters	IUGG Commission for Geophysical Risk and Sustainability (GeoRisk Commission) and IUGG/ICSU Extreme Natural Hazards and Societal Implications (ENHANS) Project, American Geophysical Union (AGU), International Council for Science (ICSU), International Geographical Union (IGU), International Society of Photogrammetry and Remote Sensing (ISPRS), International Union of Geological Sciences (IUGS), International Union of Theoretical and Applied Mechanics (IUTAM), Integrated Research on Disaster Risk Scientific Committee (IRDR-SC), and UNESCO	K. Takeuchi & A. Ismail-Zadeh
	U03	Recent Progress in the Studies of the Earth's Deep Interior	IUGG Union Commission on Study of the Earth and Deep Interior, IAGA, IASPEI, IAVCEI	G. Hulot
	U04	Progress and Perspectives in Studies of the Continental Lithosphere	IUGG	J. Dawson
	U05	Data Science/Informatics and Data Assimilation in Geophysical Models	IUGG Union Commission for Data and Information, ICSU, IAG, IAGA, IAPSO	P. Fox & C. Barton
	U06	Geoengineering: What are the Potentials for Climate Intervention, Carbon Scrubbing, and other Approaches to Moderate Climate Change and its Impacts?	IAMAS IAHS, IAPSO, IASPEI	M. MacCracken, A. Robock, L. Brown, K. Denman, D. Jackson & D. Zhang
	U07	Mathematical tools in Geophysical Modelling	IAGA and IUGG Commission on Mathematical Geophysics, IAG, IAPSO	M. Holschneider
	U08	Global and Regional Sea Level Change	IAPSO, IACS, IAG	J. Church & S. Holgate
	U09	Do We Really Know the Hydrological Cycle?	IAHS, IACS, IAG, IAMAS, IAPSO	P. Hubert
	U10	Climate Change: a 360 Degree-View from IUGG Associations	IAGA, IACS, IAG, IAMAS, IAPSO, IASPEI	E. Friis-Christensen
	U11	Earth and Space Science in Africa	IAGA – as part of IUGG Geoscience in Africa initiative and the eGY-Africa program, IAG, IAHS, IAMAS, IAPSO, IASPEI, IAVCEI, African Geospace Society (AGS), Association of African Universities (AAU), Africa Earth Observing Network (AEON), AfricaArray; ICSU Regional Office for Africa, CODATA, International Network for the Availability of Scientific Publications (INASP), UN Global Alliance for Information and Communication Technologies and Development (UN-GAID), U.S. InterAcademy Panel on International Issues (IAP); European Enabling Grid for e-Science (EGEE); Geoscience Information in Africa (GIRAF); and the Abdus Salam International Centre for Theoretical Physics in Trieste (ICTP)	C. Barton
	U12	Geosciences and the Future of Planet Earth	IUGG, IACS, IAG, IAGA, IAHS, IAMAS, IAPSO, IASPEI, and IAVCEI	H. Gupta & L. Szarka
	GC	General Contributions	IUGG, IACS, IAG, IAGA, IAHS, IAMAS, IAPSO, IASPEI, and IAVCEI	A. Ismail-Zadeh

Association	Symposium	Symposia Title	Organisers & Co-Sponsors	Lead Convenors
IACS	JC01	Arctic System Modelling	IACS, IAMAS, IAPSO	S. Elliot & A. Roberts
	JC02/ JC03	Snow – Atmosphere Interactions and Avalanches.	IACS, IAMAS,IAHS(ICSIH)	A. Casteller, J. Hendrikx, M. Lehning, M. Parlange, P. Etchevers & E. Brun
	JC04	Ice Shelves and Glacier Tongues – Ice on the Edge	IACS, IAPSO	R. Warner & M. Dinniman
	C01	Remote Sensing of the Cryosphere – linking and validating measurements from satellite, air, and ground	IACS	W. Rack & J. Lieser
	C02	Ice Cores and Climate	IACS	M. Curran
	C03	Morphology of Snow and Ice on the Ground and in the Atmosphere	IACS, IAMAS	H. Löwe & J. Spiegel
	C04	Glacier and Ice Cap Fluctuations	IACS	G. Cogley, P. Jansson & A. Mackintosh
IAG	JG01	Space Geodesy-based Atmospheric Remote Sensing as a Synergistic Link between Geodesy and Meteorology	IAG, IAMAS	M. Santos, J. Wickert & O. Bock
	JG02	Application of Geodetic Techniques in Cryospheric Studies	IAG, IACS	R. Dietrich
	JG03	History of Geosciences from Terrestrial to Spaceborne Observations	IAG, IAGA Inter-Divisional Commission on History, IASPEI	J. Ádám
	JG04	Structure and Deformation of Plate Interiors	IAG, IASPEI, IAVCEI	J. Dawson
	JG05	Integrated Earth Observing Systems	IAG, IACS, IAGA, IAHS, IAMAS, IAPSO, IASPEI, IAVCEI, IOC, GOOS, GCOS, GEO/GEOSS	M. Rothacher
	JG06/ JS06	Tectonic Geodesy and Earthquakes	IAG, IASPEI, IASPEI, IAG	D.D. Jackson & J. Freymueller
	G01	Reference Frames from Regional to Global Scales	IAG	Z. Altamimi
	G02	Monitoring and Modelling of Mass Distribution and Mass Displacements by Geodetic Methods	IAG	Y. Fukuda
	G03	Monitoring and Modelling Earth Rotation	IAG	R. Gross
	G04	Multisensor Systems for Engineering Geodesy	IAG	D. Brzezinska
	G05	Geodetic Imaging Techniques	IAG	S. Verhagen
	G06	Towards a Unified World Height System	IAG	J. Ihde
	G07	High Precision GNSS	IAG	R. Neilan

Asso-ciation	Sympo-sium	Symposia Title	Organisers & Co-Sponsors	Lead Convenors
IAGA	JA01	Fluids in the crust and mantle: Geodynamic and seismological consequences – geophysical and geological constraints	IAGA, IAG	G. Caldwell, S.F. Cox, Y. Iio, Y. Ogawa & T. Van Dam
	JA02	Climate and Weather of the Sun-Earth System – CAWSES –II early results	IAGA, ICMA, IAMAS	S. Avery
	JA03	Long-term changes in the stratosphere, mesosphere, thermosphere and ionosphere	IAGA, ICMA, IAMAS	G. Bieg & J. Lastovicha
	JA04	Electromagnetic oscillations from space to Earth: Celebrating 150 years and recent developments in ultra-low frequency wave research	IAGA Div.3, IAGA Divisions I, II, V, Interdivisional Commission on History and IASPEI	B.J. Fraser & M.J.S. Johnson
	JA05	Data rescue, digitisation and metadata requirements in geophysics	IAGA and IASPEI	E. Clarke
	A011	Planetary Magnetic Fields and Geomagnetic Secular Variation	IAGA Div I and Div V	C. Constable, A. Chulliat & C. Finlay
	A012	Planetary Magnetic Fields and Geomagnetic Secular Variation	IAGA Div I	D. Ivers & P. Livermore
	A013	Planetary Magnetic Fields and Geomagnetic Secular Variation	IAGA Div I	W. Kuang & A. Jackson
	A021	Electromagnetic Induction	IAGA Div I	G. Egbert, I. Ferguson & G. Hill
	A022	Electromagnetic Induction	IAGA Div I	M. Ingham, C.M. Sainato, K. Selway, A. Jones, K. Veeraswamy, E. Sokolova
	A031	Paleomagnetism	IAGA Div I	G. Turner, J. Channell, A. Herries, B. Singer
	A032	Paleomagnetism	IAGA Div I	E. Herrero-Bervera, J. Tarduno & Y. Gallet
	A033	Paleomagnetism	IAGA Div I	P. Schmidt, J. Tait & A. Rapalini
	A034	Paleomagnetism	IAGA Div I	M.I.B. Raposo, J. Geissman & Y. Otofuji
	A041	Rock Magnetism	IAGA Div I	Ö. Özdemir, M.J. Dekkers & Y. Jae Yu
	A042	Rock Magnetism	IAGA Div I and Div V	D. Clark, S. McEnroe, R. Harrison & L. Alva-Aldivia
	A043	Rock Magnetism	IAGA Div I	M. Hill, L. Tauxe & Y. Yamamoto
	A044	Rock Magnetism	IAGA Div I	B. Maher, A. Roberts, Y. Pan & M.J. Orgeira
	A050	Electrodynamics and energetic of the middle atmosphere and lower thermo-sphere: the local and global picture	IAGA Div II	F.J. Luebken
	A061	Coupling in the atmosphere-ionosphere-magnetosphere system and its response to external forcing and forcing from below	IAGA Div II	D. Pancheva
	A062	Coupling in the atmosphere-ionosphere-magnetosphere system and its response to external forcing and forcing from below	IAGA Div II and Div III	M. Yamamoto
	A063/ A065	Coupling in the atmosphere-ionosphere-magnetosphere system and its response to external forcing and forcing from below	IAGA ICDC, Div II & Div III	H. Takahashi & H. Lühr
	A071	Radiation belt dynamics and remote sensing of the Earth's plasmasphere	IAGA Div II and Div III	M. Clilverd
	A072	Radiation belt dynamics and remote sensing of the Earth's plasmasphere	IAGA Div II	J. Lichtenberger
	A081	Space plasma processes	IAGA Div III	A. Hilgers
	A082	Space plasma processes	IAGA Div III	C. Foullon
	A083	Space plasma processes	IAGA Div III	L. Kepko
	A091	Magnetosphere-ionosphere coupling	IAGA Div III and Div II	S. Wing
	A092	Magnetosphere-ionosphere coupling	IAGA Div III and Div II	R. L. Lysak
	A093	Magnetosphere-ionosphere coupling	IAGA Div III and Div II	R. Lukianova
	A101	The Sun and the Heliosphere: New Views	IAGA Div. IV	K. Muglach
	A102	The Sun and the Heliosphere: New Views	IAGA Div. IV	M. Delva
	A111	The Sun and the Heliosphere: Physical Processes	IAGA Div. IV	G. Zank
	A112	The Sun and the Heliosphere: Physical Processes	IAGA Div. IV	A.C. Cadavid
	A113	The Sun and the Heliosphere: Physical Processes	IAGA Div. IV	B. Li
	A121	Space Weather and Space Climate	IAGA Div IV	J. Linker
	A122	Space Weather and Space Climate	IAGA Div IV and Div V	K. Mursula
	A131	Magnetic observations from ground to space – ingredients for new geomag-netic research	IAGA Div V	H.J. Linthe
	A132	Magnetic observations from ground to space – ingredients for new geomag-netic research	IAGA Div V	C. Beggan
	A141	Lithospheric field and related geological/tectonic implications	IAGA Div V	M. Hamoudi
	A142	Lithospheric field and related geological/tectonic implications	IAGA Div V	M. Purucker
	A143	Lithospheric field and related geological/tectonic implications	IAGA Div V	E. Thebault
	A144	Lithospheric field and related geological/tectonic implications	IAGA ICDC and Div V	S.G. Gokarn
	A151	Reporter's Review	IAGA Div III	A. Milillo
	A152	Reporter's Review	IAGA Div IV	M.P. Miralles
	A153	Reporter's Review	IAGA Div V	M. Korte
	A161	History sessions focused on IAGA subdisciplines	IAGA Inter-Divisional Commis-sion on History	P. Wilkinson
	A162	History sessions focused on IAGA subdisciplines	IAGA Inter-Divisional Commis-sion on History	A. Egeland

Association	Symposium	Symposia Title	Organisers & Co-Sponsors	Lead Convenors
IAHS	JH01	GRACE, other remote sensing platforms and ground based methods for estimating multi-scale surface water budgets, groundwater system characterization and hydrological processes	IAHS (ICRS, ICSW, ICGW, ICWRS, PUB, GRACE), IAG, IAMAS	M. Hafeez
	JH02	Hydro-climatology: Variability and change	IAHS (ICCLAS, ICSW, HYDROMET), IAMAS	S. Franks
	JHW01	Integrated flood management	IAHS (ICSW, ICWRS), IAMAS, WMO, BOM Australia	B. Stewart
	JHW02	Interaction between fresh water and ecosystem in the coastal zone	IAHS (ICGW, ICWQ), IAPSO	M. Taniguchi
	JHW03	Impacts of changing climate, snow and ice on mountain hydrology	IAHS (ICSIH, ICLAS, ICRS, ICGW, ICSW, PUB), IAMAS, IACS	D. Marks
	JHW04	Subglacial water: Properties, processes and role in ice-mass dynamics	IAHS (ICSIH), IACS	B. Hubbard
	H01	Conceptual and modelling studies of integrated groundwater, surface water, and ecological systems	ICGW, ICSW, ICWQ, ICWRS	G. Nützmann
	H02	Cold regions hydrology in a changing climate	ICSIH, PUB	D. Yang
	H03	Risk in Water Resources Management	ICWRS, ICSW, ICWQ,	G. Blöschl
	H04	Assessment of water quality under changing climate conditions	ICWQ, ICCE, ICWRS, UNESO	J. Peters
	HW01	Tracer applications in sediment research	ICCE, ICT, ICWQ, PUB	V. Golosov
	HW02	Understanding and quantifying physical and geochemical processes during artificial recharge of groundwater	ICGW, ICWQ	H. Prommer
	HW03	Regional groundwater modelling: Approaches, challenges, and future directions	ICGW, ICT	H. Reeves
	HW04	Snow and ice hydrology: Principles, processes and prediction	ICSIH, ICGW, ICSW	D. Marks
	HW05	Revisiting experimental catchment studies in forest hydrology	ICSW, ICRS	A. Webb
	HW06	Expert judgement versus statistical goodness-of-fit for hydrological model evaluation	ICSW, ICWRS, STAHY	C. Perrin
	HW07	Hydro-geomorphology	ICSW, ICCE	C. Cudennec
	HW08	Tracer hydrology as a tool for estimating flow parameters, groundwater dynamics, pollution transport and bioremediation processes in heterogeneous systems	ICT, ICGW	P. Maloszewki
	HW09	Revaluing system knowledge in water resources management	ICWRS, ICWQ	N. van de Giesen
	HW10	Water quality and sediment prediction in ungauged basins	ICWQ, ICCE	B. Arheimer
	HW11	Water supply and water quality in large metropolitan areas and megacities	ICWQ, ICWRS	V. Krysanova
	HW12	Quality and quantity aspects of green and blue water: Impact on agriculture, environment, energy and industry	ICWQ, ICWRS	U. Sharma
	HW13	Recent development of statistical tools for hydrological application	STAHY, ICSW, ICWRS	S. Grimaldi
	HW14	Education in the hydrological sciences	EDU	A. Askew

Asso-ciation	Sympo-sium	Symposia Title	Organisers & Co-Sponsors	Lead Convenors
IAMAS	JM01	Geoengineering: Can it limit climate change and its impacts?	IAMAS (ICCL), IAVCEI	M. MacCracken & A. Robock
	JM02	Data assimilation and ensemble forecasting for weather and climate	IAMAS (ICDM, ICMA), IAPSO, IAHS, IAGA, IACS	W. Lahoz
	JM03	Earth system observations and integration	IAMAS (ICCL), IAPSO	R. Bouchard
	JM04	Stratosphere-Troposphere-Ocean coupling in weather and climate	IAMAS (ICMA, ICDM, ICCL), IAPSO	E. Manzini
	JM05	Manifestation of anthropogenic forcing and natural variability in the Arctic and Antarctic climate systems	IAMAS (ICPM), IAPSO, IACS	S. O'Farrell
	JM06	High-impact weather and extreme climate events	IAMAS (ICCL, ICDM), IAHS	X. Zhang, R. Swinbank & R. Stewart
	JM07	Atmospheres and ices on terrestrial planets	IAMAS (ICPAE), IACS	D. Titov
	JM08	Predictability of the coupled climate system, climate system feedbacks and sensitivity to external forcing	IAMAS (ICCL, ICDM), IAPSO, IACS	N. Andronova
	JM09	External forcing from above on the middle atmosphere and lower ionosphere	IAMAS (ICMA), IAGA	A. Krivolutsky
	JM10	Monsoons, Tropical Cyclones and Tropical Dynamics	IAMAS (ICCL,ICDM), IAPSO, IACS, IAHS,GEWEX, CLIVAR	J. Li & J. McBride
	JM11	From Ice-house to Green-house: Studies of Natural and Human-Induced Climate Change	IAMAS (ICCL), IAPSO, IACS	M. MacCracken
	JM12/ A06.4	Thunderstorms: from troposphere to mesosphere and beyond / Thunder-storms: Upwards and Downwards Coupling of the Atmospheric Layers and near-Earth Space	IAMAS (ICAE), IAGA (Division II)	C. Price, F.T. São Sabbas & H. Lühr
	JM13	Precipitation measurements; instrumentation and statistics at all scales	IAMAS(ICCP), IAHS	D. Schertzer
	M01	Solar UV radiation	IAMAS (IRC)	M. Blumthaler
	M02	Chemistry-climate interactions	IAMAS (ICMA, ICACGP, ICCL, IOC, IRC)	L. Pan
	M03	Aerosol-Cloud-Precipitation-Radiation-Interactions	IAMAS (ICCP, ICCL, IRC)	G. Feingold & I. Koren
	M04	Recent advances in middle atmosphere science	IAMAS (ICMA)	S. Yoden
	M05	Comparative Atmospheres of the giant planets and their satellites	IAMAS (ICPAE)	A. Coustenis
	M06	Bioaerosols in the Earth system	IAMAS (ICCP)	C. Morris & U. Pöschl
	M07	Advances in atmospheric dynamics	IAMAS (ICDM)	N. Harnik, M. Reeder & R. Smith
	M08	The impact of solar variability on the Earth	IAMAS (ICMA, IRC, ICAE, ICCL, ICCP, IOC)	U. Langematz
	M09	Three-dimensional radiative transfer in the atmosphere	IAMAS (IRC)	A. Marshak
	M10	Tropospheric processes and processing: Pollution and biogeochemical cycling	IAMAS (ICACGP)	M. Kanakidou
	M11	Ice in the Atmosphere: Formation, Measurement, Modeling and Impacts	IAMAS (ICCP)	A.J. Heymsfield, P.J. DeMott & O. Moehler
	M12	Mesoscale and synoptic scale meteorology in the Arctic and Antarctic	IAMAS (ICPM)	T. Lachlan-Cope
	M13	Mineral dust: Its impact on the atmosphere and the ocean	IAMAS (ICCP)	J.P. Chen
	M14	Stratospheric processes and their role in climate focused on the Southern Hemisphere	IAMAS (ICMA), WCRP (SPARC), IGAC	G. Bodeker
IAPSO	PAS1	IAPSO The Prince Albert I Medal & Memorial Lecture	IAPSO	J. Rodhe
	JP01	The Southern Ocean in a changing world	IAPSO, IACS	I. Ansorge
	JP02	Future state of the Arctic and potential impact	IAPSO, IACS and IAMAS	B. Tremblay
	JP03	Global and regional sea-level change	IAPSO, IACS, IAG	J. Church & S. Holgate
	P01	General topics of ocean physics and chemistry	IAPSO	E. Morozov
	P02	Physical and biogeochemical processes in marginal enclosed and semi-enclosed seas	IAPSO	S. Sparnocchia
	P03	Ocean Mixing	IAPSO	T.J. McDougall
	P04	Thermohaline Circulation (THC) and Deep Currents	IAPSO	A. Bergamasco
	P05	New insights from Sustained Ocean Observing Systems	IAPSO	S. Wijffels
	P06	Eastern and Western Boundary Currents	IAPSO	L. Beal
	P07	Ocean acidification, including Coastal Coral Reef Oceanography	IAPSO	D. Smythe-Wright

Asso-ciation	Sympo-sium	Symposia Title	Organisers & Co-Sponsors	Lead Convenors
IASPEI	JS01	Advances in Tsunami Science, Warning, and Mitigation	IASPEI, IAPSO and IAVCEI	K. Satake
	JS02	Heat Flow, Tectonics, and Geothermal Energy	IASPEI	C. Clauser, M. Sandiford & A. Gliko
	JS03	Scientific Results from Seafloor Networks	IASPEI, IAPSO and IAGA; ION	R. Stephen
	JS04/ JV03	Physics and Chemistry of Earth Materials with Implications for Earth Structure and Processes	IASPEI, IAVCEI, IAGA, IAVCEI, IASPEI, SEDI	H. O'Neill, G. Yaxley, I. Jackson, T. Irifune, C. McCammon, T. Yoshino
	JS05/ JV04	The Davies Mantle: Reconciling Geophysical and Geochemical Perspectives	IASPEI, IAVCEI, IAVCEI-SEDI, IASPEI, SEDI	I. Jackson, I. Campbell, L. Moresi, A. Hofmann & H.P. Bunge
	JS07	Antarctic and Arctic Research	IASPEI, IACS, IAG, IAGA	I. Allison
	JS09	Electromagnetic Studies of Earthquakes, Active Faulting and Tsunamis	IASPEI, IAGA, IAVCEI	M. Johnston & T. Harinarayana
	JS10	Electromagnetic studies of active processes using space technology	IASPEI, IAGA, IAVCEI	M. Parrot & Y. Hobara
	JS11/ JV09	Imaging and monitoring active volcanoes and geothermal fields by Electro-Magnetic (EM) and other geophysical techniques	IASPEI, IAGA, IAVCEI	J. Zlotnicki, Y. Sasai & V. Spichak
	JS12	Towards short-term earthquake prediction – Electromagnetic and other possible precursors and their generation mechanisms	IASPEI, IAGA, IAVCEI	T. Nagao
	S01/S03	Seismological Observation and Interpretation/ Sub-Saharan Africa Seismology	IASPEI	D.A. Storchak, P. Dirks, R. Durrheim & A. Nyblade
	S02	Triggered and Induced Seismicity	IASPEI	S. Lasocki & A. Farias do Nascimento
	S04	Non-instrumental seismology	IASPEI	L. Grant Ludwig
	S05	Infrastructure for seismology (FDSN)	IASPEI	G. Suarez, T. van Eck & R. Butler
	S06	Recent Large/Destructive Earthquakes	IASPEI	H. Gupta, W. Zhongliang, D. Srinagesh & P. Burton
	S07	Strong Ground Motions; their source, path, and site effects	IASPEI	M. Ghafory-Ashtiany & H. Kawase
	S08	Seismic Hazard and Risk – The Global Earthquake Model	IASPEI	M. Ghafory-Ashtiany, D. Giardini & A. Kijko
	S09	Earthquake Early Warning Systems	IASPEI	A. Zollo & J. Zschau
	S10	Physics of the seismic process: from laboratory studies to field observations	IASPEI	A.D. Zavyalov, I. Main, S.A. Shapiro & A. Dyskin
	S11	Earthquake forecasting and testing	IASPEI	D.D. Jackson & D. Rhoades
	S12	Episodic Tremor, Slip, and Large Earthquakes	IASPEI	D.D. Jackson
	S13	Seismic Imaging of the Lithosphere and Mantle	IASPEI	G.A. Houseman & K. Furlong
	S14	Plate Boundary Processes	IASPEI	K. Furlong & G.A. Houseman
	S15	Anisotropy and attenuation: mechanisms, processes and observations	IASPEI	M.K. Savage, J. Plomerova, J.M. Kendall & I. Jackson
	S16	Earthquake Disaster Assessments: Seismology and Engineering	IASPEI	W.D. Mooney
	S17/S18	Earthquakes and public health / Using NMSOP and other educational modules and tools for online and in-person training courses	IASPEI	L. Grant Ludwig, P. Bormann, J. Taber & V.M. Hamza
	S19	Christchurch Earthquake	IASPEI	G. Gibson & M. Quigley

Association	Symposium	Symposia Title	Organisers & Co-Sponsors	Lead Convenors
IAVCEI	JV01	World Volcano Observatories (WOVO) and International Science	IAVCEI IAMAS	A. Tupper, P. Webley, W. Marzocchi & J. Nielson-Gammon
	JV02	Forecasting and Monitoring Volcanic Eruptions	IAVCEI, IASPEI, IAG, IAGA	S. Nakada, C. Newhall, F. Sigmundsson, G. Jolly & J. Marti
	JV05	Using Geodesy on Volcanoes to Understand Volcanic, Tectonic, and Hydrothermal Forces	IAVCEI, IAG	N. Fournier, M. Battaglia, M. Poland & K. Heki
	JV06	CANCELLED	IAVCEI	M. MacCracken & A. Robock
	JV07	Using Paleomagnetism to Understand Volcanic Processes	IAVCEI, IAGA	M. Porreca, M. Mattei, M. Ort, L. Brown & J. Geissman
	JV08	Remote Sensing of Volcanic Hazards and the Risk to Global Aviation	IAVCEI, IAMAS	F. Prata, A. Tupper & S. Carn
	JV09/ JS11	Imaging and monitoring active volcanoes and geothermal fields by Electro-Magnetic (EM) and other geophysical techniques	IAVCEI, IASPEI, IAGA, IAGA, IASPEI	J. Zlotnicki, Y. Sasai & V. Spichak
	JV10/ V19	Volcanic and Seismic Issues Related to Siting of Nuclear Facilities / Probabilistic Volcanic Hazard Mapping	IAVCEI, IASPEI	C. Connor, S. Self, J. Stamatakos, R. Carniel & E. Calder
	JV11	Progress and Perspectives in Studies of the Continental Lithosphere	IAVCEI, IASPEI, ILP	J. Dawson
	JV12/ JS08	Volcano Seismology	IAVCEI, IASPEI, IASPEI	J. Neuberg, H. Kumagai & J. Johnson
	V01/ V04	Magma chambers and intrusions: their physical and chemical dynamics	IAVCEI	C. Annen, L. Caricchi, O. Müntener, S. Cruden, R. Weinberg, R. Squire & T. Rushmer
	V02	Arc Magmatism: The Constructive and Destructive Dynamics of Convergent Margin Magmatism	IAVCEI	J. Lindsay, A. Schmitt, P. Caffe & G. Zellmer
	V03	Time-scales of Magmatic Processes and Volcanological Implications	IAVCEI	F. Costa & O. Sigmarsson
	V05	Magmatic Volatiles and Gases	IAVCEI	N. Perez, P. Kyle, T. Mori & Y. Taran
	V06	The Rheology of Magmas	IAVCEI	D. Giordano, Y. Lavalleé & C. Romano
	V07	Subaerial and Subaqueous Lava flows	IAVCEI	T. Thordarsson, A. Harris & S. Calvari
	V08	Volcanic Conduit and Vent Processes	IAVCEI	B. Kennedy, O. Melnik, J. Castro, P. Papale & M. Manga
	V09	Eruption, Transport and Deposition of Pyroclasts in Plumes Using Field Studies, and Computational Modelling	IAVCEI	C. Bonadonna, B. Houghton, A. Costa, A. Neri & M. Bursik
	V10	The Dynamics of Pyroclastic Density Currents: Field Studies of Their Deposits, Computational Modelling and Experiments	IAVCEI	A. Clarke, O. Roche, T. Druitt & J. Dufek
	V11	Characteristics and Imaging of Pyroclasts	IAVCEI	H. Wright, L. Pioli, M. Polacci, P. Dellino & K. Cashman
	V12	Tectonic Controls on Volcanism	IAVCEI	J. Cole, D. Gravely & A. Gudmundsson
	V13	Understanding Big Volcanic Systems	IAVCEI	J. White, J. Gottsman, J. Marti, G. Giordano & S. Bryan
	V14	Monogenetic Volcanism: Magma Sources, Ascent and Eruption	IAVCEI	G. Valentine, S. Cronin, K. Nemeth, A. Pittari & B. Zimanowski
	V15	Kimberlite Volcanology	IAVCEI	K. Russell, L. Porritt & T. Gernon
	V16	Subglacial and Subaqueous and Volcanism: processes, products and impacts	IAVCEI	S. Allen, B. Edwards, H. Tuffen & M. Gudmundsson
	V17	Planetary Volcanism: what's different out there, what's new, and what are we learning?	IAVCEI	G. Leone, T. Gregg, E. Stofan, S. Smrekar & A. Davies
	V18	Surface processes in volcanic terrains: the erosion, transport and redeposition of volcaniclastic material and their associated hazards	IAVCEI	V. Manville, M. Gudmundsson & N. Riggs
	V19/ JV10	Probabilistic Volcanic Hazard Mapping / Volcanic and Seismic Issues Related to Siting of Nuclear Facilities	IAVCEI, IASPEI	R. Carniel, E. Calder, C. Connor, S. Self & J. Stamatakos
	V20	Volcanic Systems and Mineral Deposits	IAVECI	S. Beresford, P.S. Ross, C. de Ronde, B. Gemmell & M. Hannington

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TUESDAY, 28 JUNE 2011 0830-1000 AM1

Tuesday, 28 June 2011 0830-1000 MR203
IUGG
U12 Geosciences and the Future of Planet Earth
U12S1 Speakers by Invitation
Chairpersons: Harsh Gupta & Kate Heal

0830 **Introduction.**
0845 **# 1168.** Geosciences and the Future of Planet Earth – a hydrological perspective
K. Heal
0900 **As above.**
0915 **# 1248.** Important role of Geoscience for future of Planet Earth!
K. Arora, S. Nittala.
0930 **# 1257.** Quest for Global Sustainability: The Role of Geophysics and Challenges Ahead
A.A. Kizhakkekara Kunjavaran
0945 **Discussion.**

Tuesday, 28 June 2011 0830-1000 MR213
IACS
C02 Ice Cores and Climate
C02S1
Chairpersons: Tas van Ommen

0830 **# 4522.** A 300-year's Records of Sea Ice Extent of Southern Indian Ocean from LGB69 Ice Core, East Antarctica.
C. Xiao, R. Li, S. Sneed.
0845 **As above.**
0900 **Discussion.**
0915 **# 4174.** New Histories of Antarctic Sea Ice from West Antarctic Ice Cores
D. Reusch
0930 **# 4639.** Understanding Sources of Sea Salts to Coastal Antarctica
M. Curran, T. Vance, A. Moy, I. Goodwin.
0945 **# 764.** A high resolution SOI proxy from the Law Dome ice core
T. Vance, T. van Ommen, M. Curran, C. Plummer.

Tuesday, 28 June 2011 0830-1000 MR101
IAMAS
M11 Ice in the Atmosphere: Formation, Measurement, Modeling and Impacts
M11S1 Ice in the atmosphere – cirrus clouds
Chairpersons: Ottmar Möhler & Jiwen Fan

0830 **# 2111.** Physical Processes Controlling Midlatitude Cirrus Ice Size Distributions
E. Jensen, J. Bergman, L. Pfister, P. Lawson.
0845 **# 5234.** Ice Nucleation and Bimodality Inferred from Cirrus Cloud Observations
D. Mitchell, P. Lawson, S. Mishra.
0900 **# 4439.** Using SPartICus and TC4 Data to Describe the Effects of Non-Gaussian Prior Statistics on the Bayesian Retrieval of Mid-Latitude and Tropical Cirrus Cloud Properties
M. Schwartz, G. Mace.
0915 **# 4904.** Global analysis of Ice cloud microphysics from CloudSat and CALIPSO : size, shape and color ratio
H. Okamoto, K. Sato, Y. Hagihara.
0930 **# 2428.** Rough and irregular ice crystals in cirrus and mixed phase clouds
Z. Ulanowski, P.H. Kaye, E. Hirst, R.S. Greenaway, M. Schnaiter.
0945 **Discussion.**

Tuesday, 28 June 2011 0830-1000 MR211
IAPSO
P01 General topics of ocean physics and chemistry
P01S1
Chairpersons: Eugene Morozov & Silvia Blanc

0830 **Introduction.**
0845 **Discussion.**
0900 **Discussion.**
0915 **# 664.** Alternative Methodology to Acoustically Estimate Zooplankton Populations and Suspended Sediment Concentrations using ADCP Echo-Data Recordings.
M. Baques, S. Blanc, E. Garibotti, E. Alberdi, C. Piccolo, et al.
0930 **# 670.** Modelling AcousticTarget Strengths of Prolate Spheroids: Application to At-Laboratory Measurements on Percichthys trucha.
S. Blanc, J.D. Gonzalez, A. Madirolas.
0945 **Discussion.**

Tuesday, 28 June 2011 0830-1000 MR212
IAPSO
P03 Ocean Mixing
P03S1
Chairpersons: Graham Hughes

0830 **# 3475.** Distribution, Intensity and Origins of Mixing in the Southern Ocean: An Observational Study Surrounding the Kerguelen Plateau.
A. Meyer, B.M. Sloyan, K. Polzin, H.E. Phillips, N.L. Bindoff.
0845 **# 5670. Invited** Rates and mechanisms of turbulent dissipation in the Antarctic Circumpolar Current
A. Naveira Garabato, S. Waterman, K. Polzin.
0900 **As above.**
0915 **# 3371.** The Determination of Mixing Coefficients and Their Spatial Variability in the Southern Ocean Using the Tracer-contour Inverse Method
A. Meijers, T. McDougall, B. Sloyan.
0930 **# 4283. Invited** Impacts of Diapycnal Interior Ocean Mixing on Climate
R. Hallberg, A. Adcroft, J. Dunne, J. Krasting.
0945 **As above.**

TUESDAY, 28 JUNE 2011 1030-1200 AM2

Tuesday, 28 June 2011 1030-1200 MR203
IUGG
U12 Geosciences and the Future of Planet Earth
U12S2 Speakers by Invitation
Chairpersons: Kusumita Arora & James Wookey

1030 **# 977.** Geosciences and the Future of Planet Earth: Perspectives from the Cryospheric Sciences
I. May
1045 **# 1512.** Space weather and our technological systems
E. Yizengaw
1100 **# 5877.** The Polar Regions: An area of active research for decades to come
A. Jahn
1115 **# 3727.** The Future of Geosciences: a View from the Base of the Mantle
J. Wookey
1130 **# 4236.** Observation of Volcanic Ash Concentration and Composition
C. Emde
1145 **Discussion.**

Tuesday, 28 June 2011 1030-1200 MR213
IACS
C02 Ice Cores and Climate
C02S2
Chairpersons: Kumiko Goto-Azuma

1030 **# 3508.** High-Resolution Ice-Core Records of Black Carbon from the West Antarctic Ice Sheet and Law Dome, East Antarctica.
R. Edwards, J.R. McConnell, M. Bisiaux, T. van Ommen, M. Curran, et al.
1045 **# 3594.** A 2000 Year Volcanic Record from Law Dome, East Antarctica
C. Plummer, M. Curran, T. van Ommen, T. Vance, S.O. Rasmussen, et al.
1100 **Discussion.**
1115 **# 5157.** A high resolution deuterium excess and isotopic record around 1kyr BP from Law Dome, East Antarctica.
D. Newlands, T. van Ommen, A. Moy, M. Curran, C. Plummer.
1130 **# 976.** A 50-Year High-Resolution Record of Temperature and Atmospheric Circulation from a Coastal Antarctic Ice Core
K. Sinclair, N. Bertler, J. Bull.
1145 **Discussion.**

Tuesday, 28 June 2011 1030-1200 MR101
IAMAS
M11 Ice in the Atmosphere: Formation, Measurement, Modeling and Impacts
M11S2 Ice in the atmosphere – mixed-phase clouds Part 1
Chairpersons: Alexei Korolev & Hugh Morrison

1030 **# 3131.** Influence of Aviation and Anthropogenic Aerosol Emissions on Large-Scale Cirrus Clouds and Anthropogenic Forcing
J. Penner, M. Wang, Y. Yun, L. Xu, Y. Chen.
1045 **# 2191.** Cloud phase – temperature relation in Arctic, Antarctic and Storm Track region derived from CALIPSO observation
Y. Hu
1100 **# 3857.** Measurements of aerosol activation behavior in mixed phase clouds at the high alpine site Jungfraujoch (3580 m asl, Switzerland)
E. Weingartner, J. Cozic, B. Verheggen, S. Mertes, N. Bukowiecki, et al.
1115 **# 4321.** Ice Nuclei Counter for Laboratory and Field Measurements
G. Kok, D. Cziczo, G. Kulkarni.
1130 **# 1741.** Volcanic ash particles from the Eyjafjallajoekull eruption as ice nuclei in clouds
I. Steinke, O. Mathler, A. Kiselev, M. Niemand, H. Saathoff, et al.
1145 **# 1157.** Time Dependence of Immersion Freezing
A. Welti, F. Luond, O. Stetzer, U. Lohmann.

Tuesday, 28 June 2011 1030-1200 MR211
IAPSO
P01 General topics of ocean physics and chemistry
P01S2
Chairpersons: Eugene Morozov & Silvia Blanc

1030 **# 1453.** Episodic Upwelling and Dust Deposition as Bloom Triggers in Low Nutrient Low Chlorophyll Regions
P. Calil, S. Doney, K. Yumimoto, K. Eguchi, T. Takemura.
1045 **# 2589.** Reconstructed interannual global net primary production patterns due to El Nino Southern Oscillation and El Nino Modoki since the 1800s
A. Maharaj, A. Belo Do Couto, N.J. Holbrook.
1100 **# 1903.** The Astronomical Tides in Loch Ness
P. Woodworth, D. Pugh, M. Bos.
1115 **Discussion.**
1130 **Discussion.**
1145 **Discussion.**

Tuesday, 28 June 2011 1030-1200 MR212
IAPSO
P03 Ocean Mixing
P03S2
Chairpersons: Graham Hughes

1030 **# 4248.** The Observed Baroclinic Structure of the Antarctic Circumpolar Current
H. Phillips, N. Bindoff.
1045 **# 2524. Invited** Mixing and energetics of the ocean overturning circulation
G. Hughes, A. Hogg, R. Griffiths.
1100 **As above.**
1115 **# 3029.** Conservative Temperature as the embodiment of the First Law of Thermodynamics:- Quantifying the error in treating potential temperature as “heat content”
F. Graham, T. McDougall.
1130 **# 5902.** Improved thermodynamics utilising TEOS-10, Absolute Salinity, and Conservative Temperature in the Australian Climate Ocean Model
S. Marsland, T. McDougall, S. Griffies, R. Fiedler.
1145 **# 2727.** On irreversible changes in gravitational potential energy due to turbulent diapycnal mixing
R. Tailleux

TUESDAY, 28 JUNE 2011 1330-1500 PM1

Tuesday, 28 June 2011 1330-1500 MR203

IUGG

U12 Geosciences and the Future of Planet Earth

U12S3 Speakers by Invitation

Chairpersons: Harsh Gupta & Craig Rodger

1330 **# 1460.** Scientists and non-scientists: Do we all speak the same language?
A. Geyer

1345 **# 2149.** You and whose army? International collaborative networks as a mechanism for strengthening the pursuit of knowledge.
C. Rodger, R.H. Holzworth, J.B. Brundell.

1400 **Discussion.**

1415 **# 5599.** A Comparison of In-situ Stress Direction as Measured from Cleat Orientation Mapping and from Well Log data for Coal Bed Methane Exploration in Jharia Coalfield, India
R. Chatterjee, S. Paul.

1430 **# 6001.** Seismic monitoring in Azerbaijan with Az-NDC and Geology Institute database
G. Babayev, F.A. Gadirov.

1445 **Discussion.**

Tuesday, 28 June 2011 1330-1500 MR213

IACS

C02 Ice Cores and Climate

C02S3

Chairpersons: Mark Curran

1330 **# 5457. Invited** Observational constraints on climate-carbon feedbacks over the past 2000 years
D. Etheridge, M. Rubino, R. Matear, C. Trudinger, C. Allison, et al.

1345 **As above.**

1400 **# 4686.** Multi-tracer Calibration of Firn Air Processes at NEEM, Northern Greenland
C. Trudinger, C. Buizert, P. Martinerie, V. Petrenko, J. Severinghaus, et al.

1415 **# 5105.** Optical televiewer imaging of the uppermost 650 m of the NEEM deep borehole
B. Hubbard, NEEM Science Team.

1430 **# 4189.** The structure of large and abrupt climate changes as inferred from the GISP2, NGRIP, and NEEM ice cores
J. White, T. Popp, A. Svensson, V. Gkinis, S. Johnsen, et al.

1445 **# 4977.** An Automated Method for Stratigraphic Dating of Ice Cores
M. Winstrup, A. Svensson, O. Winther.

Tuesday, 28 June 2011 1330-1500 MR101

IAMAS

M11 Ice in the Atmosphere: Formation, Measurement, Modeling and Impacts

M11S3 Ice in the atmosphere – mixed-phase clouds Part 2

Chairpersons: Eric Jensen & Ernest Weingartner

1330 **# 5223.** A Revised Paradigm for Representing Ice Microphysics in Models
H. Morrison, W.W. Grabowski.

1345 **# 2862.** Toward Improving Ice Nucleation Parameterization based on Classical Nucleation Theory and Aerosol Effects on Mixed-phase and Ice Clouds
J. Fan, G. Kulkarni, J. Comstock, X. Liu, M. Ovchinnikov.

1400 **# 642.** Comparison of ice nucleation parameterization on cloud and precipitation development in the Eastern Mediterranean using WRF with detailed cloud microphysics
Z. Levin, K. Ardon-Dryer, A. Teller.

1415 **# 2379.** Statistical validation of a cloud resolving model against aircraft observations of orographic snow clouds.
H. Ohtake, M. Murakami, N. Orikasa, A. Saito, T. Kato, et al.

1430 **Discussion.**

1445 **# 1204.** Numerical simulation of the drop and ice particles relative impact on formation of heavy precipitation
G. Pirnach, T. Romash.

Tuesday, 28 June 2011 1330-1500 MR211

IAPSO

P01 General topics of ocean physics and chemistry

P01S3

Chairpersons: Eugene Morozov & Silvia Blanc

1330 **Introduction.**

1345 **# 4259.** Interaction between barotropic and baroclinic tides in a region of complex topography
P. Chu, J. Richman, C. Rowley.

1400 **Discussion.**

1415 **Discussion.**

1430 **Discussion.**

1445 **Discussion.**

Tuesday, 28 June 2011 1330-1500 MR212

IAPSO

P03 Ocean Mixing

P03S3

Chairpersons: Bob Hallberg

1330 **# 4573. Invited** Mixing and Internal Waves on Australian North West Shelf
G. Ivey, N. Jones, C. Bluteau, M. Rayson.

1345 **As above.**

1400 **# 5575.** Numerically Reproduced Internal Wave Spectra in the Deep Ocean
T. Hibiya, Y. Sugiyama, Y. Niwa.

1415 **# 5903.** Model/observation study of the Indonesian Throughflow in the Australian Climate Ocean Model
S. Marsland, S. Wijffels, R. Cowley, S. Griffies.

1430 **# 5441.** Model-Predicted Distribution of Wind-Induced Internal Wave Energy in the World's Oceans
N. Furuichi, T. Hibiya, Y. Niwa.

1445 **# 4661.** A process-based modelling study of mixing processes at the Subtropical Front in the south-east Indian Ocean
S. Borlace, J. Kaempf, M. Tomczak.

TUESDAY, 28 JUNE 2011 1630-1900

Opening Ceremony & Welcome Reception 1630-1900

Plenary Room 2 and Exhibition Area

WEDNESDAY, 29 JUNE 2011 0830-1000 AM1

Wednesday, 29 June 2011 0830-1000 MR203
IUGG
U02 Grand Challenges in Natural Hazards Research and Risk Analysis
U02S1 Speakers by Invitation
Chairpersons: Kuni Takeuchi

0830 **# 5012.** The Grand Challenges of Integrated Research on Disaster Risk
G. McBean
0845 **As above.**
0900 **# 3472.** Natural Hazard Risk Assessment in the Australasian Region: Informing Disaster Risk Reduction and Building Community Resilienc
J. Schneider, J. Sexton.
0915 **As above.**
0930 **# 2112.** Satellite-based remote sensing estimation of precipitation for early warning systems: Strengths and Limitations
S. Sorooshian
0945 **As above.**

Wednesday, 29 June 2011 0830-1000 MR220
IACS
C01 Remote Sensing of the Cryosphere – linking and validating measurements from satellite, air, and ground
C01S1
Chairpersons: Wolfgang Rack & Jan Lieser

0830 **# 6069. Invited** Remote Sensing of Snow and Glaciers: Our State-of-the-Art and a Vision for the Future
A. Nolin
0845 **As above.**
0900 **# 1506.** Multitemporal, multisensor fusion for monitoring ice sheet changes from altimetry and imagery
G. Babonis, B. Csatho, T. Schenk, S. Nagarajan.
0915 **# 4322.** Local changes of the Greenland Ice Sheet from altimetry
L. Sorensen, K. Nielsen, R. Forsberg, G. Spada, S. Simonsen.
0930 **# 5338.** Historical Response of Ice Cover on Great Bear Lake and Great Slave Lake, Canada, as Observed from SMMR-SSM/I Brightness Temperature Measurements
C. Duguay, K.K. Kang.
0945 **# 3198.** Comparison of Simulated Snow Cover from the Weather Research & Forecast (WRF) Regional Climate Model with Satellite-Based and In-situ Observations
K. Bormann, J. Evans, M. McCabe.

Wednesday, 29 June 2011 0830-1000 MR213
IACS
C02 Ice Cores and Climate
C02S4
Chairpersons: Ross Edwards

0830 **# 4056.** Stable isotope records for the past 1000 years from five ice cores in Central Dronning Maud Land
H. Oerter, S. Kipfstuhl, F. Wilhelms.
0845 **# 3118.** High Resolution Climate Record from the Dome Fuji Ice Core during Antarctic Isotope Maxima (AIM) 3 and 4
K. Goto-Azuma, T. Tatenuma, T. Miyake, M. Hirabayashi, T. Kuramoto, et al.
0900 **# 1131.** Snow accumulation rate and water stable isotope changes of near surface-snow at the inland Antarctica
Y. Hoshina, K. Fujita, F. Nakazawa, Y. Iizuka, T. Miyake, et al.
0915 **# 1679.** Potential of the Stable Water Isotope Composition of Precipitation and Firn Cores as a Proxy for Climate Reconstruction at the Northern Antarctic Peninsula Region.
F. Fernandoy, H. Meyer, M. Tonelli.
0930 **Discussion.**
0945 **Discussion.**

Wednesday, 29 June 2011 0830-1000 MR219
IACS
C03 Morphology of Snow and Ice on the Ground and in the Atmosphere
C03S1
Chairpersons: Henning Loewe

0830 **# 2427. Invited** Studying Ice Crystals – Alternatives To In Situ Imaging
Z. Ulanowski
0845 **As above.**
0900 **# 5830. Invited** Some Numerical Tools to Study Snow Microstructure from 3D Images
F. Flin, A. Hasan, L. Gillibert, A. Dufour, B. Chareyre, et al.
0915 **As above.**
0930 **Discussion.**
0945 **# 4373.** Experiments on the formation and structure of depth hoar
A. Van Herwijnen, E. Adams, P. Staron.

Wednesday, 29 June 2011 0830-1000 MR210
IAG
GOS1 International Association of Geodesy (IAG)
GOS1 Opening Session – Part 1
Chairpersons: Hermann Drewes

0830-1000 Opening session (part 1) for all IAG speakers and delegates

Wednesday, 29 June 2011 0830-1000 MR109
IAMAS
M03 Aerosol-Cloud-Precipitation-Radiation-Interactions
M03S1
Chairpersons: Ilan Koren & Graham Feingold

0830 **# 2847. Invited** Impact of Aerosols on Cloud System-Resolving Model Simulations of Tropical Deep Convection
H. Morrison, W.W. Grabowski, S.T. Massie.
0845 **As above.**
0900 **# 2791.** A-train Satellite Observations of Very Little Cloud Invigoration by Aerosols
S. Massie, L. Munchak, J. Jiang, H. Sui.
0915 **# 1373.** Why Do Cloud Base Drop Concentrations Determine the Height for Onset of Rain in Growing Convective Clouds?
D. Rosenfeld, E. Freud.
0930 **# 1243.** Numerical Simulations of Aerosol Effects on Regional Precipitation
Y. Yin, H. Xiao, Q. Chen.
0945 **Discussion.**

Wednesday, 29 June 2011 0830-1000 MR102

IAMAS

M06 Bioaerosols in the Earth system

M06S1

Chairpersons: Cindy E. Morris & Ulrich Pöschl

0830 **Introduction.**

0845 **# 5625. Invited** Direct Measurements of Bioaerosol Fluxes into the Atmosphere: Relevance and Challenges
Y. Brunet

0900 **As above.**

0915 **# 1839.** Understanding the global transport of bacteria in the atmosphere: Insights from models and measurements
S. Burrows, W. Elbert, T. Butler, P. Jackel, H. Tost, et al.

0930 **# 1897.** Diatoms in snow in the Windmill Islands, East Antarctica: Sources and implications
A. Budgeon, M. Gasparon, D. Roberts, N. Adams.

0945 **# 4210.** Occurrence of the Ice Nucleation Active Bacterium Pseudomonas syringae in Precipitation is Linked to Air Mass Properties and their Trajectories.
C. Morris, C. Monteil.

Wednesday, 29 June 2011 0830-1000 MR106

IAMAS

M07 Advances in atmospheric dynamics

M07S1

Chairpersons: Michael Reeder

0830 **# 3529.** Professor Bruce Morton's Contributions to Australian Meteorology
M. Reeder, R. Smith.

0845 **# 3460. Invited** Dynamics of Heat Lows
T. Spengler

0900 **As above.**

0915 **# 3585.** The Dynamics of Heat Lows over Elevated Terrain
R. Smith, T. Spengler.

0930 **# 1175.** Numerical Simulations of the Australian Heat Low
G. Thomsen

0945 **# 3806.** Dynamics and Seasonality of the Subtropical Highs
T. Miyasaka, H. Nakamura.

Wednesday, 29 June 2011 0830-1000 MR105

IAMAS

M08 The impact of solar variability on the Earth

M08S1

Chairpersons: Ulrike Langematz

0830 **# 4897. Invited** Total Solar Irradiance – A new absolute value from PREMOS/PICARD and a revised PMOD-TSI-composite
W. Schmutz

0845 **As above.**

0900 **# 3186. Invited** Measured and Modeled Trends in Solar Spectral Irradiance Variability and Application to Earth Atmospheric Studies
J. Harder, J. Fontenla, A. Merkel, M. Rast, T. Woods.

0915 **As above.**

0930 **# 691.** Solar Irradiance Variations During Solar Cycle 23/24 Minimum
T. Woods

0945 **# 2800.** Temperature Responses to Spectral Solar Forcing Since 1600 from a Coupled Ocean-Atmosphere Radiative Convective Model
R. Cahalan, G. Wen, P. Pilewskie, J. Harder.

Wednesday, 29 June 2011 0830-1000 MR103

IAMAS

M13 Mineral dust: Its impact on the atmosphere and the ocean

M13S1 Dust Chemistry & Biosphere Interaction

Chairpersons: Jen-Ping Chen & Zifa Wang

0830 **# 3945. Invited** Estimation of the iron solubility in dust: In search of the key parameter?
K. Desboeufs

0845 **As above.**

0900 **# 2894.** Systematic in the Aeolian Dust Iron Dissolution
S. Hsu, G.T.F. Wong, Y.T. Huang, J.C. Huang, F. Tsai.

0915 **# 5312.** Transport of atmospheric iron embedded in mineral dust simulated by a regional atmospheric dust model
S. Nickovic, M. Vujadinovic, A. Vukovic, V. Djurdjevic, G. Pejanovic, et al.

0930 **# 1296.** Photooxidation of Atmospheric Organic Trace Gases on Laboratory Proxies for Mineral Dust
S.A. Styler, S. Lapierre, D.J. Donaldson.

0945 **# 1537.** Size-Resolved Mineralogy and Mineral Association of Australian Desert Dust Aerosol
M. Box, D. French, M. Radhi, G. Box, D. Cohen, et al.

Wednesday, 29 June 2011 0830-1000 MR211

IAPSO

P01 General topics of ocean physics and chemistry

P01S4

Chairpersons: Silvia Blanc & Eugene Morozov

0830 **# 2789.** Direct observation of subtropical mode water circulation in the North Atlantic Ocean
D. Fratantoni, Y. Kwon, J. Park.

0845 **# 1528.** Arterial ocean circulation of the Southeast Indian Ocean
P. Divakaran, G. Brassington, K. Walsh.

0900 **# 713.** Underwater Cataracts in the Equatorial Atlantic
E. Morozov

0915 **# 1896.** What Controls Warm Water Volume Variations in the Tropical Pacific Ocean?
J. Brown, A. Fedorov.

0930 **# 4208.** An Overview of real-time global and regional forecast systems developed at the Naval Research Laboratory
P. Hogan, O.M. Smedstad, C. Barron, E.J. Metzger, C. Rowley, et al.

0945 **Discussion.**

Wednesday, 29 June 2011 0830-1000 MR212

IAPSO

P03 Ocean Mixing

P03S4

Chairpersons: Helen Phillips

0830 **# 4730.** Mechanisms and rates of energy transfer affecting the global overturning circulation
J. Saenz, A. Hogg, G. Hughes, R. Griffiths.

0845 **# 1061. Invited** Scale interactions in the tropical Pacific: the role of ocean mixing
K. Richards, A. Natarov, Y. Kashino, W. Sasaki.

0900 **As above.**

0915 **# 3722.** A constraint on the magnitude and structure of eddy potential vorticity fluxes
D. Marshall, J. Maddison, P. Berloff.

0930 **# 3503.** Potential Vorticity Sources and Sinks from Friction and Diapycnal Mixing at a Slope
J. Benthuysen, L. Thomas.

0945 **# 5576.** Assessment of Fine-Scale Parameterization of Diapycnal Diffusivity Near Mixing Hotspots
T. Hibiya

WEDNESDAY, 29 JUNE 2011 1030-1200 AM2

Wednesday, 29 June 2011 1030-1200 MR203

IUGG

U02 Grand Challenges in Natural Hazards Research and Risk Analysis

U02S2 Speakers by Invitation

Chairpersons: David Jackson & Kuni Takeuchi

1030 **# 3066.** High Resolution 20-km Mesh Global Climate Model and Projected Hydro-meteorological Extremes in the Future
A. Kitoh

1045 **As above.**

1100 **# 5369.** Sustainability of the Venice Lagoon in the face of climate change
P. Linden, C. Nasci.

1115 **As above.**

1130 **# 5381.** Disaster policy and climate change: how much more of the same?
S. Dovers, J. Handmer.

1145 **As above.**

Wednesday, 29 June 2011 1030-1200 MR220

IACS

C01 Remote Sensing of the Cryosphere – linking and validating measurements from satellite, air, and ground

C01S2

Chairpersons: Wolfgang Rack & Jan Lieser

1030 **# 4339.** Radar Instrumentation for Operation Ice Bridge
P. Gogineni, C. Leuschen, F. Rodriguez-Morales, J. Paden, C. Lewis, et al.

1045 **Discussion.**

1100 **# 4347.** Validation of FM-CW Accumulation Radar Derived Snow Accumulation Rate With Firn Core Data
D. Braaten, P. Gogineni, J. Carse, C. Laird, D. Mailhot, et al.

1115 **# 3307.** Anisotropy in microwave backscatter from snow/firn in Wilkes Land, East Antarctica
A. Fraser, N. Young.

1130 **# 4902.** The characterization of precipitation and clouds at Dome Fuji station, the Antarctic interior, based on the ceilometer observation
N. Hirasawa, K. Fujita.

1145 **Short poster presentations.**

Wednesday, 29 June 2011 1030-1200 MR219

IACS

C03 Morphology of Snow and Ice on the Ground and in the Atmosphere

C03S2

Chairpersons: Alec van Herwijnen

1030 **# 5968. Invited** From Polar Snow to Ice: Observations of Pore Structure using large Scale X-ray Tomography
J. Freitag, S. Kipfstuhl.

1045 **As above.**

1100 **# 5029.** Experimental observations of anisotropic polycrystalline ice flow
A. Treverrow, W.F. Budd, J. Jacka, R.C. Warner.

1115 **# 3918.** Micro-mechanical Modelling of Dynamic Recrystallization in Polar Ice: Theory and Numerical Predictions
R. Staroszczyk

1130 **# 5048.** Temperature gradient metamorphism of snow as a migration problem of coalescing pores?
H. Löwe, M. Schneebeli.

1145 **# 1956.** The temporal evolution of sea ice microstructure
M. Ingham, K. Jones.

Wednesday, 29 June 2011 1030-1200 MR218

IACS

C04 Glacier and Ice Cap Fluctuations

C04S1

Chairpersons: Nicolas Cullen

1030 **# 1059. Invited** What do glaciers tell us about climate variability and climate change?
G. Roe

1045 **As above.**

1100 **# 3264.** Advancing New Zealand Glaciers in a Warming World
A. Mackintosh, B. Anderson.

1115 **# 552.** Russian Northern Far East: Assessment of mountain glaciers state and projection of their evolution
M. Ananicheva

1130 **# 4523.** Glacier Changes of the Himalayas in the Last 20 Years
C. Xiao, G. Xiaoyin, Z. Dongqi, R. Jiawen, Q. Dahe, et al.

1145 **# 5109.** A physically-calibrated model of the response of Tsanfleuron Glacier, Switzerland, to anticipated climate change
B. Hubbard, D. Chandler.

Wednesday, 29 June 2011 1030-1200 MR210

IAG

GOS2 International Association of Geodesy (IAG)

GOS2 Opening Session – Part 2

Chairpersons: Hermann Drewes

1030-1200 Opening session (part 2) for all IAG speakers and delegates

Wednesday, 29 June 2011 1030-1200 MR109
IAMAS
M03 Aerosol-Cloud-Precipitation-Radiation-Interactions
M03S2
Chairpersons: Hugh Morrison & Daniel Rosenfeld

1030 **# 1425. Invited** A strategy of isolating climatic effects of aerosol on precipitation from other weather and climate factors
C. Zhang, J. Huang.
1045 **As above.**
1100 **# 797.** The effects of aerosols on Thunderstorms and Lightning in a Chinese Megacity
R. Zhang, Y. Wang, Q. Wang.
1115 **# 2099.** Impact of aerosols on cloud and precipitation revealed from long-term surface and global satellite measurements
Z. Li, F. Niu, D. Rosenfeld, Y. Liu, J. Fan.
1130 **# 5444.** Identification of Supercooled Liquid Water over the Southeast Australia and Tasmania and its response to glaciogenic cloud seeding
S. Siems, M. Manton, A. Morrison.
1145 **Discussion.**

Wednesday, 29 June 2011 1030-1200 MR102
IAMAS
M06 Bioaerosols in the Earth system
M06S2
Chairpersons: Cindy E. Morris & Ulrich Pöschl

1030 **# 1665. Invited** Parameterizing bioaerosol emissions and interactions with clouds current issues in models on different scales
C. Hoose, C. Anquetil-Deck, S.M. Burrows, M. Hummel, J.E. Kristjansson.
1045 **As above.**
1100 **# 4520.** Crops and Crop Debris as Potential Sources of High-Temperature Ice Nuclei
T. Hill, E. Garcia, A.J. Prenni, P.J. DeMott, G.D. Franc.
1115 **# 1362.** Cloud Condensation and Ice Nucleation Activity of Bacteria isolated from Cloud Water
C.E. Oehm, E. Attard, C. Chou, O. Stetzer, A.M. Delort, et al.
1130 **# 961.** The Ice Nucleation Ability Of Pollens And Fungal Spores
B.G. Pummer, H. Grothe, H. Bauer, J. Bernardi.

Wednesday, 29 June 2011 1030-1200 MR106
IAMAS
M07 Advances in atmospheric dynamics
M07S2
Chairpersons: Roger Smith

1030 **# 3374.** Fronts, Orography and the Boundary Layer
L. Muir, M. Reeder.
1045 **# 4492. Invited** Comparing the Dynamics of Australian and Africa Synoptic-scale Tropical Disturbances.
G. Berry
1100 **As above.**
1115 **# 3528.** Breaking Rossby Waves, Fronts and Wildfires in Southern Australia
M. Reeder, T. Spengler, R. Musgrave.
1130 **# 4777.** Decadal Changes in Southern Hemisphere Subtropical Jet and Weather Modes
J. Frederiksen, C.S. Frederiksen.
1145 **Discussion.**

Wednesday, 29 June 2011 1030-1200 MR105
IAMAS
M08 The impact of solar variability on the Earth
M08S2
Chairpersons: Thomas Woods

1030 **# 5527. Invited** Solar spectral irradiance variations on time scales of days to decades: are they coherent?
T. Dudok De Wit, G. Cessateur, M. Kretzschmar, J. Lilensten, L. Vieira.
1045 **As above.**
1100 **# 5181. Invited** From Solar Irradiances to Solar Influences on Ozone: A Perspective from SCIAMACHY (and other) Satellite Observations
M. Weber, J.P. Burrows, S. Dikty, J. Pagaran, C. von Savigny, et al.
1115 **As above.**
1130 **# 3647.** The Role of Stratospheric Warmings on Stratospheric Solar Response as Simulated with the Chemistry-Climate Model LMDz-Reprobus
P. Keckhut, M. Marchand, S. Bekki, C. Claud, D. Cugnet, et al.
1145 **# 2025.** The 27-day and 11-year solar cycle variations in tropical upper stratospheric ozone
V. Fioletov

Wednesday, 29 June 2011 1030-1200 MR104
IAMAS
M12 Mesoscale and synoptic scale meteorology in the Arctic and Antarctic
M12S1
Chairpersons: Dave Bromwich

1030 **# 708. Invited** Observations of wintertime air-sea fluxes over the Terra Nova Bay polynya, Antarctic
J. Cassano, S. Knuth.
1045 **As above.**
1100 **# 556.** Two years of atmospheric boundary layer tower observation at Dome C, Antarctic plateau
C. Genthon, D. Six, O. Traullé, E. Aristidi.
1115 **Discussion.**
1130 **# 5372.** Blowing Snow in Adelie Land, Antarctica: Observation and Simulation by a Regional Climate Model.
H. Gallée, A. Trouvilliez, C. Agosta, C. Genthon, V. Favier.
1145 **# 5524.** Surface jets formed on the lee side of the Antarctic Peninsula during easterly flow.
T. Lachlan-Cope, V. Smith, A. Elvidge, A. Kirchgaessner, R. Ladkin.

Wednesday, 29 June 2011 1030-1200 MR103
IAMAS
M13 Mineral dust: Its impact on the atmosphere and the ocean
M13S2 Dust Physics and Impacts
Chairpersons: Zifa Wang & Slobodan Nickovic

1030 **# 4980.** A Surface Area Based Formulation of Heterogeneous Ice Nucleation by Mineral Dust Aerosols
O. Moehler, M. Niemand, B. Vogel, H. Vogel, P. Connolly, et al.

1045 **# 2275.** Simulations of Mineral Dust Impact on Cloud Glaciation and Precipitation Formation
J. Chen, Y.C. Lin.

1100 **# 4617.** Simulating radiation feedback to boundary layer stability caused by dust aerosols over Australia using the Weather Research and Forecasting model with Chemistry (WRF/Chem)
O. Alizadeh Choobari, P. Zawar-Reza, A. Sturman.

1115 **# 3526.** Simulation of aerosol mixing state in a dust event over Taiwan
I. Tsai, C-J. Shiu, W-N. Chen, C-K. Chou, J-P. Chen.

1130 **# 2279.** The Influence of Dust-microphysics Processes on Tropical Cyclone Development
S. Chen, C.T. Cheng, J.P. Chen, Y.C. Lin, H.H. Lee, et al.

1145 **# 2377.** Simulation of mineral dust wet deposition by in-cloud and below-cloud scavenging
Y. Lin, J.P. Chen.

Wednesday, 29 June 2011 1030-1200 MR211
IAPSO
P01 General topics of ocean physics and chemistry
P01S5
Chairpersons: Silvia Blanc & Eugene Morozov

1030 **# 2358.** The arrested development of wind-driven currents under the Gent-McWilliams parameterisation
M. Ward, A. Hogg.

1045 **# 1454.** Basin Resonances in the Equatorial Indian Ocean
W. Han, J. McCreary, Y. Masumoto, J. Vialard, B. Duncan.

1100 **# 2565.** Details on Upwelling in the eastern Great Australian Bight, South Australia
J. Kaempf

1115 **# 2655.** Possible cause of the interannual mixed-layer depth variability in the north pacific eastern subtropical mode water formation region
S. Kako, T. Nishi.

1130 **# 2728.** Mechanisms of surface intensification of westward propagating signals by a mean flow
R. Tailleux, J. Le Sommer.

1145 **Discussion.**

Wednesday, 29 June 2011 1030-1200 MR212
IAPSO
P03 Ocean Mixing
P03S5
Chairpersons: Helen Phillips

1030 **# 967. Invited** Intermittent Intense Turbulent Mixing under Ice in the Laptev Sea Continental Shelf
Y. Lenn, T. Rippeth, C. Old, S. Bacon, I. Polyakov, et al.

1045 **As above.**

1100 **# 1187.** Mixing across a PV gradient: tilted jets over sloped bottom topography.
E. Boland, A. Thompson, E. Shuckburgh, P. Haynes, S. Bouvier.

1115 **# 3485.** Where and how long ago was water in the western North Atlantic last ventilated? Maximum entropy inversions of tracer data
M. Holzer, F. Primeau, W. Smethie Jr. , S. Khatiwala.

1130 **# 3943.** Lagrangian surface ocean diffusivity in the Southern Ocean
J. Sallee, K. Speer, S.R. Rintoul.

1145 **# 4152.** From Rossby Wave to turbulence in the Southern Ocean
L. Jullion, A. Naveira Garabato, K. Polzin, K. Heywood, D. Stevens.

Wednesday, 29 June 2011 1030-1200 MR213
IAPSO
P06 Eastern and Western Boundary Currents
P06S1 Dynamics and Fluxes
Chairpersons: Lisa Beal & Katy Hill

1030 **# 2026. Invited** Dynamics of Circulations in the South Indian Ocean
J. McCreary

1045 **As above.**

1100 **# 2549.** Subtropical western boundary currents separating from bottom slopes with inshore pool regions: An indication to the kuroshio near-shore path
H. Nishigaki, H. Mitsudera.

1115 **# 4560.** Barotropic and Baroclinic Responses to Basin-Wide Wind Forcing: Insights on the Kuroshio from Observations and OFES Model Output
M. Andres, M. Nonaka, H. Sasaki.

1130 **# 5382.** Can South Pacific winds explain the northward flow of the Antarctic Circumpolar Current along the Campbell Plateau?
M. Bowen

1145 **# 5697.** Remote Influences of Boundary Current Variability on Extra-tropical Sea Surface Temperature
R. Marsh, S. Taws, N. Wells.

Wednesday, 29 June 2011 1330-1500 MR203

IUGG

U02 Grand Challenges in Natural Hazards Research and Risk Analysis

U02S3 Speakers by Invitation

Chairpersons: A. Ismail-Zadeh & V. Kossobokov

1330 **# 2823.** Mitigating Volcanic Risk in the United States and Adjacent Pacific Region
J. Eichelberger

1345 **As above.**

1400 **# 5967.** India's Tsunami Warning System: A Success Story
H. Gupta

1415 **As above.**

1430 **# 5384.** Challenges in Data management during disasters
S. Zlatanova

1445 **As above.**

Wednesday, 29 June 2011 1330-1500 MR220

IACS

C01 Remote Sensing of the Cryosphere – linking and validating measurements from satellite, air, and ground

C01S3

Chairpersons: Jan Lieser & Robert Massom

1330 **# 5771. Invited** Stick your nose into the snow – Validation of satellite sea ice observations
C. Haas

1345 **As above.**

1400 **# 5561.** Regional Variations in Sea Ice and Snow Thickness in the Antarctic Pack Ice, and the Implications for Sea Ice Thickness Products Derived from Satellite Laser Altimetry
A. Worby, J. Lieser, S. Ackley, H. Xie.

1415 **# 3012.** The distribution and variation of Antarctic sea-ice freeboard and thickness from ICESat (2003-2009)
D. Yi, H. Zwally, J. Robbins.

1430 **# 482.** Optimising airborne LiDAR surveys in the Antarctic pack ice zone
A. Steer, C. Watson, J. Lieser, A. Lucieer.

1445 **# 2211.** Development of a modis sea ice albedo product
J. Stroeve, M. Brodzik.

Wednesday, 29 June 2011 1330-1500 MR218

IACS

C04 Glacier and Ice Cap Fluctuations

C04S2

Chairpersons: Andrew Mackintosh & Nicolas Cullen

1330 **# 1348.** Exploring The Dynamic Behaviour Of The Surface Flow Of Tasman Glacier
T. Redpath, S. Fitzsimons, P. Sirguey, A. Kääb.

1345 **# 3173.** Assessment of Glaciers Changes in Mountain Regions of Former Soviet Union using Recent Satellite Data and Historical Data Sets.
T. Khromova, G. Nosenko.

1400 **# 1076.** Formation conditions of supraglacial lakes on debris-covered glaciers in the Himalayas
A. Sakai, T. Tadono, K. Fujita, T. Nuimura.

1415 **# 5856.** Glacier Geometry and Hydrology Changes in the Southern Alps, New Zealand
B. Anderson, A. Mackintosh, A. Sood, J. Hendrikx, E. Hreinsson, et al.

1430 **# 5921.** Climate variability and river flow from partly-glacierised Himalayan headwater basins of the Indus and Ganges
D. Collins, J. Davenport.

1445 **Discussion.**

Wednesday, 29 June 2011 1330-1500 MR217

IAG

G01 Reference Frames from Regional to Global Scales

G01S1

Chairpersons: Zuheir Altamimi & Athanasios Dermanis

1330 **# 2778.** Current achievements of reference frame determinations
Z. Altamimi

1345 **# 2679.** On the alternative approaches To ITRF formulation. a theoretical comparison.
A. Dermanis

1400 **# 3993.** External evaluation of the ITRF2008Â : report of the working group of the IAG sub-commission 1. 2
X. Collilieux, Z. Altamimi, D. Argus, C. Boucher, A. Dermanis, et al.

1415 **# 5354.** Thoughts to future realizations of the International Terrestrial Reference Frame
H. Drewes, M. Seitz, D. Angermann.

1430 **# 2631.** Consistent adjustment of combined terrestrial and celestial reference frames
M. Seitz, P. Steigenberger, T. Artz, R. Heinkelmann, D. Angermann.

1445 **Discussion on IAG Commission 1 Activities.**

Wednesday, 29 June 2011 1330-1500 MR215

IAG

G04 Multisensor Systems for Engineering Geodesy

G04S1

Chairpersons: Dorota Grejner-Brzezinska & Hansjorg Kutterer

1330 **# 2071.** Earth on the Edge – Applications of Geodesy in Engineering
G. Retscher, G. Mentes, A. Reiterer.

1345 **# 4941.** Integration of Inertial and Vision Sensors with 3D Maps for Positioning and Orientation in GNSS Denied Environment
J. Wang, W. Ding, X. Liu, P. Solomon, W. Liu.

1400 **# 4630.** Land Navigation/Geolocation Aided by Terrestrial Laser Scanning
C. Toth, D. Brzezinska, X. Wang, JK. Lee.

1415 **# 3668.** Integration of Uncertainty Measures into a Direct Geo-Referencing of 3D Point Clouds
J. Paffenholz, H. Kutterer.

1430 **# 5260.** First Step Dam Monitoring Using Integration of Two GNSS receivers and One Robotic Total station : A Case Study at Sermo Dam, Yogyakarta Province, Indonesia
A. Sunantyo, K. Suryolelono, D. Fahrurrazi, A. Swastana, M. Iqbal, et al.

1445 **Discussion.**

Wednesday, 29 June 2011 1330-1500 MR109
IAMAS
M03 Aerosol-Cloud-Precipitation-Radiation-Interactions
M03S3
Chairpersons: Wojtek Grabowski & Steve Siems

1330 **# 2828. Invited** Microphysical and optical properties of shallow convective clouds in large-eddy simulation with double-moment warm-rain microphysics
W.W. Grabowski, J. Slawinska, H. Pawlowska, H. Morrison.
1345 **As above.**
1400 **# 3487.** Effect of Hygroscopic Seeding on Warm Rain Clouds
N. Kuba, M. Murakami.
1415 **# 3571.** Validation Of JMANHM+HUCM Through Comparisons With Satellite And Aircraft Observations At DYCOMS-II Period
Y. Sato, T. Nakajima, K. Suzuki, J. Jensen, T. Nakajima, et al.
1430 **# 3249. Invited** Effects of Turbulent Microphysics on Precipitation-Dynamical Feedbacks and Indirect Effects in Simulations of Stratocumulus and Shallow Cumulus Convection
C. Franklin
1445 **As above.**

Wednesday, 29 June 2011 1330-1500 MR102
IAMAS
M06 Bioaerosols in the Earth system
M06S3
Chairpersons: Cindy E. Morris & Ulrich Pöschl

1330 **Aerosol feedback & interactions – a tale from afar.**
1345 **# 5615. Invited** Overview of Physical and Chemical Approaches for Direct Detection of Biological Aerosols
J.A. Huffman
1400 **As above.**
1415 **# 4078.** Fungal Diversity and Biogeography in the Air
J. Froehlich, V. Despres, U. Poeschl.
1430 **# 3298.** Phylogenetic analysis of long-range transported bacteria isolated from Asian dust (KOSA) bioaerosols
T. Maki, F. Kobayashi, M. Kakikawa, A. Matsuki, Y. Iwasaka.
1445 **Poster Presentation Introduction.**

Wednesday, 29 June 2011 1330-1500 MR106
IAMAS
M07 Advances in atmospheric dynamics
M07S3
Chairpersons: Jorgen Fredriksen

1330 **# 4556.** Atmospheric Forcing of Antarctic Sea Ice
J. Renwick
1345 **# 4727.** An inverse method for determining climate forcing from climate data
M. Zidikheri, J. Frederiksen.
1400 **# 3772.** Seasonal Evolutions Of Atmospheric Response To Decadal SST Anomalies In The North Pacific Subarctic Frontal Zone: Observations And A Coupled Model Simulation
B. Taguchi, H. Nakamura, M. Nonaka, N. Komori, A. Kuwano-Yoshida, et al.
1415 **# 1523.** Climatological dependence of the tropospheric zonal-mean circulation and eddy activity on the position of a midlatitude SST front as revealed from idealized experiments
F. Ogawa, H. Nakamura.
1430 **# 1091.** Midlatitude Storm Track Response to Increased Greenhouse Warming
Y. Wu, M. Ting, R. Seager, M. Cane, N. Naik.
1445 **# 3200.** Barotropic Instability and the Latitude of the Eddy-Driven Jet
J. Kidston, G. Vallis.

Wednesday, 29 June 2011 1330-1500 MR105
IAMAS
M08 The impact of solar variability on the Earth
M08S3
Chairpersons: Werner Schmutz

1330 **# 894. Invited** Impact of charged particles and cosmic rays on the low and middle atmosphere
I. Mironova
1345 **As above.**
1400 **# 4249. Invited** How Would a New Maunder Minimum Affect the Climate?
G. Feulner, S. Rahmstorf.
1415 **As above.**
1430 **# 4412.** Lower Stratospheric Response to 11-Year Solar Forcing: Evidence for Coupling to the Troposphere-Ocean System
L. Hood, B. Soukharev.
1445 **# 3973.** Mechanisms Involved in the Amplification of the Solar Cycle Signal in the Tropical Pacific
H. Schmidt, S. Misios.

Wednesday, 29 June 2011 1330-1500 MR104
IAMAS
M12 Mesoscale and synoptic scale meteorology in the Arctic and Antarctic
M12S2
Chairpersons: Matthew Lazzara

1330 **# 555.** Temperature biases in Antarctic atmospheric temperature
C. Genthon, D. Six, M. Lazzara, V. Favier.
1345 **# 625.** Reductions of September Arctic Sea Ice Linked to Fewer Summer Storms
J. Screen, I. Simmonds, K. Keay.
1400 **# 4422.** Snow Web: The Next Generation of Antarctic Meteorological Monitoring Systems
A. McDonald, J. Coggins, R. Ward, G. Plank.
1415 **# 4987.** Unprecedented Upper-air Observations over Antarctic and Surrounding Ocean from Concordiasi Driftsonde Data
J.J. Wang, T. Hock, S.A. Cohn, D. Lauritsen, C. Martin, et al.
1430 **# 3785.** Vertical Lapse Rates of Air Temperature in the Kaffioyra Region (NW Spitsbergen) in Summer Seasons, 2005-2010
R. Przybylak, A. Arazny, M. Kejna.
1445 **Short Poster Presentations.**

Wednesday, 29 June 2011 1330-1500 MR103
IAMAS

M13 Mineral dust: Its impact on the atmosphere and the ocean

M13S3 Forecast & analysis

Chairpersons: Ottmar Moehler & Slobodan Nickovic

1330 **# 888. Invited** The MACC/ECMWF aerosol analysis and forecast system: Focus on dust.
J. Morcrette, A. Benedetti, L. Jones, J.W. Kaiser, M. Razinger.

1345 **As above.**

1400 **# 814.** Three-Dimensional Structure of African-Atlantic Aerosol Regulated by the ITCZ as a Leaky Barrier
C. Zhang, A. Adams.

1415 **# 794.** MISR observations in and near the dust source regions: 10-year analysis of aerosol properties and plume heights
A. Lyapustin, M. Garay, I. Sokolik, R. Kahn, O. Torres.

1430 **# 5987.** A quantitative diagnosis method for the regional transport of mineral dust
Z. Wang, H.S. Cheng, J. Li.

1445 **Discussion.**

Wednesday, 29 June 2011 1330-1500 MR211
IAPSO

P01 General topics of ocean physics and chemistry

P01S6

Chairpersons: Silvia Blanc & Eugene Morozov

1330 **# 3399.** The Dynamics of Wind-driven Intraseasonal Variability in the Equatorial Indian Ocean
M. Nagura, M. McPhaden.

1345 **# 658. Invited** Rogue Waves in the Ocean: Review
E. Pelinovsky, A. Slunyaev, C.H. Kharif.

1400 **# 3426.** Effects of Diurnal Cycle of Surface Heat Flux on the Seasonal Variation of the Wind-Driven Ekman Flow
Y. Ide, Y. Yoshikawa.

1415 **# 4364.** A Nested Grid Circulation Model for the German Bight
J. Staneva, S. Grayek, J. Schulz-Stellenfleth, E. Staneva.

1430 **# 5413.** Numerical Simulations of Wind Stress and Thermal Stratification Effects on Natural and Artificial Sea Surface Features in SAR Images
S. Matt, A. Fujimura, C. Maingot, A. Soloviev, S. Rhee.

1445 **# 4656.** Decadal Variability in the South Atlantic Circulation in a Numerical Model Forced with NCEP/Reanalysis
E. Campos, S. Garzoli, G. Goni.

Wednesday, 29 June 2011 1330-1500 MR212
IAPSO

P03 Ocean Mixing

P03S6

Chairpersons: Amelie Meyer

1330 **# 5045.** Super Cooling Driven by Mixing and Frontal Advection Below Fast Ice in an Arctic Coastal Polynya
L.H. Smedsrud, M G. McPhee, R. Skogseth, F. Nilsen.

1345 **# 2291.** Balanced-Unbalanced Interactions Catalyzed by Topography
W. Dewar, A. Hogg, P. Berloff, B. Deremble.

1400 **Discussion.**

1415 **As above.**

1430 **# 165.** Modeling the effects of tidal and wave mixing on circulation and thermohaline structures in the Bering Sea: Process studies
J. Wang, H. Haoguo.

1445 **Discussion.**

Wednesday, 29 June 2011 1330-1500 MR213
IAPSO

P06 Eastern and Western Boundary Currents

P06S2 Dynamics and Fluxes

Chairpersons: Ming Feng & Masami Nonaka

1330 **# 4280.** Predictability of the East Australian Current Separation and Eddy Shedding Region
R. Woodham, A. Kiss, G. Brassington, O. Alves.

1345 **# 4778.** The Role Of Cyclonic Anomalies In The Separation Of Subtropical Western Boundary Currents
A. Kiss

1400 **# 3733.** Sea Level Pressure Minimum along the Kuroshio and its Extension
Y. Tanimoto, T. Kanenari, H. Tokinaga, SP. Xie.

1415 **# 4561.** Dynamical Downscaling of the East and Western Boundary Currents Around Australia Using the Bluelink Ocean Forecasting Australia Model
C. Sun, M. Feng, R. Matear, M. Chamberlain, P. Craig, et al.

1430 **# 4724.** An estimation of eddy heat transport in the western boundary currents using a global dddy-resolving ocean GCM simulation
K. Aoki, S. Minobe, Y. Tanimoto, Y. Sasai.

1445 **# 3518.** Isopycnal and diapycnal transports of nutrient in the Kuroshio region
K. Komatsu, I. Yasuda, S. Itoh, T. Ikeya, H. Kaneko, et al.

WEDNESDAY, 29 JUNE 2011 1630-1800 PM2

Wednesday, 29 June 2011 1630-1800 MR203
IUGG

U02 Grand Challenges in Natural Hazards Research and Risk Analysis

U02S4 Open Forum: Natural Hazards: from Risk to Opportunity by Partnership of Science and Society (Speakers by Invitation)

Chairpersons: Kuni Takeuchi & Alik Ismail-Zadeh

1630 **Introduction.**

1645 **As above.**

1700 **# 5341.** Partnership of Science and Society: A grand challenge
R. Kuroda

1715 **# 5949.** Enhancing Social Resilience through Participatory Integrated Floods and Droughts Management – An Example from Pakistan
S. Khan

1730 **Discussion.**

1745 **As above.**

Wednesday, 29 June 2011 1630-1800 MR220
IACS
C01 Remote Sensing of the Cryosphere – linking and validating measurements from satellite, air, and ground
C01S4
Chairpersons: Jan Lieser & Robert Massom

1630 **# 3153.** Validation of CryoSat-2 Sea Ice Freeboard Retrievals in the Arctic by Ground, Helicopter and Aircraft Surveys
S. Hendricks, L. Stenseng, V. Helm, C. Haas.

1645 **# 3595.** Quantifying Sea Ice Formation Rates In The Laptev Sea By Means Of ENVISAT SAR Scenes And Airborne Ice Thickness Measurements
T. Krumpen, J. Hoelemann, L. Rabenstein.

1700 **# 2585.** Remote detection of the loose platelet layer at the base of a sea ice cover by electromagnetic induction measurements
P.J. Langhorne, C. Haas, W. Rack, A.J. Gough, W. Clavano, et al.

1715 **# 5456.** Thickness and extent of multi-year/multi-decadal fast ice east of Mertz Glacier, East Antarctica
N. Young, A. Fraser, J. Lieser, R. Massom, S. Rintoul.

1730 **# 4651.** Investigation of Antarctic sea-ice motion using ASAR imagery
P. Heil, R. Massom, G. Hyland, A. Giles.

1745 **Discussion.**

Wednesday, 29 June 2011 1630-1800 MR218
IACS
C04 Glacier and Ice Cap Fluctuations
C04S3
Chairpersons: Nicolas Cullen & Andrew Mackintosh

1630 **# 1146. Invited** The Potential Drivers Of Glaciers And Ice Caps: A Multi-Scale Problem
T. Moelg, G. Kaser.

1645 **As above.**

1700 **# 1223.** Future glacier changes in western Canada: inter-comparison of modelling approaches
V. Radic, F. Anslow, A. Jarosch, G. Clarke.

1715 **# 3231.** Turbulent heat fluxes over Brewster Glacier, New Zealand, using bulk aerodynamic and eddy correlation data
J. Conway, N.J. Cullen, T. Molg, S.J. Fitzsimons, R. Spronken-Smith.

1730 **# 1028.** Inhomogeneous wastage distribution of Himalayan glaciers
K. Fujita, T. Nuimura.

1745 **# 1368.** Study on the Factors Influencing the Steady-state Length of a Mountain Glacier
N. Wang, K. Duan.

Wednesday, 29 June 2011 1630-1800 MR217
IAG
G01 Reference Frames from Regional to Global Scales
G01S2
Chairpersons: Athanasios Dermanis & Zuheir Altamimi

1630 **# 5752.** The Construction of ICRF2 and its impact on Terrestrial Reference Frame
K. Le Bail, C. Ma, D. Gordon, D. MacMillan, S. Bolotin.

1645 **# 2391.** DPOD2008: a global reference frame derived from ITRF2008 for precise orbit determination of DORIS satellites
P. Willis, F. Lemoine, N. Zelensky, J. Ries, L. Soudarin, et al.

1700 **# 5839.** Combined weekly coordinate solutions from SLR and DORIS
F. Lemoine, D.S. Chinn, K. Le Bail, N.P. Zelensky, S. Melachroinos, et al.

1715 **# 4002.** Combination of space geodetic measurements during CONT08
A. Pollet, D. Coulot.

1730 **# 5820.** Improving the Terrestrial Reference Frame Realization of LEO Orbits by Means of Consistent Combination of Space Geodesy Techniques From Ground, LEO and GNSS Layer
D. Svehla, T. Springer, C. Flohrer, R. Zandbergen, J. Dow, et al.

1745 **# 4965.** Atmospheric Effects on VLBI-derived Terrestrial and Celestial Reference Frames
J. Boehm, H. Spicakova, L. Plank, T. Nilsson, H. Schuh.

Wednesday, 29 June 2011 1630-1800 MR215
IAG
G04 Multisensor Systems for Engineering Geodesy
G04S2
Chairpersons: Dorota Grejner-Brzezinska & Hansjorg Kutterer

1630 **# 2782.** Applications of body-mounted MEMS inertial sensors
B. Schaefer, F. Wild-Pfeiffer, W. Xue, C. Becker, U. Lindemann.

1645 **# 3030.** PL-RTK: A Pseudolite-based RTK System
C. Li, J. Huang, Y. Xu, T. Zhang, M. Wu, et al.

1700 **# 3038.** Precise Position Determination for Ground-based Pseudolite
M. Wu, J. Huang, Y. Xu, Y. Qiu, C. Li, et al.

1715 **# 3835.** Quality Assessment of Different GNSS/IMS-Integrations
P. Hafner, K. Laengauer, M. Wieser, N. Kuehtreiber.

1730 **# 4644.** Collaborative navigation in GPS-challenged environments
D. Grejner-Brzezinska, C. Toth, JK. Lee, X. Wang.

1745 **Discussion.**

Wednesday, 29 June 2011 1630-1800 MR109

IAMAS

M03 Aerosol-Cloud-Precipitation-Radiation-Interactions

M03S4

Chairpersons: Lazaros Oreopoulos & Hugh Morrison

1630 **# 728. Invited** Aerosol properties in the vicinity of clouds from MODIS and CALIPSO
A. Marshak, T. Varnai, G. Wen, W. Yang, R. Cahalan.

1645 **As above.**

1700 **# 5982.** The Aerosol-Cloud-Precipitation System as a Coupled Oscillator
G. Feingold, I. Koren.

1715 **# 1609.** Have We Been Underestimating the Aerosols Impact on Cloud Cover in Marine Stratocumulus
T. Goren, D. Rosenfeld.

1730 **# 5496.** Evidence of Regional-scale Aerosol Impacts on Cloud Microphysics over the East China Sea
M. Koike, N. Takegawa, N. Moteki, Y. Kondo, K. Kita, et al.

1745 **# 3105.** An improved precipitation scheme in Cumulus Parameterization
Y. Chen, J. Chen.

Wednesday, 29 June 2011 1630-1800 MR102

IAMAS

M06 Bioaerosols in the Earth system

M06S4

Chairpersons: Cindy E. Morris & Ulrich Pöschl

1630 **# 1246.** Microbial implication in atmospheric chemistry
M. Vaitilingom, L. Deguillaume, T. Charbouillot, R. Maisonobe, M. Sancelme, et al.

1645 **# 695. Invited Research Priorities for Climate Effects of Bioaerosols**
K. Bigg

1700 **# 695. Invited** Research Priorities for Climate Effects of Bioaerosols
K. Bigg

1715 **# 4209. Invited** Mapping the Interdisciplinarity of Research on the Role of Microbial Aerosols in Atmospheric Processes.
C. Morris, V. Decognet.

1730 **Discussion & organisation of working group for publications.**

1745 **As above.**

Wednesday, 29 June 2011 1630-1800 MR106

IAMAS

M07 Advances in atmospheric dynamics

M07S4

Chairpersons: Nili Harnik

1630 **# 4978. Invited** Stratospheric Transport: Dynamics, Age, and Trace Gases
A. Plumb

1645 **As above.**

1700 **# 1552.** Sources of Annular Mode Timescales
L. Mudryk, P. Kushner.

1715 **# 2618.** Cooling of the wintertime arctic stratosphere induced by the western pacific teleconnection pattern
K. Nishii, H. Nakamura, Y. Orsolini.

1730 **# 737.** New Climatological Diagnostics of Midlatitudes Moist Stratification
F. Laliberte, O. Pauluis, T. Shaw.

1745 **# 3742.** Zonal Mean Polar Cold Air Outbreak in the Northern Hemispheric Winter
T. Iwasaki, Yasushi. Mochizuki, Satoshi. Hasegawa, Fukiko. Takehi.

Wednesday, 29 June 2011 1630-1800 MR105

IAMAS

M08 The impact of solar variability on the Earth

M08S4

Chairpersons: Joanna Haigh

1630 **# 3117. Invited** Results from the SPARC-SOLARIS Project
K. Matthes, K. Kodera.

1645 **As above.**

1700 **# 3398. Invited** Non-linear interaction of the solar forcing in the boreal winter
K. Kodera

1715 **As above.**

1730 **# 4061. Invited** The Earth System Response to Solar Variablity
D. Marsh, N. Calvo, M. Mills.

1745 **As above.**

Wednesday, 29 June 2011 1630-1800 MR104

IAMAS

M12 Mesoscale and synoptic scale meteorology in the Arctic and Antarctic

M12S3

Chairpersons: John Turner

1630 **# 2569. Invited** Developments in synoptic and meso-scale meteorology in support of weather forecasting operations for the Australian Antarctic program.
N. Adams

1645 **As above.**

1700 **Discussion.**

1715 **# 4279.** Relationships between Antarctic cyclones and surface conditions as derived from high resolution NWP data
P. Uotila, T. Vihma, A. Pezza, K. Keay, I. Simmonds, et al.

1730 **# 4903.** Evolution of synoptic-scale high-pressure systems after Antarctic winter blocking, and related weather conditions at Dome Fuji station, the Antarctic interior
N. Hirasawa, H. Nakamura, H. Motoyama, M. Hayashi, T. Yamanouchi.

1745 **# 5373.** Atmospheric Circulation in the lower Troposphere above Dome-C, Antarctica: Observation and Simulations by the MAR RCM and the LMDz GCM.
H. Gallée, C. Genthon, D. Six, O. Traulla, E. Artistidi.

Wednesday, 29 June 2011 1630-1800 MR103
IAMAS
M13 Mineral dust: Its impact on the atmosphere and the ocean
M13S4 Observation & event analysis
Chairpersons: Jean-Jacques Morcrette & Shu-Hua Chen

1630 **# 2031.** First detailed observations of long-range transported dust over the northern South China Sea: Results from 7SEAS/Dongsha Experiment
N. Lin, S. Wang, S. Tsay, C. Hsu, S. Bell, et al.
1645 **# 4835.** A Climatology of Middle East Dust Events
M. Rezazadeh, P. Irannejad, Y. Shao.
1700 **# 1759.** Study of a super heavy Asian dust episode to Taiwan
C.Y. Lin, Y. Sheng, Z. Wang, W. Chen.
1715 **#5454.** Impact of Continental Outflow on Atmospheric Chemistry over Tropical Bay of Bengal
M. Sarin, B. Srinivas, A. Kumar.
1730 **Discussion.**
1745 **Discussion.**

Wednesday, 29 June 2011 1630-1800 MR211
IAPSO
P01 General topics of ocean physics and chemistry
P01S7
Chairpersons: Silvia Blanc & Eugene Morozov

1630 **# 5397.** Interannual variations in low potential vorticity water and the subtropical countercurrent in an eddy-resolving OGCM
M. Nonaka, S.P. Xie, H. Sasaki.
1645 **# 2968.** The ocean response to volcanic iron fertilisation: A biogeochemical ocean model study after the eruption of Kasatochi
B. Langmann, A. Lindenthal, J. Paetsch, I. Lorkowski, M. Hort.
1700 **# 2312.** Axisymmetric Intrusions in Stratified Fluids
B. Sutherland, A. Holdsworth, J. McMillan.
1715 **# 4584.** Relative contribution of local and remote forcing to Eastern Indian Ocean variability
C. Ummenhofer, F. Schwarzkopf, G. Meyers, A. Biatstoch, C. Boning
1730 **# 1765.** Delineation of Gas-Hydrates – A Viable Major Energy Resource for Future
K. Sain, M. Ojha.
1745 **# 1551.** Climate change impacts — Adaptation and mitigation in SAARC countries
J.S. Pillai

Wednesday, 29 June 2011 1630-1800 MR210
IAPSO
P02 Physical and biogeochemical processes in marginal enclosed and semi-enclosed seas
P02S1
Chairpersons: Stefania Sparnocchia & Sayed Sharaf El Din

1630 **Introduction.**
1645 **# 1714.** Affect of Eddies on the intensification of cyclones in the Bay of Bengal
K. Maneesha, Y. Sadhuram.
1700 **# 1680.** EICC and mixed layer induced intra annual variability of chlorophyll in the Bay of Bengal using GTSPP and SeWiFS data
K. Patnaik, K. Prasad, S. Arun Kumar, C. Ramu.
1715 **# 1876.** Upwelling along Southwest coast of India and its relation to Indian monsoon.
A. Joseph Kochuprampil, P. Vareed Joseph, O.M. Johannessen.
1730 **# 3084.** Convective exchange flows above sloping bottom: a unified approach
I. Chubarenko
1745 **# 3425.** Spencer Gulf Eddies (Speddies): the effects of evaporation, heating and tides.
J. Middleton, C. Teixeira.

Wednesday, 29 June 2011 1630-1800 MR212
IAPSO
P03 Ocean Mixing
P03S7
Chairpersons: Amelie Meyer

1630 **# 4324. Invited** Toward Regional Characterizations of the Oceanic Internal Wavefield
K. Polzin, Y. Lvov.
1645 **As above.**
1700 **# 2608.** Assessment of the Effects of Tidal Mixing in the Kuril Straits on the Formation of the North Pacific Intermediate Water
Y. Tanaka, T. Hibiya, Y. Niwa.
1715 **# 3819.** Lagrangian Transport Near Front Transitions: Altimetry and Idealised Models
A. Thompson, J.B. Sallee.
1730 **# 2889.** Observations of Estuarine Circulation and Solitary Internal Waves in a highly energetic tidal channel
S. Groeskamp, J.J. Nauw, L.R.M. Maas.
1745 **# 2567.** Ekman Currents, Shear and Stress within the Mixed Layer of the Southern Ocean
C. Roach, H. Phillips, N. Bindoff, S. Rintoul.

Wednesday, 29 June 2011 1630-1800 MR213
IAPSO
P06 Eastern and Western Boundary Currents
P06S3 Observing Systems and Observations
Chairpersons: Shiro Imawaki & Bo Qiu

1630 **# 4994.** Building a new climate index: The Agulhas Current Time-series (ACT)
L. Beal, G. Leber, P. Cipollini, J. Lutjeharms.
1645 **# 5468.** CORC: Development and implementation of integrated boundary current observing techniques
U. Send, B. Cornuelle, R. Davis, P. Niiler, D. Roemmich, et al.
1700 **# 1374.** The Pisco-San Juan Coastal Upwelling
C. Grados, A. Chaigneau, A. Pietri, N. Dominguez, G. Eldin.
1715 **# 5423.** Southward Flow under the Florida Current and Coastal Countercurrent in the Straits of Florida
A. Soloviev, J. Wood.
1730 **Discussion.**
1745 **Discussion.**

Thursday, 30 June 2011 0830-1000 MR217

IAG

G01 Reference Frames from Regional to Global Scales

G01S3

Chairpersons: Zuheir Altamimi & Joao Torres

0830 **# 1782.** Geocenter Variations From Analysis of SLR data
M. Cheng, J. Ries, B. Tapley.

0845 **# 4814.** Challenges for Reference Frame Refinement: An Australian Perspective
G. Johnston, J. Dawson, M. Moore, R. Ruddick.

0900 **# 4683.** First geodetic results from the AuScope VLBI network
O. Titov, J. Lovell, J. Dickey.

0915 **# 1963.** Modelling earthquakes in a semi-dynamic datum
C. Crook

0930 **# 586.** Network RTK services in tectonically active regions
C. Roberts

0945 **# 2587.** Realisation of a Semi-Kinematic Geodetic Datum using an Absolute Deformation Model (ADM)
R. Stanaway, G. Blick, C. Roberts.

Thursday, 30 June 2011 0830-1000 MR216

IAG

G05 Geodetic Imaging Techniques

G05S1

Chairpersons: Sandra Verhagen & Xiaoli Ding

0830 **# 5904. Invited** Argument Decomposition of Spatio-temporal Arrays of Radar Interferometric Data
R. Hanssen

0845 **As above.**

0900 **# 3112.** Improved Deformation model for Time Series Interferometric SAR Analysis
Y. Zhang, J.X. Zhang, H.A. Wu, Z. Lu.

0915 **# 3652.** Near real-time monitoring concept of mass movements with ground based SAR
S. Roedelsperger, G. Laufer, A. Eichhorn, C. Gerstenecker, M. Becker.

0930 **# 3320.** Ground deformation at Mt. Etna from 2003 to 2010 with PSInSAR
C. Xu, P. He, Y. Wen.

0945 **# 801.** Monitoring ground subsidence in Shanghai downtown area using InSAR technology
J. Wu, L. Zhang, T. Li, B. Ban.

Thursday, 30 June 2011 0830-1000 MR104

IAMAS

JM05 Manifestation of anthropogenic forcing and natural variability in the Arctic and Antarctic climate systems

JM05S1 Arctic

Chairpersons: David Bromwich

0830 **# 2508. Invited** Arctic Sea Ice Influences on Northern Hemisphere Snow Cover
J. Stroeve, A. Frei, D. Ghatak.

0845 **As above.**

0900 **# 2196.** Are the Two Most Recent Harsh Northern Hemisphere Winters Manifestation of Anthropogenic Global Warming in the Arctic?
J. Cohen, M. Barlow.

0915 **# 2245.** Possible snow albedo reduction due to black carbon in snowpack and snow grain size variation on the present earth
T. Aoki, K. Kuchiki, M. Niwano.

0930 **# 1302.** Late 20th century simulation of Arctic sea-ice and ocean properties in the CCSM4
A. Jahn, K. Sterling, M.M. Holland, J. Kay, J. Maslanik, et al.

0945 **# 4883.** Ocean Salinity Profiles Teach Us Thinning and Volume Decrease of the Okhotsk Sea-ice Cover
K. Ohshima, S. Riser.

Thursday, 30 June 2011 0830-1000 MR105

IAMAS

JM10 Monsoons, Tropical Cyclones and Tropical Dynamics

JM10S1 Global Monsoon and Climate Change

Chairpersons: Jianping Li

0830 **# 1893. Invited** Recent Intensification of the Global Monsoon and Global precipitation
B. Wang, J. Liu, H.J. Kim, P. Webster, T. Schroeder.

0845 **As above.**

0900 **# 2106.** Climate Changes and the Potential Roles of Aerosols in the East Asian Monsoon Region: An Overview of the EAST-AIRE and AMF Experiments in China
Z. Li, H. Chen, S.C. Tsay, B. Holben, J. Huang, et al.

0915 **# 2210.** Global Monsoon Precipitation Changes in Response to Sea Surface Temperature Patterns under Global Warming
P. Hsu, T. Li, J. Luo.

0930 **# 1966.** The impact of Asian and non-Asian aerosols on 20th century Asian summer monsoon
T. Cowan, W. Cai.

0945 **# 5686.** Effects of increased CO2 levels on monsoons
A. Cherchi, A. Alessandri, S. Masina, A. Navarra.

Thursday, 30 June 2011 0830-1000 MR109

IAMAS

M03 Aerosol-Cloud-Precipitation-Radiation-Interactions

M03S5

Chairpersons: Toshihiko Takemura & Zhian Sun

0830 **# 5443. Invited** Have anthropogenic aerosols âœmaskedâ the effects of greenhouse gas forcing on Indo-Pacific regional circulation and rainfall?
L. Rotstayn, S. Jeffrey, J. Syktus, M. Collier, K. Wong, et al.

0845 **As above.**

0900 **# 678.** Evaluation of a scheme representing horizontal and vertical cloud structure in Australian Community Climate and Earth System Simulator
Z. Sun, X. Zhou, D. Bi, M. Dix, A. Hirst, et al.

0915 **# 1895.** Predictive Skill and Climatic Effects of Interactive Cloud-Aerosol Microphysics in the GEOS-5 AGCM
L. Oreopoulos, D. Lee, Y. Sud, D. Barahona, A. Nenes, et al.

0930 **# 2860.** Toward Improving Bulk Microphysics for Regional and Global Climate Simulations of Aerosol Indirect Effects
J. Fan, L.R. Leung, Z. Li, H. Morrison, Q. Yun.

0945 **# 5535.** The Climatic Impact on Clouds and Rainfall due to Using an Ensemble Kalman Filter to Optimize BC Emissions
J. Cohen, C. Wang.

Thursday, 30 June 2011 0830-1000 MR106
IAMAS
M07 Advances in atmospheric dynamics
M07S5
Chairpersons: James Renwick

0830 **# 4646.** Subgrid Model with Universal Scaling Law for Atmospheric Simulations
V. Kitsios, J.S. Frederiksen, M.J. Zidikheri.
0845 **# 5885.** Beyond Quasi-Geostrophic Turbulence: statistical breaking of isotropy and (2+Hz)-Dimensional Vorticity Equations
D. Schertzer, I. Tchiguirinskaia, S. Lovejoy, A. Tuck.
0900 **# 1280.** The Mesoscale Kinetic Energy Spectrum of Moist Baroclinic Life Cycles
M. Waite, C. Snyder.
0915 **# 1516.** The influence of upstream conditions and local terrain features on orographic precipitation
C. Watson, T. Lane.
0930 **# 1476.** Wind Shear and Boundary Layer Clouds over the Southern Ocean
L. Hande, S. Siems, M. Manton.
0945 **Discussion.**

Thursday, 30 June 2011 0830-1000 MR210
IAPSO
P02 Physical and biogeochemical processes in marginal enclosed and semi-enclosed seas
P02S2
Chairpersons: Sayed Sharaf El Din & Stefania Sparnocchia

0830 **# 2511.** Abrupt changes observed in the deep Western Mediterranean
H.L. Bryden, K. Schroeder, G.P. Gasparini, S. Sparnocchia.
0845 **# 1192.** Near-Surface Wind-Driven And Geostrophic Currents In The Mediterranean Sea
M. Menna, PM. Poulain, E. Mauri.
0900 **# 2718.** Sensitivity of the coastal circulation to wind forcing resolution in the Gulf of Lions, Mediterranean sea
P. Fraunie, C. Langlais, A. Schaeffer, A. Molcard, B. Barnier, et al.
0915 **# 4943.** Small Scale Interactions Between Physical and Biological Processes in a Microtidal Semi-Enclosed Estuary
J. Piera, M.L. Artigas, O. Ross, C. Llebot, J. Sole, et al.
0930 **# 3170.** Time-scales and Spatial Variability of Hypoxia along the Northern Gulf of Mexico Shelf
P. Chapman, S. DiMarco, Y. Feng, R. Hetland.
0945 **Discussion.**

Thursday, 30 June 2011 0830-1000 MR212
IAPSO
P03 Ocean Mixing
P03S8
Chairpersons: Bill Dewar

0830 **Introduction.**
0845 **# 3203. Invited** Preliminary Results from a Topographic Scattering Experiment
G. Carter, S. Johnston, C. Whalen, A. Jenkins.
0900 **As above.**
0915 **# 2643.** Instability and mixing in shelf seas
Z. Liu, S. Thorpe.
0930 **# 4004.** Significant Sink Of Ocean Eddy Energy Near Western Boundaries
X. Zhai, H. Johnson, D. Marshall.
0945 **Discussion.**

Thursday, 30 June 2011 0830-1000 MR213
IAPSO
P06 Eastern and Western Boundary Currents
P06S4 Air-Sea Interaction
Chairpersons: Ming Feng & Jay McCreary

0830 **# 3504.** A Buoyancy-forced Eastern Boundary Current over Shelf-slope Topography with Application to the Leeuwin Current
J. Benthuysen, N. Bindoff.
0845 **# 5359.** Anatomy of the Leeuwin Current and Role of Eddies and Air-Sea Fluxes
C. Domingues, M. Maltrud, S. Wijffels, J. Church, M. Tomczak.
0900 **# 4996.** Impact of Western Boundary Current Sea Surface Temperature Fronts on Surface Stress and Atmospheric Ekman Pumping
N. Schneider, B. Qiu, Y. Sasaki, A. Lauer.
0915 **# 1378.** The Atmospheric Response to Gulf Stream Variability
R. Hand, N.S. Keenlyside, N.E. Omrani.
0930 **# 3440. Invited** Role of western boundary current systems in large-scale atmosphere-ocean interaction
Y. Kwon, C. Frankignoul, M. Alexander, N. Sennechael.
0945 **As above.**

Thursday, 30 June 2011 0830-1000 MR203
IASPEI
SOS1 International Association of Seismology and Physics of the Earth's Interior (IASPEI)
SOS1 IASPEI Opening Session
Chairpersons: Peter Suhadolc

0830-1000 **Opening Session for all IASEPI speakers and delegates.**

THURSDAY, 30 JUNE 2011 1030-1200 AM2

Thursday, 30 June 2011 1030-1200 PH2
IUGG
3A IUGG 2011 Union Plenary Lectures
3A
Chairpersons: Tom Beer

1030 **# 614.** Environmental Observations as a Basis for Environmental Intelligence
G. Ayers
1100 **# 611.** Present-day sea level rise: How unsual and can we explain it?
A. Cazenave
1130 **# 5537.** The hidden history of ice sheets: the secret to predicting sea-level rise
D. Vaughan

Please see page 29 for Union Plenary Lecture abstracts.

THURSDAY, 30 JUNE 2011 1330-1500 PM1

Thursday, 30 June 2011 1330-1500 MR204
IUGG
U08 Global and Regional Sea Level Change
U08S1 Speakers by Invitation
Chairpersons: John Church

1330 **# 2416.** Geocentric sea level rise from global tide gauges and GPS measurements of vertical land movement
M. King, I. Thomas, D. Lavallee, S. Williams, P. Whitehouse, et al.
1345 **As above.**
1400 **# 1855.** Global Evaluations of Mountain Glacier and Ice Cap Mass Balance: Current Status and Projections to 2100
T. Pfeffer, D. Bahr.
1415 **As above.**
1430 **# 2788.** Evolution of the polar ice sheets from observations and glaciological modeling
P. Huybrechts
1445 **As above.**

Thursday, 30 June 2011 1330-1500 MR217
IAG
G01 Reference Frames from Regional to Global Scales
G01S4
Chairpersons: Joao Torres & Zuheir Altamimi

1330 **# 2206.** Modernisation of the New Zealand Geodetic Datum 2000
M. Amos, G. Blick, C. Crook, D. Grant.
1345 **# 2656.** Status and new perspectives of the SIRGAS reference frame
L. Sanchez, C. Brunini, V. Mackern, W. Martinez, R. Luz.
1400 **# 3627.** EUREF's Contribution to a National, European and Global Geodetic Infrastructure
J. Ihde, Z. Altamimi, E. Brockmann, C. Bruyninx, A. Caporali, et al.
1415 **# 4760.** The Contribution of GLONASS Observations to the APREF Network
L. Huisman, Andrea. Nardo.
1430 **# 2516.** Efforts Towards a Dense Velocity Field Based on GNSS Observations
J. Dawson, C. Bruyninx, J. Legrand, Z. Altamimi, M. Becker, et al.
1445 **Discussion on Regional Reference Frames and their link to the ITRF.**
J. Torres & Z. Altamimi

Thursday, 30 June 2011 1330-1500 MR216
IAG
G05 Geodetic Imaging Techniques
G05S2
Chairpersons: Sandra Verhagen & Xiaoli Ding

1330 **# 5137.** Evaluation Of Digital Terrain Model Extracted From SAR Interferometric Data Based On Strata
O.D. Zaloti Junior, M.J. Perez Monteiro, C.C. Freitas, S.J.S. Sant'Anna, F. Antunes Zaloti, et al.
1345 **# 4865.** 3D Surface Displacement from Multi-Sensor, Multi-Track and Multi-Temporal Interferograms
X. Ding, J. Hu, Z. Li, J. Zhu & Q. Sun.
1400 **# 4875.** Instantaneous GNSS Attitude Determination for Remote Sensing Platforms
N. Nadarajah, G. Giorgi, P.J.G. Teunissen.
1415 **# 3285.** Imaging Of Interseismic Deformation With ALOS/PALSAR And The Effect of Traveling Ionospheric Disturbance
M. Hashimoto, A. Saito, D. Mineyama.
1430 **Discussion.**
1445 **# 5661.** InSAR Imaging of Tibetan Plateau Discontinuous Permafrost
C. Shum, C.K. Shum, K. Erkan, H. Lee, Z. Lu.

Thursday, 30 June 2011 1330-1500 MR104
IAMAS
JM05 Manifestation of anthropogenic forcing and natural variability in the Arctic and Antarctic climate systems
JM05S2 Antarctic Atmosphere, Ocean
Chairpersons: David Reusch

1330 **# 5671. Invited** Causes of interdecadal changes in the Antarctic Bottom Water of the Atlantic Ocean
A. Naveira Garabato, M. Meredith, L. Jullion, A. Gordon, P. Abrahamsen.
1345 **As above.**
1400 **# 4409. Invited** Decadal Behavior of Surface Air Temperature and Snow Accumulation over the Polar Ice Sheets
D. Bromwich, A. Monaghan, J. Nicolas, J. Box.
1415 **As above.**
1430 **# 5574.** Observed variability in the atmospheric moisture transport over the Southern Ocean
M. Tsukernik, A. Lynch, P. Uotila.
1445 **# 902.** Composite Analysis of the Surface Effects of El Nino Southern Oscillation Teleconnections on Antarctica
M. Lazzara, L. Welhouse, G. Tripoli, L. Keller.

Thursday, 30 June 2011 1330-1500 MR105
IAMAS
JM10 Monsoons, Tropical Cyclones and Tropical Dynamics
JM10S2 Monsoon Simulation and Monsoon Dynamics
Chairpersons: Bin Wang

1330 **# 4417. Invited** Diagnostics and Metrics for Evaluating GCM Simulation of the Asian-Australian Monsoon
K. Sperber
1345 **As above.**
1400 **# 4159.** The Role of Tropical Waves in Super-parameterized Simulations of the Asian Monsoon
D. Randall, C. DeMott.
1415 **# 3533.** Similarities And Differences In Driving Force Of The Monsoon With A 'Past And Future' Lens.
H. Ueda
1430 **# 855.** Change in the East Asian Summer Monsoon Associated with Tibetan Plateau Forcing: A Complementary Means for Assessing Regional Climate Projections
Y. Liu, B. Dong, G. Wu.
1445 **# 1022.** Persistent Weakening Trend in the Sensible Heat Source over the Tibetan Plateau and Its Impact on the Asian Summer Monsoon
A. Duan, F. Li, M. Wang, G. Wu.

Thursday, 30 June 2011 1330-1500 MR109
IAMAS
M03 Aerosol-Cloud-Precipitation-Radiation-Interactions
M03S6
Chairpersons: Leon Rotstayn & Jason Cohen

1330 **# 3470. Invited** Projection of Climate Change by the Aerosol Direct and Indirect Effects in the 21st Century
T. Takemura
1345 **As above.**
1400 **# 3534.** Radiative impacts of Indonesian biomass burning aerosols
A. Chrastansky, L. Rotstayn.
1415 **# 678.** Evaluation of a scheme representing horizontal and vertical cloud structure in Australian Community Climate and Earth System Simulator
Z. Sun, X. Zhou, D. Bi, M. Dix, A. Hirst, et al.
1430 **# 3958.** Effects of Horizontal and Vertical Cloud Structure in a Twenty-Year Climate Simulation
J. Shonk, R.J. Hogan.
1445 **# 2014.** Sensitivity of the Simulated Present-Day Climate of Europe and North Africa to Different Aerosol Climatologies
E. Zubler, U. Lohmann, D. Luethi, C. Schar.

Thursday, 30 June 2011 1330-1500 MR107
IAMAS
M05 Comparative Atmospheres of the giant planets and their satellites
M05S1
Chairpersons: Athena Coustenis

1330 **# 2845. Invited** The Atmospheres of Uranus and Neptune from Recent Ground- and Space-Based Filtered Radiometric and Spectroscopic Thermal Emission Data
G. Orton
1345 **# 2962. Invited** A turbulent view of Saturn's atmospheric dynamics
P. Read, T. Dowling, R. Young.
1400 **As above.**
1415 **# 2503. Invited** The Plumes of Enceladus and the Exosphere of Rhea
H. Waite, B. Magee, B. Teolis, T. Brockwell, INMS Science Team.
1430 **As above.**
1445 **# 4381.** A Comparison of the Ionospheres of Saturn and Jupiter from Cassini and Galileo Radio Occultations
A. Kliore, A.F. Nagy, F.M. Flasar.

Thursday, 30 June 2011 1330-1500 MR106
IAMAS
M07 Advances in atmospheric dynamics
M07S6
Chairpersons: Hisashi Nakamura

1330 **# 1999. Invited** Why does predictability vary from forecast to forecast?
R. Kleeman
1345 **As above.**
1400 **# 2390.** Similarities between precursors of weather and climate events and optimally growing initial errors in their onset predictions
M. Mu, W. Duan, Z. Jiang, Y. Yu, H. Xu.
1415 **# 2294.** Improved Atmospheric Blocking in a Climate Model
A. Scaife, D. Copsey, C. Gordon, C. Harris, T. Hinton.
1430 **# 3397.** On the Vortex-Vortex Interaction for the Maintenance Mechanism of Blocking
A. Yamazaki, H. Itoh.
1445 **# 2386.** Relationship between WP Pattern and Blocking over Northeastern Asia
C. Bueh

Thursday, 30 June 2011 1330-1500 MR210
IAPSO
P02 Physical and biogeochemical processes in marginal enclosed and semi-enclosed seas
P02S3
Chairpersons: Atsuhiko Isobe & Kai Wang

1330 **Introduction.**
1345 **# 2244. Invited** Transport of oceanic nutrients and its influences on primary production over the shelf in the East China Sea
X. Guo, L. Zhao.
1400 **As above.**
1415 **# 2562.** Numerical study on the dynamics of persistent organic pollutants from the atmosphere and river in the East China Sea
J. Ono, D. Takahashi, X. Guo, S. Takahashi, H. Takeoka.
1430 **# 1389.** Simulation of suspended sediment in the offshore near the Changjiang Estuary
K. Wang, X.H. Shi.
1445 **# 5673.** Interannual Variability of Volume and Nutrient Fluxes Through Taiwan Strait
C. Liu, C. Chen, Y. Yu, H. Chen, Y. Wang, et al.

Thursday, 30 June 2011 1330-1500 MR212
IAPSO
P03 Ocean Mixing
P03S9
Chairpersons: Bill Dewar

1330 **# 3327.** Vertical Tidal Mixing Parameterizations: Which Best Matches Reality?
R. Robertson
1345 **# 4012.** Seismic Oceanography and Microstructure Measurements of Intrusions and Mixing in the Coastal and Slope Regions of the Southern Adriatic Sea
J. Book, W.T. Wood, A.E. Rice, S. Carniel, A. Bergamasco, et al.
1400 **# 4576.** Large eddy simulation of benthic turbulent boundary layer under a tidally oscillating flow
Y. Wakata
1415 **# 4613.** The role of wind and stratification in setting levels of mixing in the WEP thermocline
A. Natarov, KJ. Richards, Y. Kashino.
1430 **# 4729.** Stochastic Subgrid Mixing in Simple Ocean Models
M. Zidikheri, J. Frederiksen.
1445 **# 2597.** Influence of Langmuir Circulation on the Deepening of the Wind-Mixed Layer
Y. Noh, G. Gahyun, S. Raasch.

Thursday, 30 June 2011 1330-1500 MR213
IAPSO

P06 Eastern and Western Boundary Currents
P06S5 Annual to Multidecadal Variability – Part 1
Chairpersons: Shiro Imawaki & Katy Hill

1330 **# 4703. Invited** Interannual to decadal variations in the Kuroshio-Oyashio Extension region in an eddy-resolving OGCM
M. Nonaka, B. Taguchi, H. Sasaki, H. Nakamura.
1345 **As above.**
1400 **# 4857.** Directly Measured Variability of Flow and Hydrographic Properties in the Mozambique Channel
J. Ullgren, H. van Aken, H. Ridderinkhof, W. de Ruijter.
1415 **# 1644.** Covariability of the Gulf Stream with deep return flow at 26N in 2009, from the RAPID transatlantic moored array
E. Frajka-Williams, S. Cunningham, T. Kanzow, J. Hirschi, H. Bryden.
1430 **# 1226.** Interannual to decadal Gulf Stream variability in an eddy-resolving ocean model
Y. Sasaki, N. Schineider.
1445 **# 3888.** On driving mechanisms of the Florida Current annual cycle
L. Czeschel, R. Greatbatch, C. Eden.

Thursday, 30 June 2011 1330-1500 MR203
IASPEI

S01/S03 Seismological Observation and Interpretation/ Sub-Saharan Africa Seismology
S0103S1
Chairpersons: Bob Engdahl & Dmitry Storchak

1330 **# 3967.** ORFEUS Data Center: Operations, Data Quality Management and Services for the Seismological Research Community.
R. Sleeman, T. van Eck, G-J. van den Hazel.
1345 **# 1173.** International Seismological Centre (ISC): Mission and Status
D. Storchak, I. Bondar, J. Harris.
1400 **# 1181. Invited** New Location Procedures at the International Seismological Centre
I. Bondar, J. Harris, D. Storchak.
1415 **As above.**
1430 **# 5033. Invited** Earthquake Catalogues, Bibliographies, Databases and Data Exchange
G. Gibson
1445 **As above.**

Thursday, 30 June 2011 1330-1500 MR108
IASPEI

S04 Non-instrumental seismology
S04S1
Chairpersons: Lisa Grant Ludwig & David Jackson

1330 **# 3866.** Using Instrumental Earthquake Data for Non-Instrumental Seismology
J. Ebel
1345 **# 2861.** The influence of the Ottawa-Bonnechere Graben on neotectonics, contemporary seismicity, and seismic hazard
J. Adams, P. Smith.
1400 **# 3311.** Recurrence of Large Earthquakes around Tokyo Metropolitan Area Inferred from Coastal Geology and Historical Records
K. Satake, K. Shimazaki, Y. Tsuji, T. Ishibe, H. -Y. Kim, et al.
1415 **# 2504.** San Andreas Fault in the Carrizo Plain: Old, Straight, Simple and Slip-predictable
S. Akciz, L. Grant Ludwig, O. Zielke, J.R. Arrowsmith.
1430 **# 2522.** Using Fragile Landforms to Probe Patterns of Rupture of the San Andreas and San Jacinto Faults in Southern California, USA
L. Grant Ludwig, J. Brune.
1445 **# 2967.** Downslope Sackungen Creep and Failure of Shallow Intact Rock as Durable Palaeoseismic Features
N.H. Sleep

Thursday, 30 June 2011 1330-1500 MR211
IASPEI

S06 Recent Large/Destructive Earthquakes
S06S1
Chairpersons: Wu Zhongliang & D Srinagesh

1330 **Introduction.**
1415 **# 671.** Hypocentral Location of Aftershocks from the 4 April, 2010 (Mw7. 2) El Mayor-Cucapah Earthquake of Baja California, Mexico, Using a Local Seismic Network
R. Castro, J. Acosta, V. Wong, A. Perez-Vertti, A. Mendoza, et al.
1430 **# 811.** Lessons from Boumerdes (Algeria) Earthquake of May 21st, 2003
D. Benouar
1345 **Discussion.**
1400 **Discussion.**
1445 **Discussion.**

Thursday, 30 June 2011 1330-1500 MR209
IASPEI

S15 Anisotropy and attenuation: mechanisms, processes and observations
S15S1
Chairpersons: Ian Jackson & Martha Savage

1330 **# 3491. Invited** Seismic Attenuation Tomography in SE Australia
S. Pozgay, N. Rawlinson.
1345 **As above.**
1400 **# 2449.** Continental Plate Assemblages Deciphered from 3D Modelling of Fossil Seismic Anisotropy
J. Plomerova, V. Babuska.
1415 **# 858.** Seismic Anisotropy and Implication for Mantle Deformation beneath the NE Margin of the Tibet Plateau and Ordos Plateau
J. Li, L. Ye, F. Niu.
1430 **# 1974.** 3D isotropic and anisotropic structures of crust and uppermost mantle in Tibet and surrounding regions from ambient noise tomography
Y. Yang, Y. Zheng, M. Ritzwoller.
1445 **Discussion.**

Thursday, 30 June 2011 1330-1500 MR214
IASPEI
S16 Earthquake Disaster Assessments: Seismology and Engineering
S16S1
Chairpersons: Walter Mooney & Rajender Chadha

1330 **Introduction.**
1345 **# 562.** Earthquake Fault Superhighways
S. Das, David. Robinson, Mike. Searle.
1400 **As above.**
1415 **# 3429.** Fast and Robust Inversion of Earthquake Source Rupture Process with Applications to Earthquake Emergency Response
Y. Chen, Yong. Zhang.
1430 **As above.**
1445 **Discussion.**

THURSDAY, 30 JUNE 2011 1630-1800 PM2

Thursday, 30 June 2011 1630-1800 MR204
IUGG
U08 Global and Regional Sea Level Change
U08S2 Speakers by Invitation
Chairpersons: Simon Holgate

1630 **# 3600.** The Importance Of Land Water Storage In Sea Level Variations
K. Laval, J. Polcher.
1645 **As above.**
1700 **# 2732.** Observations of historical and modern sea level rise
D. Chambers
1715 **As above.**
1730 **# 2675.** Towards Regional Projections of Twenty-first Century Sea Level Change
C. Katsman, R. van de Wal, A. Slangen, S. Drijfhout, W. Hazeleger.
1745 **As above.**

Thursday, 30 June 2011 1630-1800 MR216
IAG
G07 High Precision GNSS
G07S1
Chairpersons: Ruth Neilan & Urs Hugentobler

1630 **# 718.** Detection of Low Frequency Structures Oscillations on L1 GPS signal by Wavelets Analysis – Application on Monitoring Bridges
A. Larocca, R. Schaal, G. Guimaraes, D. Blitzkow.
1645 **# 4742.** The Effects of L2C Signal Tracking on High-Precision Carrier Phase GPS Positioning
F. Blume, H. Berglund, L. Estey.
1700 **# 5233.** Multi-GNSS Carrier Phase Measurements: A Receiver Designer's Perspective
C. Rizos, E. Glennon.
1715 **# 5578.** Estimation of Phase Center Variation and its Effect on Precise Orbit Determination
A. Shabanloui, J. Kusche.
1730 **Discussion.**

Thursday, 30 June 2011 1630-1800 MR104
IAMAS
JM05 Manifestation of anthropogenic forcing and natural variability in the Arctic and Antarctic climate systems
JM05S3 Antarctic Cryosphere
Chairpersons: Siobhan O'Farrell

1630 **# 3355. Invited** Antarctic Sea Ice Change and Variability, and its Implications
R. Massom, P. Reid, S. Stammerjohn, B. Raymond, A. Fraser.
1645 **As above.**
1700 **# 874.** Atmospheric influences on East Antarctic landfast sea-ice formation and breakout
A. Fraser, R. Massom, N. Adams.
1715 **# 4934.** The Rapid Warming on the Western Side of the Antarctic Peninsula
J. Turner, T. Maksym.
1730 **# 5668. Invited** Climate and ice on the Antarctic Peninsula: insights from a unique natural laboratory
D. Vaughan
1745 **As above.**

Thursday, 30 June 2011 1630-1800 MR105
IAMAS
JM10 Monsoons, Tropical Cyclones and Tropical Dynamics
JM10S3 Air-sea Interaction and Monsoon Dynamics
Chairpersons: Jun Matsumoto

1630 **# 944. Invited** Air – sea interaction and formation of the Asian summer monsoon onset vortex over the Bay of Bengal
G. Wu, Y. Guan, Y. Liu, J. Yan, J. Mao.
1645 **# 4872. Invited** Ocean's role in East-Asian summer monsoon onset
D. Hu, L.J. Yu, J.Q. Feng.
1700 **# 4872. Invited** Ocean's role in East-Asian summer monsoon onset
D. Hu, L.J. Yu, J.Q. Feng.
1715 **# 1615.** Role of air-sea coupling in the interannual variability of the South China Sea summer monsoon
R.K. Lestari, M. Watanabe, M. Kimoto.
1730 **#5589.** Influence of Indian Ocean Dipole on Following years ENSO: Mechanisms and Interdecadal Stability
T. Izumo, M. Lengaigne, J. Vialard, J-J. Luo, T. Yamagata.
1745 **# 5448.** The Impact of Spring Abrupt Termination of El Nino on the Summer Monsoon Activity over the Northeastern Indian Subcontinent
T. Terao, F. Murata, A. Habib, M.S.H. Bhuiyan, T. Hayashi.

Thursday, 30 June 2011 1630-1800 MR101
IAMAS
JM11 From Ice-house to Green-house: Studies of Natural and Human-Induced Climate Change
JM11S1 From Greenhouse to Ice-house in the Natural World
Chairpersons: David Etheridge & Michael MacCracken

1630 **# 876.** Methane and environmental change during the Paleocene-Eocene thermal maximum (PETM): Modeling the PETM onset as a two-stage event
L. Mysak, D.A. Carozza, G.A. Schmidt.
1645 **# 1015.** Thermal Evolution over the Last 4 Ma in the Tropical Western Pacific
Q. Li, L. Li, J. Tian.
1700 **# 5936.** The threshold of 40 to 100 kyr cycle during the Pleistocene
A. Abe-Ouchi, F. Saito, K. Kawamura.
1715 **# 3480.** Factors Contributing to Wintertime Northern Hemisphere Precipitation Changes under the Last Glacial Maximum Conditions in PMIP2 Coupled Models
A. Laine, H. Nakamura, M. Kageyama, A. Abe-Ouchi, K. Nishii.
1730 **# 4452.** Modeling Shifts in Seawater Due to Glacial-interglacial Sea Ice Variability
C. Brennan, A. Weaver, M. Eby, K. Meissner.
1745 **Discussion.**

Thursday, 30 June 2011 1630-1800 MR109
IAMAS
M03 Aerosol-Cloud-Precipitation-Radiation-Interactions
M03S7 Aerosol Properties
Chairpersons: Greg Kok & Graham Feingold

1630 **# 710. Invited** HaChi (Haze in China) Project: Hygroscopicity at high relative humidity and its relationship to aerosol optics and cloud physics
C. Zhao, N. Ma, Z. Deng, P. Liu, A. Wiedensohler, et al.
1645 **As above.**
1700 **# 5062.** Evolution of Aerosol Properties Before, During and After Fog Events Near Paris, France
G. Kok, D. Baumgardner, N. Boypuk, R. Newton.
1715 **# 3185.** Regional Haze in China: Distributions, Mechanism and Numerical Forecast
X. Zhang, D. Gong, C.H. Zhou, H.L. Liu, H. Wang, et al.
1730 **# 2092.** Using Energy Balance Constraint to Analyse the Robustness of the Modelled Tropospheric Response to Absorbing Aerosols: Implications for Radiative and Hydrological Forcing
G. Persad, Y. Ming, V. Ramaswamy.
1745 **# 4262.** Aerosol Effects on Indian Summer Monsoon Onset and Strength
H. Shin, C. Wang.

Thursday, 30 June 2011 1630-1800 MR107
IAMAS
M05 Comparative Atmospheres of the giant planets and their satellites
M05S2
Chairpersons: Frank Mills & Darrell Strobel

1630 **# 3226. Invited** Near-IR Spectra of Titan and the Giant Planets
J. Bailey, L. Kedziora-Chudczer.
1645 **# 601. Invited** Cassini long-term observation campaign of Titan's cloud activity: how to monitor Titan's climate and hydrocarbons cycle at planetary scale
S. Rodriguez, S. Le Mouelic, P. Rannou, C. Sotin, R H. Brown.
1700 **As above.**
1715 **# 2890.** Titan's cycle of methane
S. Atreya, H. Niemann.
1730 **# 2005.** Chemistry and Transport of Methane and Molecular Hydrogen in Titan's Atmosphere: Is there a Consistent Explanation?
D. Strobel
1745 **Discussion & Poster Presentations.**

Thursday, 30 June 2011 1630-1800 MR106
IAMAS
M07 Advances in atmospheric dynamics
M07S7
Chairpersons: TBC

1630 **# 3325. Invited** Origin and Dynamics of the Circumglobal Teleconnection
M. Watanabe, H. Nakamura, Y. Kosaka.
1645 **As above.**
1700 **# 3651.** Dynamics of dominant wavy anomaly patterns in winter along the ssian-pacific subtropical jet
H. Nakamura, H. Sato, T. Miyasaka, K. Nishii.
1715 **# 3688.** Role of Medium-Scale Waves on the Southern Annular Mode
Y. Kuroda, H. Mukougawa.
1730 **# 4311.** An Idealized Study Of Jet Sharpening And Vortex-Jet Interaction Of A Barotropically Unstable Jet
N. Harnik, D. Dritschel, E. Heifetz.
1745 **Discussion.**

Thursday, 30 June 2011 1630-1800 MR210
IAPSO
P02 Physical and biogeochemical processes in marginal enclosed and semi-enclosed seas
P02S4
Chairpersons: Kai Wang & Atsuhiko Isobe

1630 **# 2913.** An eddy resolving tidal-driven model of the South China Sea assimilating along-track SLA data using the EnOI
J. Xie, F. Counillon, J. Zhu, L. Bertino.
1645 **# 3072.** Numerical Forecast of Kuroshio Water Intrusion Onto the Shallow Coastal Waters Using an Ocean Reanalysis Dataset
A. Isobe, S. Kako.
1700 **# 3613.** Phytoplankton Response To The Intrusion Of Oceanic Warm Water In Bungo Channel, Japan
N. Yoshie, N. Fujii, X. Guo, T. Komorita, A. Isobe.
1715 **# 5534.** Observational Study on Water Mass Structure and Mixing to Sustain Summertime Biological Productivity along the Shelf Edge of the Southeastern Bering Sea
I. Yasuda, T. Tanaka, K. Kuma.

1730 # **166.** Modeling ice-covered marine ecosystem in the Bering and Chukchi seas
J. Wang, H. Haoguo.

1745 # **1430.** Transformation of the hydrological and hydrochemical characteristics in Kara Sea in 2007-2008
A. Rozhkova

Thursday, 30 June 2011 1630-1800 MR212

IAPSO

P04 Thermohaline Circulation (THC) and Deep Currents

P04S1

Chairpersons: TBC

1630 # **2233.** The International Thermodynamic Equation Of Seawater – 2010 (TEOS-10): The new oceanographic salinity and temperature variables and the implications for observational oceanography and for ocean modeling
T. McDougall

1645 # **3022. A geostrophic streamfunction for use in density surfaces**
T. McDougall, A. Klocker.

1700 # **3723.** A new perspective on the momentum balance of the meridional overturning circulation
D. Marshall, H. Pillar, H. Johnson.

1715 # **2973.** How Much of the 20th Century Global Temperature Variability Was Due to Changes in Meridional Overturning Circulation?
J. Piskozub, D. Gutowska.

1730 # **4235.** Satellite Multi-Sensor Studies of Meridional Overturning Circulation (MOC) and Deep Ocean Convection (DOC)
X. Yan, Y.H. Jo, F.F. Li, W.T. Liu.

1745 # **3789.** Observations Of Latitudinal Coherence Of The Atlantic Meridional Overturning Circulation From Deep Moored Arrays
S. Elipot, E. Frajka-Williams, C.W. Hughes.

Thursday, 30 June 2011 1630-1800 MR213

IAPSO

P06 Eastern and Western Boundary Currents
P06S6 Annual to Multidecadal Variability, Part 2

Chairpersons: Lisa Beal & Young-Oh Kwon

1630 # **1021. Invited** Decadal Variability of the Kuroshio Extension System:Mechanisms and Impact
B. Qiu, S. Chen.

1645 **As above.**

1700 # **3605.** Understanding low frequency variability in the East Australian current from observations and ocean state estimates
K. Hill, K.R. Ridgway, S.R. Rintoul, P.R. Oke.

1715 # **3635.** ENSO to Multi-decadal Time Scale Changes in East Australian Current Transports and Fort Denison Sea Level: Oceanic Rossby Waves as the Connecting Mechanism
N. Holbrook, I. Goodwin, S. McGregor, E. Molina, S. Power.

1730 # **3073.** Multi-decadal Variations of the Leeuwin Current
M. Feng, C. Boning, A. Biastoch, Y. Masumoto, E. Weller.

1745 # **1580. Invited** Mechanisms for coherent variations between the North Pacific boundary current systems
N. Schneider, E. Di Lorenzo.

Thursday, 30 June 2011 1630-1800 MR203

IASPEI

S01/S03 Seismological Observation and Interpretation/ Sub-Saharan Africa Seismology

S0103S2

Chairpersons: Dmitry Storchak & Johannes Schweitzer

1630 # **5363.** Recent Developments in Portable Seismic Instrumentation from the IRIS PASSCAL Instrument Center
J. Gridley

1645 # **5219. Invited** On Modifying Standard Magnitude Procedures
J. Dewey, P. Bormann.

1700 **As above.**

1715 # **4020.** A new magnitude estimation for the European Arctic
J. Schweitzer, M. Pirli.

1730 # **5303.** Heterogeneity of instrumental earthquake catalogs for the Italian region
A. Peresan, L. Romashkova, A. Nekrasova, V. Kossobokov, G.F. Panza.

1745 **Discussion.**

Thursday, 30 June 2011 1630-1800 MR108

IASPEI

S04 Non-instrumental seismology

S04S2

Chairpersons: Lisa Grant Ludwig & David Jackson

1630 # **3452.** Rounding out the Australian Earthquake Database by Delving into Historical Records
K. McCue, G. Gibson.

1645 # **3223.** The Wellington Fault – A Revised Dextral Slip Rate for the Late Quaternary, Based on Fault-offset Fluvial Terraces in the Hutt Valley, Wellington, New Zealand
D. Ninis, T. Little, R. Van Dissen, E. Smith, N. Wang, et al.

1700 # **4840.** An Overview of The New Indonesian Active Fault Research Program
D.H. Natawidjaja, N. Horspool, E. Yulianto, I. Meilano, B. Sapiie, et al.

1715 # **970.** Preliminary results of new paleoseismological investigations along the North Tabriz Fault, NW Iran
A. Fathian Baneh, S. Solaymani Azad, H. Nazari, M. Ghorashi, M. Talebian.

1730 # **773.** Seismicity and Geological Structures in Nepal Himalaya and its surroundings
D.R. Thapa, G. Wang.

1745 **Discussion.**

Thursday, 30 June 2011 1630-1800 MR211
IASPEI
S06 Recent Large/Destructive Earthquakes
S06S2
Chairpersons: D Srinagesh & P Burton

1630 **# 3948.** Predictability of Seismic Extremes
V. Kossobokov
1645 **As above.**
1700 **# 1330.** Source characteristics of recent destructive earthquakes in Kerman, southeast Iran
M.R. Gheitanchi
1715 **Discussion.**
1730 **# 1691.** Association of earthquake occurrences with crustal vertical movements
V. Anthwar, K. Mallick.
1745 **# 1920.** Seismic Deformation by GPS for Ms7. 1 Yushu Earthquake on April 14th, 2010 in Tibetan Plateau, China
J. Ren, G. Meng, H. Sun, J. Zhang, P. Li, et al.

Thursday, 30 June 2011 1630-1800 MR209
IASPEI
S15 Anisotropy and attenuation: mechanisms, processes and observations
S15S2
Chairpersons: Ian Jackson & Christine McCarthy

1630 **# 3672. Invited** Effect of partial melting on seismic wave velocities and attenuation
Y. Takei, C. McCarthy.
1645 **As above.**
1700 **# 3603.** Attenuation and dispersion in melt-free and melt-bearing Earth analogue materials
C. McCarthy, Y. Takei.
1715 **# 3262.** Dispersion And Attenuation In Cracked And Fluid-Saturated Rocks: Compressional- And Shear-Wave Information From Seismic-Frequency Forced-Oscillation Methods
I. Jackson, H. Schijns, D.R. Schmitt.
1730 **# 2841.** Experimental Observation of Active Slip System Switch-over in Olivine at Mantle Conditions: Implications to attenuation of seismic anisotropy in the upper mantle
J. Chen, J. Girard, P. Raterron, C. Holyoke.
1745 **Discussion.**

Thursday, 30 June 2011 1630-1800 MR214
IASPEI
S16 Earthquake Disaster Assessments: Seismology and Engineering
S16S2
Chairpersons: Walter Mooney & Rajander Chadha

1630 **# 1125.** Ground Motion prediction and crustal structure across Indo-Gangetic Plains for assessing earthquake hazard due to Himalayan earthquakes.
R. Chadha, D. Srinagesh, S. Singh.
1645 **# 1233.** Using an offset-to-MM Intensity relationship to rapidly assess heavy disasters during the 2008 Mw 7. 9 Wenchuan Earthquake
K.X. Hao, T. Kobayashi, H. Fujiwara.
1700 **# 4754.** The Padang Post-Earthquake Damage Assessment
M. Wehner, K. Dale, M. Edwards, N. Corby.
1715 **# 5042.** An Overview of the 2010 Haiti Earthquake
W. Mooney, R. DesRoches, M. Eberhard, G. Rix, M. Comerio.
1730 **Discussion.**
1745 **# 5541.** Temporary Housing Using Locally Available Waste Materials in the Earthquake Prone National Capital Region Delhi- A Hope for the Future
R. Sarkar, R. Sardana.

FRIDAY, 1 JULY 2011 0830-1000 AM1

Friday, 1 July 2011 0830-1000 PH2
IUGG
U04 Progress and Perspectives in Studies of the Continental Lithosphere
U04S1 Speakers by Invitation
Chairpersons: John Dawson & Sierd Cloetingh

0830 **# 923.** Lithospheric Structure of the Australian Plate from Seismic Imaging
N. Rawlinson
0845 **As above.**
0900 **# 2136.** Dynamics of the Indo-Australian plate – perspectives from the inside
M. Sandiford
0915 **As above.**
0930 **# 3466.** Earthquake and Tsunami Generation along the Margin of the Australian Plate: What does it tell us About Seismic Coupling and its Variability?
P. Cummins
0945 **# 4309.** How does continental lithosphere respond to the transition from subduction to arc-continent collision?
M. Quigley, B. Duffy.

Friday, 1 July 2011 0830-1000 MR214
IAG
JG02 Application of Geodetic Techniques in Cryospheric Studies
JG02S1
Chairpersons: Reinhard Dietrich & Matt King

0830 **# 3998. Invited** ESA Satellite Observations of Climate Change Impact on the Cryosphere
R. Haagmans, M. Drinkwater, M. Kern.
0845 **# 1532.** Observation of cryospheric mass changes by regional gravity field modeling from the GRACE gravity mission – a simulation study
K. Bentel, C. Gerlach.
0900 **# 3776.** Present-Day Ice Surface Height And Ice Mass Changes In Greenland From ICEsat And GRACE Data
A. Groh, H. Ewert, R. Dietrich.
0915 **# 4194. Invited** Geodetic measurements of Glacial Isostatic Adjustment in Greenland
S.A. Khan, J. Wahr, M. Bevis, T.v. Dam.
0930 **# 3512. Invited** Accelerations In GPS Horizontal Coordinates Due To Increased Ice Loss In Greenland
T. Van Dam, J. Wahr, L. Liu, A. Kahn, M. van den Broeke.
0945 **# 2910.** Geodetic signals of anomalous snow fall due to arctic oscillation as seen with GRACE, GPS and polar motion
K. Heki, K. Matsuo.

Friday, 1 July 2011 0830-1000 PH3
IAHS
JH02 Hydro-climatology: Variability and change
JH02S1
Chairpersons: S. Franks

0830 **# 130.** Kohonen Self-Organizing Map as Software Sensor Estimator of the Reference Crop Evapotranspiration
A. Adeloye, R. Rustum.
0845 **# 135.** The River Niger and climate change over 100 years
G. Mahe, G. Lienou, F. Bamba, J.E. Paturel, O. Adeaga, et al.
0900 **# 168.** Hydro-Climatological Variability in the Murray-Darling Basin
N. Lockart, D. Kavetski, S.W. Franks.
0915 **# 204.** A new framework for modelling future hydrologic extremes: Nested Bias Correction as a precursor to Stochastic Rainfall Downscaling
A. Sharma, R. Mehrotra, F. Johnson.
0930 **# 158.** Trends in precipitation extremes and detrended fluctuation analysis of streamflow in Zhejiang, East China
M. Booij, Y. Tian, Y. Xu, Q. Zhang, S. Lin.
0945 **#447.** Estimation of evapotranspiration in Brigida river basin (Brazil) by satellite remote sensing
C. Santos, R. Silva, L. Silva, S. Montenegro, A. Ribeiro Neto.

Friday, 1 July 2011 0830-1000 MR104
IAMAS
JM03 Earth system observations and integration
JM03S1 Earth Observations and Integration – Validations
Chairpersons: Richard Bouchard

0830 **# 2151.** Benchmarking of the Australian community land surface model using multiple observations
B. Pak, Y. Wang, R. Law, E. Kowalczyk, H. Zhang, et al.
0845 **# 3272.** Short-Wave Flux Observation at Two Nearby Stations over Tibet and Implication to Satellite Retrieval
D. Lu, J.J. Huo, L. Wang, W. Zhang.
0900 **# 5198.** Calibrating HadCM3 to Palaeoclimate Proxy Measurements
T. Edwards, J. Rougier, M. Collins.
0915 **# 4314.** Observing System Monitoring Center (OSMC)
R. Bouchard, K. Kern, S. Hankin, K. O'Brien, T. Habermann, et al.
0930 **Discussion.**
0945 **Discussion.**

Friday, 1 July 2011 0830-1000 MR110
IAMAS

JM06 High-impact weather and extreme climate events

JM06S1

Chairpersons: Ron Stewart & Richard Swinbank

0830 **# 981. Invited** The northeast Australia floods of 2010/11: Role of La Niña and global warming
N. Nicholls

0845 **As above.**

0900 **# 2607.** Characteristic of Eurasian Blocking Event and Its Implications on Winter Climate Conditions in South China
H.N. Cheung, W. Zhou.

0915 **# 4063.** Atmospheric Blockings and Associated Climate Extremes in the Northern Hemisphere: Detection of Change and Attribution of Causes
I. Mokhov, M. Akperov, A. Lupo, A. Vetrova.

0930 **# 3805.** Extreme Weather Conditions Connected by Anomalous Meanders of the Upper-level Westerlies over Eurasia in Summer 2010
T. Miyasaka, H. Nakamura, A. Yatagai.

0945 **# 4771.** Multidecadal Variability of the Impact of ENSO on Southeast Queensland Rainfall
P. Van Rensch, W. Cai, T. Cowan, A. Sullivan.

Friday, 1 July 2011 0830-1000 MR106
IAMAS

JM07 Atmospheres and ices on terrestrial planets

JM07S1

Chairpersons: Ralf Greve

0830 **Introduction.**

0845 **# 3243.** Carbon Monoxide and Water Vapour in the Lower Atmosphere of Venus
J. Bailey

0900 **# 2999. Invited** Sulfur Oxide Chemistry in the Mesosphere of Venus
F. Mills, B. Sandor, R.T. Clancy, K.L. Jessup, Y. Yung, et al.

0915 **As above.**

0930 **# 2166. Invited** Recent progress of the Venus general circulation model
M. Yamamoto, K. Ikeda, M. Takahashi.

0945 **As above.**

Friday, 1 July 2011 0830-1000 MR105
IAMAS

JM10 Monsoons, Tropical Cyclones and Tropical Dynamics

JM10S4 Monsoon Variability

Chairpersons: E. Hugo Berbery

0830 **# 2250. Invited** Variation of summer monsoon and tropical cyclone rainfall in mainland China and Taiwan since the middle 20th century
C. Chang, Y. Lei, C. Sui, X. Lin, P. Tang, et al.

0845 **As above.**

0900 **# 740.** Interdecadal Changes in the Tropical and Extratropical Impacts on the East Asian Winter Monsoon
L. Wang, W. Chen, R.H. Huang.

0915 **# 589.** Influence of Stratospheric Quasi Biennial Oscillation on Asian Summer Monsoon
K. Mohanakumar

0930 **# 929.** Changes in the East Asian Cold Season since 2000
K. Wei, W. Chen, W. Zhou.

0945 **# 3549.** Dynamics of Interannual Variability in Summer Precipitation over East Asia
Y. Kosaka, S-P. Xie, H. Nakamura.

Friday, 1 July 2011 0830-1000 MR101
IAMAS

JM11 From Ice-house to Green-house: Studies of Natural and Human-Induced Climate Change

JM11S2 From Ice-house to Greenhouse in the Warming World

Chairpersons: Andrew Watson & David Etheridge

0830 **# 4554.** Mid-Holocene Simulation Using an Earth System Model, MIROC-ESM
R. Ohgaito, A. Yamamoto, T. Hajima, A. Abe-Ouchi, T. Sueyoshi, et al.

0845 **As above.**

0900 **# 1910.** An Implication for Assuming No Error in Anthropogenic Fossil-fuel Emissions
R. Andres, R. Houghton.

0915 **# 5431.** From Climate Shifts to Paradigm Shifts
R. Jones

0930 **# 2865.** The Response Of The Earth System To Very High Greenhouse-Gas Emission Scenarios
B. Sanderson, G. Meehl, B. O'Neill, R. Knutti, J. Kiehl, et al.

0945 **# 2531.** Millennial-scale Evolution of the Greenland Ice Sheet under Future Warming Scenarios and Sensitivity of Results to Model Parameters
J. Fyke, A. Weaver, A. Mackintosh, L. Carter.

Friday, 1 July 2011 0830-1000 MR203
IASPEI

S01/S03 Seismological Observation and Interpretation/ Sub-Saharan Africa Seismology

S0103S3

Chairpersons: Dmitry Storchak & Johannes Schweitzer

0830 **# 1797.** Fast Moment magnitude estimation for local events
A. Gallo, G. Costa, P. Suhadolc.

0845 **# 2545.** Large slip rates at the seismogenic zone of the 2008 Mw 7. 9 Wenchuan earthquake
Q. Chen, L. Li, C. Hua, J. Cheng.

0900 **# 3802.** Insight Into The Mechanisms Behind The Storfjorden, Svalbard, 2008 Earthquake Sequence
M. Pirli, J. Schweitzer.

0915 **# 4562.** The Influence of FIR Artifacts on Hypocentre Locations Recorded from the Korumburra, Victoria Earthquake Swarm.
W. Peck, C. Payne, B. White, S. Merrifield.

0930 **# 4657.** The Cleve, South Australia earthquake magnitude 4. 8, 5 June 2010
D. Love

0945 **Discussion.**

Friday, 1 July 2011 **0830-1000 MR108**
IASPEI
S05 Infrastructure for seismology (FDSN)
S05S1 Infrastructure for Seismology (FDSN – International Federation of Digital Seismograph Networks)
Chairpersons: Gerardo Suarez & Torild van Eck

0830 **Introduction.**
0845 **# 4285.** The FDSN Data Center at the IRIS DMC: Management and Distribution of Data for FDSN Seismological Networks
T. Ahern, R. Benson, R. Casey, C. Trabant.
0900 **# 2751.** The European seismological observational research infrastructure and EPOS
T. Van Eck, D. Giardini, R. Bossu, W. Hanka, L. Ottemaller, et al.
0915 **# 3242.** Pacific21, the geophysical network in Northwestern Pacific Ocean
S. Tsuboi, Y. Ishihara, Y. Yuki, T. Watanabe, Y. Fukao.
0930 **# 5636.** BR Network – The University of Brasilia Seismic Network, Seismological Observatory.
G. Franca, L.V. Barros, M.G. Von Huelsen, C.N. Chimpliganond, D.P. Fontenele, et al.
0945 **# 5177.** Challenges of Incorporating Small Localised Networks Into a National Seismograph Network.
M. Smith, A. Cichowicz, L. Labuschagne, R. Kometsi, G. van Aswegen, et al.

Friday, 1 July 2011 **0830-1000 MR211**
IASPEI
S06 Recent Large/Destructive Earthquakes
S06S3
Chairpersons: P Burton & Harsh Gupta

0830 **# 2410.** A rare example of earthquake slip below the Moho in a great earthquake
S. Das, D. Robinson.
0845 **As above.**
0900 **# 2777.** Historical Natural Hazard Event Databases Supply Valuable and Timely Information
P. Dunbar, K. Stroker, H. McCullough.
0915 **# 2938.** Resilience or Luck: an Appraisal of the Sept 2010 Darfield, New Zealand, Earthquake
K. Berryman
0930 **# 4710.** Information Products Laboratory for Emergency Response (IPLER): Responding to the Haiti Earthquake
C. Renschler, J. van Aardt, R. Eguchi.
0945 **Discussion.**

Friday, 1 July 2011 **0830-1000 MR213**
IASPEI
S11 Earthquake forecasting and testing
S11S1
Chairpersons: David Rhoades & Warner Marzocchi

0830 **Introduction.**
0845 **# 2981.** Evaluating Earthquake Forecasts
J. Rundle, J. Holliday, D. Turcotte, Y.T. Lee, C.C. Chen.
0900 **As above.**
0915 **# 3096.** Overview of Japanese CSEP Testing Center and its Performance for the Earthquake Forecast Testing Experiment
N. Hirata, H. Tsuruoka, K. Nanjo, S. Yokoi.
0930 **As above.**
0945 **# 3099.** Japanese Testing Center of Collaboratory for the Study of Earthquake Predictability
H. Tsuruoka, K. Nanjo, S. Yokoi, N. Hirata.

Friday, 1 July 2011 **0830-1000 MR209**
IASPEI
S15 Anisotropy and attenuation: mechanisms, processes and observations
S15S3
Chairpersons: Jessica Johnson & Mark Hildyard

0830 **# 3111.** A simple theoretical model for stress-induced anisotropy of rocks
B. Gurevich, M. Pervukhina.
0845 **# 3629.** Elastic anisotropy estimation based on laboratory measurements of velocity and polarization of quasi P-waves
B. Gurevich, M. Lebedev, A. Bona, R. Pevzner.
0900 **# 3561.** Characterising Frequency-dependent Anisotropy due to Microfractures
M. Hildyard
0915 **# 3220.** Discriminating Between Spatial and Temporal Variations in Anisotropy at Mount Ruapehu Volcano, New Zealand
J. Johnson, M. Savage, J. Townend, B. Keats.
0930 **# 3244.** S-anisotropy and Stress Direction in Active Fault Zone
H. Ito
0945 **Discussion.**

Friday, 1 July 2011 **0830-1000 MR219**
IASPEI, IAVCEI
JS05/JV04 The Davies Mantle: Reconciling Geophysical and Geochemical Perspectives
JS05V04S1
Chairpersons: Ian Jackson & Louis Moresi

0830 **# 4486.** Mapping Upper Mantle Depletion: The Influence of Ridge Migration and Seafloor Spreading Histories on the Geophysical Properties of the Asthenosphere and Seafloor Depth
D. Muller, S. Masterton, J. Whittaker, P. Wessel.
0845 **# 5030. Invited** Heat Fluxes at the Earth's Surface and Core-mantle Boundary Since Pangea Formation and Their Implications for the Geomagnetic Superchrons
S. Zhong, N. Zhang.
0900 **# 5480.** Mantle flow at the New Hebrides slab edge, southwest Pacific: the juxtaposition of back-arc upwelling with a slab edge
K. McLean, M. Jadamec, P. Durance, L. Moresi.
0915 **# 2398. Invited** Melting in the asthenosphere beneath old oceanic plate
E. Takahashi
0930 **# 5500.** Experimental Study of the Role of Water in the Uppermost Mantle
D.H. Green, W.O. Hibberson, I.J. Kovacs, A. Rosenthal.
0945 **# 1085.** Hafnium isotope evidence for a deep mantle plume origin of layered mafic intrusions
O. Nebel, R.J. Arculus, J.A. Mavrogenes, Y.J. Nebel-Jacobsen, T.J. Ivanic.

Friday, 1 July 2011 1030-1200 PH2

IUGG

U04 Progress and Perspectives in Studies of the Continental Lithosphere

U04S2 Speakers by Invitation

Chairpersons: Ian Ferguson & Kevin Furlong

1030 **# 2215.** How the New Zealand Plate Boundary was Made
K.P. Furlong, P. Kamp.

1045 **# 4577.** Deformation along the boundaries of the Australian Plate: the spectrum of processes from Tonga to New Zealand
J. Beavan, L. Wallace.

1100 **# 742.** Control of subduction zone width and lateral slab edges on subduction dynamics and overriding plate deformation
W.P. Schellart, D.R. Stegman, R.J. Farrington, L. Moresi.

1115 **As above.**

1130 **# 669.** Crustal Deformation from Geodesy: Measurement on Short to Long Temporal and Spatial Scales
T. Herring

1145 **# 5284.** TOPO-EUROPE: An integrated solid earth approach to Continental Topography and Deep Earth – Surface Processes in 4D
S. Cloetingh

Friday, 1 July 2011 1030-1200 MR217

IACS

JC02/JC03 Snow – Atmosphere Interactions and Avalanches.

JC0203S1 Snow – Atmosphere Interactions and Avalanches; Introduction, Precipitation and Blowing Snow

Chairpersons: Samuel Morin & Michael Lehning

1030 **Introduction.**

1100 **# 2571.** Observed Temperature Sensitivity On Mountain Lee Precipitation
T. Kerr, R. Henderson, A. Sood.

1115 **Discussion.**

1130 **# 1648.** Simulations of snow-drift events in alpine terrain using a high-resolution fully coupled snow-atmosphere model
V. Vionnet, E. Martin, V. Masson, E. Brun, Y. Durand, et al.

1045 **Discussion.**

1145 **Discussion.**

Friday, 1 July 2011 1030-1200 MR214

IAG

JG02 Application of Geodetic Techniques in Cryospheric Studies

JG02S2

Chairpersons: Matt King & Reinhard Dietrich

1030 **# 5719.** A Newly Reanalyzed Data set of GPS-Determined Antarctic Vertical Rates: A Useful Constraint for a new GIA Model of Antarctica
P. Moore, I. Thomas, P. Whitehouse, M. Bentley, M. King.

1045 **# 3936.** Present-day ice mass changes in Antarctica from GRACE and ICESAT data
R. Dietrich, H. Ewert, A. Groh, M. Scheinert.

1100 **# 5150.** Deriving GIA-induced Uplift Rates from Observations of Gravitational Potential
A. Purcell, A. Dehecq, P. Tregoning, K. Lambeck, S. McClusky, et al.

1115 **# 4145.** Antarctic interannual accumulation signals consistently monitored by GRACE satellite gravimetry and ENVISAT radar altimetry.
B. Legresy, M. Horwath, F. Remy, F. Blarel, J.M. Lemoine.

1130 **Discussion.**

1145 **As above.**

Friday, 1 July 2011 1030-1200 MR216

IAG

G07 High Precision GNSS

G07S2

Chairpersons: Ruth Neilan & Gary Johnston

1030 **# 4772.** Single-Frequency PPP-RTK: Theory and Experimental Results
P. Teunissen

1045 **# 4825.** Optimal triple frequency GPS and Galileo linear combinations for future Precise Point Positioning
M. Deo

1100 **# 1149.** Analysing time series of PPP residuals by means of ARMA processes
X. Luo, M. Mayer, B. Heck.

1115 **# 2158.** Equivalence of Existing Network RTK Methods under the PPP Mode
X. Zou, M.R. Ge, W.M. Tang, J.N. Liu.

1130 **# 3368.** Investigation of ambiguity resolution success rate in PPP with a new zero-difference ambiguity resolution method
X. Zhang, P. Li, X. Li.

1145 **Discussion.**

Friday, 1 July 2011 1030-1200 PH3

IAHS

JH02 Hydro-climatology: Variability and change

JH02S2

Chairpersons: S. Franks

1030 **# 176.** Pan Evaporation trend for the Haihe River Basin and its Response to Climate Change
Z. Bao, J. Zhang, G. Wang, G. Fu, C. Liu.

1045 **# 185.** Assessment of flash flood events using remote sensing- and atmospheric model-derived precipitation in a hydrological model
I. Yucel, F. Keskin.

1100 **# 220.** Estimation of water and carbon footprints of Australian irrigated agricultural systems
C. Vote, M.M. Hafeez, P. Charlton, R. Faux.

1115 **# 483.** Trends in hydro-meteorological variables in the Brahmaputra basin in India and their impact on flood events
U. Sharma

1130 **# 327.** Water Resources Variability in sub-Saharan Africa during the 20th Century
D. Conway, A. Persechino, S. Ardoin-Bardin, H. Hamandawana, G. Mahe.

1145 **Discussion.**

Friday, 1 July 2011 **1030-1200 MR104**
IAMAS
JM03 Earth system observations and integration
JM03S2 Earth Observations and Integration – Climate Implications
Chairpersons: Richard Bouchard

1030 **# 4675.** Classification of flux uncertainties for carbon budget analysis
I. Enting
1045 **# 5479.** Overview of the Australian Community Climate and Earth System Simulator (ACCESS)
A. Hirst, K. Puri.
1100 **# 5603.** Objectively Capturing the Variability of Weather Systems and how they relate to Local Climate
P. Hope, K. Keay, C J. Ganter.
1115 **Poster Presentations.**
1130 **As above.**
1145 **Discussion.**

Friday, 1 July 2011 **1030-1200 MR110**
IAMAS
JM06 High-impact weather and extreme climate events
JM06S2
Chairpersons: Lisa Alexander & Ron Stewart

1030 **# 3347. Invited** Understanding the Causes of the 2010 Russian Heat Wave and the Implications for Extreme Heat Wave Predictions and Projections.
R. Dole, M. Hoerling, J. Perlwitz, J. Eischeid, P. Pegion, et al.
1045 **As above.**
1100 **# 2632.** The role of upstream soil drought in generation of strongest heat waves
E. Volodin
1115 **# 3738.** Russian Summer Heat Wave 2010: Climatological Background and Intraseasonal Evolution
I. Zveryaev, Yu. Zyulyaeva, S. Gulev.
1130 **# 2885.** Downscaling Using Significant Features In Circulations Present On The Hottest Days In The California Central Valley
R. Grotjahn
1145 **# 3070.** Numerical studies on extreme maximum temperature in mountain lee on clear days
F. Kimura, S. Adachi.

Friday, 1 July 2011 **1030-1200 MR106**
IAMAS
JM07 Atmospheres and ices on terrestrial planets
JM07S2
Chairpersons: Dmitri Titov

1030 **# 3589.** On the Possibility of Gamma Ray Emissions from Venusian Lightning
R. Lorenz, D. Lawrence.
1045 **# 2888.** Methane on Mars: observations, origin, implications for habitability
S. Atreya, P. Mahaffy.
1100 **# 2127.** Glaciation of Mars from 10 million years ago until 10 million years into the future simulated with the model MAIC-2
R. Greve, B. Grieger, O.J. Stenzel.
1115 **# 2445.** The surfaces of Titan and Enceladus : morphotectonics, composition and variations
A. Coustenis, A. Solomonidou, E. Bratsolis, M. Hirtzig, G. Bampasidis, et al.
1130 **# 4719. Invited** Habitable zone limits for dry planets
Y. Abe, A. Abe-Ouchi, K. Zahnle, N. Sleep.
1145 **As above.**

Friday, 1 July 2011 **1030-1200 MR105**
IAMAS
JM10 Monsoons, Tropical Cyclones and Tropical Dynamics
JM10S5 West African Monsoon and South American Monsoon
Chairpersons: Guoxiong Wu

1030 **# 1194. Invited** Remote influence of the South American monsoon variability on African precipitation
A. Grimm, C. Reason.
1045 **As above.**
1100 **# 3161. Invited** Seasonal Evolution of the West African Monsoon System
K. Cook
1115 **# 2684.** Investigation of the West African monsoon water cycle from numerical weather prediction models and AMMA products
O. Bock, R. Meynadier, F. Guichard, A. Boone, J.L. Redelsperger.
1130 **# 3352.** Guinean Coastal Rainfall of the West African Monsoon
H. Nguyen, C.D. Thorncroft, C. Zhang.
1145 **# 5399.** Northeast monsoon in Southeast Asia
J. Matsumoto, S.Y. Ogino, N. Endo, P.M. Wu, H. Kubota, et al.

Friday, 1 July 2011 1030-1200 MR101
IAMAS

JM11 From Ice-house to Green-house: Studies of Natural and Human-Induced Climate Change

JM11S3 Regional Manifestations of the Changing Climate

Chairpersons: Michael MacCracken & Andrew Watson

1030 **# 4623.** Southern Hemisphere Circulation During The Medieval Climate Anomaly
I. Goodwin, T. Cohen, P. Mayewski, A. Lorrey, S. Browning, et al.

1045 **# 4076.** Long-Term Precipitation Variability and Change Within the Conterminous United States
J. Nielsen-Gammon, B. McRoberts.

1100 **# 3474.** Australia's hotter and drier future: Climate change projections using CMIP5 experimental design and the CSIRO Mk3. 6 climate model
K. Wong, J. Syktus, S.J. Jeffrey, L.D. Rotstayn, Ch.J. White, et al.

1115 **# 2572.** Winter Changes and Projections in Southern Hemisphere Circulation and Australian Rainfall
C. Frederiksen, J. Frederiksen, J. Sisson, S. Osbrough.

1130 **# 2578.** Changes in the interannual variability of Southern Hemisphere atmospheric circulation in the future climate
S. Grainger, C. Frederiksen, X. Zheng.

1145 **Discussion.**

Friday, 1 July 2011 1030-1200 PH1
IAPSO

PAS1 IAPSO The Prince Albert I Medal & Memorial Lecture

PAS1

Chairpersons: Johan Rodhe

1030 Presentation of the Prince Albert I Medal to Dr. Trevor McDougall, CSIRO Marine and Atmospheric Research, Hobart, Australia "For his outstanding work on (1) important and fundamental problems of ocean fluid dynamics over the full range of ocean scales, and (2) the thermodynamic properties of seawater".
Lawrence Mysak, IAPSO President
Detecting signatures of ocean mixing:- the forensic science aspect of ocean mixing
T. McDougall

Friday, 1 July 2011 1030-1200 MR203
IASPEI

S01/S03 Seismological Observation and Interpretation/ Sub-Saharan Africa Seismology

S0103S4

Chairpersons: James Dewey & Michael Korn

1030 **# 2736.** Towards a Global Mapping of Scattering and Intrinsic Attenuation of the Lithosphere
M. Korn

1045 **# 4343.** Detecting subsurface reflections in southwestern Japan, using ambient seismic noise
K. Hirahara, S. Ohmi.

1100 **# 1151.** Finite-Difference Simulation of Scattered Waves Based on a Locally Refined Grid
V. Cheverda, V. Lisitsa, G. Reshetova.

1115 **# 96.** Recent Seismic Observations in the Shillong Plateau – Assam Valley of Northeast India Region: Pop-up and Transverse Tectonics
J.R. Kayal

1130 **# 1385.** Preliminary interpretation of the 11th September 2009 Earthquake occurrence in SW Nigeria
A.A. Adepelumi

1145 **Discussion.**

Friday, 1 July 2011 1030-1200 MR108
IASPEI

S05 Infrastructure for seismology (FDSN)

S05S2 Infrastructure for Seismology (FDSN – International Federation of Digital Seismograph Networks)

Chairpersons: Torild van Eck & Gerardo Suarez

1030 **Introduction.**

1045 **# 4254.** Current status of the Swiss Seismic Network
J. Clinton, F. Haslinger, D. Giardini.

1100 **# 5364.** An Overview of IRIS PASSCAL Capabilities and Recent Innovations in Facilitating and Promoting Efficient Data Collection and Archiving
J. Gridley

1115 **Discussion.**

1130 **Discussion – FDSN objectives and activites.**

1145 **Discussion – FSDN objectives and activities**

Friday, 1 July 2011 1030-1200 MR213
IASPEI

S11 Earthquake forecasting and testing

S11S2

Chairpersons: John Rundle & Naoshi Hirata

1030 **# 3956.** What Stands Behind "Probability" in Earthquake Forecasting?
V. Kossobokov

1045 **# 3632.** Earthquake forecasting and earthquake prediction: different attitudes for obtaining the best model
W. Marzocchi, J. Zechar.

1100 **As above.**

1115 **# 3567.** Adaptation of a Long-range Earthquake Forecasting Model to a Global Catalogue
D. Rhoades

1130 **# 4362.** Global Earthquake Forecasts
D. Jackson, Y. Kagan.

1145 **# 4363.** Testing of Fault Segmentation Models
D. Jackson

Friday, 1 July 2011 1030-1200 MR209
IASPEI

S15 Anisotropy and attenuation: mechanisms, processes and observations

S15S4

Chairpersons: George Rumpker & Vladimir Cheverda

1030 **# 1153.** Numerical simulation of elastic waves in 3D anisotropic media by Lebedev finite-difference schemes
V. Cheverda, V. Lisitsa, D. Vishnevsky.

1045 **# 3799.** Short-scale variations of shear-wave splitting across the Dead Sea basin: evidence for the effects of sedimentary fill from waveform modeling
G. Ruempker, A. Kaviani, M. Weber, G. Asch.

1100 **# 5241.** Investigation of P- and S-wave Anisotropy beneath the Japan Subduction Zone
M. Ishise, H. Oda.

1115 **Discussion.**

1130 **Discussion.**

1145 **Discussion.**

Friday, 1 July 2011 **1030-1200 MR219**
IASPEI, IAVCEI
JS05/JV04 The Davies Mantle: Reconciling Geophysical and Geochemical Perspectives
JS05V04S2
Chairpersons: Ian Campbell & Albrecht Hofmann

1030 **# 4105.** Heat Flow Partitioning Between Continents and Oceans – 3D planform effects and supercontinents
L. Moresi, C. Cooper, A. Lenardic, A. Jellinek, C. O'Neill, et al.
1045 **# 785.** Role of Thermally Buffered Solidification in Moulding the Cooling History of the Mantle: a new look into the Kelvin Problem
V. Hamza, R. Cardoso.
1100 **# 4901. Invited** Heterogeneous mantle plumes
C. Farnetani
1115 **As above.**
1130 **# 3207.** The gravitational stability of mantle plumes
R. Kerr, J. Lister, C. Meriaux, N. Russell, A. Crosby.
1145 **Discussion.**

FRIDAY, 1 JULY 2011 1330-1500 PM1

Friday, 1 July 2011 **1330-1500 PH2**
IUGG
U06 Geoengineering: What are the Potentials for Climate Intervention, Carbon Scrubbing, and other Approaches to Moderate Climate Change and its Impacts?
U06S1 Speakers by Invitation
Chairpersons: Michael MacCracken

1330 **# 5152.** An Overview of Approaches to Climate Engineering
M. Mac Cracken
1345 **# 3989.** Implications and Risks of Engineering Solar Radiation to Limit Climate Change – Results from Multi-Model Ensemble Simulations
H. Schmidt
1400 **As above.**
1415 **# 1382.** Can We Afford Curbing Ship Tracks by Banning Bunker Fuel: An Unplanned Global Scale Experiment in Geoengineering
D. Rosenfeld, T. Goren.
1430 **As above.**
1445 **# 5138.** Engineering of Cirrus Clouds to Reduce Global Warming
D. Mitchell, S. Mishra.

Friday, 1 July 2011 **1330-1500 MR217**
IACS
JC02/JC03 Snow – Atmosphere Interactions and Avalanches.
JC0203S2 Snow – Atmosphere Interactions and Avalanches; Snow Models and Snow Distribution
Chairpersons: Eric Brun & Sven Kotlarski

1330 **# 2084. Invited** A comparison of 6561 snow models using observations from an alpine site
R. Essery, S. Morin.
1345 **As above.**
1400 **# 464.** Distributed Modelling of Snow Cover in the Semi-Arid Andes of Chile
S. Gascoin, K. Bortels, C. Kinnard, S. Lhermitte.
1415 **# 4827.** Parameterization of New Snow Density for Snow-Cover Models
C. Fierz, C. Zwart, R.S.W. van de Wal, M. Lehning.
1430 **# 4284.** Stochastic growth model for snow accumulation in complex terrain
H. Löwe, T. Wust, L. Egli.
1445 **Discussion.**

Friday, 1 July 2011 **1330-1500 MR214**
IAG
JG02 Application of Geodetic Techniques in Cryospheric Studies
JG02S3
Chairpersons: Reinhard Dietrich & Matt King

1330 **# 4956.** ICESat and CryoSat cross-calibrated with classical radar altimeters
W. Bosch, D. Dettmering.
1345 **# 3907.** Precise analysis of ICESat data in the region of subglacial Lake Vostok (East Antarctica) and some glaciological implications
H. Ewert, R. Dietrich, S. Popov.
1400 **# 2667.** Dynamic ocean topography in the southern hemisphere from GRACE/GOCE and multi-mission altimeter data
A. Albertella, R. Savcenko, T. Janjic, R. Rummel, W. Bosch, et al.
1415 **# 3905.** Mean Sea-Surface Topography in the Weddell Sea Region, Antarctica, from ICESat Laser Altimetry and a Regional Geoid Solution
M. Scheinert, H. Ewert, J. Schwabe, V. Lieb, R. Dietrich.
1430 **# 2497.** Analysis of landfast sea ice vertical and horizontal displacements derived from a combined precise relative Global Navigation Satellite System and Total Station measurement array
G. Leonard, J. Wright, T. Haskell.
1445 **# 2651.** GPS integer PPP to investigate Mertz ice tongue movement.
L. Lescarmontier, B. Legracsy, F. Perosanz, F. Mercier, S. Loyer, et al.

Friday, 1 July 2011 **1330-1500 MR216**

IAG

G07 High Precision GNSS

G07S3

Chairpersons: Ruth Neilan & Gary Johnston

1330 **# 5680.** Real-time Combination of GNSS Orbit and Clock Correctors for Precise Point Positioning
G. Weber, L. Mervart, L. Agrotis, A. Stürze.

1345 **# 2436.** Real-Time PANDA and Application to The Wide Differential Prototype System In China
C. Shi, Y. Lou, Q. Zhao, H. Zhang, W. Song, et al.

1400 **# 3661.** Single Epoch Precise Positioning – Methodology and Test Results with Multi GNSS Data
P. Wielgosz, J. Paziewski, K. Stepnaik, A. Krankowski

1415 **# 3691.** IGS Global Ionosphere Maps: Current Stage and Future Improvements
A. Krankowski, P. Wielgosz, M. Hernandez-Pajares.

1430 **# 3795.** Impact of Troposphere Modelling on GNSS Satellite Antenna PCV Estimation
R. Dach, A. Jaeggi, R. Schmid, H. Bock, S. Lutz, et al.

1445 **# 1849.** Reliable Integer Ambiguity Resolution: Soft constraints on the baseline length and direction and new multi-frequency mixed code carrier linear combinations
P. Henkel

Friday, 1 July 2011 **1330-1500 PH3**

IAHS

JH02 Hydro-climatology: Variability and change

JH02S3

Chairpersons: E. Blyth

1330 **# 227.** Calibration of evapotranspiration model using runoff records and regional evapotranspiration
Z. Bargaoui, A. Houcine.

1345 **# 230.** Hydro – Climatic Variability of the Hadejia – Jamare River Systems in the North Central Nigeria
S. Odunuga, I. Okeke, L. Oyebande, A. Omojola.

1400 **# 239.** Water and ice regime of the rivers of European Russia under climate change
D. Nesterenko, N. Frolova, S. Agafonova.

1415 **# 240.** Modelling Maximum Precipitation in a Mountainous Area of Greece Under Global Warming
D. Panagoulia, C. Caroni.

1430 **# 244.** Climate Variability versus Climate Change: How do you tell the difference?
M. Roderick, F. Sun, G. Farquhar.

1445 **# 256.** Analysis of extreme daily rainfall in south-eastern Asia with a latest gridded daily rainfall data set
K. Ono, S. Kazama.

Friday, 1 July 2011 **1330-1500 MR104**

IAMAS

JM03 Earth system observations and integration

JM03S3 Earth Observations and Integration – Observatories

Chairpersons: Richard Bouchard

1330 **# 2000.** Adequacy of observations and global analyses for tracking climate
K. Trenberth

1345 **# 4315.** The National Data Buoy Center – Strategic Ocean Observations and International Collaboration
W. Burnett, R. Bouchard, H. Portmann, L. Bernard.

1400 **# 4552.** The Indian Ocean Observing System (IndOOS) Resources Forum
G. Meyers, N. D'Adamo, Y. Masumoto, W. Yu.

1415 **# 3744.** Towards a Mesoscale Observation Network in Southeast Asia
T. Koh, CK. Teo.

1430 **# 2765.** Unmanned Aerial Systems: Bridging the Gap Between Space-born Observations and In-situ Ground Measurements
M.A. Lange, A. Teller, S. Ioannou, C. Keleshis.

1445 **# 4313.** Refreshing the Equatorial Pacific Tropical Atmosphere and Ocean (TAO) Array
R. Bouchard, R. Crout, L. Leblanc, S. McArthur, D. Petraitis, et al.

Friday, 1 July 2011 **1330-1500 MR110**

IAMAS

JM06 High-impact weather and extreme climate events

JM06S3

Chairpersons: Randy Dole & Jun Xia

1330 **# 5777.** Drought and Heavy Precipitation over the Canadian Prairies
R. Stewart

1345 **As above.**

1400 **# 4483.** Record rainfall brings unprecedented flooding to Victoria in January 2011
B. Campbell, H. Stern, B. Trewin.

1415 **# 1473.** Trends and oscillations in Australian rainfall extremes
D. Jakob

1430 **# 3332.** Numerical Simulation and Diagnosis Analysis of Heavy Rainstorm in Queensland in 10th January 2011
X. Wang, P. Steinle, A. Seed.

1445 **# 1933.** Flood impact attributed to climate change in Japan
S. Kazama & L. Gunawardhana.

Friday, 1 July 2011 **1330-1500 MR107**
IAMAS
JM08 **Predictability of the coupled climate system, climate system feedbacks and sensitivity to external forcing**
JM08S1
Chairpersons: Natalia Andronova

1330 **# 2813.** Physical Processes, Feedbacks and Climate Sensitivity
A. Gettelman

1345 **# 2135.** Climate feedbacks under unforced climate variability: useful analogues for secular climate change?
R. Colman, L. Hanson.

1400 **# 5629.** Climate sensitivity to external forcings from 1870 to 2005, inferred from ensemble climate model simulations
A. Bichet, M. Wild, D. Folini, C. Schär.

1415 **# 818.** Model Climate Sensitivity Uncertainty Caused by Climate Mean State Biases
D. Dommenget

1430 **# 2374.** Impact of Global Ocean Surface Warming on Seasonal-to-Interannual Climate Prediction
J. Luo, S. Behera, Y. Masumoto, T. Yamagata.

1445 **# 1967.** Understanding the role of model biases in climate projections for the western Pacific.
J. Brown, J.R. Brown, L. Muir, J. Risbey, A. Sen Gupta, et al.

Friday, 1 July 2011 **1330-1500 MR105**
IAMAS
JM10 **Monsoons, Tropical Cyclones and Tropical Dynamics**
JM10S6 **Monsoon and Its Variability**
Chairpersons: Dunxin Hu

1330 **# 877.** A possible cause of decreasing summer rainfall in northeast Australia
J. Li, J. Feng, Y. Li.

1345 **# 4454.** Projected Changes of Australia's Wet Season: The Australian Monsoon in a Warmer Climate
A. Moise, R. Colman, R. Suppiah, L. Hanson.

1400 **# 3394.** Diagnosing Potential Changes in Monsoon Onset/Intensity in the Australia-Asian Region from IPCC AR4 Models
H. Zhang, A. Moise, P. Liang.

1415 **# 2615.** A monsoon-like southwest Australian circulation, the SAM and southwest Western Australian winter rainfall
Y. Li, J. Feng, J. Li, D. Liu.

1430 **# 872.** Is there a relationship between the SAM and southwest Western Australian winter rainfall?
J. Feng, J. Li, Y. Li.

1445 **# 3254.** An assessment of climate model simulations of the climate of the Western Pacific monsoon region.
I. Smith, A. Moise, R. Colman.

Friday, 1 July 2011 **1330-1500 MR108**
IAMAS, IAGA
JM12/A06. 4 **Thunderstorms: from troposphere to mesosphere and beyond / Thunderstorms: Upwards and Downwards Coupling of the Atmospheric Layers and near-Earth Space**
JM12A64S1
Chairpersons: Colin Price

1330 **# 2053. Invited** Thunderstorms and Lightning in Australia
Y. Kuleshov, D. Mackerras, M. Darveniza.

1345 **As above.**

1400 **# 510.** Location of TGF Source Lightning
A. Collier, T. Gjesteland, N. Ã¯stgaard.

1415 **Discussion.**

1430 **# 4536.** Distribution of Polarimetric Parameters in Precipitating Cells Formed a Thunderstorm Observed by X-band Multi-parameter Radar in Warm Season.
T. Sano, S. Oishi, K. Sunada.

1445 **# 3588.** Are There Really 2000 Thunderstorms Active at any Time?
C. Price, K. Mezuman, E. Galanti.

Friday, 1 July 2011 **1330-1500 MR207**
IAPSO
JP02 **Future state of the Arctic and potential impact**
JP02S1
Chairpersons: Wieslaw Maslowski

1330 **Introduction.**

1345 **# 1303.** Seasonal cycle of the Fram Strait freshwater export: Present state and future changes
A. Jahn, B. Tremblay, M.M. Holland, R. Newton, L.A. Mysak.

1400 **# 5375.** Changes in Arctic Ocean Freshwater Composition North of Ellesmere Island and Greenland from 2007-2010
W. Smethie, P. Schlosser, B. Newton, M. Steele, R. Friedrich.

1415 **Discussion.**

1430 **Discussion.**

1445 **# 2431.** Increase of Shelf-Bsin Exchange in the Ice-Depleted Arctic Ocean
V. Ivanov, E. Watanabe.

Friday, 1 July 2011 1330-1500 MR211

IAPSO

JP03 Global and regional sea-level change

JP03S1

Chairpersons: Simon Holgate

1330 **# 829.** Sea Level Rise And Fresh Water Availability And Biodiversity Of Small Islands- Lakshadweep Islands In Arabian Sea, Indian Ocean
J.S. Pillai

1345 **# 883.** Mediterranean Sea Level Variability Changes and Projections at High Frequencies (1-100 Days)
I. Vilibic, J. Sepic, M. Marcos, G. Jorda.

1400 **# 2532.** A Simple Way to Estimate an Allowance for Sea-Level Rise, Taking into Account Uncertainty
J. Hunter

1415 **# 4805.** The impact of storminess changes on extreme sea levels over southern Australia
F. Colberg, K. McInnes.

1430 **# 5518.** The contribution from glaciers and ice caps to sea level rise – assessing the present state of the art.
G. Kaser, A. Arendt, G. Cogley, A. Gardner, R. Hock, et al.

1445 **# 5200.** Role of Cryosphere in Present-day Sea-Level Rise
C. Shum, H. Lee, J. Duan, J. Guo, I. Howat, et al.

Friday, 1 July 2011 1330-1500 MR212

IAPSO

P04 Thermohaline Circulation (THC) and Deep Currents

P04S2

Chairpersons: TBC

1330 **# 2701.** The Thermohaline Mean Circulation
J. Zika, M.H. England.

1345 **# 3960.** South Atlantic Overturning Circulation, Heat and Freshwater Transports at 24S
H.L. Bryden, B.A. King, G.D. McCarthy.

1400 **# 751.** Long-term Variability of Thermohaline Characteristics of the Deep and Bottom Water Masses in the Atlantic Ocean
A. Demidov

1415 **# 5153.** The Role of Bottom Pressure Torques on the Interior Pathways of North Atlantic Bottom Water
P. Spence, O. Saenko, W. Sjip, M. England.

1430 **# 1442.** North Atlantic Multi-decadal Variability simulated in CGCMs
J. Ba, N. Keenlyside, W. Park, E. Hawkins.

1445 **# 4792.** Deep Oceanic Zonal Jets Constrained By Fine-Scale Wind Stress Curls In The South Pacific Ocean: A High-Resolution Coupled GCM Study
B. Taguchi, R. Furue, N. Komori, A. Kuwano-Yoshida, M. Nonaka, et al.

Friday, 1 July 2011 1330-1500 PH1

IAPSO

P05 New insights from Sustained Ocean Observing Systems

P05S1

Chairpersons: Steve Riser & Katy Hill

1330 **Introduction.**

1345 **# 3404. Invited** The Australian Animal Tagging and Monitoring System (AATAMS)
I. Field, R. Harcourt, M. Hindell, M-A. Lea, S. Goldworthy, et al.

1400 **As above.**

1415 **# 1916. Invited** Sustained ecosystem monitoring using passive and active acoustics
R. Kloser, R. McCauley.

1430 **As above.**

1445 **Discussion.**

Friday, 1 July 2011 1330-1500 MR204

IASPEI

JS01 Advances in Tsunami Science, Warning, and Mitigation

JS01S1

Chairpersons: Kenji Satake & Vasily Titov

1330 **# 487.** Small islands, big story. Opening up the palaeotsunami record of the Pacific
J. Goff, C. Chague-Goff, D. Dominey-Howes.

1345 **# 3284.** Searching for Proxies to Distinguish Between Tsunami and Storm Deposits: Can Chemical and Isotopic Signatures Provide the Missing Link?
C. Chague-Goff, D. Mazumder, A. Andrew, J. Goff, M. Cisternas.

1400 **# 3303.** Reinterpretation of Megatsunami Inundation in Southeast Australia and the Implications for Palaeotsunami Identification
C. Courtney, D. Dominey-Howes, C. Chague-Goff, C. Tarbotton, J. Goff.

1415 **Discussion.**

1430 **# 725.** Analytical tests in the theory of tsunami wave generation by submarine landslides in a basin of variable depth
E. Pelinovsky, I. Didenkulova, I. Nikolkina, N. Zahibo.

1445 **# 3877.** Hydraulic Experiment On Bed Load Due To Tsunamis With Various Sand Grain Size
T. Takahashi, M. Fujita, T. Kurokawa.

Friday, 1 July 2011 1330-1500 MR209

IASPEI

JS07 Antarctic and Arctic Research

JS07S1

Chairpersons: Ian Allison

1330 **# 4864. Invited** Interior East Antarctica as revealed from aerogeophysical observations
F. Ferraccioli, R.E. Bell, T.A. Jordan, T. Creyts, D. Damakse, et al.

1345 **As above.**

1400 **# 4348.** Isolating Nadir Radar Returns Over the Gamburtsev Subglacial Mountains, East Antarctica
D. Braaten, P. Gogineni, J. Paden, J. Li, R.E. Bell, et al.

1415 **# 4338.** Bed Topography for Jakobshavn, Helhiem, and Kangerdlussuaq Glaciers
P. Gogineni, J. Paden, F. Rodriguez-Morales, J. Li, A. Hoch, et al.

1430 **# 3125.** Monitoring of glacial seismic events from Greenland at regional distances: experience from the POLENET/LAPNET experiment
E. Kozlovskaya, A. Kozlovsky,. POLENET/LAPNET Working Group.

1445 **# 4255.** Using GLISN to observe iceberg calving at local distances.
J. Clinton, M. Olivieri, J. Amundson, F. Walter.

Friday, 1 July 2011 1330-1500 MR203
IASPEI

S01/S03 Seismological Observation and Interpretation/ Sub-Saharan Africa Seismology

S0103S5

Chairpersons: Paul Dirks & Gerhard Graham

1330 **# 5176.** Recent Seismic Activity in Augrabies, Northern Cape, South Africa
M. Smith, I. Saunders, H. Minnaar, C. Groenewald, F. Strasser, et al.

1345 **# 813.** Implication Of Coulomb Stress Changes In Seismic Hazard Assessment
V. Midzi

1400 **# 1054.** Using first Gumbel model of extreme value to predict earthquake return period in East Africa
I. Tumwikirize, R. Durrheim.

1415 **Discussion.**

1430 **# 2550.** The crustal and Upper Mantle Structure of Southwestern Nigeria from Inversion of Teleseismic Surface Waves
M.A. Isogun, T. Yakubu.

1445 **As above.**

Friday, 1 July 2011 1330-1500 MR213
IASPEI

S11 Earthquake forecasting and testing

S11S3

Chairpersons: David Rhoades & David D. Jackson

1330 **# 1363.** Long-Term Seismic Forecast for Kuril-Kamchatka Arc for 2011- 2016 Based on Regularities of Seismic Gaps and Seismic Cycle, the Reliability of Previous Forecasts
S. Fedotov, A. Solomatin, S. Chernyshev.

1345 **# 4916.** Earthquake forecasting and estimation of maximum magnitude in Bhuj, Western India
W.K. Mohanty, A.K. Mohapatra, K. Kislay, K.F. Tiampo, A.K. Verma.

1400 **# 5077.** PSINSAR, Geodynamics and Cephallonia (W Greece): Earthquake Forecast and Odysseus' Homeland?
C. Browitt, E. Lagios, J. Underhill, F. Novali, P. Papadimitriou, et al.

1415 **# 4938.** Long-range earthquake triggering near Tobago, West Indies: precursory indicators
J. Latchman, W. Aspinall.

1430 **# 119.** Prediction of Earthquake Occurrence Probabilities and Hazard in Northeast India
D. Shanker, A. Panthi, H.N. Singh.

1445 **# 919.** Investigation of Seismicity Rate Using Markov-modulated Hawkes Process with Stepwise Decay
T. Wang, M. Bebbington, D. Harte.

Friday, 1 July 2011 1330-1500 MR220
IASPEI

S14 Plate Boundary Processes

S14S1

Chairpersons: Kevin Furlong & Marino Protti

1330 **# 97.** Seismic Characteristics at the Plate Boundary: Andaman-Sumatra Subduction Zone
J.R. Kayal, S. Roy.

1345 **# 565.** Role of a deep subducted seamount in the earthquake occurrence and segmentation process offshore of southwestern Sumatra
S. Das, S. Singh, N. Hananto, M. Mukti, D. Robinson.

1400 **Discussion.**

1415 **# 5726.** Seismic Response to Tectonic Movements in the Banda Arc Region – a Consequence of Discontinuities in the Process of Subduction
A. Spicak, R. Matejkova, J. Vanek.

1430 **# 677. Invited** The Nicoya segment of Middle American Trench: an Excellent Target for Drilling and Monitoring the Shallow Portion of the Seismogenic Zone
M. Protti, V. Gonzalez, Y. Kaneda, K. Brown.

1445 **As above.**

Friday, 1 July 2011 1330-1500 MR219
IASPEI, IAVCEI

JS05/JV04 The Davies Mantle: Reconciling Geophysical and Geochemical Perspectives

JS05V04S3

Chairpersons: Ian Jackson & Louis Moresi

1330 **# 4907. Invited** Models of the Earth, secular cooling and geoneutrinos
W. McDonough

1345 **# 2781. Invited** Thermo-Chemical Evolution of Earth's Mantle-Plate Tectonics System and the Resulting Geochemical and Seismological Signatures
P. Tackley, T. Nakagawa, F. Deschamps, J.A.D. Connolly, E. Kaminski.

1400 **# 4826.** Understanding the thermochemical mantle: influence of a chemical pool with high heat rate at the bottom of the mantle
J. Huang, H. Cheng.

1415 **# 2120.** Did the Formation of D Cause the Archaean-Proterozoic Transition?
I. Campbell, R. Griffiths.

1430 **# 4670.** Earth's missing lead in D
A. Hofmann

1445 **Discussion.**

Friday, 1 July 2011 1330-1500 MR103
IAVCEI
JV01 World Volcano Observatories (WOVO) and International Science
Chairpersons: Warner Marzocchi

1330 **Introduction.**
1345 **# 5007.** Volcanic Ash Fall Impacts Working Group, thinking collaboratively acting globally.
K. Wallace, G. Leonard, T. Wilson, C. Neal.
1400 **# 5211. Invited** The International Volcanic Ash Task Force (IVATF)
R. Romero, M. Guffanti, A. Tupper.
1415 **As above.**
1430 **# 5567.** Closing Chasms and Shifting Paradigms – Attaining the Cooperation Needed for Volcanic Ash Cloud Warnings for Aircraft
A. Tupper
1445 **# 5009.** The Smithsonian's Global Volcanism Program: New Directions
E. Venzke, E. Cottrell, P. Kimberly, R. Wunderman, S. Kuhn Sennert.

FRIDAY, 1 JULY 2011 1630-1800 PM2

Friday, 1 July 2011 1630-1800 PH2
IUGG
U06 Geoengineering: What are the Potentials for Climate Intervention, Carbon Scrubbing, and other Approaches to Moderate Climate Change and its Impacts?
U06S2 Speakers by Invitation
Chairpersons: Michael MacCracken

1630 **# 3696.** Managing the terrestrial carbon sink for climate protection
P. Canadell
1645 **As above.**
1700 **# 2056.** Enhancement of Oceanic CO2 uptake
T. Trull
1715 **As above.**
1730 **# 5596.** Geoengineering treatment of methane
A. Lockley
1745 **Discussion.**

Friday, 1 July 2011 1630-1800 MR217
IACS
JC02/JC03 Snow – Atmosphere Interactions and Avalanches.
JC0203S3 Snow – Atmosphere Interactions and Avalanches; Avalanches
Chairpersons: Jordy Hendrikx & Alejandro Casteller

1630 **# 1451.** Monitoring glide avalanches using time-lapse photography
A. Van Herwijnen, R. Simenhois.
1645 **# 3980.** Snow avalanches in forested terrain
M. Teich, P. Bartelt, A. Gret-Regamey, P. Bebi.
1700 **# 5790.** MetGIS High Resolution Snow Forecasts for the Southern Hemisphere: Recent Upgrades and Performance Checks
G. Spreitzhofer, S. Sperka.
1715 **# 962.** Tree-ring reconstruction of snow avalanches in the Patagonian Andes and its relationship with atmospheric circulation patterns
A. Casteller, R. Villalba, D. Araneo, V. Stöckli.
1730 **# 1848.** Earthquake-induced avalanching in Canterbury, New Zealand
J. Hendrikx, A. Hobman, K. Birkeland.
1745 **# 4221.** Snow Variability in Different Climatic Conditions and Snow Stability Assessment
P. Chernous, N. Barashev, Y. Fedorenko, Y. Seliverstov.

Friday, 1 July 2011 1630-1800 MR216
IAG
G07 High Precision GNSS
G07S4
Chairpersons: Ruth Neilan & Gary Johnston

1630 **# 4229.** Assessing the accuracy limits of kinematic acceleration from GPS for airborne gravimetry
C. Jekeli
1645 **# 1639.** Precise GNSS orbit determination using an adjustable box-wing model for solar radiation pressure
U. Hugentobler, C. Rodriguez Solano, P. Steigenberger.
1700 **# 2160.** Multi-GNSS Orbit And Clock Offset Determination
Q. Zhao, M. Li, C. Shi, J. Liu.
1715 **# 1725.** Impact and Feasibility of High-Precision Clock Modelling for Ground-Based and LEO GPS Receivers
U. Weinbach, S. Schoen.
1730 **# 3870.** GNSS-based Formation Flying – Functional Model for the GARADA project
S. Verhagen, P.J. Buist, G. Giorgi.
1745 **# 1716.** A Three-Carrier Ambiguity Resolution Method for Precise Orbit Determination of Compass Satellites
B. Sun, X. Yang, F. Cao, H. Yang.

Friday, 1 July 2011 1630-1800 PH3
IAHS
JH02 Hydro-climatology: Variability and change
JH02S4
Chairpersons: K. K Yilmaz

1630 **# 262.** Drought/wetness analysis from TMPA data sets within the Laohahe Basin, North China
S. Jiang, L.L. Ren, B. Yong, X.L. Yang, X.F. Liu.
1645 **# 265.** Changes of Evaporation Capacity and Its Influencing Factors in Different Climatic Zones of China
L. Cuishan, Z. Jianyun, W. Guoqing, H. Ruimin.
1700 **# 268.** River runoff response to climate changes in Poland (East-Central Europe)
J. Pociask-Karteczka
1715 **# 275.** Evapotranspiration observation and data analysis in reed swamp wetlands
S. Xu
1730 **# 284.** Satellite-based Tracking of Water Surface Variation of Poyang Lake in Recent Three Decades
P. Song, Y. Liu.
1745 **# 286.** Recent Increased Frequency of Drought Events in Poyang Lake Basin of China: Climate Change or Anthropogenic Effects?
Y. Liu, P. Song, J. Peng, Q. Fu, C. Dou.

Friday, 1 July 2011 1630-1800 MR104
IAMAS
JM03 Earth system observations and integration
JM03S4 Earth Observations and Integration – Analysis
Chairpersons: Richard Bouchard

1630 **# 865.** Trends in Tropospheric Humidity from 1970-2008 over China from a Homogenized Radiosonde Dataset
T. Zhao
1645 **# 2810.** Comparative analysis of upper ocean heat content variability from ensemble operational ocean analyses
Y. Xue, M. Balmaseda, T. Boyer, N. Ferry, S. Good, et al.
1700 **# 3353.** Observation of the Hadley Cells and Relationship Between Tropics and Extra-tropics.
H. Nguyen, B. Timbal, C. Lucas, A. Evans, H. Hendon.
1715 **# 4527.** An Observational Analysis of Tropical Expansion in the Southern Hemisphere
C. Lucas, H. Nguyen, B. Timbal.
1730 **# 4715.** Weddell Sea ice thickness structures simulated with a sea ice model
P. Heil, R. Stevens.
1745 **# 5401.** Anthropogenic Tectonic/Earth-change: combining anthropogenic climate – biosphere – cryosphere – lithosphere – hydrosphere – sediment & asthenosphere change into a new unified hypothesis
C. Allen

Friday, 1 July 2011 1630-1800 MR110
IAMAS
JM06 High-impact weather and extreme climate events
JM06S4
Chairpersons: Neville Nicholls & Lisa Alexander

1630 **# 4507.** Changes and uncertainties in global data sets of observed climate extreme indices
M. Donat, L.V. Alexander.
1645 **# 2802.** An Optimum Big Rainfall Index
J. O'Brien, D. Zierden, P. Leftwich.
1700 **# 3003.** A simple bias-correction method for climate extremes estimated by the Generalized Extreme Value distribution
S. Perkins
1715 **# 5321.** Drought Characteristic Analysis Based on Bivariate Copula Function and Case Study in Yellow River
J. Xia, D.X. She.
1730 **Discussion.**
1745 **Discussion.**

Friday, 1 July 2011 1630-1800 MR107
IAMAS
JM08 Predictability of the coupled climate system, climate system feedbacks and sensitivity to external forcing
JM08S2 Advances in Modelling
Chairpersons: Natalia Andronova

1630 **# 6008. Invited** How Weather Impacts the Forced Climate Response
B. Kirtman
1645 **As above.**
1700 **Discussion.**
1715 **# 4678.** ACCESS Coupled Model for IPCC AR5 and CMIP5
D. Bi, M. Dix, M. Golebiewski, A. Hirst, S. Marsland, et al.
1730 **# 4442.** Intercomparison of the Multi-regional Results of Five Approaches for Forming Probabilistic Climate Change Projections
A. Moise, P. Whetton, J. Bathols, L. Hanson.
1745 **# 4793.** Climate during the Last Glacial Maximum: an assessment of the Earth System Modelling Approach
R. Matear, S. Phipps.

Friday, 1 July 2011 **1630-1800 MR105**

IAMAS

JM10 Monsoons, Tropical Cyclones and Tropical Dynamics

JM10S7 Monsoon Prediction

Chairpersons: C-P Chang

1630 **# 4925. Invited** Multi-Model Ensemble Coupled Prediction for Monsoon Precipitation (Mean State and Intraseasonal to Seasonal Prediction)
J. Lee, B. Wang, I-S. Kang, J. Shukla.

1645 **# 4130. Invited** Analysis of the Asian Monsoon Response to ENSO in the Met Office GloSea4 Seasonal Hindcasts
A. Turner, R. Levine, G. Martin.

1700 **As above.**

1715 **# 5826.** Predictability of Indian summer monsoon onset and withdrawal using dynamical seasonal forecasts
A. Alessandri, A. Borrelli, A. Cherchi, A. Navarra.

1730 **# 107.** Predictable Climate Dynamics of Abnormal East Asian Winter Monsoon: Once-in-a-century Snowstorms in 2007/2008 Winter
Z. Wu, J. Li, Z. Jiang, J. He, X. Zhu.

1745 **# 3900.** Transport by the Asian Monsoon Circulation
K. Bowman

Friday, 1 July 2011 **1630-1800 MR108**

IAMAS, IAGA

JM12/A06. 4 Thunderstorms: from troposphere to mesosphere and beyond / Thunderstorms: Upwards and Downwards Coupling of the Atmospheric Layers and near-Earth Space

JM12A64S2

Chairpersons: Elisabeth Blanc

1630 **# 5791. Invited** Global Distribution of Thunderstorm Activities Estimated by GEON and its Relationship to Solar Activity
Y. Takahashi, M. Sato, K. Yamashita, H. Miyahara, N. Hoshino.

1645 **As above.**

1700 **# 3654.** Influence of Global Warming on Global Lightning Distribution as Shown by Schumann Resonance Frequencies
G. Satori, V. Mushtak, E. Williams, T. Nagy.

1715 **# 2964.** Possible feedback loop in lightning initiation caused by ice and nitrogen oxides
J. Hallett, H. Peterson, M. Bailey, D. Petersen.

1730 **# 3019.** Gravity Wave Generation by Convection and Middle Atmosphere Response
R. Vincent, J. Alexnder, S. Kovalam, I. Reid, A. MacKinnon, et al.

1745 **#5799.** Lightning and Thunderstorms in Jupiter
Y. Takahashi, M. Sato, K. Nakajima, Y. Yair, K. Aplin.

Friday, 1 July 2011 **1630-1800 MR207**

IAPSO

JP02 Future state of the Arctic and potential impact

JP02S2

Chairpersons: Alexandra Jahn

1630 **Introduction.**

1645 **# 4708.** The Arctic Upper Ocean heat storage and its impact on sea ice and climate.
W. Maslowski, J. Clement Kinney, J. Haynes, S. Okkonen, R. Osinski.

1700 **Discussion.**

1715 **# 917.** Mapping of sea ice production in the Arctic coastal polynyas
T. Tamura, K. Ohshima.

1730 **Discussion.**

1745 **# 5046. Invited** Recent Wind Driven High Export in the Fram Strait Contributes to Arctic Sea Ice Decline
L.H. Smedsrud, A. Sirevaag, K. Kloster, A. Sorteberg, S. Sandven.

Friday, 1 July 2011 **1630-1800 MR211**

IAPSO

JP03 Global and regional sea-level change

JP03S2

Chairpersons: CK Shum

1630 **# 724.** Holocene Relative Sea-Level Change in Bangladesh
T. Rashid

1645 **# 2183.** Fingerprints of Sea Level Change due to Mass Loss of Ice Sheets and Land Glaciers
S. Brunnabend, R. Rietbroek, J. Schroeter, J. Kusche.

1700 **# 4950.** Long-term evolution of the dynamic ocean topography with mesoscale resolution synergies of GOCE and multi-mission altimetry
W. Bosch, R. Savcenko.

1715 **# 5151.** Incorporating Lake-loading into Calculations of Post-Glacial Rebound and Sea-Level Change
A. Purcell, K. Lambeck.

1730 **# 5227.** Sea-Level Budget Closure and Glacial Isostatic Adjustment
Z. Huang, C. Shum, J. Guo, C. Kuo, J. Duan, et al.

1745 **Discussion.**

Friday, 1 July 2011 **1630-1800** **MR212**
IAPSO
P04 Thermohaline Circulation (THC) and Deep Currents
P04S3
Chairpersons: TBC

1630 **# 1458.** Mechanisms Of Decadal Variability Of The Meridional Overturning Circulation In a Coupled Climate Model With a Hybrid-Coordinate Ocean component
A. Persechino, R. Marsh, B. Sinha, A. Blaker, A. Megann.

1645 **# 3400.** Subduction of pacific subantarctic mode water and antarctic intermediate water in an eddy-resolving model
Y. Hiraike, Y. Tanaka, S. Urakawa, H. Hasumi.

1700 **# 4503.** Downslope Flows in the Bari Canyon System (BSC): new insights from combining seismic oceanography measurements and preliminary results from process study simulations.
A. Bergamasco, S. Carniel, W. Wood, R. Hobbs, J. Book, et al.

1715 **# 4993.** A Review of the Role of the Agulhas System in Climate
L. Beal, A. Biastoch, W.P.M. De Ruijter, R. Zahn, F. Peeters, et al.

1730 **# 3524.** Two Different Modes Of The Atlantic Meridional Overturning Circulation Corresponding To Stadial And Interstadial Periods In Glacial Climate
A. Oka, A. Abe-Ouchi, H. Hasumi.

1745 **# 852.** Influence of the northern oceanic pathway between Pacific and Atlantic on ice age climate
A. Hu, G. Meehl, W. Han, A. Timmerman, B. Otto-Bliester, et al.

Friday, 1 July 2011 **1630-1800** **PH1**
IAPSO
P05 New insights from Sustained Ocean Observing Systems
P05S2
Chairpersons: Susan Wijffels & Matthiew Palmer

1630 **Introduction.**

1645 **# 4011.** Estimates of Global Ocean Circulation from Argo Floats
A. Gray, S. Riser.

1700 **# 4307.** Using the Near-Global Coverage of Argo float and Other Observing System Salinity Data to Document Basin and Global Scale Patterns of Salinity Changes in the Ocean.
T. Boyer, J. Antonov, J. Reagan.

1715 **# 3434.** Multi-year Observations of Mixed-layer Evolution Under Seasonal Ice Around Antarctica Using Profiling Floats
S. Riser, A. Wong.

1730 **# 3527.** Accurate and sustained monitoring of offshore wind-waves using surface drifters with a low-cost GPS wave sensor
K. Komatsu

1745 **Discussion.**

Friday, 1 July 2011 **1630-1800** **MR204**
IASPEI
JS01 Advances in Tsunami Science, Warning, and Mitigation
JS01S2
Chairpersons: James Goff & Efim Pelinovsky

1630 **# 2871.** Tsunami Modeling and Inundation Mapping in Alaska: The Threat of Local Landslide-Generated Tsunamis
D. Nicolsky, E. Suleimani, R. Hansen.

1645 **Discussion.**

1700 **# 4588.** Integrating tsunami numerical model and remote sensing to search tsunami affected area and its impact
S. Koshimura, M. Matsuoka.

1715 **# 1441.** Abnormal amplification of tsunami waves at special bottom geometries
I. Didenkulova, E. Pelinovsky.

1730 **# 3402.** Modelling Tsunami Propagation In Shallow Water: Limitations Due To Elevation Data Resolution
J. Griffin, L. Fountain, K. Van Putten, J. Sexton, O. Nielsen.

1745 **Discussion.**

Friday, 1 July 2011 **1630-1800** **MR209**
IASPEI
JS07 Antarctic and Arctic Research
JS07S2
Chairpersons: Ian Allison

1630 **# 5331.** A Gravity and Magnetic View over the Arctic
M. Mandea, C. Gaina, V. Lesur.

1645 **# 2626.** Magnetotelluric survey across the Sorjsdel Glacier, East Antarctica: lessons learned
J. Peacock, K. Selway, G. Heinson.

1700 **# 1265.** Kinematics and Deformation status of Schirmacher Oasis region of central Dronning Maud Land, Antarctica using GPS
C.D. Reddy, P. Sunil, A. Dhar & M. Ponraj.

1715 **# 1177.** Investigation of Crustal Structures On- and Off-shore Northern Victoria Land, Antarctica, by 3D Combined Gravimetric and Magnetic Modeling
P. Schindler, G. Jentzsch, D. Damaske, A. Laufer.

1730 **# 3746.** Seismic Swarm Activity Along The Spreading Zones of the Northern Mohns Ridge and The Mohns Â' Knipovich Bend, As Viewed Within The International Polar Year
M. Pirli, J. Schweitzer, IPY Project Consortium.

1745 **# 4028.** LOMGRAV: an airborne geophysical survey in the Arctic Ocean in support of extended continental shelf claims
A. Vestergaard, A. Døssing, R. Forsberg, J. Halpenny, M. Véronneau.

Friday, 1 July 2011 **1630-1800 MR213**
IASPEI
S11 **Earthquake forecasting and testing**
S11S4
Chairpersons: David D. Jackson & David Rhoades

1630 **# 679.** Spatial distribution of seismicity parameters along the Longmenshan tectonic zone before the 2008 Wenchuan earthquake and their relationships with the distribution of strong aftershocks
G. Yi, X. Wen, H. Xin, H. Qiao, S. Wang.

1645 **# 838.** Statistical model of time interval between earthquakes
N. Tahernia, N. Mirzaei, M. Khodabin.

1700 **# 2193.** Sensitivity of Coulomb stress change to the parameters of Coulomb failure model. A case study for the 2008 Mw 7. 9 Wenchuan earthquake
J. Wang, C. Xu, J. Freymueller.

1715 **# 4798.** Coulomb stress evolution due to coseismic, postseismsic and interseismic deformation induced by the 2008 Mw7. 9 Wenchuan earthquake
J. Wang, C. Xu.

1730 **# 3092.** Detection of Anomalous Signals Prior to Large Earthquakes Using Superconducting Gravimeter and Broadband Seismometer Records
W. Shen, D. Wang, C. Hwang, H. Ding, J. Yi.

1745 **Discussion.**

Friday, 1 July 2011 **1630-1800 MR220**
IASPEI
S14 **Plate Boundary Processes**
S14S2
Chairpersons: Wouter Schellart & Fabio Capitanio

1630 **# 1066.** Subduction dynamics and the origin of Andean orogeny and Bolivian Orocline
F. Capitanio, C. Faccenna, S. Zlotnik, D. Stegman.

1645 **Discussion.**

1700 **# 2892.** Afterslip detection by normal-mode data
T. Tanimoto

1715 **# 1428.** Linking latest Miocene plate boundary processes across the Pacific plate
J. Austermann, Z. Ben-Avraham, P. Bird, O. Heidbach, G. Schubert, et al.

1730 **# 1508.** Effects of plate strength, density, rheology, and subduction angle on the evolution of a subducting plate
W. Sharples, M. Jadamec, L. Moresi, F. Capitanio.

1745 **# 743.** Experimental investigations of energy dissipation during subduction of oceanic plates into the upper mantle
W.P. Schellart

Friday, 1 July 2011 **1630-1800 MR219**
IASPEI, IAVCEI
JS05/JV04 **The Davies Mantle: Reconciling Geophysical and Geochemical Perspectives**
JS05V04S4
Chairpersons: Ian Campbell & Albrecht Hofmann

1630 **# 2776. Invited** Geodynamic Controls on the Chemical Structure of the Mantle
R. Carlson

1645 **As above.**

1700 **# 2965. Invited** Palaeontology of the Earth's Mantle
N.H. Sleep, D. Bird, E. Pope.

1715 **# 3020. Invited** Dynamical Geochemistry of the Mantle
G. Davies

1730 **As above.**

1745 **Discussion.**

Friday, 1 July 2011 **1630-1800 MR103**
IAVCEI
JV01 **World Volcano Observatories (WOVO) and International Science**
JV01S2
Chairpersons: John Nielson-Gammon & Andrew Tupper

1630 **Introduction.**

1645 **# 2141.** Investigating science advice, emergency management and decision making in the laboratory
E. Doyle, D.M. Johnston, D. Paton.

1700 **# 5990.** Recent Eruptive Activity At Gaua Volcano, Vanuatu: Scientific And Emergency Response
E. Garaebiti, G. Jolly, S. Todman, J. Cevuard, A. Worwor, et al.

1715 **# 3007.** Volcanic Lightning: Global Observations and Constraints on Source Mechanisms
S. McNutt, E. Williams.

1730 **# 3458.** Atmospheric Internal Waves Generated by Explosive Volcanic Eruptions
P. Baines

1745 **Discussion.**

SATURDAY, 2 JULY 2011 0830-1000 AM1

Saturday, 2 July 2011 0830-1000 PH2
IUGG

U10 Climate Change: a 360 Degree-View from IUGG Associations

U10S1 Speakers by Invitation

Chairpersons: Eigil Friis-Christensen

0830 **# 5286.** The view from the past: Understanding global climate processes through records from ice cores
T. Van Ommen

0845 **As above.**

0900 **Discussion.**

0915 **Discussion.**

0930 **# 3104.** The exploration of Titan with a focus on its climatic and seasonal changes
A. Coustenis

0945 **As above.**

Saturday, 2 July 2011 0830-1000 MR220
IACS

JC04 Ice Shelves and Glacier Tongues – Ice on the Edge

JC04S1

Chairpersons: Lars Smedsrud

0830 **# 4144. Invited** Dynamics and calving of the Mertz Glacier and its ice tongue, East Antarctica.
B. Legrésy, L. Lescarmontier, N. Young, R. Coleman, B. Galton-Fenzi, C. Mayet, L. Testut, et al.

0845 **As above.**

0900 **# 4707.** The Effect of External Factors on the Floating Mertz Glacier Tongue (East Antarctica) Prior to Its Calving
R. Massom, A. Giles, R. Warner, B. Legresy, H. Fricker, et al.

0915 **As above.**

0930 **# 5818.** Oceanographic Consequences of the Calving of the Mertz Glacier Tongue
S. Rintoul, L. Herraiz-Borreguero, S. Sokolov, B. Pena-Molino, E. van Wijk.

0945 **As above.**

Saturday, 2 July 2011 0830-1000 MR216
IAG

JG01 Space Geodesy-based Atmospheric Remote Sensing as a Synergistic Link between Geodesy and Meteorology

JG01S1

Chairpersons: Olivier Bock & Jens Wickert

0830 **# 2392. Invited** DORIS Tropospheric Estimation at IGN, Current Strategies, GPS Intercomparisons and Perspectives
P. Willis, O. Bock, Y. Bar-Sever.

0845 **As above.**

0900 **# 5786.** Regional near Real-Time Tropospheric Delay Processing and Assimilation into Weather Forecast and Nowcast Models
R. Weber, G. Maller, A. Karabatic, N. Magnet, J. Bathm.

0915 **# 2426.** NRT atmosphere model based on the ground GNSS permanent networks for meteorological and positioning applications
J. Bosy, W. Rohm, J. Kaplon, J. Sierny.

0930 **Discussion.**

0945 **# 5063.** Generation and Assessment of VMF1-Type Grids Using North-American Numerical Weather Models
M. Santos, L. Urquhart, F. Nievinski,.

Saturday, 2 July 2011 0830-1000 MR217
IAG, IASPEI

JG06/JS06 Tectonic Geodesy and Earthquakes

JG06JS06S1 Tectonic Geodesy and Earthquakes Part 1

Chairpersons: Jeff Freymueller & Valentin Mihkailov

0830 **# 636.** Towards an integrated model of deformation along the western margin of North America
C. Pearson, R. Snay, R. McCaffrey.

0845 **# 1581.** Mapping fault creep across the major faults in northern California using persistent scatterer InSAR
G. Funning, L. Jin, M. Floyd, R. Bürgmann, A. Ferretti.

0900 **Discussion.**

0915 **# 4784.** An Improved Model for Tectonic Deformation in Alaska
J. Freymueller, J. Elliott.

0930 **# 3263.** Co- And Postseismic Deformation Associated With The 2010 Maule, Chile, Earthquake Detected By ALOS/PALSAR ScanSAR-ScanSAR Interferometry
M. Hashimoto, T. Ozawa.

0945 **# 5355.** Recent aseismic, co-seismic and post-seismic deformations in the pacific orogenic zone of Latin America
H. Drewes, L. Sanchez.

Saturday, 2 July 2011 0830-1000 MR207
IAGA

JA01 Fluids in the crust and mantle: Geodynamic and seismological consequences – geophysical and geological constraints

JA01S1

Chairpersons: Grant Caldwell & Stephen Cox

0830 **# 4426.** Fluids in the Nicaraguan subduction zone imaged with marine MT and CSEM sounding
S. Constable, S. Niaf, K. Key, D. Myer.

0845 **# 4426.** Fluids in the Nicaraguan subduction zone imaged with marine MT and CSEM sounding
S. Constable, S. Niaf, K. Key, D. Myer.

0900 **# 6071.** Electromagnetic image of the Hikurangi subduction interface, Raukumara Peninsula, New Zealand
G. Hill, W. Heise, G. Caldwell, S. Bennie & N. Cozens.

0915 **# 2411.** Origin of high conductivity in the lower crust
T. Yoshino, A. Shimojuku, X. Guo, F. Noritake, D. Yamazaki.

0930 **# 3130.** Three-dimensional Eectrical Rsistivity Modelling of the Onikobe Caldera -Implications for Volcanoes and Earthquake Activity
Y. Ogawa, H. Fukino, M. Ichiki, W. Kanda, B. Tank.

0945 **# 5848.** On the electrical conductivity structure beneath the back arc region of SW Japan
T. Minami, H. Toh, T. Kasaya, M. Shimoizumi, N. Oshiman.

Saturday, 2 July 2011 0830-1000 MR208
IAGA
JA05 Data rescue, digitisation and metadata requirements in geophysics
JA05S1
Chairpersons: Ellen Clarke

0830 **# 5517. Invited** Conservation and Digital preservation of Colaba-Alibag magnetic records at WDC, Mumbai
M. Rajaram, S. Alex.
0845 **As above.**
0900 **# 5220. Invited** SeismoArchives Online at the IRIS DMC: Preserving Pre-Digital Seismograms (1882-1990) for Research & Information
J. Dewey, R. Benson, W. Lee, C. Hutt, T. Knight, et al.
0915 **As above.**
0930 **# 3162.** ISC: Processing Historical Seismic Station Bulletins (1900-1970)
D. Storchak, D. Di Giacomo, A. Baranauskaite, R. Wylie, R. Verney.
0945 **# 2746.** Preservation and access of natural hazards data at NOAA's National Geophysical Data Cnter (NGDC)
S. McLean, K. Stroker, P. Dunbar.

Saturday, 2 July 2011 0830-1000 MR205
IAGA
A011 Planetary Magnetic Fields and Geomagnetic Secular Variation
A011S1 Main field and Secular Variation: Observation, Modelling, and Mechanisms
Chairpersons: Catherine Constable & Arnaud Chulliat

0830 **# 5217.** What is the Accuracy of Geomagnetic Field Models?
S. Maus, C. Manoj, C. Rollins.
0845 **# 3729.** Orthogonality Of Harmonic Potentials And Fields In Spheroiodal And Ellipsoidal Coordinates
F. Lowes, D. Winch.
0900 **# 1663.** Toward changing a paradigm? New insights on geomagnetic jerks from long time-series of geomagnetic data and models
C. Demetrescu, V. Dobrica.
0915 **# 3942.** The Strength of the Geomagnetic Field, 1590-1840
R. Holme, N. Suttie, M. Korte.
0930 **# 5059.** A parade of archeomagnetic field models: from global to local scales
E. Thebault, Y. Gallet, M. Le Goff, A. Genevey.
0945 **# 4890.** Large-scale sources of the geomagnetic field in the Earth's core
S. Starchenko

Saturday, 2 July 2011 0830-1000 MR206
IAGA
A101 The Sun and the Heliosphere: New Views
A101S1 New Views of the Sun, the Interplanetary Medium, and Outer Heliosphere
Chairpersons: Dean Pesnell

0830 **# 1960.** Modeling of Magnetic Flux Emergence on the Sun
M. Cheung
0845 **As above.**
0900 **# 5851.** Photospheric Flows and Magnetic Fields, and Their Role in CME/Flare Initiation
B. Welsch
0915 **As above.**
0930 **# 2826.** The Photospheric Velocity Field Around Active Regions Derived from SDO/HMI Vector Magnetograms
K. Muglach, P. Schuck, J.T. Hoeksema, X. Sun, Y. Liu.
0945 **# 4140.** Photosphere-Chromosphere Connection as Derived from New Solar Telescope
V. Abramenko, V. Yurchyshyn, P. Goode.

Saturday, 2 July 2011 0830-1000 MR219
IAHS
JH02 Hydro-climatology: Variability and change
JH02S5
Chairpersons: S. Franks

0830 **# 321.** An Investigation Into Synchronous Dry Spells Across The Continental Southern Hemisphere
D. Verdon-Kidd, A. Kiem.
0845 **# 329.** South-east Australia's Drought: Numerical Modelling and Land-Atmosphere Feedback
X. Meng, J. Evans, M. McCabe.
0900 **# 335.** Agronomy and climatology on a 100. 000 km basin in West Africa
S. Louvet, K. Delarue, J.E. Paturel, G. Mahé, M. Vaksmann.
0915 **# 352.** Pathologies of hydrological models used in changing climatic conditions: a review
L. Coron, V. Andreassian, M. Bourqui, C. Perrin.
0930 **# 359.** Explaining Annual Streamflow Variability of Amazonia Rivers
A.V. Lopes, J. Dracup.
0945 **# 385.** Elasticity of the Rainfall-Runoff Transformation Under a Changing Climate
D. Post, J. Teng, F. Chiew, B. Wang, J. Vaze.

Saturday, 2 July 2011 0830-1000 MR109
IAMAS
JM02 Data assimilation and ensemble forecasting for weather and climate
JM02S1
Chairpersons: William Lahoz

0830 **# 2733.** Ensemble kalman filter in weather and climate
T. Miyoshi, E. Kalnay, J. Amezcua, B. Hunt, K. Ide, J. Kang, et al.
0845 **As above.**
0900 **# 4498.** Replicate Earth ensembles, climate model dependence and climate determinism
C. Bishop, G. Abramowitz.
0915 **# 4983.** Developments to the Met Office Global and Regional Ensemble Prediction System
R. Swinbank, W. Tennant, SE. Beare, K. Mylne, N.M. Roberts.
0930 **# 3181.** Variational Assimilation for High Resolution NWP in Australia
P. Steinle, X. Wang, Y. Xiao, A. Seed.
0945 **# 1859.** An Overview of the International HEPEX Hydrologic Post-processing and Verification Experiments
Q. Duan, J. Schaake, J. Thielen, S. Jan van Andel, A. Weerts.

Saturday, 2 July 2011 0830-1000 MR110
IAMAS
JM06 High-impact weather and extreme climate events
JM06S5
Chairpersons: Richard Grotjahn & Jun Xia

0830 **# 3656.** Intercomparison of Precipitation-based Extremes Indices over Japan Simulated by 60km and 20km-mesh AGCMs and 5km-mesh RCM
M. Nakano, S. Kanada, T. Kato, K. Kurihara.
0845 **# 2238.** Extreme Short-term Rainfall in Regional Climate Model Simulations for Sweden
J. Olsson, U. Willén, K. Foster.
0900 **# 3566.** Extreme Precipitation Characteristics Over Europe: Uncertainties Of Estimation And Climate Variability
S. Gulev, O. Zolina, C. Simmer.
0915 **# 4015.** Simulation of long-lived deep convection in Africa
A. Laing, S. Trier, C. Davis.
0930 **Discussion.**

Saturday, 2 July 2011 0830-1000 MR103
IAMAS
JM08 Predictability of the coupled climate system, climate system feedbacks and sensitivity to external forcing
JM08S3 Climate Predictability Part 1
Chairpersons: Alberto Arribas

0830 **Introduction.**
0845 **# 2735.** Predicting the climate of the coming decade
A. Arribas, D. Smith, N. Dunstone, R. Eade, H. Pohlmann, et al.
0900 **# 4836.** Decadal Prediction using a High-Resolution Global Climate Model
T. Mochizuki, M. Kimoto, M. Ishii, H. Tatebe, Y. Chikamoto, et al.
0915 **# 827.** The 'spring predictability barrier' for ENSO predictions and its possible mechanism: results from a fully coupled model
W. Duan, C. Wei.
0930 **# 995.** Asymmetric Role of the Indian Ocean SST on the Predictability of ENSO Transitivity/Persistency
M. Ohba, M. Watanabe.
0945 **# 3088.** Decadal Climate Variability and Predictability in a Coupled GCM
Y. Yu, Y. Zhang, M. Liu.

Saturday, 2 July 2011 0830-1000 MR105
IAMAS
JM10 Monsoons, Tropical Cyclones and Tropical Dynamics
JM10S8 Cyclones Intrseasonal, simulation
Chairpersons: Ronghui Huang

0830 **# 2239. Invited** Propagation and Maintenance mechanism of the TC/submonthly wave pattern in the Western North Pacific and the Upscaling Feedback of TCs: A barotropic view
H. Hsu
0850 **# 2138. Invited** Intraseasonal TC prediction in the southern hemisphere
M. Wheeler, A. Leroy, J. McBride, F. Vitart.
0915 **# 826.** Intraseasonal modulation of tropical cyclogenesis in the western North Pacific: A case study
J. Mao, G. Wu.
0930 **# 6056.** Prediction and diagnostics for Tropical Cyclone Yasi
N. Davidson, X. Yi, M. Nguyen, M. Reeder, Y. Ma, et al
0945 **# 851.** Los Alamos Sferic Array (LASA) observations and high resolution simulation of the electrification and lightning of Hurricane Rita during its period of rapid intensification
A. Fierro, J.M. Reisner, X.M. Shao, T. Hamlin, J. Harlin.

Saturday, 2 July 2011 0830-1000 MR210
IAPSO
JP02 Future state of the Arctic and potential impact
JP02S3
Chairpersons: Lars Smedsrud

0830 **# 5756.** Impact of Low Pressures on Sea Ice Deformations in the Arctic Ocean
J. Haapala, I. Heiler, P. Uotila.
0845 **Discussion.**
0900 **# 162.** Can we project future Arctic summer ice minima using DA index?
J. Wang, X. Bai.
0915 **# 2851.** The Current and Future State of Permafrost in CESM
A. Slater, D.M. Lawrence, S.C. Swenson.
0930 **# 624. Invited** Declining Summer Snowfall in the Arctic: Causes, Impacts and Feedbacks
J. Screen, I. Simmonds.
0945 **Discussion.**

Saturday, 2 July 2011 0830-1000 MR211
IAPSO
JP03 Global and regional sea-level change
JP03S3
Chairpersons: Georg Kaser

0830 **# 2476.** Reconstruction of Regional Sea Level Variability Using Multi-Variate Regression Against Atmospheric Pressure.
S. Holgate, G. Woppelmann, M. Karpytchev.
0845 **# 3557.** Peculiar Behavior of the Mediterranean Sea Level over the Last Fifty or So Years
M. Orlic, M. Pasaric.
0900 **# 3865.** Regional Sea Level Change In The Arctic Ocean From A Combination Of Radar And Laser Altimetry, Tide Gauges And Ocean Models
O. Andersen, Y. Cheng, T. Hvid, P. Knudsen.
0915 **# 3874.** Investigations of sea level variability in the Pacific Islands Region over the past 60 years
M. Becker, B. Meyssignac, A. Cazenave, W. Llovel.
0930 **# 4042.** Spatial Trend Patterns in Sea Level from Altimetry, Past Sea Level Reconstruction and Coupled Climate Models (CNRM-CM3 and GFDL-CM2-1)
B. Meyssignac, A. Cazenave, D. Salas y Melia, P. Rogel, W. Llovel.
0945 **Discussion.**

Saturday, 2 July 2011 0830-1000 MR212
IAPSO
P04 Thermohaline Circulation (THC) and Deep Currents
P04S4
Chairpersons: TBC

0830 **# 2369.** A modeling study of mesoscale eddies and deep convection in the Labrador Sea
T. Kawasaki, H. Hasumi.
0845 **# 2457.** Monitoring Deep Convection in the Labrador Sea Using Satellite Measurements of Temperature and Sea Level
R. Gelderloos, C.A. Katsman, F. Straneo, K. Vage.
0900 **# 4504.** Downslope Flows and Boundary Currents off Cape Adare (Antarctica): observations and modeling.
A. Bergamasco, A. Gordon, S. Carniel, M. Sclavo, K. Schroeder, et al.
0915 **# 3164.** Thermohaline Variability and Antarctic Bottom Water Fromation at the Ross Sea Shelf Break.
G. Budillon, P. Castagno, S. Aliani, G. Spezie.
0930 **# 4803.** Formation of Antarctic Bottom Water off Cape Darnley with Huge Sea Ice Production
K. Ohshima, Y. Fukamachi, Y. Nakayama, T. Tamura, S. Nihashi, et al.
0945 **# 5405.** An investigation of the Holocene carbon cycle using a model of intermediate complexity: The role of Southern Ocean ventilation
C. Simmons, L. Mysak, D. Matthews.

Saturday, 2 July 2011 0830-1000 PH1
IAPSO
P05 New insights from Sustained Ocean Observing Systems
P05S3
Chairpersons: Toshio Suga & Jeff Polton

0830 **# 4776. Invited** Recent Research Highlights from Tropical Ocean Observing System in the Indian Ocean
Y. Masumoto, W. Yu, G. Meyers.
0845 **As above.**
0900 **# 5240.** Seasonal and interannual variability of 20 C isotherm in the southeastern Indian Ocean
T. Ogata, Y. Masumoto.
0915 **# 5515.** A new view of biases in historical Expendable BathyThermograph data based on side-by-side comparisons
S. Wijffels, R. Cowley, L. Cheng, S. Kizu, T. Boyer.
0930 **# 2914.** A New Method to Estimate the Systematical Biases of Expendable Bathythermograph(XBT)
L. Cheng, J. Zhu.
0945 **Discussion.**

Saturday, 2 July 2011 0830-1000 MR102
IAPSO
P07 Ocean acidification, including Coastal Coral Reef Oceanography
P07S1 Ocean acidification and carbonate chemistry Part 1
Chairpersons: Denise Smythe-Wright

0830 **# 3133.** Monitoring of Ocean Acidification: Evolving Measurement Strategies and Capabilities
R. Byrne
0845 **As above.**
0900 **# 638.** Impact of Sea ice Decline in the Arctic Ocean on the Rate of Ocean Acidification
A. Yamamoto, M. Kawamiya, A. Ishida.
0915 **# 5788.** Ocean acidification in the Northern Adriatic Sea and its effects on the calcium carbonate saturation states
S. Sparnocchia, A. Luchetta, C. Cantoni, G. Catalano.
0930 **# 5452.** Seasonal Variability of Surface Ocean pH and Aragonite Saturation Station in the Pacific Island Region
M. Kuchinke, B. Tilbrook, A. Lenton.
0945 **# 5868.** Potential Contribution of SOx Emissions to Surface Ocean Acidification
D. Turner, I.M. Karle, J. Corbett, A. Lauer.

Saturday, 2 July 2011 0830-1000 MR203
IASPEI
JS01 Advances in Tsunami Science, Warning, and Mitigation
JS01S3
Chairpersons: Kenji Satake & Diana Greenslade

0830 **# 1986.** Far-field and Near-field Tsunami Heights and Their Relation to Source Magnitudes
V. Gusiakov
0845 **# 2820.** Historical tsunami data supports forecast, warning, modeling, and hazard assessment
P. Dunbar, L. Dengler.
0900 **# 2266.** Development of the Database on Tsunami Trace with Reliability Evaluation on JAPAN Coasts
F. Imamura, Y. Iwabuchi, H. Sugino, Y. Tsuji, N. Shuto.
0915 **# 2855.** The Strengthened U.S. Tsunami System – 6 Years of Change
S. McLean, J. Rhodes, P. Whitmore, A. Allen, V. Titov.
0930 **# 2582.** Assessing Tsunami Recurrence Intervals using Coastal Stratigraphy; Progress, Perturbations and Potential
A. Switzer
0945 **# 2660.** The Impact of Far-Field Tsunamis on the Far East Coast of Russia
V. Gusiakov, L. Chubarov, S. Beisel.

Saturday, 2 July 2011 0830-1000 MR204
IASPEI
S08 Seismic Hazard and Risk – The Global Earthquake Model
S08S1
Chairpersons: Ashtiany & Engdal

0830 **# 1174.** GEM Global Instrumental Seismic Catalogue (1900-2009)
D. Storchak
0845 **# 968.** Global Instrumental Seismic Catalog. II Recent period: 1964-present
E. Engdahl, I. Bondar, D. Storchak, A. Villaseaor.

0900 **# 5314.** Automatic Calculation of Seismicity Rates in Eastern Australia
R. Cuthbertson

0915 **# 5306.** Multi-scale scenario-based approach to seismic hazard assessment
A. Peresan, F. Vaccari, F. Romanelli, G. Folladore, G.F. Panza.

0930 **Discussion.**

0945 **As above.**

Saturday, 2 July 2011 0830-1000 MR213
IASPEI

S10 Physics of the seismic process: from laboratory studies to field observations

S10S1

Chairpersons: Alexey Zavyalov & Arcady Dyskin

0830 **# 5521. Invited** Earthquake Nucleation and Fault Slip:Experiments on a Natural Fault
L. Germanovich, L. Murdoch, D. Garagash, Z. Reches, S. Martel, et al.

0845 **As above.**

0900 **# 4178.** Porous Sample Fracturing by Rapid Pore Pressure Drop.
S. Turuntaev, E. Zenchenko, T. Yuschenko.

0915 **# 2423.** Dynamics Of Acoustic Emission In Loaded Samples Under Fluid Triggering Of Failure
A. Ponomarev, G. Sobolev.

0930 **# 2479.** Instability of geomaterials caused by incipient grain/block rotation
A. Dyskin, E. Pasternak.

0945 **# 3261.** Understanding of the Secondary Fracture Associated with Dynamic Fault Slip in Terms of Damage Tensor
T. Suzuki

Saturday, 2 July 2011 0830-1000 MR218
IASPEI

S14 Plate Boundary Processes

S14S3

Chairpersons: Linda Warren & Giampiero Iaffaldano

0830 **# 2114. Invited** Monsoon speeds up Indian plate motion
G. Iaffaldano, L. Husson, H.P. Bunge.

0845 **As above.**

0900 **# 2455.** European Mantle Lithosphere â“ Hercynian Microplate Boundaries Control Crustal Tectonics and Magmatism
V. Babuska, J. Plomerova, U. Achauer, M. Granet.

0915 **# 4658.** Updated GPS velocity field and block models for the northeastern Caribbean: Implications for forearc definition, kinematics, and coupling along the Lesser Antilles trench
M. Stafford-Glenn, P. Jansma, G. Mattioli, E. Calais.

0930 **# 4753.** Role of Mega-splay Faulting in the Rupture Process of Great Earthquakes at the Nankai Trough
T. Sagiya, Y. Yamanaka.

0945 **Discussion.**

Saturday, 2 July 2011 0830-1000 MR108
IASPEI

S17/S18 Earthquakes and public health / Using NMSOP and other educational modules and tools for online and in-person training courses

S1718S1 Resources, tools and concepts for education and training in seismology and earthquake risk mitigation

Chairpersons: Gary Gibson

0830 **# 973.** The Website Edition of the IASPEI New Manual of Seismological Observatory Practice (NMSOP-2)
P. Bormann

0845 **# 974.** Animations and Demonstrations as Complementary Educational Tools in the Second Edition of the IASPEI New Manual of Seismological Observatory Practice
P. Bormann, S. Wendt.

0900 **# 4515.** Applying Public Health Methods and Models to Earthquake Risk Reduction
L. Grant Ludwig

0915 **Discussion.**

Saturday, 2 July 2011 0830-1000 MR104
IASPEI, IAVCEI

JS04/JV03 Physics and Chemistry of Earth Materials with Implications for Earth Structure and Processes

JS04JV03S1 Mantle Petrology and Geochemistry

Chairpersons: Eiichi Takahashi

0830 **# 3302.** Mineral Compositional Controls on REE Patterns in Cratonic Garnet Iherzolite Xenoliths and Implications for Mantle Metasomatism
G. Yaxley, A. Woodland, H. O'Neill, H. Hofer.

0845 **# 787.** The Oxidation State of Terrestrial Basalts and its Link with the Mantle: Constraints from V/Sc Bulk-Rock Systematics, V/Sc Olivine-Liquid Partitioning and Fe-XANES
G. Mallmann, HStC. O'Neill, AJ. Berry, MD. Norman, SM. Eggins, et al.

0900 **# 5501.** Plate Tectonics without Deep Mantle Thermal Plumes
D.H. Green, T.J. Falloon.

0915 **# 992.** Major Element Zonation in Garnet from the Wesselton Kimberlite, South Africa
B. Hanger, G. Yaxley.

0930 **# 1077.** An experimental study on carbonated eclogite at 3.5-5.5 GPa – implications on silicate and carbonate metasomatism in the cratonic mantle
K. Kiseeva, G.M. Yaxley, J. Hermann, V.S. Kamenetsky.

0945 **# 1547.** An unusual Polymict Peridotite from Kimberley, South Africa: Insights into mantle metasomatism prior to kimberlite emplacement
A. Giuliani, B.A. Wyatt, D. Phillips, M.A. Kendrick.

Saturday, 2 July 2011 **0830-1000 MR107**
IAVCEI
JV08 Remote Sensing of Volcanic Hazards and the Risk to Global Aviation
JV08S1 Remote Sensing of Volcanic Hazards and the Risk to Global Aviation Part 1
Chairpersons: Fred Prata & Simon Carn

0830 **# 2073. Invited** Determination of time- and height-resolved volcanic ash emissions for quantitative ash dispersion modeling: The 2010 Eyjafjallajokull eruption
A. Stohl, A.J. Prata, S. Eckhardt, L. Clarisse, A. Durant, et al.
0845 **As above.**
0900 **# 2528.** Quantification and Visualisation of the Eyjafjallajokull Ash Clouds Using Satellite Measurements
F. Prata, A. Prata, V. Realmuto.
0915 **# 4044.** Rapid response during a volcanic crisis with the autonomous volcano sensor web (VSW)
A. Davies, S. Chien, J. Doubleday, D. Tran, D. Mandl, et al.
0930 **# 1201.** Improvements of altitude and concentration estimates of ash clouds using the WRF-Chem model based on case studies of the Pacific Rim and Iceland
T. Steensen, M. Stuefer, P. Webley, G. Grell, S. Freitas.
0945 **# 2267.** Far-range Volcanic Ash Hazard from Somma-Vesuvius. Consequences for Civil Aviation over the Central Mediterranean Area
A. Folch, R. Sulpizio.

Saturday, 2 July 2011 **0830-1000 MR112**
IAVCEI, IASPEI
JV12/JS08 Volcano Seismology
JV12JS08S1
Chairpersons: Jurgen Neuberg

0830 **# 4405. Invited** An Overview of Volcano Infrasound: from Hawaiian to Plinian, Local to Global
D. Fee
0845 **As above.**
0900 **# 3891. Invited** Intrusive and pre-eruptive seismic swarms at Piton de la Fournaise volcano (Reunion island)
J. Battaglia, F. Brenguier, V. Ferrazzini.
0915 **As above.**
0930 **# 3959.** Mechanisms of VT earthquakes during the 2002-2006 episode of volcano-seismic unrest at Mt. Spurr, Alaska, USA
D. Roman, J.A. Power.
0945 **# 676.** Excitation of Airwaves Caused by Bubble Bursting in a Cylindrical Conduit: Experiments and a Model
A. Namiki, T. Kobayashi, I. Sumita.

SATURDAY, 2 JULY 2011 1030-1200 AM2

Saturday, 2 July 2011 **1030-1200 PH2**
IUGG
U10 Climate Change: a 360 Degree-View from IUGG Associations
U10S2 Speakers by Invitation
Chairpersons: Eigil Friis-Christensen

1030 **# 5506.** The detection and anatomy of 50 years of ocean warming: observations and CMIP3 models
S. Wijffels, P. Barker, L. Muir.
1045 **As above.**
1100 **# 5178.** Sea level change: a truly interdisciplinary topic with societal impacts
A. Cazenave, R.S. Nerem.
1115 **As above.**
1130 **# 3935.** Evidence of Nearby Supernovae Affecting Life
H. Svensmark
1145 **As above.**

Saturday, 2 July 2011 **1030-1200 MR111**
IACS
JC01 Arctic System Modelling
JC01S1 Arctic System Modeling I
Chairpersons: Scott Elliott & Andrew Roberts

1030 **# 3984. Invited** Modeling the coupled Arctic regional climate system
H. Matthes, K. Dethloff, A. Rinke, W. Dorn, D. Klaus, et al.
1045 **As above.**
1100 **# 4057. Invited** Modelling land-atmosphere feedbacks over the Arctic with a coupled climate-ecosystem model
B. Smith, P. Miller, P. Samuelsson, A. Wramneby.
1115 **As above.**
1130 **# 2842. Invited** Regional Arctic Climate Model (RACM): An overview and selected ice-ocean results
W. Maslowski, J. Jakacki, R. Osinski, A. Roberts, J. Cassano, et al.
1145 **As above.**

Saturday, 2 July 2011 **1030-1200 MR220**
IACS
JC04 Ice Shelves and Glacier Tongues – Ice on the Edge
JC04S2
Chairpersons: Rob Massom

1030 **# 4440. Invited** Larsen C Ice Shelf Acceleration, Surface Elevation Change, Rheology and Ice-Ocean Interaction
A. Khazendar, M.P. Schodlok, E. Larour, E. Rignot.
1045 **As above.**
1100 **# 2417. Invited** Tidal modulation of flow of Larsen C and Filchner-Ronne Ice Shelves, Antarctica
M. King, K. Makinson, H. Gudmundsson.
1115 **As above.**
1130 **# 2268.** Implementation of ice shelf dynamics in the ice sheet model SICOPOLIS
R. Greve, T. Sato.
1145 **# 1499.** High resolution, long term reconstruction of surface evolution in northwestern Greenland for investigating dynamic glacier behavior
G. Babonis, B. Csatho, T. Schenk, C. van der Veen.

Saturday, 2 July 2011 1030-1200 MR216
IAG
JG01 **Space Geodesy-based Atmospheric Remote Sensing as a Synergistic Link between Geodesy and Meteorology**
JG01S2
Chairpersons: Jens Wickert & Marcelo Santos

1030 **# 4423. Invited** Applications of ground-based Global Navigation Satellite Systems measurements for climate studies
J.J. Wang, L. Zhang.
1045 **As above.**
1100 **# 4109.** Upper Air Temperature Records: A Comparison of GPS Radio Occultation, Radiosondes and MSU/AMSU in the Lower Stratosphere
F. Ladstadter, A.K. Steiner, L. Haimberger, C. Tavolato, U. Foelsche, et al.
1115 **# 5344.** Climate Observed by FORMOSAT-3/COSMIC during the 5-year Period of 2006-2011
J. Liu, Y.Y. Sun, G.S. Chang, C.H. Lin.
1130 **# 5025.** Space Geodesy and the Australian Space Research Program Project: Platform Technologies for Space, Atmosphere and Climate
K. Zhang, R. Norman, C. Wang, P. Teunissen, C. Rizos, et al.
1145 **# 2683.** The West African monsoon water cycle investigated with a network of ground-based GPS receivers
O. Bock, S. Nahmani, R. Meynadier, F. Guichard, M.N. Bouin.

Saturday, 2 July 2011 1030-1200 MR217
IAG, IASPEI
JG06/JS06 **Tectonic Geodesy and Earthquakes**
JG06JS06S2 **Tectonic Geodesy and Earthquakes Part 2**
Chairpersons: Valentin Mihkailov & David D. Jackson

1030 **Introduction.**
1045 **# 557.** NRIAG's Role to Mitigate Earthquake Disasters in Egypt Using GPS and Seismic Data
S. Mahmoud, A.M. El-Shahat.
1100 **# 2525.** Ghost tilt event during transient deformation event: insights from the September 3, 2010 Mw7. 1 Darfield event, New Zealand
N. Fournier, A. Jolly, C. Miller.
1115 **# 4578.** Source models of the Mw 7. 1 Darfield, New Zealand, earthquake
J. Beavan, C. Holden, M. Reyners, B. Fry, S. Samsonov, et al.
1130 **# 4591.** Coseismic Displacements and Fault Kinematics at the Releasing Termination of the Strike slip Greendale Fault during the Mw 7. 1 Darfield (Canterbury) Earthquake, New Zealand: Quantification from Cadastral and LiDAR Surveys
B. Duffy, C. McInnes, R. Van Dissen, N. Litchfield, D. Barrell, et al.
1145 **Discussion.**

Saturday, 2 July 2011 1030-1200 MR207
IAGA
JA01 **Fluids in the crust and mantle: Geodynamic and seismological consequences – geophysical and geological constraints**
JA01S2
Chairpersons: Stephen Cox & Grant Caldwell

1030 **# 5923.** Highly Constricted Crustal Fluids Undergoing Oscillatory Forcing
P. Rouleau
1045 **# 4752.** Spatial Distribution of Low-frequency Aftershocks of the 2008 Iwate-Miyagi Nairiku Earthquake in Northeastern Japan and Its Implication to the Role of Crustal Fluid on the Seismogenesis
M. Kosuga, The Group Affected By Aftershk.
1100 **# 2611.** Generating Process of Intraplate Earthquakes and Roles of fluid in crust
Y. Iio
1115 **As above.**
1130 **Discussion.**
1145 **Discussion.**

Saturday, 2 July 2011 1030-1200 MR208
IAGA
JA05 **Data rescue, digitisation and metadata requirements in geophysics**
JA05S2
Chairpersons: Rick Benson

1030 **# 5238. Invited** Digitization of Old Analogue Geomagnetic Data and Their Metadata Collection
H. Toh, T. Iyemori, M. Takeda, M. Nose, Y. Odagi.
1045 **As above.**
1100 **# 5779.** The Safeguarding, Availability and Extraction of Data from Historical UK Magnetic Observatory Analogue Records
A. Thomson, E. Clarke, T. Humphries, R. McIntosh, F. MacTaggart.
1115 **# 3568.** The SISMOS Project for the research, recovery, reproduction and study of historical seismograms
G. Ferrari
1130 **# 2349.** Film ionogram image process and analysis with digital techniques
B. Ning, L. Hu, G. Li, L. Liu, W. Wan.
1145 **# 2854.** Improving Discovery and Use of Marine Data through Standard Metadata
S. McLean, A. Milan, R. Arko, J. Mize.

Saturday, 2 July 2011 1030-1200 MR206

IAGA

A101 The Sun and the Heliosphere: New Views
A101S2 New Views of the Sun, the Interplanetary Medium, and Outer Heliosphere

Chairpersons: Karin Muglach

1030 **# 5774.** First results from SDO/HMI
J. Schou

1045 **As above.**

1100 **# 3136.** Observing with the Solar Dynamics Observatory
A. Title

1115 **As above.**

1130 **# 4131.** New insights into the sun's photosphere dynamics offered by new solar telescope of BBSO
V. Abramenko, V. Yurchyshyn, P. Goode.

1145 **# 2046.** Magnetoacoustic Wave Oscillation of an Expanding Coronal Loop
J. Schmidt, L. Ofman.

Saturday, 2 July 2011 1030-1200 MR219

IAHS

JH02 Hydro-climatology: Variability and change
JH02S6

Chairpersons: E. Boegh

1030 **# 386.** A Comparison Between Energy Balance, Combination, and Complementary Approaches for Estimation of Evapotranspiration
A. Ershadi, M.F. McCabe, J.P. Evans.

1045 **# 391.** Simulation of the impacts of climate change on water budget in the Xitiao River Catchment, China
X. Mo, D. Meng, S. Liu.

1100 **# 392.** Are Declining Stream Flows due to Changing Climate or Changing Forest ?
R. Silberstein, W. Dawes, C. Macfarlane, K. Petrone, J. Hughes.

1115 **# 412.** Past and future spatiotemporal variability of rainfall of the Bani catchment in West Africa
S. Louvet, J.E. Paturel, G. Mahé, N. Vigaud, P. Roucou.

1130 **# 442.** Non stationary analysis of spatial patterns of extreme rainfall events trends in West Africa
S. Garcia Galiano, J.D. Giraldo Osorio.

1145 **Discussion.**

Saturday, 2 July 2011 1030-1200 MR101

IAMAS

JM01 Geoengineering: Can it limit climate change and its impacts?
JM01S1 Counter-balancing Global Climate Change with Solar Radiation Management

Chairpersons: Michael MacCracken

1030 **# 2627.** Modeling geoengineering with sulfate stratospheric aerosols at the end of 21 century using climate chemistry carbon cycle model.
E. Volodin, A. Ryaboshapko.

1045 **# 1416.** Impact of Modified Sulphate Aerosol Concentrations on the Formation and Evolution of Cirrus Clouds
A. Cirisan, P. Spichtinger, D. Weisenstein, H. Wernli, T. Peter.

1100 **# 3963.** Sensitivity to Deliberate Sea Salt Seeding of Marine Clouds – Observations and Model Simulations
J.E. Kristjansson, K. Alterskjær.

1115 **# 2137.** Engineering the Climate with Polar-only Solar Radiation Management
M. Mac Cracken, H.J. Shin, K. Caldeira, G. Ban-Weiss.

1130 **# 4165.** Considering Lessons Learned from Governing Weather Modification when Creating Geoengineering Governance
R. Hauser

1145 **Discussion.**

Saturday, 2 July 2011 1030-1200 MR109

IAMAS

JM02 Data assimilation and ensemble forecasting for weather and climate
JM02S2

Chairpersons: Craig Bishop & William Lahoz

1030 **# 1947. Invited** Ideas to improve ensemble data assimilation
T. Miyoshi

1045 **As above.**

1100 **# 4429.** Assimilation of Radial Winds from Australian Radars
S. Rennie, A. Seed, P. Steinle.

1115 **# 1314.** Time Weighted 4DSVD Scheme
J. Wang, J. Li.

1130 **# 3437.** The statistical dynamical Kalman filter
T. O'Kane, J. Frederiksen.

1145 **# 5650.** GSI-based hybrid ensemble-variational data assimilation system for NCEP GFS: 3DVAR based hybrid, ensemble 4DVAR and satellite data impact study
X. Wang, T. Lei, J. Whitaker, D. Parrish, D. Kleist.

Saturday, 2 July 2011 1030-1200 MR110

IAMAS

JM06 High-impact weather and extreme climate events
JM06S6

Chairpersons: Lisa Alexander & Richard Grotjahn

1030 **# 104.** Relationships between the Sea Surface Temperature and drought extremes during the South America raining season: an observational analysis
G. Silva, T. Ambrizzi.

1045 **# 1155.** A Time-Lagged Ensemble Forecast Experiment on the Modulation of Precipitation over West Java in January-February 2007
S. Yoden, J. Trilaksono, S. Otsuka.

1100 **# 3711.** Estimation of effects of urban area on a localized heavy rainfall over Tokyo using cloud resolving model including urban activity
K. Souma, K. Sunada, T. Suetsugi, K. Tanaka.

1115 **# 4583.** Southeast Australian droughts: Relative importance of Indian and Pacific Ocean a matter of timescale
C. Ummenhofer, A. Sen Gupta, P. Briggs, M. England, P. McIntosh, et al.

1130 **# 4535.** Application of a Regional Climate Model to Regional-scale High Impact Events: The Benefits of Higher Resolution
M. Grose, J. Bennett, N. Bindoff.

1145 **Discussion.**

Saturday, 2 July 2011 1030-1200 MR103
IAMAS
JM08 Predictability of the coupled climate system, climate system feedbacks and sensitivity to external forcing
JM08S4 Climate Predictability Part 2
Chairpersons: Natasha Andronova

1030 **# 3560.** Monthly-Seasonal Forecasting at the UK Met Office
A. Arribas, S. Ineson, C. MacLachlan, A. Maidens, M. Gordon, et al.
1045 **# 5844.** Climate predictability sources for South-Eastern Europe
R. Bojariu, L. Velea.
1100 **# 4960.** Interannual predictions of the Atlantic Meridional Overturning Circulation at 26. 5ºN
W. Mueller, D. Matei, J. Baehr, J. Jungclaus, J. Marotzke, et al.
1115 **# 1019.** Studies of Atmospheric Predictability Based on the Nonlinear Local Lyapunov Exponent
R. Ding, J.P. Li.
1130 **# 2365.** Current status of IOD forecast skill in Coupled General Circulation Models
L. Shi, H. Hendon, O. Alves, J.J. Luo, M. Balmaseda, et al.
1145 **Presentation of posters.**

Saturday, 2 July 2011 1030-1200 MR105
IAMAS
JM10 Monsoons, Tropical Cyclones and Tropical Dynamics
JM10S9 Cyclones Boundary layer, simulation
Chairpersons: Dave Raymond

1030 **# 4569. Invited** Interpreting GPS dropsonde measurements of hurricane boundary-layer turbulence
J. Kepert, N. Davidson, Y. Xiao, Y. Ma, R. Bowen.
1045 **# 3572. Invited** The Tropical-Cyclone Boundary Layer
R. Smith
1100 **# As above.**
1115 **# 2010.** Diurnal variation of precipitation associated with tropical cyclone and the structural change
M. Sawada, T. Iwasaki.
1130 **# 4473.** The Sensitivity of Tropical Cyclone Vacillation Cycles to the Vortex Size and the Sea Surface Temperature
C.M. Nguyen, M.J. Reeder, N.E. Davidson.
1145 **# 1350.** Effect of sea spray evaporation and dissipative heating on typhoon 'Yutu'
C. Xiaoping, F. Jianfang, H. Xiaogang, Z. jing.

Saturday, 2 July 2011 1030-1200 MR211
IAPSO
JP03 Global and regional sea-level change
JP03S4
Chairpersons: Philip Woodworth

1030 **# 4293.** Reconstruction of Sea Level Variations in the Gulf of Mexico Derived from Satellite Altimetry and Tide-Gauges Records
M. Karpytchev, C. Letetrel, S. Barbosa, G. Woppelmann.
1045 **# 2283.** Quantifying the respective contribution of steric sea level for different oceanic layers at global and regional scales from the last decades to the recent years
W. Llovel, B. Meyssignac, A. Cazenave, I. Fukumori.
1100 **# 5332.** Observed and Simulated Regional Patterns of Thermosteric Sea-Level Rise
C. Domingues, J. Church, N. White, D. Monselesan, P. Gleckler, et al.
1115 **# 2329.** Revisiting Halosteric and Thermosteric Sea Level Rise 1950-2000
P. Durack, S. Wijffels.
1130 **# 2304.** Deep Ocean Warming Assessed from Altimeters, GRACE, In-Situ Measurements, and a Non-Boussinesq OGCM
Y.T. Song, F. Colberg.
1145 **Discussion.**

Saturday, 2 July 2011 1030-1200 PH1
IAPSO
P05 New insights from Sustained Ocean Observing Systems
P05S4
Chairpersons: Peter Oke & Yutaka Yoshikawa

1030 **# 2247. Invited** Achieved and expected scientific advances from the southwest pacific ocean circulation and climate experiment (SPICE)
A. Ganachaud, Spice Contributors.
1045 **As above.**
1100 **Discussion.**
1115 **# 5307.** Ventilation of the North Pacific and its interannual variation
T. Suga, A. Iwasaki, K. Toyama.
1130 **# 3961.** Interannual Variability in the Atlantic Meridional Overturning Circulation
H.L. Bryden, C.L. Atkiinson, S.A. King.
1145 **Discussion.**

Saturday, 2 July 2011 1030-1200 MR102
IAPSO
P07 Ocean acidification, including Coastal Coral Reef Oceanography
P07S2 Ocean acidification and carbonate chemistry Part 2
Chairpersons: David Turner

1030 **# 5996.** Understanding the effects of ocean acidification on marine organisms: the importance of variability.
J. Havenhand
1045 **As above.**
1100 **# 5681.** Will higher carbon dioxide concentrations effect phytoplankton production of organohalogens.
D. Smythe-Wright
1115 **# 982.** Coral Reef Habitat Recovery Beyond the Industrial Era
K. Meissner, B.I. McNeil.
1130 **# 6096.** A Southern Hemisphere Time Series for CO2 Chemistry and pH
K. Hunter, K.C. Currie, M.R. Reid, H. Doyle.
1145 **# 5563.** Ocean versus reef acidification: the role of benthic processes in driving reef water carbon chemistry
K. Anthony

Saturday, 2 July 2011 1030-1200 MR203
IASPEI
JS01 Advances in Tsunami Science, Warning, and Mitigation
JS01S4
Chairpersons: D. Dominey-Howes & Paula Dunbar

1030 **# 2915.** An Introduction To The New Revised International Oceanographic Commission (IOC) Post-Tsunami Field-Guide
D. Dominey-Howes, M. Yamamoto, L. Kong, L. Dengler, H. Fritz, et al.

1045 **# 3580.** The Accretionary Wedge Development and Major Structural Elements In The Tsunamigenic Makran Zone, Oman Gulf
M. Mokhtari

1100 **# 4601.** The New Zealand National Tsunami Evacuation Mapping Framework: From Modelling and Warning to Community Preparedness
G. Leonard, W. Power, D.M. Johnston, D. Coetzee, G. Downes.

1115 **# 3266.** An Analysis of the Diversity in Scenario-based Tsunami Forecasts in the Indian Ocean
D. Greenslade, A. Annunziato, A. Babeyko, N. Horspool, S. Kumar, et al.

1130 **# 3137.** Assessing Tsunami Source Using DART Data
U. Kanoglu, C. Sen, L. Tang, C. Moore, V. Titov.

1145 **# 4207.** Evaluation of a Canadian Pilot Project for a GPS-Augmented Tsunami Warning System
H. Dragert, M. Schmidt, Y. Lu, K. Wang.

Saturday, 2 July 2011 1030-1200 MR204
IASPEI
S08 Seismic Hazard and Risk – The Global Earthquake Model
S08S2 GEM Introduction: Giardini
Chairpersons: Giardini & Ashtiany

1030 **Introduction.**

1100 **# 5884.** The Global Earthquake Model's Open Source Calculation Engine
F. Haslinger, M. Pagani, H. Crowley, J. McKenty, D. Monelli, et al.

1040 **# 6003.** Development of Mashhad Earthquake Risk Model
M. Ghafory-Ashtiany, H. Tabaroie.

1115 **Discussion.**

1130 **Discussion.**

1145 **Discussion.**

Saturday, 2 July 2011 1030-1200 MR213
IASPEI
S10 Physics of the seismic process: from laboratory studies to field observations
S10S2
Chairpersons: Alexey Zavyalov & Arcady Dyskin

1030 **# 1259.** Laboratory Modelling of Tidal Effects in Seismicity
V. Saltykov, A. Patonin.

1045 **# 2957.** 3D Modeling of Earthquake Cycles of the Xianshuihe Fault, South Western China
L. Xiaofan

1100 **# 3078.** Fast computational methods for large- and multi-scale interplate earthquake cycle simulations
K. Hirahara, M. Ohtani, M. Hyodo, T. Hori.

1115 **# 3453.** Modelling Australia's Intraplate earthquakes – a fragmentation model
K. McCue, C. Sinadinovski.

1130 **# 3562.** On the Early Detectability of likely Fault Rupture Arrest
M. Hildyard

1145 **# 4992.** The long-term seismic cycle at a subduction thrust: comparing geodynamic numerical simulations to analogue gelatin models
Y. Van Dinther, T. Gerya, F. Corbi, F. Funiciello, P.M. Mai, et al.

Saturday, 2 July 2011 1030-1200 MR218
IASPEI
S14 Plate Boundary Processes
S14S4
Chairpersons: Mark Quigley & Tim Stern

1030 **Introduction.**

1045 **# 3601.** Multiple Collision and Subduction Structure of the Izu-Bonin Arc, Central Japan, Revealed by Active Source Seismic Data
R. Arai, T. Iwasaki, H. Sato, S. Abe, N. Hirata.

1100 **# 4308. Invited** Surface rupture during the 2010 Mw 7.1 Darfield (Canterbury) earthquake: Implications for fault development, orogenesis, and palaeoseismology
M. Quigley, R. Van Dissen, N. Litchfield, P. Villamor, K. Furlong, et al.

1115 **As above.**

1130 **# 3417.** Mantle drips and their impact on Moho and surface topography
L. Evans, G. Houseman.

1145 **# 4741.** Mantle deformation and surface processes in orogenic and trans-tensional zones: finite element experiments with application to western North Island (NZ)
T. Stern, G. Houseman, L. Evans.

Saturday, 2 July 2011 1030-1200 MR108
IASPEI
S17/S18 Earthquakes and public health / Using NMSOP and other educational modules and tools for online and in-person training courses
S1718S2 Resources, tools and programs for education and outreach in seismology, hazard awareness and geophysics
Chairpersons: Valiya Hamza & John Taber

1030 **# 3702.** Earthquake Awareness Programme For Schools
A. Kumar

1045 **Discussion.**

1100 **# 5852. Invited** Expanding Educational Seismology in the U.S. via Online Resources
J. Taber, T. Bravo, R. Butler, J. Johnson, P. McQuillan, et al.

1115 **As above.**

1130 **# 1198. Invited** Mobile Geophysical Observatories and its use in Education and Outreach Programs
V. Hamza, C. Ponte Neto, M. Sousa.

1145 **As above.**

Saturday, 2 July 2011 1030-1200 MR104
IASPEI, IAVCEI
JS04/JV03 Physics and Chemistry of Earth Materials with Implications for Earth Structure and Processes
JS04JV03S2 Fluids, volatiles and subduction
Chairpersons: Greg Yaxley & Kate Kiseeva

1030 # **558.** **Invited** Distribution of Water in the Earth's Mantle and its Implications for the Global Water Circulation
S. Karato
1045 **As above.**
1100 # **2102.** Fluid trapping during slab dehydration and unbending: implications for intermediate-depth seismicity, mantle regassing and slab rheology.
M. Faccenda, T. Gerya, N. Mancktelow, L. Moresi.
1115 # **2399.** Role of Hydrogen in the Earthfs core
E. Takahashi, T. Imai.
1130 # **2764.** **Invited** Effects of volatile components on electrical conductivity of the deep mantle
T. Katsura, T. Yoshino.
1145 **As above.**

Saturday, 2 July 2011 1030-1200 MR107
IAVCEI
JV08 Remote Sensing of Volcanic Hazards and the Risk to Global Aviation
JV08S2 Remote Sensing of Volcanic Hazards and the Risk to Global Aviation Part 2
Chairpersons: Andrew Tupper & Fred Prata

1030 # **3576.** In situ assessment of airborne ash hazards to aviation: limits, progress, and lessons from Iceland
D. Pieri, A. Diaz, G. Bland, M. Fladeland.
1045 **Discussion.**
1100 # **5493.** A VAAC Perspective on the Jan 2011 Bromo and Oct/Nov 2010 Merapi Eruptions
R. Patrick, C. Davies, A. Tupper, G. Jackson.
1115 # **4251.** Satellite Measurements And Modelling Of The 2010 Merapi Volcanic Eruption Clouds
S. Carn, J. Wang, K. Yang, A.J. Prata, L. Clarisse.
1130 # **5693.** Recent Progress in Volcanic Cloud Observations Using Satellite UV Instruments
K. Yang, N.A. Krotkov, S.A. Carn, G.A. Vicente, E.J. Hughes.
1145 # **2818.** Operational Remote Sensing in the North Pacific
T. Steensen, P. Webley, J. Dehn, K. Dean, S. MacFarlane.

Saturday, 2 July 2011 1030-1200 MR112
IAVCEI, IASPEI
JV12/JS08 Volcano Seismology
JV12JS08S2
Chairpersons: Hiroyuki Kumagai

1030 # **5266.** Variations of oscillation patterns generated by the interaction between bubbles and conduit resonance
M. Ichihara, V. Vidal.
1045 # **761.** Seismic structure of the Tengchong volcanic area southwest China from local earthquake tomography
Y. Xu, X. Yang.
1100 # **4392.** Acoustic resonant oscillations between the atmosphere and the solid earth during the 1991 Mt. Pinatubo eruption
S. Watada, H. Kanamori.
1115 # **5356.** Into the vent – probing the basaltic lava lake at Volcan Villarrica (Chile)
J. Johnson, J. Anderson, R. Sanderson, G. Waite, J.L. Palma, et al.
1130 # **4150.** Pseudo-Reflection Profiling method and its volcanological applications
T. Tsutsui
1145 # **1216.** Precise Location of Lower Crustal Earthquake Swarms Beneath Mammoth Mountain, California – Evidence for the Magmatic Roots to the Mammoth Mountain Mafic Volcanic Field?
D. Shelly, D. Hill.

SATURDAY, 2 JULY 2011 1330-1500 PM1

Saturday, 2 July 2011 1330-1500 PH2
IUGG
U02 Grand Challenges in Natural Hazards Research and Risk Analysis
U02S5 Earth on the Edge – Recent Pacific Rim Disasters
Chairpersons: Kuni Takeuchi & Ramesh Singh

1330 # **6040.** Chain Reactions Happened in Great East Japan Earthquake and Tsunami
K. Takeuchi
1345 # **6017.** The Great Off Tohoku Earthquake of 11 March 2011
K. Satake
1400 **As above.**
1415 # **6026.** Tsunami disaster and impact due to the 2011 Tohoku earthquake
F. Imamura
1430 **As above.**
1445 # **6064.** Flow regime transformations in the March 11, 2011 tsunami, Northern Honshu, Japan
S. Kieffer, J. Colberg, J. Flowers.

Saturday, 2 July 2011 1330-1500 MR111
IACS
JC01 Arctic System Modelling
JC01S2 Arctic System Modeling Part 2
Chairpersons: Scott Elliot & Andrew Roberts

1330 # **707.** Modeling Arctic Climate with a Regional Arctic Climate Model
J. Cassano, M. Higgins, W. Maslowski, W. Gutowski, D. Lettenmaier.
1345 # **5560.** Modelling the seasonal cycle of aerosol characteristics in the Arctic: The importance of wet deposition
J. Browse, K. Carslaw, S. Arnold, O. Boucher.
1400 # **161.** Implementation of an unstructured-grid Great Lakes Ice-circulation Model (GLIM) for Great Lakes Earth System Model (GLESM)
J. Wang, X. Bai, H. Hu.
1415 # **2123.** Numerical study of winter water formation in the Chukchi Sea in the Arctic Ocean
Y. Kawaguchi, T. Tamura, S. Nishino, T. Kikuchi, M. Itoh, et al.
1430 # **4458.** Tidal coupling in a regional arctic ice-ocean model
A. Roberts, W. Hibler III, J. Hutchings.
1445 **Discussion.**

Saturday, 2 July 2011 1330-1500 MR217

IACS

JC02/JC03 Snow – Atmosphere Interactions and Avalanches.

JC0203S4 Atmosphere Interactions and Avalanches; Atmospheric Forcing and Hydrological Response

Chairpersons: Pierre Etchevers & Charles Fierz

1330 **Introduction.**

1345 **# 4062. Invited** Turbulent properties of atmospheric flows over snow-covered surfaces: an overview of wind tunnel and field studies
C. Manes, M. Guala, A. Clifton, K. Leonard, C. Gromke, et al.

1400 **As above.**

1415 **# 3813.** Snow melt and atmospheric processes in mountain environments
M.B. Parlange, S. Simoni, R. Mutzner, D. Nadeau, M. Diebold, et al.

1430 **# 2852.** Uncertainty in Snow Water Equivalent Reconstructions
A. Slater, M.P. Clark, A.P. Barrett.

1445 **Discussion.**

Saturday, 2 July 2011 1330-1500 MR220

IACS

JC04 Ice Shelves and Glacier Tongues – Ice on the Edge

JC04S3

Chairpersons: Mike Dinniman

1330 **# 2208. Invited** Flow, Stratification and Mixing Next to the Erebus Glacier Tongue: An Overview of Preliminary Results
C. Stevens, T. Stanton, M. McPhee, A. Forrest, A. Hamilton, et al.

1345 **As above.**

1400 **# 2580.** The contribution of ice shelf-ocean interaction to Antarctic landfast sea ice
P.J. Langhorne, A.J. Gough, T.G. Haskell, G.H. Leonard, A.R. Mahoney, et al.

1415 **# 5104.** Borehole-based optical televiewer imaging of ice facies within and around an Antarctic ice shelf rift
B. Hubbard, J-L. Tison, F. Pattyn, K. Matsuoka.

1430 **# 4048.** Exploring an Under-Ice Ocean Cavity with Sound
P. Worcester, W.H. Munk, B.D. Cornuelle, M.A. Dzieciuch, K.E. Wage.

1445 **Poster Introduction.**

Saturday, 2 July 2011 1330-1500 MR216

IAG

JG01 Space Geodesy-based Atmospheric Remote Sensing as a Synergistic Link between Geodesy and Meteorology

JG01S3

Chairpersons: Marcelo Santos & Olivier Bock

1330 **# 5229. Invited** Application of GPS Radio Occultation Technique to Weather, Climate and Space Weather: Results from the COSMIC Program
J. Liu, Y. -H. Kuo.

1345 **As above.**

1400 **# 3964.** Second-order ionospheric and dispersion residual effects on the GPS/RO-derived atmospheric parameters
S. Pagiatakis, P. Vergados.

1415 **#3698.** The Mist Experiment: Tropospheric Effects Retrieval From A Local, Multiscale Network Of GNSS Receivers And The Statistical Analysis Of The Estimated Zenith And Slant Delays
F. Sanso, L. Biagi, MG. Visconti.

1430 **Discussion.**

1445 **Discussion.**

Saturday, 2 July 2011 1330-1500 MR207

IAGA

JA01 Fluids in the crust and mantle: Geodynamic and seismological consequences – geophysical and geological constraints

JA01S3

Chairpersons: Yoshihisa Iio & Grant Caldwell

1330 **# 4290.** The 2000 and 2008 West Bohemia Earthquake Swarms as a Model of Fluid-driven Seismicity
T. Fischer, S. Hainzl.

1345 **As above.**

1400 **# 3265.** Fault Mechanics and Fluid-Driven Failure in High Fluid Flux Regimes
S. Cox, M. Crawford.

1415 **# 3281.** Localisation of Fault-controlled Fluid Flow During Growth of a Normal Fault Network, Jebel Akhdar Dome, Oman
P. Stenhouse, S. Cox, S. Virgo, M. Arndt, J. Urai.

1430 **# 4940.** Brittle ductile deformation triggered by fluids separated from melt -Fossil evidence of Arc crustal earthquake preserved in Higo metamorphic rocks-
K. Okamoto

1445 **# 815.** Kola Super Deep – Evidence of fluids in the Crust
S. Milanovskiy

Saturday, 2 July 2011 1330-1500 MR208

IAGA

JA05 Data rescue, digitisation and metadata requirements in geophysics

JA05S3

Chairpersons: Ellen Clarke & Rick Benson

1330 **# 5330.** ICSU World Data System's International Programme Office in Japan
Y. Murayama, K. Murata, M. Ishii, N. Doi, S. Iwata, et al.

1345 **As above.**

1400 **# 3761.** Inter-university Upper atmosphere Global Observation NETwork (IUGONET)
H. Hayashi, Y. Koyama, T. Hori, Y. Tanaka, M. Kagitani, et al.

1415 **# 1289. Invited** Metadata Handling and Historical Data Recovery at the National Geophysical Data Center
J. Mabie, D. Herzog, W. Denig.
1430 **As above.**
1445 **Discussion.**

Saturday, 2 July 2011 1330-1500 MR205

IAGA
A013 Planetary Magnetic Fields and Geomagnetic Secular Variation
A013S1 Numerical simulations and observations: Looking back and predicting the future
Chairpersons: Andrew Jackson

1330 **# 3582.** CALS10k. 1: A Holocene Geomagnetic Field Model Based on Archeo- and Paleomagnetic Data
M. Korte, C. Constable, F. Donadini.
1345 **As above.**
1400 **# 4433.** Developent of Variational Data Assimilation Methods for the Modular Scalable Self-consistent Three-dimensional Geodynamo Simulator
G. Egbert, L. Dimitrova, W. Kuang, A. Tangborn.
1415 **As above.**
1430 **# 5918.** Numerical simulations of short-timescale geomagnetic field variations
A. Sakuraba
1445 **# 4306.** Effect of cross-correlation in geomagnetic data assimilation
W. Kuang, A. Tangborn, W. Jiang.

Saturday, 2 July 2011 1330-1500 MR206

IAGA
A101 The Sun and the Heliosphere: New Views
A101S3 New Views of the Sun, the Interplanetary Medium, and Outer Heliosphere
Chairpersons: Karin Muglach

1330 **# 690.** New Solar EUV Irradiance Results from SDO EVE
T. Woods,. EVE Team.
1345 **As above.**
1400 **# 4842.** New Results on the X-ray/EUV Sun from Hinode
T. Sakao
1415 **As above.**
1430 **# 2252.** Solar Probe Plus and Solar Orbiter, the next Heliospheric missions
R.F. Wimmer-Schweingruber
1445 **As above.**

Saturday, 2 July 2011 1330-1500 MR210

IAHS
JH01 GRACE, other remote sensing platforms and ground based methods for estimating multi-scale surface water budgets, groundwater system characterization and hydrological processes
JH01S1
Chairpersons: Mohsin Hafeez & Earl Bardsley

1330 **# 79.** Groundwater Resources Assessment Based on Satellite GRACE and Hydrogeology in Western Australia
M. Taniguchi, K. Yamamoto, R. Sarukkalige.
1345 **# 212.** Analysis of Regional Variations in Soil Moisture By Means of Remote Sensing, Satellite Gravimetry and Hydrological Modelling
S. Abelen, F. Seitz, A. Güntner, M. Schmidt.
1400 **# 435.** Monitoring of surface and ground water variations using multisatellite observations and hydrological modelling
F. Seyler, F. Frappart, F. Papa, J.M. Martinez, T. Le Toan.
1415 **# 501.** A Global Basin-scale Terrestrial Water Storage dataset from GRACE
C.R. Wilson, C.R. Wilson, B.R. Scanlon.
1430 **# 481.** Widespread Ground Fissures in the Northern Flank of Indian Peninsular Shield Caused Due to Ground Water Depletion and Extreme Rainfall – Inference From Multi Sensor Data Analysis
R. Singh
1445 **# 171.** A Global Network of Area-Integrated Water Budget Monitoring for Climate Change Detection
E. Bardsley

Saturday, 2 July 2011 1330-1500 MR219

IAHS
JH02 Hydro-climatology: Variability and change
JH02S7
Chairpersons: E. Blyth

1330 **# 478.** Climate variability and change in east Africa
A. Laing, A. Gettelman, J. Dudhia, F. Witmer, J. Tribbia.
1345 **# 222.** Medium Term Streamflow Prediction in a Changing Climate
J. Teng, F. Chiew, J. Vaze.
1400 **# 485.** Effect on surface water resource due to climate change: Indian scenario
P.K. Bhunya
1415 **# 152.** How could hydro-climatic conditions evolve in the long-term in West Africa? The case study of the Bani River catchment.
D. Ruelland, L. Collet, S. Ardoin-Bardin, P. Roucou.
1430 **# 98.** Temporal Changes in Annual Rainfall in the Top End of Australia
W. Erskine, M. Saynor.
1445 **Discussion.**

Saturday, 2 July 2011 1330-1500 MR102

IAHS
JHW02 Interaction between fresh water and ecosystem in the coastal zone
JHW02S1
Chairpersons: Donald Rosenberry & Jean-François Exbrayat

1330 **# 2579. Invited** Biogeochemical effects of submarine groundwater discharge in oligotrophic coastal waters off oceanic islands
G. Kim, J. Kim, J. Jeong.
1345 **As above.**
1400 **# 85.** Habitat usage of a groundwater-fed coastal inlet by the iconic and endangered queen conch Strombus gigas, Yucatan Peninsula, Mexico.
T. Stieglitz, L. Chauvaud, E. Amice, J. Thebault, J. Peel, et al.
1415 **# 80.** Effects of Submarine Groundwater Discharge on Seashell Ecosystem in the Coastal Zone Near Mt. Chokai, Japan
M. Taniguchi, T. Hosono, M. Ono, B. Burnett, T. Nakano.
1430 **# 5533.** Monitoring of Oyster and SGD in Tidal Flat using Synthetic Aperture Radar
D. Kim, B. Choe, J-H. Hwang, Y. Oh, W. Moon.
1445 **Discussion.**

Saturday, 2 July 2011 1330-1500 MR101

IAMAS

JM01 Geoengineering: Can it limit climate change and its impacts?

JM01S2 Might Solar Radiation Management be used to Complement Carbon Dioxide Removal

Chairpersons: Michael MacCracken

1330 **# 2139.** Moderating Critical Impacts by Climate Engineering
M. Mac Cracken

1345 **# 5602.** Assessing Theoretical Potential Benefits of 'Drought-Proofing' Australia's Foodbowl
P. Hope, A. Watkins, B. Backway.

1400 **# 854.** Geo-engineering Biofuel from Algae
T. Beer, D. Batten, P.K. Campbell.

1415 **# 5387.** Carbon Capture and Geological Storage (CCS) in Romania
C.S. Sava, C. Constantin, A. Proca, C. Tomescu, A. Dudu, et al.

1430 **Poster Presentations.**

1445 **Discussion.**

Saturday, 2 July 2011 1330-1500 MR109

IAMAS

JM02 Data assimilation and ensemble forecasting for weather and climate

JM02S3

Chairpersons: Mu Mu & William Lahoz

1330 **# 2122. Invited** Model Error Estimation in Ensemble-Kalman Filter
Z. Meng, D. Wu.

1345 **As above.**

1400 **# 5651.** Assimilation of Radar Radial Velocity Data with the WRF Ensemble-VAR Hybrid System for the Prediction of Hurricane IKE (2008)
X. Wang, Y. Li, M. Xue.

1415 **# 4480.** Gridded Operational Consensus Forecasts
T. Hume, S. Cooper, P. Riley, E. Ebert.

1430 **# 2817.** An assessment of oceanic variability in the NCEP climate forecast system reanalysis
Y. Xue, B. Huang, Z. Hu, A. Kumar, C. Wen, et al.

1445 **# 5716.** Evaluation of probabilistic quality and value of the ENSEMBLES multi-model seasonal forecasts: comparison with DEMETER
A. Alessandri, A. Borrelli, A. Navarra, A. Arribas, M. Déqué, et al.

Saturday, 2 July 2011 1330-1500 MR110

IAMAS

JM06 High-impact weather and extreme climate events

JM06S7

Chairpersons: Richard Swinbank & Ron Stewart

1330 **# 4033. Invited** The influence of diabatic processes on the evolution of mesoscale structures in extratropical cyclones
J. Chagnon

1345 **As above.**

1400 **# 3513.** Predictabiliy Analysis Of Explosive Cyclones In The North Pacific Storm Track Using An Ensemble Reanalysis Data
A. Kuwano-Yoshida, T. Enomoto.

1415 **# 3815.** Extreme Mid Latitude Cyclones: Their Origins, Structure And Impacts
S. Gulev, N. Tilinina, I. Rudeva.

1430 **# 1655.** An energetics signature of Southern Hemisphere explosive cyclones
M. Black, A.B. Pezza.

1445 **# 1970.** The distribution of mobile atmospheric fronts in the Southern Hemisphere
I. Simmonds

Saturday, 2 July 2011 1330-1500 MR103

IAMAS

JM08 Predictability of the coupled climate system, climate system feedbacks and sensitivity to external forcing

JM08S5 Climate Metrics and Diagnostics Part 1

Chairpersons: Alberto Arribas

1330 **# 772. Invited** The impact of global warming on the Walker Circulation and the Southern Oscillation Index
S. Power, G. Kocuiba.

1345 **As above.**

1400 **# 3773. Invited** Interdependence of basin modes in the tropical climate predictability
S. Behera, J-J. Luo, T. Izumo, Y. Masumoto, T. Yamagata.

1415 **# 2209.** Improving Low-Cloud Simulation Using an Upgraded Multiscale Modeling Framework and CERES, CloudSat, CALIPSO and MODIS Observations
K. Xu, A. Cheng.

1430 **# 3372.** Natural and Forced Modes of Variability in CMIP3 Oceans
L. Muir, S. Wijffels, J. Brown.

1445 **# 2121.** Generation Mechanism of the Subtropical Dipole Modes Simulated in a Coupled General Circulation Model
Y. Morioka, T. Tozuka, S. Masson, P. Terray, T. Yamagata.

Saturday, 2 July 2011 1330-1500 MR105

IAMAS

JM10 Monsoons, Tropical Cyclones and Tropical Dynamics

JM10S10 Cyclones Genesis, NWP

Chairpersons: Roger Smith

1330 **# 2315. Invited** Dynamics of Tropical Cyclogenesis
D. Raymond, S. Gjorgjievska, S. Sessions, C. Lopez Carrillo.

1345 **# 4179. Invited** The Pre-Depression Investigation of Cloud Systems in the Tropics (PREDICT) Experiment: Scientific Basis, New Analysis Tools and Some First Results
M. Montgomery

1400 **As above.**

1415 **# 3151.** Multi-scale Observations of Cloud Clusters and Tropical Cyclones
S. Chen, B. Kerns, E. Ryan, C. Lee.

1430 **#4559.** Interdecadal Variability of Storm Track Activity and its Relationship with Tropical Circulation
S. Lee, J. Lee, B. Wang, K. Ha.

1445 **Discussion.**

Saturday, 2 July 2011 1330-1500 MR211

IAPSO

JP03 Global and regional sea-level change

JP03S5

Chairpersons: John Church

1330 **# 727.** Response of the Coupled Ocean-Atmosphere System to Greenland Ice Melting
D. Stammer, N. Agarwal, P. Herrmann, A. Köhl, C.R. Mechoso.

1345 **# 4930.** Barotropic response of sea level to idealized ice-sheet melting
K. Lorbacher, S.J. Marsland, S.M. Griffies, J.A. Church.

1400 **# 1904.** Modelling the Variability of Sea Level in the North Atlantic
P. Woodworth, M.A.M. Maqueda, V. Roussenov, R. Williams.

1415 **# 4003.** A Model of Atlantic Heat Content and Sea Level Change in Response to Thermohaline Forcing
X. Zhai, H. Johnson, D. Marshall.

1430 **# 2954.** Regional Variations in Mean Sea Level and their Impact on The Mean Surface Circulation
P. Knudsen, O.B. Andersen.

1445 **# 2356.** Linear trend of regional sea-level change in the Pacific Ocean and its relationship with background decadal oscillation
X. Zhang, J. Church.

Saturday, 2 July 2011 1330-1500 PH1

IAPSO

P05 New insights from Sustained Ocean Observing Systems

P05S5

Chairpersons: Steve Riser & Katy Hill

1330 **# 4510.** Design of the Integrated Marine Observing System
P. Oke, P. Sakov.

1345 **# 2227.** Seasonal Variations of the Wind-Driven Ekman Flow Estimated From HF Radar, a Part of an Intensive Monitoring System in the Tsushima Strait
Y. Yoshikawa, A. Masuda.

1400 **# 588.** On the sensitivity of HFSWR wave height and directional wave spectrum estimation to non-stationarity of forcing winds
S. Anderson

1415 **# 1831.** Residual Circulation in Liverpool Bay
J. Polton, M. Palmer, M. Howarth.

1430 **# 1995.** A Strain Induced Freshwater Pump In The Liverpool Bay ROFI
M. Palmer, J. Polton.

1445 **Discussion.**

Saturday, 2 July 2011 1330-1500 MR203

IASPEI

JS01 Advances in Tsunami Science, Warning, and Mitigation

JS01S5

Chairpersons: Susan McLean & Yutaka Hayashi

1330 **Introduction.**

1345 **Discussion.**

1400 **# 2385.** Tsunami Risk Perception Framework for the Start Time Evacuation Modeling
E. Mas, F. Imamura, S. Koshimura.

1415 **# 2387.** Tsunami Hazard and Risk Assessment for Coastal Population in the Indian Ocean
A. Suppasri, T. Asada, F. Imamura, S. Koshimura.

1430 **# 2388.** Assessment on community level tsunami awareness and outlook for future evacuation strategy: Introducing 'tsunami-deck'
A. Muhari, F. Imamura, S. Koshimura.

1445 **# 2922.** Present Research Status and Foresight on Timely Cancelletion of Tsunami Warning
Y. Hayashi

Saturday, 2 July 2011 1330-1500 MR212

IASPEI

JS03 Scientific Results from Seafloor Networks

JS03S1

Chairpersons: Ralph Stephen & Pascal Tarits

1330 **# 2117. Invited** Detection of Tsunami and T-phase by the Dense Oceanfloor Network System for Earthquakes and Tsunamis (DONET)
S. Tsuboi, T. Nakamura, M. Nakano, T. Watanabe, A. To, et al.

1345 **As above.**

1400 **# 3587.** Real Time Monitoring Systems And Applications For Megathrust Earthquakes And Tsunamis Around The Nankai Trough, Southwestern Japan
Y. Kaneda

1415 **Discussion. # 4351.** Sea-floor seismo-geodetic observatories monitoring the Tonankai mega-thrust earthquakes
E. Araki, K. Kawaguchi, K. Kitada, T. Kimura, D. Saffer, et al.

1430 **# 4053.** Real Time Seismic Network Observation in the Sea of Japan by a Newly Developed Ocean Bottom Cabled Seismometer System
T. Kanazawa, M. Shinohara, S. Sakai, T. Yamada, K. Mochizuki, et al.

1445 **Discussion.**

Saturday, 2 July 2011 1330-1500 MR204
IASPEI

S08 Seismic Hazard and Risk – The Global Earthquake Model

S08S3

Chairpersons: Jochen Zschau & Farsi

1330 **# 840.** Assessing variables of seismic hazard analysis in the framework of fuzzy sets theory
E. Boustan, N. Tahernia.

1345 **Discussion.**

1400 **# 2867.** Towards a new seismic hazard model for the 2015 National Building Code of Canada
J. Adams, S. Halchuk.

1415 **# 4620.** Better Defining Earthquake Risk in Wellington, New Zealand: the First Five Years of the It's Our Fault Programme
R. Van Dissen, T. Little, P. Barnes, S. Semmens, D. Boon, et al.

1430 **Discussion.**

1445 **Discussion.**

Saturday, 2 July 2011 1330-1500 MR213
IASPEI

S10 Physics of the seismic process: from laboratory studies to field observations

S10S3

Chairpersons: Arcady Dyskin & Alexey Zavyalov

1330 **# 776.** Seismicity Dynamics and Earthquake Predictability
G. Sobolev

1345 **# 5724.** From earthquake prediction research to warnings ahead of earthquakes
R. Stefánsson, S. Jakobsdóttir, G. Gumundsson.

1400 **# 2216.** Computational Issues in Forecasting Earthquakes
J. Rundle, J.R. Holliday, M. Yoder, D.L. Turcotte, K.F. Tiampo, et al.

1415 **# 1025.** Maps of Synchronization for Low-Frequency Microseismic Noise Multi-Fractal Properties
A. Lyubushin

1430 **# 5776.** Possible Origins of Future large Earthquakes in Iceland
S.S. Jakobsdottir, G.B. Gudmundsson, R. Stefansson.

1445 **# 3050.** Seismicity Dynamics of the Island Arcs at the Northwest Pacific
E. Sasorova, B. Levin, M. Andreeva.

Saturday, 2 July 2011 1330-1500 MR104
IASPEI, IAVCEI

JS04/JV03 Physics and Chemistry of Earth Materials with Implications for Earth Structure and Processes

JS04JV03S3 Rheology and Elasticity

Chairpersons: Tetsuo Irifune & Takahashi Yoshino

1330 **# 812.** Application of a Finite Element Program to the Visco-plastic Behaviour of a Rock Sample by Considering the Effect of a Temperature Gradient
S. Mehrabian, S. Mizani.

1345 **# 1891.** Strength and Temperature-induced Weakening of Mantle Minerals, Implications to deep seismicity
J. Chen, J. Girard.

1400 **# 3280.** Dislocation Damping And Anisotropic Attenuation In The Earth's Mantle
I. Jackson, R.J.M. Farla, J.D. Fitz Gerald, U.H. Faul, M.E. Zimmerman.

1415 **# 4918.** Fate of subducted slabs: insights from laboratory measurements on sound velocity and density changes
T. Irifune

1430 **# 4203.** Measuring the Elastic Properties of Natural Rocks and Mineral Assemblages under Earth's Deep Crustal and Mantle Conditions – Techniques, Results, Challenges
H.J. Mueller, K. Roetzler, F.R. Schilling, C. Lathe, M. Wehber.

1445 **Discussion.**

Saturday, 2 July 2011 1330-1500 MR108
IAVCEI

JV05 Using Geodesy on Volcanoes to Understand Volcanic, Tectonic, and Hydrothermal Forces

JV05S1

Chairpersons: Nico Fournier & Kosuke Heki

1330 **# 4367. Invited** The 2010 Eyjafjallajokull Volcano Unrest and Eruptions: Spatial and Temporal Variations in Ground Deformation
S. Hreinsdottir, T. Arnadottir, F. Sigmundsson, A. Hooper, M. Roberts, et al.

1345 **As above.**

1400 **# 4563.** Investigation of Tectonic/Hydrothermal and Volcanic Interactions using Geodetic Data and Geodynamic Modelling at the Okataina Volcanic Centre
L. Holden, R. Cas, L. Ailleres, L. Moresi, N. Fournier, et al.

1415 **# 2526.** Inverting volcano ground deformation signal due to hydrothermal processes: what do we actually invert for?
N. Fournier, L. Chardot.

1430 **# 3619.** Numerical modelling of ground deformation and stress field around a pressured magma chamber: constraints on reservoir failure and rheology
G. Currenti, A. Bonaccorso, D. Scandura, C. Williams, C. Del Negro.

1445 **# 2598.** Instantaneous and localized temperature changes in atmosphere associated with the Icelandic eruption in April 2010 observed by GPS radio occultation
K. Heki, I. Okazaki.

Saturday, 2 July 2011 1330-1500 MR112
IAVCEI, IASPEI
JV12/JS08 Volcano Seismology
JV12JS08S3
Chairpersons: Jeffrey Johnson

1330 # **5707.** Mapping of Magma Movements in Agitated Icelandic Volcanoes
K.S. Vogfjord, S. Hjaltadottir, M.J. Roberts, R. Slunga.
1345 # **784.** Recent seismic activity at Volcano Nyamulagira, Western Rift Valley of Africa
N. Lukaya, K. Kavotha, N. D'Oreye, T. Mavonga, B. Rusangiza, et al.
1400 # **3336.** Ascending Seismic Source During an Explosive Eruption at Tungurahua Volcano, Ecuador
H. Kumagai, P. Palacios, M. Ruiz, H. Yepes, T. Kozono.
1415 # **5079.** Long-period seismic events induced by quick bubble formation: a new source mechanism predicted by SPH simulations
Y. Ida, T. Kozono, E. Fujita.
1430 # **2693.** Very-Long Period signals associated with Merapi 2010 eruption
P. Jousset, A.B. Santoso.
1445 # **2441.** Fluid-dynamic source mechanisms for acoustic and seismic signals generated during strombolian eruptions
M. James, S. Lane, S. Corder.

SATURDAY, 2 JULY 2011 1630-1800 PM2

Saturday, 2 July 2011 1630-1800 PH2
IUGG
U02 Grand Challenges in Natural Hazards Research and Risk Analysis
U02S6 Speakers by Invitation
Chairpersons: Alik Ismail-Zadeh & Volodya Kossobokov

1630 # **6032.** Accidents at Fukushima No. 1 Nuclear Power Plant caused by the 2011 Tohoku earthquake
K. Irikura
1645 **As above.**
1700 # **6030.** Tectonic Context and Implications of the Canterbury, New Zealand Earthquake Sequence
K.P. Furlong, G.P. Hayes, M. Quigley, H. Benz.
1715 **As above.**
1730 # **6018.** Weather & Climate Prediction and the Brisbane 2011 Floods
N. Nicholls
1745 **As above.**

Saturday, 2 July 2011 1630-1800 MR111
IACS
JC01 Arctic System Modelling
JC01S3 Arctic System Modeling III
Chairpersons: Scott Elliott & Andrew Roberts

1630 # **4211.** Tundra Burning in 2007: Did Sea Ice Retreat Matter?
V. Alexeev, M. Tsukernik.
1645 # **2181.** COSIM Involvement in Arctic Ice Biogeochemistry Simulations
S. Elliott, C. Deal, E. Hunke, N. Jeffery, M. Jin, et al.
1700 **Discussion.**
1715 **Discussion.**
1730 **Discussion.**
1745 **Discussion.**

Saturday, 2 July 2011 1630-1800 MR217
IACS
JC02/JC03 Snow – Atmosphere Interactions and Avalanches.
JC0203S5 Snow – Atmosphere Interactions and Avalanches; Radiation and Final Discussion
Chairpersons: Marc Parlange & Henning Löwe

1630 # **994.** Increasing Aerosol Loading in the Atmosphere and Its Impact on Snow and Glaciers
R. Singh
1645 # **2079.** The Snow Albedo Feedback and Elevation Gradients of European Climate Change
S. Kotlarski, D. Luthi, C. Schar.
1700 **As above.**
1715 # **1450.** Investigation of shortwave radiation redistribution over complex topography
N. Helbig, H. Loewe, E. Adams.
1730 # **1165.** Black Carbon in Snow/Ice of Western China and Its Radiative Forcing
J. Ming, C. Xiao, Z. Du, M. Flanner.
1745 **Wrap Up: special issue AWR.**

Saturday, 2 July 2011 1630-1800 MR220
IACS
JC04 Ice Shelves and Glacier Tongues – Ice on the Edge
JC04S4
Chairpersons: Roland Warner

1630 # **4830.** Ocean-ice Interaction at the Amery Ice Shelf: an Overview.
I. Allison, M. Craven, H. Fricker, B. Galton-Fenzi, J. Hunter, et al.
1645 # **3246.** Seasonal cycle of ocean interaction with the amery ice shelf
L. Herraiz-Borreguero, B. Galton-Fenzi, J. Hunter, I. Allison.
1700 # **3463.** Modelling the interaction between Antarctica and the Southern Ocean
J. Hunter, B. Galton-Fenzi.
1715 # **3326.** Tidal Effects on Ice Shelves in the Amundsen Sea
R. Robertson
1730 # **5047.** Melting of the Fimbul Ice Shelf – a Difficult case for Ice-Ocean Models due to High Resolution Mixing Processes on the Continental Shelf
L.H. Smedsrud, O.A. Nøst, T. Hatterman, E. Isaksson, J. Kohler, et al.
1745 # **2793.** What controls the time scale of circumpolar deep water intrusions onto Antarctic continental shelves?
M. Dinniman, P. St-Laurent, J. Klinck.

Saturday, 2 July 2011 1630-1800 MR216

IAG

JG01 Space Geodesy-based Atmospheric Remote Sensing as a Synergistic Link between Geodesy and Meteorology

JG01S4

Chairpersons: Marcelo Santos & Jens Wickert

1630 **# 3869.** Full Solar Cycle of Effective Ionization levels for the NeQuick Model
S. Verhagen, Y. Memarzadeh, H. Van Der Marel.

1645 **Discussion.**

1700 **# 3808.** Determination of the Vienna Atmospheric Pressure Loading Corrections
D.D. Wijaya, J. Boehm, M. Schindelegger, M. Karbon, H. Schuh.

1715 **# 3970.** Tomography of the troposphere water vapor by using a single GPS receiver: a very ill-posed inverse problem
J. Barriot, J. Serafini, L. Sichoix, M. Aureau.

1730 **Discussion.**

1745 **Discussion.**

Saturday, 2 July 2011 1630-1800 MR205

IAGA

A013 Planetary Magnetic Fields and Geomagnetic Secular Variation

A013S2 Numerical simulations and observations: Looking back and predicting the future

Chairpersons: Weijia Kuang

1630 **# 2636.** Assimilation of Geomagnetic Observations in Three-Dimensional Models of the Geodynamo
A. Fournier, J. Aubert, E. Thebault.

1645 **As above.**

1700 **# 3439.** Towards variational data assimilation for the geodynamo: an illustrative example
K. Li, A. Jackson, P. Livermore.

1715 **# 2664.** Do accelerated core flows produce better magnetic field model forecasts?
C. Beggan, K. Whaler.

1730 **Discussion.**

1745 **Discussion.**

Saturday, 2 July 2011 1630-1800 MR206

IAGA

A101 The Sun and the Heliosphere: New Views

A101S4 New Views of the Sun, the Interplanetary Medium, and Outer Heliosphere

Chairpersons: Eberhard Moebius

1630 **# 1293.** How is the solar wind heated and accelerated?
X. Li

1645 **As above.**

1700 **# 4394.** Long-Term Solar Wind Variations
R. Lopez

1715 **# 2224.** Physical Laws For The Solar Wind, Valid At Any Phase Of The Solar Cycle, As A Conclusion Made During COSPAR 2010
V. Eselevich

1730 **# 3697.** Unusual Evolution Of Solar Wind Parameters Over The Past Solar Cycle
R. Von Steiger, T.H. Zurbuchen.

1745 **As above.**

Saturday, 2 July 2011 1630-1800 MR210

IAHS

JH01 GRACE, other remote sensing platforms and ground based methods for estimating multi-scale surface water budgets, groundwater system characterization and hydrological processes

JH01S2

Chairpersons: A/Prof. Mohsin Hafeez & Prof Makoto Taniguchi

1630 **# 105.** Estimating Soil Heat Flux using Distributed Temperature Sensing
N. Van De Giesen, J.H.A.M. Jansen, P.M. Stive, S.W. Tyler, S.C. Steele-Dunne.

1645 **Discussion.**

1700 **# 251.** A Preliminary Analysis of the Total Column Water Vapor Retrieved from COSMIC Data
W. Wang, X. Zhou.

1715 **# 310.** Study on winter wheat evapotranspiration estimation based on Todorovic method
G. Liu, M. Hafeez, Y. Liu, D. Xu.

1730 **# 384.** Improving runoff predictions in ungauged catchments using hydrological models together with remote sensing data
Y. Zhang, F. Chiew, A. van Dijk, N. Viney, Y. Liu.

1745 **Discussion.**

Saturday, 2 July 2011 1630-1800 MR219

IAHS

JH02 Hydro-climatology: Variability and change

JH02S8

Chairpersons: K. K Yilmaz

1630 **# 144.** Hydrological validation of climate model statistical downscaling methods.
M. Bourqui, T. Mathevet, J. Gailhard, F. Hendrickx.

1645 **# 223.** Statistical Downscaling of Daily Rainfall for Southeastern Australia
G. Fu, S. Charles.

1700 **# 124.** Climate Variability and Water Security for Power Generation
A. Wyatt, S. Franks.

1715 **# 279.** Developing a feedbacks toolkit for Regional water resource assessments
E. Blyth, C. Jacobs.

1730 **# 463.** Multi-model assessment of climate change impact on hydrological regime in the Czech Republic
M. Hanel, A. Vizina.

1745 **Discussion.**

Saturday, 2 July 2011 1630-1800 MR102

IAHS

JHW02 Interaction between fresh water and ecosystem in the coastal zone

JHW02S2

Chairpersons: Makoto Taniguchi & Kate Heal

1630 **# 979.** Is There a Groundwater Pathway Driving the High Productivity of Tonle Sap Lake, Cambodia?
W. Burnett, R. Peterson, G. Wattayakorn, S. Chanyotha, R. Kritsananuwat, et al.

1645 **# 1919.** Discharge of phosphorus laden brackish groundwater to a coastal wetland and its influence on ecosystem metabolism: An example from the Florida Everglades, USA
R. Price, G. Koch, X. Zapata-Rios.

1700 **# 834.** Submarine groundwater discharge at oceanic islands: the coastal ecosystems and beyond
H. Bokuniewicz
1715 **Discussion.**
1730 **# 2717.** Influence of submarine groundwater discharge on nutrients and algal blooms in Hood Canal, a portion of Puget Sound, Washington, USA
D. Rosenberry, R. Sheibley, S. Cox.
1745 **Discussion.**

Saturday, 2 July 2011 1630-1800 MR109
IAMAS
JM02 Data assimilation and ensemble forecasting for weather and climate
JM02S4
Chairpersons: Tomoko Matsuo & William Lahoz

1630 **# 4499.** Identification and correction of errors in error-variance-prediction
C. Bishop, E. Satterfield, D. Kuhl, K. Shanley.
1645 **# 2362.** A New Dynamical Intraseasonal Forecast System Using POAMA
D. Hudson, A.G. Marshall, Y. Yin, O. Alves.
1700 **# 5458.** Assessing the importance of the Australian radiosonde network to NWP
P. Steinle, E. Miles.
1715 **# 2148.** Improving Seasonal Rainfall Forecasting by Combining Statistical and Dynamical Modelling Approaches
Q. Wang, A. Schepen, D. Robertson, S. Hawthorne, A. Charles.
1730 **# 5608.** A Bayesian Clutter Mitigation Scheme for the BoM Radar Network
J. Peter, A. Seed, P. Steinle.
1745 **# 4494.** Gridded Operational Consensus Forecast (GOCF) approach to medium range (1 â“ 7 days) rainfall forecasting for Australia
S. Cooper, P. Riley, T. Hume.

Saturday, 2 July 2011 1630-1800 MR110
IAMAS
JM06 High-impact weather and extreme climate events
JM06S8
Chairpersons: Jeff Chagnon & Tetsuo Nakazawa

1630 **# 4191.** A tale of two polar lows during IPY-THORPEX
J.E. Kristjansson, H. McInnes, J. Kristiansen, H. Schyberg, I. Fare, et al.
1645 **# 2372.** Future Change in Extratropical Cyclones Associated with Change in the Upper Troposphere
R. Mizuta, M. Matsueda, H. Endo, S. Yukimoto.
1700 **# 4257.** Ensemble Prediction of the North Atlantic Jet
T. Frame, S. Gray, J. Methven, M. Ambaum.
1715 **# 4860.** Development processes of Baiu frontal depressions
E. Tochimoto
1730 **# 5035.** Large-scale indicators of Australian extra-tropical cyclones and associated extreme weather events
A. Dowdy, G. Mills, B. Timbal.
1745 **Discussion.**

Saturday, 2 July 2011 1630-1800 MR103
IAMAS
JM08 Predictability of the coupled climate system, climate system feedbacks and sensitivity to external forcing
JM08S6 Climate Metrics and Diagnostics Part 2
Chairpersons: Natalia Andronova & Alberto Arribas

1630 **# 3559.** Solar Forcing of Northern Hemisphere Winter Climate Variability
S. Mahmood, S. Ineson, A. Scaife, J. Knight, J. Manners.
1645 **# 5385.** Application of a Pattern Matching Technique for Climate Change Projections of Rainfall
F. Delage, A. Moise.
1700 **# 5539.** Impact of 18. 6-year Period Tidal Cycle on Ocean and Climate
I. Yasuda, Y. Tanaka, S. Osafune, H. Hasumi, H. Tatebe.
1715 **# 4375.** Volume Variability Diagnostic for 4D Datasets
N. Andronova, S. Boland.
1730 **Poster Presentations.**
1745 **# 1513.** Climate–Carbon Cycle Uncertainties And Their Impact On Probable Future Global-Mean Temperatures
R. Bodman, P. Rayner, I. Enting, D. Karoly.

Saturday, 2 July 2011 1630-1800 MR105
IAMAS
JM10 Monsoons, Tropical Cyclones and Tropical Dynamics
JM10S11 Cyclones Interannual, NWP
Chairpersons: Mike Montgomery

1630 **# 767. Invited** Interannual variations of the Activities of Tropical Cyclones over the Northwest Pacific and Their Association with the Tropical Western pacific Thermal States
R. Huang, L. Wu, G. Chen.
1645 **As above.**
1700 **# 4068.** Structure and Evolution of Developing and Non-developing African Easterly Waves during NAMMA
N. Ramos, S.D. Aberson, V. Morris.
1715 **# 1383.** Impact of Indian Ocean SSTA on the frequency of Northwest Pacific tropical cyclones Observations and Regional Climate Model Simulations
R. Zhan, Y. Wang, X. Lei, C. Wu.
1730 **# 1948.** Data assimilation and predictability studies on Typhoon Sinlaku (2008) using the WRF-LETKF system
T. Miyoshi, M. Kunii.
1745 **# 1608.** The variability of Tropical Cyclone in the High Frequent Occurrence regions in the Western North Pacific and Associated with General Circulation
Y. Yang, H. Huang, W. Wang.

Saturday, 2 July 2011 1630-1800 MR211

IAPSO

JP03 Global and regional sea-level change

JP03S6

Chairpersons: Wolfgang Bosch

1630 **# 3801.** ENSO modoki and decadal sea level variations in tropical pacific
S. Behera, T. Yamagata.

1645 **# 3818.** Contribution of Pacific Wind Stress to Decadal Subsurface Cooling and Falling Sea Level in the Tropical South Indian Ocean
C. Boening, F.U. Schwarzkopf.

1700 **# 2537.** Reducing uncertainty in the pattern of regional sea level rise around the Australian coastline.
S. O'Farrell

1715 **# 2332.** Regional Fingerprints of Radiative Forcing and the Attribution of 20th century Sea-level Rise
J. Church, D. Monselesan, N. White, L. Rotstayn, S. Jeffrey, et al.

1730 **Discussion.**

1745 **Discussion.**

Saturday, 2 July 2011 1630-1800 MR203

IASPEI

JS01 Advances in Tsunami Science, Warning, and Mitigation

JS01S6

Chairpersons: Alexander Rabinovich & William Power

1630 **Introduction.**

1645 **# 4538.** Tsunami Modelling, Forecasting and Warning for the Great Barrier Reef Region
A. Simanjuntak, D. Greenslade, S. Allen.

1700 **# 2994.** PTHA vs. Worst-case Scenarios: An Application to Eastern Sicily Coasts (Italy)
S. Tinti, A. Armigliato, F. Zaniboni, G. Pagnoni, S. Gallazzi, et al.

1715 **# 2306.** GPS Detection of Tsunami Scales for Early Warnings
Y.T. Song

1730 **# 3288.** Assessment of US Warning Performance during the 2010 Chile Tsunami
E. Bernard, V. Titov.

1745 **# 4531.** Using tsunameter observations to improve numerical forecasts of the 2010 Chile tsunami
S. Allen, A. Simanjuntak, D. Greenslade.

Saturday, 2 July 2011 1630-1800 MR212

IASPEI

JS03 Scientific Results from Seafloor Networks

JS03S2

Chairpersons: Yoshiyuki Kaneda & Bruce Howe

1630 **# 5379. Invited** Challenges and early results from NEPTUNE Canada: The world's first regional cabled ocean observatory network.
M. Best, C.R. Barnes, F.R. Johnson, L. Pautet, B. Pirenne.

1645 **As above.**

1700 **# 5542.** NEMO-SN1 (western Ionian Sea, off Eastern Sicily):Example of architecture of a cabled observatory
A. De Santis, INGV Team, INFN Team, CNR-ISMAR Team, Tecnomare Team.

1715 **# 2949.** Integration of Long-Term OBS Seismic Recordings with Land Data: the NEAREST Experiment
L. Matias, W. Geissler, S. Silva, M. Romsdorf, F. Carrilho, et al.

1730 **# 4942.** Multi-scale Methods to Characterize LOTHIR (Long-Term & High-Resolution) Data Obtained in Permanent Observatories
J. Piera, C. Simon, O. Ross, M.L. Artigas, E. Berdalet, et al.

1745 **# 5754.** A New Concept for Cabled Ocean Bottom Systems: the Marmara Sea Network
H. Rademacher, C. Guralp, S. Tunc, S. Ada, C. Pearcey.

Saturday, 2 July 2011 1630-1800 MR204

IASPEI

S08 Seismic Hazard and Risk – The Global Earthquake Model

S08S4

Chairpersons: Van Dissen & Shorchak

1630 **Introduction.**

1645 **# 1755.** Proposed Seismic Zoning Map for Bangladesh
T.M. Al-Hussaini, M.N. Al-Noman.

1700 **# 842.** Quantitative Assessment Of Seismic Hazard In The Western And Central Himalayas
U. Ghosh, P. Bhattacharya.

1715 **# 4690.** Probabilistic Seismic Hazard Assessment for Indonesia: Central Java Case Study
A. Omang, R. Robiana, A. Cipta, J. Griffin, D. Robinson, et al.

1730 **Discussion.**

1745 **Discussion.**

Saturday, 2 July 2011 1630-1800 MR213

IASPEI

S10 Physics of the seismic process: from laboratory studies to field observations

S10S4

Chairpersons: Arcady Dyskin & Alexey Zavyalov

1630 **# 3097.** Map of Expected Earthquakes for New Zealand: First Results
A. Zavyalov

1645 **# 550.** Imaging of three-dimensional b-value and fractal dimension structure of the 2001 Mw7. 7 Bhuj earthquake region, Gujarat, India
P. Mandal, M.V. Rodkin.

1700 **# 3059.** Seismic Evidences of the Earth's Interiors Differential Rotation
B. Levin, E. Sasorova, A. Domanski.

1715 **# 4139.** Is daughter better than parent? A case study: Radon vs Uranium (Uranium groundwater anomalies and active normal faulting)
W. Plastino

1730 **# 3149.** Mutually Induced Seismicity And Its Properties
S. Bayda

1745 **Discussion.**

Saturday, 2 July 2011 1630-1800 MR218
IASPEI
S13 Seismic Imaging of the Lithosphere and Mantle
S13S1
Chairpersons: Yingjie Yang & Greg Houseman

1630 **# 2066.** Lithospheric density distribution beneath North China by sequential inversion of seismic and gravity datum
X. Wang, J. Fang, H. Xu.

1645 **# 1617.** An attempt to detect temporal variations of crustal structure in the source area of the 2006 Wen-An earthquake in North China
J. Lei, D. Zhao, F. Xie, J. Liu.

1700 **# 2168.** Lithosphere deformation beneath the northeastern margin of the Tibetan plateau inferred from S receiver functions and SKS splitting measurements
H. Zhang, X. Tian, Z. Zhang, J. Teng.

1715 **# 3310.** Crustal structure of the southeast margin of Sichuan Basin: Characteristics revealed from deep seismic reflection profiling
M. Zhang, Q. Di, A. Xue.

1730 **# 779.** Imprints of volcanism in the crust and upper mantle beneath NW Deccan Volcanic Province
G. Mohan, M. Ravi Kumar, P.K. Tiwari, G. Surve, D. Saikia, et al.

1745 **# 551.** Delineation of crustal and lithospheric structures: implications toward the seismogenesis of the uninterrupted aftershock activity occurring in the Kachchh rift zone, Gujarat, India since 2001
P. Mandal

Saturday, 2 July 2011 1630-1800 MR104
IASPEI, IAVCEI
JS04/JV03 Physics and Chemistry of Earth Materials with Implications for Earth Structure and Processes
JS04JV03S4 Electrical conductivity & Crustal Processes
Chairpersons: Ian Jackson

1630 **# 2412.** Effect of iron content in ferropericlase on spin transition pressure deduced from electrical conductivity measurement
T. Yoshino, E. Ito, T. Katsura, D. Yamazaki, S. Shan, et al.

1645 **# 1643.** Electrical Response of Gypsum Rocks
A. Guinea, E. Playa , L. Rivero.

1700 **# 3407.** Relationship Between Mantle Events and Crustal Magmatism in Northeast Australia: Evidence from in situ Sulfide and Zircon Isotope Data
V. Murgulov, W. Griffin, S. O'Reilly.

1715 **Discussion.**

1730 **Discussion.**

1745 **Discussion.**

Saturday, 2 July 2011 1630-1800 MR207
IASPEI, IAVCEI
JS11/JV09 Imaging and monitoring active volcanoes and geothermal fields by ElectroMagnetic (EM) and other geophysical techniques
JS11JV09S1
Chairpersons: J. Zlotnicki & Y. Sasai

1630 **# 1286.** Numerical modeling of magnetic, gravity and deformation fields using Finite Element Method: a case study at Etna volcano
G. Currenti, F. Greco, R. Napoli, A. Pistorio, D. Scandura, et al.

1645 **# 2034.** Monitoring Taal volcano unrest in the Philippines with a joint multi-disciplinary EMSEV-PHIVOLCS program
J. Zlotnicki, Y. Sasai, M. Johnston, T. Nagao, E.M. PHIVOLCS team.

1700 **# 2663.** Shallow structure of the hydrothermal system at Taal volcano (Philippines) inferred by detailed electrical resistivity tomography
J. Zlotnicki, I. Fikos, G. Vargemezis, J.R. Puertollano, P.B. Alanis, et al.

1715 **Discussion.**

1730 **Discussion.**

1745 **Discussion.**

Saturday, 2 July 2011 1630-1800 MR108
IAVCEI
JV05 Using Geodesy on Volcanoes to Understand Volcanic, Tectonic, and Hydrothermal Forces
JV05S2
Chairpersons: Nico Fournier & Kosuke Heki

1630 **# 3482. Invited** Interferometric synthetic aperture radar and modelling techniques applied to volcano deformation source processes
P. Lundgren

1645 **As above.**

1700 **# 3757.** Co-eruptive Subsidence at Galeras Identified During an InSAR Survey of Colombian Volcanoes (2006-2009)
M. Parks, J. Biggs, T.A. Mather, D.M. Pyle, F. Amelung, et al.

1715 **# 1403.** Ground Deformation of LUSI Mud Volcano, Indonesia based on DInSAR Technique
A. Agustan, F. Kimata, A. Sulaiman, H. Abidin.

1730 **# 4212.** Continuing subsidence combined with a reversal in micro-gravity data, unrest at Askja caldera, Iceland from 2000-2010.
E. De Zeeuw Van Dalfsen, H. Rymer, E. Sturkell, F. Sigmundsson, A. Hooper, et al.

1745 **# 4032.** Gravity monitoring supplemented with cosmic ray imaging measures rise and fall of magma head
S. Okubo, H. Tanaka, T. Kazama, K. Yamamoto, Y. Tanaka, et al.

SUNDAY, 3 JULY 2011 0830-1000 AM1

Sunday, 3 July 2011 0830-1000 MR208

IAG

JG04 Structure and Deformation of Plate Interiors

JG04S1

Chairpersons: John Dawson & Markku Poutanen

0830 **# 4475.** Great Earthquakes and the Stability of the Australian Plate: Implications for Terrestrial Reference Frame Definition.
S. McClusky, P. Tregoning, C. Watson, R. Burgette, S. Lejeune.

0845 **As above.**

0900 **# 744.** Vertical Motions in Thailand after the 2004 Sumatra-Andaman Earthquake from GPS Observations and Its Geophysical Modelling
C. Satirapod, I. Trisirisatayawong, L. Fleitout.

0915 **# 5834.** The search for the true crustal deformation in Fennoscandia from BIFROST
M. Lidberg, J M. Johansson, H-G. Scherneck, T. Ning.

0930 **# 2721.** Accounting for inhomogeneities in repeated precise levelling data for the determination of vertical crustal deformations
T. Fuhrmann, K. Zippelt, B. Heck.

0945 **# 3134.** Distribution of crustal deformation in Central Iran constrained by GPS measurements
F. Tavakoli, H. Nankali, A. Walpersdorf, M. Sedighi, Z. Rahimi, et al.

Sunday, 3 July 2011 0830-1000 MR220

IAG

JG05 Integrated Earth Observing Systems

JG05S1

Chairpersons: Markus Rothacher & C.K. Shum

0830 **# 5317.** ESA's Earth Observation Missions for Integrated Earth Observing Systems
R. Haagmans, M. Drinkwater.

0845 **# 5700. Invited** Integrating Atmospheric Observations into Global Reanalysis
P. Poli, D.P. Dee, J-N. Thepaut.

0900 **# 5470. Invited** Geomagnetic Field Observation from Ground and Space
M. Korte

0915 **Discussion.**

0930 **# 5337.** What the Potential Fields Satellite Missions Tell Us About the Earth's Core?
M. Mandea, I. Panet, M. Diament, O. de Viron, V. Lesur.

0945 **# 2433.** Intercomparison of ASTER Global Digital Elevation Model with multi-mission Satellite Radar Altimetry and other DEMs
R. Smith, P.A.M. Berry.

Sunday, 3 July 2011 0830-1000 MR213

IAG

G02 Monitoring and Modelling of Mass Distribution and Mass Displacements by Geodetic Methods

G02S1

Chairpersons: Cheinway Hwang & Ole Andersen

0830 **# 1372.** The Application of Harmonic and 2nd Generation Wavelets in the Coastal Geoid Determination
M. Shafiei Joud, V. Ebrahimzade A.

0845 **# 4232.** On the combination of airborne and terrestrial gravimetry for geoid computation – a case study in South Korea
C. Jekeli, H.J. Yang, J.H. Kwon, M. Kuhn.

0900 **# 4816.** Regional geoid of Taiwan from kinematic and static gravity: consideration of real gravity gradient and height datum difference
C. Hwang, C-H. Huang, H-J. Hsu, Y-S. Hsiao, H-C. Shih.

0915 **# 3864.** The DTU10 Global Gravity field and Mean Sea Surface – First result with Cryosat-2
O. Andersen, P. Knudsen.

0930 **# 3747.** Multi-Sensor Space And In-Situ Monitoring Of Extreme Hydrological Conditions In The Amazon Region
F. Seitz, M. Schmidt, C.K. Shum, K. Hedman, F. Meyer, et al.

0945 **# 1315.** Geodynamic Changes of Tibetan Plateau caused by Tectonic Deformation or Snow Melting?
X. Zhou, W. Sun, Y. Fukuda, C.K. Shum, X. Zhang, et al.

Sunday, 3 July 2011 0830-1000 MR205

IAGA

A012 Planetary Magnetic Fields and Geomagnetic Secular Variation

A012S1 Planetary magnetic fields

Chairpersons: Jozef Brestensky TBC

0830 **# 2697. Invited** Planetary Dynamos: What can we learn from simulations?
C. Jones

0845 **As above.**

0900 **Discussion.**

0915 **# 5253.** The Preference for Dipolar Magnetic Fields in Planets
B. Sreenivasan, C. Jones.

0930 **# 2184.** Hydromagnetic Dynamos in Rotating Spherical Fluid Shells in Dependence on the Prandtl Number and Stratification
J. Simkanin, P. Hejda.

0945 **# 4891.** Scaling and energetic of hydromagnetic dynamic of the deep Earth's and planetary interiors
S. Starchenko

Sunday, 3 July 2011 0830-1000 MR214

IAGA

A050 Electrodynamics and energetic of the middle atmosphere and lower thermosphere: the local and global picture

A050S1

Chairpersons: Michael Gerding

0830 **# 5867.** Interpreting airglow and atomic oxygen variability in the mesopause region
W. Ward

0845 **As above.**

0900 **# 5723.** The OH Mesospheric Emission: an Intense Source for NIR Surroundings Imaging
G. Moreels, P. Simoneau, J. Deschamps, S. Derelle, J. Clairemidi.

0915 **# 3811.** Stereoscopic Imaging of Emissive Atmospheric Layers
G. Moreels, M. Kouahla, J. Clairemidi, M. Faivre, J. Meriwether, et al.

0930 **# 2944.** Mesospheric Gravity Wave Characteristics, Dynamics and Rotational Temperatures over South Pole, Antarctica (90Â°S) during the Austral Winter 2010
P. Pautet, M.J. Taylor, S.E. Palo, B.P. Williams.

0945 **# 549.** Observed wave-wave interaction seen through OH airglow emission at mesosphere region
P.R. Fagundes, J.R. Abalde, P.P. Batista, J.V. Bageston, Y. Sahai.

Sunday, 3 July 2011 0830-1000 MR206

IAGA

A101 The Sun and the Heliosphere: New Views

A101S5 New Views of the Sun, the Interplanetary Medium, and Outer Heliosphere

Chairpersons: Eberhard Moebius

0830 **# 2303.** Solar Energetic Particle Events During the Rise After a Long Minimum
C. Cohen, M. Wiedenbeck, G. Mason.

0845 **As above.**

0900 **# 3055.** Large-scale Coronal Disturbances And Time Variations Of Solar Energetic Particle Events
N. Nitta

0915 **# 1906.** Ion Acceleration Near CME-Driven Interplanetary Shocks
M. Desai, M. Dayeh, M. Lee, C. Smith, G. Mason, et al.

0930 **# 4505.** Multi-point Observations of the 'Ground State' Solar Wind and Heliosphere
A. Galvin

0945 **As above.**

Sunday, 3 July 2011 0830-1000 MR101

IAGA

A111 The Sun and the Heliosphere: Physical Processes

A111S1 From Micro- to Macro-scales in the Heliosphere and Magnetospheres

Chairpersons: TBC

0830 **# 1128.** Features of intermittency of solar wind turbulence on scales 0. 01–16 Hz
M. Riazantseva, G.N. Zastenker, O.M. Kalaev, A.A. Chernyshov, A.S. Petrosyan.

0845 **# 2540.** Evidence for reformation of the uranian bow shock
D. Tiu, I. Cairns.

0900 **# 2762.** Simulations of energetic neutral atoms in the heliosphere and the IBEX ribbon
J. Heerikhuisen, N. Pogorelov, G. Zank.

0915 **# 5221.** Particle Acceleration by Magnetic Reconnection: Single X-line vs Multiple X-lines
M. Oka, T. Phan, F. Mozer, S. Krucker, M. Fujimoto, et al.

0930 **# 5631.** Stochastic heating by oblique Alfven waves
Q. Lu, L. Chen.

0945 **# 5641.** Electron Dynamics in Collisionless Magnetic Reconnection
Q. Lu, C. Huang, S. Wang.

Sunday, 3 July 2011 0830-1000 MR102

IAHS

JHW02 Interaction between fresh water and ecosystem in the coastal zone

JHW02S3

Chairpersons: Thomas Stieglitz & Bo Gustafsson

0830 **# 2583. Invited** Dissolved phosphorus flow into the ocean enhanced by silicate in groundwater
H. Cho, H. Bang, G. Kim.

0845 **As above.**

0900 **# 1936.** The Effects of Sea Water and Fresh Groundwater Temperatures Change on Heat Transport in Intermediate Zone in the Coastal Aquifers
L. Gunawardhana, S. Kazama.

0915 **# 140.** Interaction between groundwater and sea water in the coastal zone
I. Zektser

0930 **# 1459.** Lower Water Level And Water Management Problem In Poyang Lake In China
C. Fu

0945 **Discussion.**

Sunday, 3 July 2011 0830-1000 MR111
IAHS
HW01 Tracer applications in sediment research
HW01S1
Chairpersons: Valentin Golosov & Des Walling

0830 **Introduction.**
0845 **# 3663.** Beryllium-7: The Cinderella of FRN Sediment Tracers?
D. Walling
0900 **# 5398.** Characterising the distribution of fallout radionuclides in hillslope derived sediments
J. Olley, F. Pantus & G. Caitcheon.
0915 **# 2038.** Using 137Cs and 210Pbex measurements to investigate the sediment budget of a small forested catchment in Southern Italy
P. Porto, D.E. Walling, G. Callegari, F. Catona.
0930 **# 688.** Estimating the soil erosion and sediment deposition on hill slopes using radionuclide 137Cs
A. Orkhonselenge
0945 **Discussion.**

Sunday, 3 July 2011 0830-1000 MR109
IAMAS
JM02 Data assimilation and ensemble forecasting for weather and climate
JM02S5
Chairpersons: Michele Rienecke & William Lahoz

0830 **# 3345. Invited** An ensemble optimal interpolation system for ocean data assimilation system
P. Oke
0845 **As above.**
0900 **# 4094.** Boundary-Layer Parameter Estimation Using the Ensemble Kalman Filter
J. Nielsen-Gammon, M. Raper, F. Zhang, X. Hu.
0915 **# 1355.** A Ocean Data Assimilation System in the Indian Ocean and West Pacific
C. Yan, J. Zhu, J. Xie.
0930 **# 4643.** Bias Correction in a regional Data Assimilation system
I. Andreu-burillo, G. Brassington, P. Oke, P. Sandery.
0945 **# 4449.** Coupled Covariances For Data Assimilation In Ocean-Atmosphere Coupled Models
P. Okely, Y. Yin, D. Hudson, O. Alves.

Sunday, 3 July 2011 0830-1000 MR110
IAMAS
JM06 High-impact weather and extreme climate events
JM06S9
Chairpersons: Ian Shepherd & Richard Swinbank

0830 **# 4858. Invited** THORPEX Pacific Asian Regional Campaign (T-PARC) in 2008 for Improving Typhoon Forecast, Extratropical Transitions and Downstream Impact Studies
T. Nakazawa, P. Harr, M. Yamaguchi, M. Weissmann, C.C. Wu, et al.
0845 **As above.**
0900 **# 1026.** The Influence of Assimilating Simulated Dropsonde Data in the Sensitive Guidance Identified by CNOPs on Typhoon Track Forecasts
X. Qin, M. Mu.
0915 **# 1570.** A spatial seasonal forecast model of tropical cyclone exposure for the Australian region
N. Holbrook, A. Werner.
0930 **# 769.** Decadal and longer-term variability in land-falling tropical cyclones over eastern Australia since the late 19th century
S. Power, J. Callaghan, G. Kocuiba.
0945 **Discussion.**

Sunday, 3 July 2011 0830-1000 MR105
IAMAS
JM10 Monsoons, Tropical Cyclones and Tropical Dynamics
JM10S12 Cyclones, Climate change
Chairpersons: Masato Sugi

0830 **# 3342. Invited** Evaluating Environmental Favorability for Tropical Cyclone Development with the Method of Point-Downscaling
D. Nolan
0845 **As above.**
0900 **# 2143.** Interdecadal Rainfall Mode in Taiwan Regulated by Tropical Cyclone and Monsoon
J. Chen
0915 **# 3611.** Rainfall Variability Associated With Typhoon And Monsoon During The Past 100 Years Over The Western North Pacific
H. Kubota, B. Wang, E. Ginn, E. Cayanan.
0930 **# 4416.** Attribution of Decadal Variability in Tropical Cyclone Occurrence Frequency
S. Yokoi, Y. Takayabu.
0945 **# 2116.** Pacific Climate Change Science Program: Southern Hemisphere Tropical Cyclone Data Portal
Y. Kuleshov, R. de Wit, M. Schweitzer, J. Phan, A. Dowdy, et al.

Sunday, 3 July 2011 0830-1000 MR103
IAMAS
JM13 Precipitation measurements; instrumentation and statistics at all scales
JM13S1
Chairpersons: Daniel Schertzer & Alan Seed

0830 **Introduction.**
0845 **# 4301.** Combined Measurement of Precipitation and Infiltration to Characterize a Changing Moisture Environment
J. Hallett
0900 **# 3376.** Statistical Downscaling Across Australia: A Gridded Multivariate Approach
Y. Wang, M. Griffiths, B. Timbal, Al. Evans.
0915 **Discussion.**
0930 **Discussion.**
0945 **Discussion.**

Sunday, 3 July 2011 0830-1000 MR106
IAMAS
M02 Chemistry-climate interactions
M02S1 Climate related circulation changes and their impact on atmospheric chemistry
Chairpersons: Greg Bodeker & Laura Pan

0830 **# 2837. Invited** On the Determination of Age-of-Air Trends from Atmospheric Trace Species
R. Garcia
0845 **As above.**
0900 **# 2305. Invited** Using Different Observations to Constrain Stratospheric Transport Changes
H. Boenisch, A. Engel.
0915 **As above.**
0930 **# 4305.** Long-Term Changes in Stratospheric Age Spectra in the 21st Century in GEOSCCM
F. Li, A. Douglass, S. Pawson, D. Waugh, P. Newman, et al.
0945 **# 5350.** Modeling and Observations of the Tropical Tropospheric Ozone Response to ENSO
L. Oman, J. Ziemke, A. Douglass, C. Lang, D. Waugh, et al.

Sunday, 3 July 2011 0830-1000 MR211
IAPSO
JP01 The Southern Ocean in a changing world
JP01S1
Chairpersons: Isabelle Ansorge

0830 **# 2322. Invited** Dynamics and Transport of the Antarctic Circumpolar Current
A. Hogg, M. Ward, A. Morrison.
0845 **As above.**
0900 **# 4374.** Diapycnal Transport in the Southern Ocean Estimated by a Box Inverse Model
K. Katsumata, B. Sloyan, S. Masuda.
0915 **# 2702. Invited** The Southern Ocean Overturning: Do we need eddies?
J. Zika, C.O. Dufour, J. Le Sommer, B. Barnier.
0930 **As above.**
0945 **# 804.** Circulation and Properties of Abyssal and Deep Waters in the Drake Passage and Scotia Sea
R. Tarakanov

Sunday, 3 July 2011 0830-1000 MR203
IASPEI
JS01 Advances in Tsunami Science, Warning, and Mitigation
JS01S7
Chairpersons: Kenji Satake & Vasily Titov

0830 **# 6081.** Outline of the tsunami early warnings and observation of the 2011 off the Pacific coast Tohoku earthquake tsunami
Y. Hayashi, T. Ozaki, M. Abe, H. Iino, H. Tsushima.
0845 **# 6080.** Heights and damage of the tsunami of the 2011 off the Pacific coast of Tohoku Earthquake on the north part of the Sanriku Coast
Y. Tsuji
0900 **# 6094. Invited** Post-tsunami field survey of the 2011 Tohoku Earthquake Tsunami
S. Koshimura, T. Takahashi.
0915 **# 6074.** Preliminary Results of a Geological Field Survey in the Sendai Plain after the 11 March 2011 Tohoku Tsunami
C. Chague-Goff, K. Goto, J. Goff, B. Jaffe, W. Szczucinski, et al.
0930 **# 6085.** Amplifications of Nearshore Tsunami Parameters during Tohoku Kanto Tsunami
A.C. Yalciner, C. Ozer, A. Zaytsev, F. Imamura.
0945 **Discussion.**

Sunday, 3 July 2011 0830-1000 MR212
IASPEI
JS03 Scientific Results from Seafloor Networks
JS03S3
Chairpersons: Mairi Best & Paolo Favali

0830 **# 5974. Invited** Observations from the Comprehensive Nuclear Test Ban Treaty Organisation's Hydroacoustic Monitoring Network
A. Forbes
0845 **As above.**
0900 **# 4769. Invited** ALOHA Cabled Observatory: Ocean surface wave characteristics inferred from acoustic data, and current observatory status
B. Howe, F. Duennebier, R. Lukas, E. Nosal, J. Aucan, et al.
0915 **As above.**
0930 **# 2833.** The Depth Dependence of Earthquake T-phases at an Ocean Acoustic Observatory
R. Stephen, P. Worcester, M. Dzieciuch.
0945 **Discussion.**

Sunday, 3 July 2011 0830-1000 MR209
IASPEI
JS12 Towards short-term earthquake prediction – Electromagnetic and other possible precursors and their generation mechanisms
JS12S1
Chairpersons: Y. Hobara & T. Nagao

0830 **# 2633. Invited** Statistical analysis of the ULF magnetic field data linked to Izu Island earthquake swarm.
Y. Hobara, T. Kamoi, M. Hayakawa.
0845 **As above.**
0900 **# 4712. Invited** Generation of Electromotive Force and Changes of Seebeck Coefficient Induced by Non-uniform Loading on Igneous Rock Blocks
A. Takeuchi
0915 **As above.**
0930 **# 684. Invited** Atmospheric pressure gradient as a possible trigger of great earthquakes
M. Gokhberg, V. Bondur, I. Garagash, E. Grekhova, N. Kolosnitsyn, et al.
0945 **As above.**

Sunday, 3 July 2011 0830-1000 MR218
IASPEI
S13 Seismic Imaging of the Lithosphere and Mantle
S13S2
Chairpersons: Richard Blewett & Greg Houseman

0830 **Introduction.**
0845 **# 3032.** Mapping of 3-D Varying Structures Having Variable Surface Curvatures. Fundamental Assumption, Lateral Scattering, and Theoretical Seismograms in the Multimode-Multistructure Treatment of the Extended Himalaya
G. Gurung, F. Schwab, B.G. Jo.
0900 **# 1626.** Seismic Tomography of the Yamasaki Fault Zone in the Western Japan
A.D. Nugraha, S. Ohmi, J. Mori, T. Shibutani.
0915 **# 3726.** Fine seismic structure around the Atotsugawa fault revealed by seismic refraction and reflection experiments
T. Iidaka, T. Iwasaki, E. Kurashimo, A. Kato, F. Yamazaki, et al.
0930 **# 4227. Invited** The Pacific Plate Subduction Beneath the Japanese Island Arc: Insight From the Past
A. Ismail-Zadeh, S. Honda, I. Tsepelev.
0945 **As above.**

Sunday, 3 July 2011 0830-1000 PH2
IASPEI
S19 Christchurch Earthquake
S19S1
Chairpersons: Gary Gibson & Mark Quigley

0830 **# 6087.** Natural Disaster Risk, Recovery and the Role of the New Zealand Earthquake Commission
H. Cowan
0845 **As above.**
0900 **# 6090.** A tale of two earthquakes: the Canterbury, New Zealand, sequence of 2010-2011
K. Berryman
0915 **As above.**
0930 **# 6088.** Impacts of the 2010 Darfield and 2011 Christchurch earthquakes on urban and rural landscapes
M. Quigley
0945 **As above.**

Sunday, 3 July 2011 0830-1000 MR207
IASPEI, IAVCEI
JS11/JV09 Imaging and monitoring active volcanoes and geothermal fields by ElectroMagnetic (EM) and other geophysical techniques
JS11JV09S2
Chairpersons: J. Zlotnicki & Y. Sasai

0830 **Introduction.**
0845 **# 2625.** Monitoring Enhanced Geothermal System Fluids with Magnetotellurics
J. Peacock, S. Thiel, G. Heinson, P. Reid.
0900 **# 3362.** Electromagnetic Volcano-monitoring of Taal Volcano, Philippines, under the SATREPS Project (2010-2014)
Y. Sasai, T. Nagao, A. Takeuchi, Y. Yamaya, T. Hashimoto, et al.
0915 **Discussion.**
0930 **Discussion.**
0945 **Discussion.**

Sunday, 3 July 2011 0830-1000 MR107
IAVCEI
JV10/V19 Volcanic and seismic hazard assessments relating to settlements, infrastructure, and siting of nuclear facilities: Part 1
JV10V19S1
Chairpersons: Eliza Calder & Roberto Carniel

0830 **Introduction.**
0845 **# 655.** Update Hazard map of Colima volcano, Mexico.
C. Suarez-Plascencia, F. Nuñez-Cornu.
0900 **# 4413.** Probabilistic Assessment and Visualisation of Tokyo's Tephra-Fall Risk
C. Magill
0915 **Discussion.**
0930 **Discussion.**
0945 **Discussion.**

Sunday, 3 July 2011 0830-1000 MR204
IAVCEI
V20 Volcanic Systems and Mineral Deposits
V20S1
Chairpersons: Steve Beresford & Bruce Gemmell

0830 **# 4501.** Criteria For Reconstructing The Volcanic And Structural Setting Of Volcanic-Associated Massive Sulphide (VMS) Deposits In Ancient Volcanic Successions
R. Allen
0845 **As above.**
0900 **# 4582.** Do Modern Seafloor Analogues in the Manus Basin of Papua New Guinea Suggest Exploration Strategies for Ancient Volcanic-Hosted Massive Sulfide Deposits?
R. Binns
0915 **# 4539.** New Insights into the Stratigraphy of the Mount Read Volcanics: Implications for VHMS Exploration
P. Fonseca, J. McPhie, A. McNeill.
0930 **# 4484.** The Timing of Volcanism and Mineralising Events in the Mount Read Volcanics, Tasmania, Australia; New Evidence from U-Pb Dating of Zircons using CA-TIMS
A. McNeill, J. Mortensen, J.B. Gemmell.
0945 **# 912.** Volcanic architecture of the Matagami mining camp, Canada: implications for VMS exploration
J. Debreil, P.S. Ross, V. McNicoll.

SUNDAY, 3 JULY 2011 1030-1200 AM2

Sunday, 3 July 2011 1030-1200 PH2
IUGG
3B IUGG 2011 Union Plenary Lectures
3B
Chairpersons: Tom Beer

1030 **# 612.** Probing the Earth
B. Kennett
1100 **# 3199.** Forecasting Earthquakes and Predicting Their Hazards
T. Jordan
1130 **# 5822.** The challenge in Earth observation: from the fast response to catastrophic events to the reliable detection of very small trends
M. Rothacher

Please see page 29 for Union Plenary Lecture abstracts.

SUNDAY, 3 JULY 2011 1330-1500 PM1

Sunday, 3 July 2011 1330-1500 MR210

IUGG
U01 Science & Nuclear Test Ban Monitoring
U01S1 Speakers by Invitation
Chairpersons: David McCormack & David Jepsen

1330 **Speech by the Representative of the Australian Foreign Ministry (TBA): The importance of science to treaty verification.**
1345 **As above.**
1400 # **5572.** Application of Geophysical Industry Techniques to an On-Site Inspection
L. Zerbo, J. Coyne.
1415 **As above.**
1430 # **6011.** Collaboration between the U.S. National Data Centre and the CTBTO
R. C. Kemerait
1445 **Discussion.**

Sunday, 3 July 2011 1330-1500 MR208

IAG
JG04 Structure and Deformation of Plate Interiors
JG04S2
Chairpersons: Markku Poutanen & John Dawson

1330 # **5594.** SWISS 4D. Determination and modeling of the tectonic deformation field of Switzerland
A. Villiger, U. Marti, E. Brockmann, A. Geiger.
1345 # **4188.** Earthquake potential via geodesy, seismology and geology: Denmark as an example
S. Gregersen, P. Voss.
1400 # **4580.** Evolution of the fold-and-thrust belt, Niigata back-arc basin, central Japan
H. Sato, S. Abe, N. Kawai, N. Kato, T. Iwasaki, et al.
1415 # **3094.** Studying intraplate seismicity in northern Fennoscandian shield using the data of the POLENET/LAPNET experiment
E. Kozlovskaya, O. Usoltseva, H. Silvennoinen, POLENET/LAPNET Working Group.
1430 **Discussion.**
1445 **Discussion.**

Sunday, 3 July 2011 1330-1500 MR220

IAG
JG05 Integrated Earth Observing Systems
JG05S2
Chairpersons: Mioara Mandea & Paul Poli

1330 # **5228.** Flood Monitoring Using Satellites
C. Shum, D. Alsdorf, S. Bettadpur, S. Calmant, J. Duan, et al.
1345 # **5688. Invited** Monitoring the Global Water Cycle Using Satellite Gravimetry
J. Chen
1400 # **5649.** Complete spherical Bouguer anomaly map: a contribution to global geophysical products
S. Bonvalot, G. Balmino, N. Vales, A. Briais, R. Biancale.
1415 # **3006.** A Search for the Slichter Mode with Superconducting Gravimeter Records Based on the Hilbert-Huang Transform Technique
W. Shen, D. Wang, C. Hwang, H. Ding.
1430 # **4266. Invited** The Importance of GGOS to Earth and Space Exploration
J. Labrecque
1445 # **5849. Invited** The Global Geodetic Observing System (GGOS): Quantifying Earth Changes in Space and Time
M. Rothacher, R. Neilan.

Sunday, 3 July 2011 1330-1500 MR213

IAG
G02 Monitoring and Modelling of Mass Distribution and Mass Displacements by Geodetic Methods
G02S2
Chairpersons: Herbert Wilmes & David Crossley

1330 # **2198.** Long-period Variability of GPS Positions in Europe and the Mediterranean
S. Zerbini, F. Raicich, M. Errico, G. Cappello.
1345 # **4162.** Non-tidal Ocean Loading Effects on GPS Height Time Series
N. Penna, S. Williams.
1400 # **4323.** Constraining Glacial Isostatic Adjustment in Greenland by GPS Observations
L. Sorensen, K. Nielsen, S.A. Khan, K. Fleming, G. Adalgeirsdottir.
1415 # **4472.** Characteristics of Surface Deformation around Mud Volcano of Sidoarjo as Observed by GPS and INSAR
H.Z. Abidin, H. Andreas, T.P. Sidiq, Y. Aoki, P. Sumintadiredja, et al.
1430 # **2405.** Applications of Absolute Gravity Measurements for Monitoring Local Mass Movements
Y. Fukuda, J. Nishijima, M. Taniguchi.
1445 # **3788.** Absolute Gravimeter Comparison Sites Support the Realization of the Global Gravity Reference System
H. Wilmes, L. Vitushkin, V. Palinkas.

Sunday, 3 July 2011 1330-1500 MR205

IAGA

A012 Planetary Magnetic Fields and Geomagnetic Secular Variation

A012S2 Planetary magnetic fields

Chairpersons: Binod Screenivasan TBC

1330 **# 2030. Invited** Planetary libration and its implication for planetary dynamos
K. Zhang, K. Chan, X. Liao.

1345 **As above.**

1400 **# 5767.** Physically Realistic Rayleigh Number in Rotating Magnetoconvection Models With Anisotropic Diffusive Coefficients
J. Brestensky, T. Soltis.

1415 **# 2604.** Effects of anisotropic turbulent thermal diffusion on rotating magnetoconvection in a sphere
C. Phillips, D.J. Ivers.

1430 **# 5188.** Magnetic instability in a rotating layer at highly eccentric positions of the critical level
A. Marsenic, S. Sevcik.

1445 **# 1576.** Buoyancy profiles for Earth's core incorporating chemical stratification beneath the core-mantle boundary
C. Davies, D. Gubbins, C. Constable.

Sunday, 3 July 2011 1330-1500 MR214

IAGA

A050 Electrodynamics and energetic of the middle atmosphere and lower thermosphere: the local and global picture

A050S2

Chairpersons: William Ward

1330 **# 5461.** MU radar head echoes of the 2009 Orionid meteor shower
T. Nakamura, C. Szasz, J. Kero, D.D. Meisel, T. Terasawa, et al.

1345 **As above.**

1400 **# 4353.** Meteor Radar Observations at Adelaide (35S), Darwin (12S) and Davis Station (68S).
I. Reid, D. McIntosh.

1415 **# 2745.** Investigations of small-scale variations in the mesosphere using radar interferometry methods
M. Zecha, P. Hoffmann, M. Rapp, J.S. Chen.

1430 **# 4098.** Horizontally Resolved Structures Of Polar Mesospheric Echoes Obtained With MAARSY
R. Latteck, M. Rapp, W. Singer, G. Stober.

1445 **# 5118.** Reduction in the Growth Rate of Gradient Drift Instability in the Presence of Charged Dust Particles
P. Muralikrishna

Sunday, 3 July 2011 1330-1500 MR215

IAGA

A062 Coupling in the atmosphere-ionosphere-magnetosphere system and its response to external forcing and forcing from below

A062S1 Low Latitude Atmosphere-ionosphere Coupling Processes and Responses to Forcing from Lower Atmosphere and Magnetosphere

Chairpersons: Mamoru Yamamoto

1330 **# 5899. Invited** VHF radar and ionosonde observations of post-midnight irregularities in Indonesia
Y. Otsuka, K. Shiokawa, T. Nagatsuma, T. Tsugawa, S. Perwitasari, et al.

1345 **As above.**

1400 **# 2019.** Equatorial Evening Prereversal Enhancement Electric Field and Spread F, and their day-to-day Variability due to Planetary/Kelvin Waves
M.A. Abdu, G.C.M. Brum, P.P. Batista, S. Gurubaran, I.S. Batista, et al.

1415 **# 5762.** Study of equatorial Spread-F with GNU Radio Beacon Receiver (GRBR) network over Asia, Pacific and Africa
M. Yamamoto, T. Tsugawa, T. Nagatsuma, Y. Otsuka, R. Tsunoda, et al.

1430 **Poster Presentations.**

1445 **As above.**

Sunday, 3 July 2011 1330-1500 MR206

IAGA

A101 The Sun and the Heliosphere: New Views

A101S6 New Views of the Sun, the Interplanetary Medium, and Outer Heliosphere

Chairpersons: Dean Pesnell

1330 **# 4101.** 360 Degree View of the Sun – Highlights from STEREO
V. Bothmer

1345 **As above.**

1400 **# 4272.** What Can the Combined Imaging and In-situ Observations from STEREO, SOHO, Hinode, SDO and SMEI Tell us About the Characteristics of CMEs?
D. Webb

1415 **# 2230.** Piston Shock Wave Driven By Coronal Mass Ejection
M. Eselevich

1430 **# 1212.** Tracing Polar Coronal Jets from Reconnection Sites to the Fast Solar Wind
M.P. Miralles

1445 **# 2371.** Extraction Of Non-Radial Magnetic Fields At The Solar Source Surface
H. Schulte In Den Baeumen, I.H. Cairns.

Sunday, 3 July 2011 1330-1500 MR217
IAHS

JH01 GRACE, other remote sensing platforms and ground based methods for estimating multi-scale surface water budgets, groundwater system characterization and hydrological processes

JH01S3

Chairpersons: Prof. Nick Van De Giesen & Dr Frederique Seyler

1330 **# 494.** A combined methodology for estimating unaccounted diversions in the northern Murray Darling Basin of Australia
M. Hafeez, M. Edraki, J. Sixsmith, U. Rabbani, Y. Chemin.

1345 **# 5958.** Informing hydrological models with ground-based time-lapse relative gravimetry: Potential and limitations
D. Rosbjerg, P. Bauer-Gottwein, L. Christiansen, O.B. Anderson, P. Binning.

1400 **# 500.** Surface layer sensible heat flux using Large-Aperture Scintillometer over Irrigated horticulture in Murrumbidgee Irrigation area
U. Rabbani, M. Hafeez, Y. Chemin.

1415 **Discussion.**

1430 **# 503.** Real Time Irrigation Demand Forecasting using Remote Sensing and Meteorological Data in Semi-arid Regions
K. Ullah, M. Hafeez, Y. Chemin, J. Sixsmith, R. Faux.

1445 **Discussion.**

Sunday, 3 July 2011 1330-1500 MR102
IAHS

JHW02 Interaction between fresh water and ecosystem in the coastal zone

JHW02S4

Chairpersons: Jean-François Exbrayat & Donald Rosenberry

1330 **# 2887. Invited** Red tides, algal skirts, and upside-down redox profiles driven by groundwater discharge into the coral lagoons of Guam, USA.
E. Matson

1345 **As above.**

1400 **# 527.** Two-dimensional hydrodynamic modeling of a managed coastal Mediterranean wetland: the Vaccares lagoon system (Rhone delta, Camargue, France)
A. Loubet, O. Boutron, O. Bertrand, P. Chauvelon.

1415 **# 3762.** Modeling Unmonitored Terrestrial Coastal Flux
Y. Shibuo

1430 **Discussion.**

1445 **Discussion.**

Sunday, 3 July 2011 1330-1500 MR111
IAHS

HW01 Tracer applications in sediment research

HW01S2

Chairpersons: Des Walling & Olivier Evrard

1330 **# 2078.** Application of Chernobyl-derived 137Cs fallout in sediment redistribution studies: advantages and disadvantages
V. Golosov, V. Belyaev, M. Markelov.

1345 **# 1606.** A comparison of 137Cs concentrations in reservoir sediments between the Hilly Loess Plateau, the Hilly Sichuan Red Basin and the Guizhou Karst Plateau in China
X. Zhang, X. He, A. Wen.

1400 **As above.**

1415 **# 2282.** Recent deposition rates and heavy metal concentrations of the Plava River floodplain sediments
V. Belyaev, M. Markelov, N. Ivanova, V. Golosov.

1430 **# 81.** Colour as a Tracer of Sediment Dispersion from Erosion of a Forest Road in Chichester State Forest, Australia
W. Erskine

1445 **Discussion.**

Sunday, 3 July 2011 1330-1500 MR108
IAHS

HW06 Expert judgement versus statistical goodness-of-fit for hydrological model evaluation

HW06S1 Comparing expert judgement and numerical criteria: experiment design

Chairpersons: Charles Perrin

1330 **Introduction.**

1345 **Interactive survey on expert judgement.**

1400 **As above.**

1415 **# 2237. Invited** Man vs. Machine: a Swedish Experiment on Hydrological Model Performance Assessment
J. Olsson, J. Dahné, B. Arheimer, H. Amaguchi, A. Kawamura.

1430 **As above.**

1445 **Discussion.**

Sunday, 3 July 2011 1330-1500 MR109
IAMAS

JM02 Data assimilation and ensemble forecasting for weather and climate

JM02S6

Chairpersons: Ian Fenty & William Lahoz

1330 **# 5409.** The Initialization of WRF using normal and high-resolution radar data: the impact on quantitative precipitation forecasts
G. Austin, L. Southerland-Stacey, P. Shucksmith.

1345 **# 5917.** On the feasibility of using weather models for mitigating tropospheric delay in SAR Interferometry
R. Hanssen, S. Liu, A. Mika, R.F. Hanssen, F. Meyer, et al.

1400 **# 4946.** Time-lagged ensemble ocean forecasting
G. Brassington, T. Pugh, P. Sandery, J. Freeman.

1415 **# 4247.** Background-Error Correlation Model Based on the Implicit Solution of a Diffusion Equation and its Application in a State-Space 3D-Var
M. Carrier, H. Ngodock, M. Yaremchuk, S. Smith.

1430 **# 5411.** Modelling Equatorial Pacific Salinity Fields With Multi-Variate Ensemble Optimal Interpolation
R. Wedd, O. Alves, Y. Yin, P. Oke.

1445 **# 4642.** Ensemble sampling: exploring error scales and structure in regional data assimilation applications.
I. Andreu-burillo, G. Brassington, P. Oke, P. Sandery.

Sunday, 3 July 2011 1330-1500 MR110
IAMAS

JM06 High-impact weather and extreme climate events

JM06S10

Chairpersons: Tetsuo Nakazawa & Ron Stewart

1330 **# 3596. Invited** The WMO Severe Weather Forecasting Demonstration Project
T. Hart, I. Shepherd.

1345 **As above.**

1400 **# 4984.** A Global Interactive Forecast System – demonstrating improved predictions of high-impact weather using TIGGE data
R. Swinbank, Z. Toth, T. Nakazawa, E. Ebert.

1415 **# 3155.** A New Paradigm Shift from Weather to Quantitative Impact Forecasts
S. Chen

1430 **# 4756.** Australian National Wind Risk Assessment (NWRA): Quantifying wind hazard and risk under current and future climate
R. Cechet, C. Arthur, A. Sanabria, C. Thomas, M. Wehner, et al.

1445 **Discussion.**

Sunday, 3 July 2011 1330-1500 MR105
IAMAS

JM10 Monsoons, Tropical Cyclones and Tropical Dynamics

JM10S13 Boundary layer, Ocean

Chairpersons: Dave Nolan

1330 **# 2232. Invited** Future Changes in Tropical Cyclone Frequency and Intensity Projected by the High-resolution MRI-AGCM
M. Sugi, H. Murakami, J. Yoshimura.

1345 **As above.**

1400 **# 907.** Future Change of Western North Pacific Typhoons: Projections by a 20-km-Mesh Global Atmospheric Model
H. Murakami, B. Wang, A. Kitoh.

1415 **# 4736.** Tropical Cyclones – Methods To Analyse Changes In Frequency And Intensity For The Australia-Pacific Region
T. Rafter, D. Abbs, M. Chattopadhyay, S. Lavender.

1430 **Discussion.**

1445 **# 864.** Great Impacts on Ocean by a Weak Typhoon
L. Sun, Y. Yang, T. Xian.

Sunday, 3 July 2011 1330-1500 MR103
IAMAS

JM13 Precipitation measurements; instrumentation and statistics at all scales

JM13S2

Chairpersons: Ana Barros & Daniel Schertzer

1330 **Introduction.**

1345 **# 5408. Invited** Multiscale Observation Error Estimation Scheme for QPE Using Local High Resolution Radar
G. Austin, P. Shucksmith, L. Southerland-Stacey.

1400 **As above.**

1415 **Discussion.**

1430 **# 1215.** A Twelve-Year Tropical Rainfall Climatology Based on a Composite of TRMM Products
J. Wang, R. Adler, G. Gu, G. Huffman, D. Bolvin.

1445 **Discussion.**

Sunday, 3 July 2011 1330-1500 MR106
IAMAS

M02 Chemistry-climate interactions

M02S2 Climate relevant processes in the upper troposphere and lower stratosphere

Chairpersons: Kenneth Bowman & Gloria Manney

1330 **# 4327. Invited** An Integral View of Extra-Tropical Upper Troposphere / Lower Stratosphere Chemistry, Dynamics and Transport
A. Gettelman, P. Hoor, L. Pan, W. Randel.

1345 **As above.**

1400 **# 4791.** The Stratospheric Contribution to Tropospheric Ozone Variability: Observational Constraints and Impacts of a Changing Climate
J. Neu, J. Worden.

1415 **# 2107.** The Asian Summer Monsoon anticyclone: Regulator of and regulated by UTLS composition
P. Braesicke, P. Achakulwisut, A. Archibald, L. Abraham, O. Smith, et al.

1430 **# 3438.** Enhanced Mid-latitude Tropospheric Column Ozone over East Asia Associated with the Subtropical Jet
S. Hayashida, A. Nakatani, S. Kondo, K. Shiohira, X. Liu, et al.

1445 **# 5609.** Is There a Hole in the Global OH Shield Over the Tropical Western Pacific Warm Pool?
M. Rex, F. Immler, R. Lehmann, K. KrÃger, V. Mohr, et al.

Sunday, 3 July 2011 1330-1500 MR211
IAPSO

JP01 The Southern Ocean in a changing world

JP01S2

Chairpersons: Andrew Hogg

1330 **# 915.** Estimation of surface heat/salt fluxes associated with sea ice growth/melt in the Southern Ocean
T. Tamura, K. Ohshima, S. Nihashi, H. Hasumi.

1345 **# 2383.** Water Exchange across Subantarctic Front and Global Ocean Conveyer Belt
R. Tarakanov, M. Koshlyakov.

1400 **# 966.** Near-Surface Eddy Heat and Momentum Fluxes in the Antarctic Circumpolar Current in Drake Passage
Y. Lenn, T. Chereskin, J. Sprintall, J. McClean.

1415 **# 5995.** Formation of dense shelf water on the East Antarctic continental shelf off Adelie Land during 2008-2010
M. Lacarra, M-N. Houssais, C. Herbaut, E. Sultan, AA. Mbengue.

1430 **# 5559.** Interaction of the Antarctic Circumpolar Current with the Macquarie Ridge
S. Sokolov, S. Rintoul, M. Williams.

1445 **Discussion.**

Sunday, 3 July 2011 1330-1500 MR203
IASPEI
JS01 Advances in Tsunami Science, Warning, and Mitigation
JS01S8
Chairpersons: Eddie Bernard & Viacheslav Gusiakov

1330 **# 6079.** Onshore behavior of the 2011 Tohoku tsunami along the Sanriku coasts and characteristics of surface erosion and sedimentation by the tsunami
Y. Nishimura, Y. Nakamura.
1345 **# 6063.** Tsunami source of the 2011 off the Pacific coast of Tohoku, Japan earthquake
Y. Fujii, K. Satake, S. Sakai, M. Shinohara, K. Kanazawa.
1400 **# 6084.** The 2011 Magnitude 9. 0 Tohoku-Oki Earthquake: Mosaicking The Megathrust From Seconds To Centuries
A. Sladen, M. Simons, S.E. Owen, S.E. Minson, F. Ortega, et al.
1415 **Discussion.**
1430 **# 6086.** Numerical modeling and observations of the global reach of the tsunami of 11 March 2011
S Tinti, I.V. Fine, A.B. Rabinovich, R.E. Thomson, R. Candella, et al.
1445 **# 6062.** The 11th March 2011 Tohoku tsunami: preliminary numerical simulations of observed sea-level signals and run-up/inundation
S. Tinti, G. Pagnoni, F. Zaniboni, S.C. Gallazzi, L. Bressan, et al.

Sunday, 3 July 2011 1330-1500 MR216
IASPEI
JS02 Heat Flow, Tectonics, and Geothermal Energy
JS02S1 Heat Flow, Tectonics, and Geothermal Energy – Part 1
Chairpersons: Christoph Clauser

1330 **# 2454.** Heat Flow, Volcanoes, and Geothermal Resources in China
S. Huang, Y. Xiong, Y. Ren, C. Pan, J. Zhang.
1345 **As above.**
1400 **# 2384.** Simulation on Geothermal Anomaly before Wenchuan Earthquake
S. Zhang
1415 **Discussion.**
1430 **# 836.** Thermal Structure of the Indian Shield Lithosphere from Heat Flux, Seismic Shear Wave Velocities and Mantle Xenoliths
S. Roy, J.C. Mareschal.
1445 **# 712.** Integrated studies for hydrological characterization and assessment of Bakreswar thermal springs in hard rock areas of Birbhum district, West Bengal India
R.K. Majumdar, N. Majumdar, A. Mukherjee.

Sunday, 3 July 2011 1330-1500 MR209
IASPEI
JS12 Towards short-term earthquake prediction – Electromagnetic and other possible precursors and their generation mechanisms
JS12S2
Chairpersons: A. Takeuchi & O. Molchanov

1330 **# 4822.** Study of Geomagnetic Anomalies Related to Earthquakes: Pisco Earthquake (M=8) 2007, Peru and Taiwan Earthquake (M=6. 4) 2009
K. Yumoto, E.M. Takla, J. Ishitsuka, D. Rosales, S. Dutra, et al.
1345 **Discussion.**
1400 **Discussion.**
1415 **# 1101.** Characteristics of the Non-line-of-sight FM Radio Wave Propagated over the Epicenter
T. Yoshida, K. Shin, M. Nishi.
1430 **# 2439.** Natural Time Analysis for Seismicity in Japan
S. Uyeda, M. Kamogawa.
1445 **Discussion.**

Sunday, 3 July 2011 1330-1500 MR212
IASPEI
S02 Triggered and Induced Seismicity
S02S1
Chairpersons: Stanislaw Lasocki & Hiroshi Ogasawara

1330 **# 2669.** Double-couple vs. non-double-couple mechanisms for detection of mode of rock-mass fracturing: comparison of moment tensor and shear-tensile/implosion model.
J. Sileny
1345 **Discussion.**
1400 **# 4198.** An influence of blasting on seismicity in Tashtagol ore-mine.
S. Turuntaev, A. Eremenko, S. Rasheva.
1415 **Discussion.**
1430 **Discussion.**
Discussion.

Sunday, 3 July 2011 1330-1500 MR218
IASPEI
S13 Seismic Imaging of the Lithosphere and Mantle
S13S3
Chairpersons: David Eaton & Kevin Furlong

1330 **# 2869. Invited** Seismic Receiver Functions and the Lithosphere-Asthenosphere Boundary
R. Kind, X. Yuan, P. Kumar, F. Sodoudi, B. Heit.
1345 **As above.**
1400 **# 2452.** The lithosphere-asthenosphere system beneath Europe as seen by different seismic techniques
J. Plomerova, U. Achauer, V. Babuska, M. Granet.
1415 **# 2501.** Insights in to the evolution of the lithospheric structure beneath Italy from S receiver function analysis
M. Miller, N. Piana Agostinetti.
1430 **# 3832.** Seismic Images of the Upper Mantle beneath the Pannonian Basin Indicate Detached Mantle Lithosphere
G. Houseman, G.W. Stuart, B.D. Dando, Y. Ren, E. Brueckl, et al.
1445 **# 3968.** Towards a comprehensive seismic model of the European upper mantle
A. Fichtner, J. Trampert.

Sunday, 3 July 2011 1330-1500 PH2

IASPEI

S19 Christchurch Earthquake

S19S2

Chairpersons: Mark Quigley & Gary Gibson

1330 **# 6028.** The Mw 6. 3 Christchurch, New Zealand Earthquake of 22 February 2011: Preliminary Seismic and Geodetic Results
J. Beavan, S. Bannister, A. Celentano, B. Fry, K. Gledhill, et al.

1345 **As above.**

1400 **# 6089.** Rockfalls and landslides triggered by the 22 February 2011 Christchurch (NZ) earthquake: the GeoNet response
R. Van Dissen, G.D. Dellow, C.I. Massey, T.R.H. Davies, S.A.L. Read, et al.

1415 **# 6091.** Regional characterisation of liquefaction following the September 2010 and February 2011 Canterbury earthquakes
B. Rosser, R. Beetham, G. Dellow, D. Heron, S. Levick, et al.

1430 **Discussion** of Lessons Learned from the Christchurch Earthquakes, by those directly involved.

1445 **Discussion.**

Sunday, 3 July 2011 1330-1500 MR207

IAVCEI

JV07 Using Paleomagnetism to Understand Volcanic Processes

JV07S1

Chairpersons: Massimiliano Porreca & Laurie Brown

1330 **# 910.** The Origins of the Anisotropy of Magnetic Susceptibility of Igneous Rocks: A Critical Reappraisal.
E. Canon-Tapia

1345 **As above.**

1400 **# 5469.** Emplacement mechanisms of the very large volume 2. 1 Ma Cerro Galan ignimbrite (NW Andes, Argentina) deduced by paleomagnetic analyses
M. Mattei, C. Lesti, M. Porreca, G. Giordano, H. Wright, et al.

1415 **# 1550.** The preservation of Anisotropy of Magnetic Susceptibility fabrics in the Permian >1, 000km3, Ora Ignimbrite and caldera, northern Italy: Implications for the timing of caldera collapse and pyroclastic flow dynamics in intra-caldera to extra-caldera settings.
M. Willcock, M. Mattei, G. Giordano, P. Hasalova, R. Cas.

1430 **# 1180.** Stratigraphy of the 16 ka caldera-forming eruption of Sete Cidades volcano (Azores) and emplacement temperatures of pyroclastic density currents by paleomagnetic analyses
M. Porreca, U. Kueppers, A. Pimentel, K.U. Hess, J. Pacheco.

1445 **# 4112.** Estimation of Deposition temperature of the Pomici di Avellino (Somma-Vesuvius, 3. 8 ka BP) Products at Afragola Village (Naples, Early Bronze Age): Understanding the Anomalies of TRM Carried by Potsherds Embedded in the PDC Deposits
R. Sulpizio, G. Eramo, A. Gargallo, E. Zanella, L. Nodari, et al.

Sunday, 3 July 2011 1330-1500 MR107

IAVCEI

JV10/V19 Volcanic and seismic hazard assessments relating to settlements, infrastructure, and siting of nuclear facilities: Part 2

JV10V19S2

Chairpersons: Eliza Calder & Stephen Self

1330 **# 4388.** Modelling volcanic ash dispersal and related hazard
G. Macedonio

1345 **As above.**

1400 **# 2194.** Reducing Uncertainties in Volcanic Hazards Assessments for Nuclear Installations
B. Hill

1415 **As above.**

1430 **# 3359.** Application Of IAEA Guidelines On Volcanic Hazard To A Nuclear Power Plant Site In Armenia
C. Connor, L. Connor, I. Savov, K. Meliksetian, R. Halama, et al.

1445 **# 3211.** Investigating the Electrical Conductivity of Volcanic Ash and the Creation of an Equivalent Ash Proxy.
J. Wardman, T. Wilson, J. Cole, P. Bodger, D. Johnston.

Sunday, 3 July 2011 1330-1500 MR112

IAVCEI

V18 Surface processes in volcanic terrains: the erosion, transport and redeposition of volcaniclastic material and their associated hazards

V18S1

Chairpersons: Magnus Gudmundsson

1330 **# 3882. Invited** The April 2010 Eruption of Eyjafjallajökull Volcano: Glacial Flooding and Attendant Hazards
M. Roberts, G. Sigursson, O. Sigursson, E. Pagneux, T. Jóhannesson, et al.

1345 **As above.**

1400 **# 4464.** Life-sized lahar measurements reveal the entrainment and stream-flow interaction dynamics that control the long-range destructiveness of water-particle mass flows
G. Lube, S. Cronin.

1415 **Discussion.**

1430 **# 1079.** Post-debris avalanche deposits at Mt. Ruapehu
A. Auer, J.D.L. White, V. Manville.

1445 **# 3114.** Formation and Evolution of Volcanic Sands in Iceland
D. Baratoux, N. Mangold, O. Arnalds, J.M. Bardintzeff, B. Platevoët, et al.

Sunday, 3 July 2011 **1330-1500 MR204**
IAVCEI
V20 Volcanic Systems and Mineral Deposits
V20S2
Chairpersons: Bruce Gemmell & Pierre-Simon Ross

1330 **# 2338.** Re-assessment of the Maar-Diatreme Setting of Olympic Dam
J. McPhie, V. Kamenetsky, K. Ehrig, N. Green.
1345 **As above.**
1400 **# 5100.** End-Permian Phreatomagmatic Pipes of the Siberian Traps Large Igneous Province: True IOCG Deposits?
S. Planke, A.G. Plozov, H. Svensen.
1415 **# 914.** Komatiite volcanoes: after 40 years what do we know?
S. Beresford, R. Cas.
1430 **# 1320.** The Felsic and Intermediate volcanic Footwall to the Cosmos Nickel Sulphide deposits, Agnew-Wiluna greenstone belt, Yilgarn Craton, Western Australia
A. Kaye, T. Thordarson, C. Hayward, G. Fitton, A. de Joux.
1445 **# 2021.** Subvolcanic hydrothermal fragmentation processes – insights from breccias and seismic analysis
M. Jebrak, P.S. Ross.

SUNDAY, 3 JULY 2011 1630-1800 PM2

Sunday, 3 July 2011 **1630-1800 MR210**
IUGG
U01 Science & Nuclear Test Ban Monitoring
U01S2 Speakers by Invitation
Chairpersons: Zhongliang Wu & Andrew Forbes

1630 **# 5254.** Contribution of Computational Geophysics to the CTBT Monitoring System
A. Ismail-Zadeh, Z. Wu.
1645 **As above.**
1700 **# 1182.** The CTBTO Link to the ISC Database
D. Storchak, I. Bondar, B. Dando, J. Harris.
1715 **As above.**
1730 **# 5736.** Infrasound for verification technology and beyond
A. Le Pichon
1745 **As above.**

Sunday, 3 July 2011 **1630-1800 MR208**
IAG
JG04 Structure and Deformation of Plate Interiors
JG04S3
Chairpersons: Kevin Furlong & Sierd Cloetingh

1630 **# 2741.** Strength and Elastic thickness of the lithosphere
M. Tesauro, M. Kaban, S. Cloetingh.
1645 **# 1432.** Utilisation of Gravity Gradients and Invariants for 3D Density Modelling
B.D. Gutknecht, N. Koether, R. Mahatsente, H.J. Goetze.
1700 **# 1729.** Gravitational potential Energy, stress field and strain rate field in the Himalayan region
M.N. Shrivastava, C.D. Reddy, S.K. Prajapati.
1715 **# 997.** Estimating moho basement and faults using gravity inversion in Yushu earthquake area, China
G. Yang, C. Shen, S. Sun, L. Xing, Y. Wu, et al.
1730 **Discussion.**
1745 **Discussion.**

Sunday, 3 July 2011 **1630-1800 MR220**
IAG
JG05 Integrated Earth Observing Systems
JG05S3
Chairpersons: Keith Alverson & Ruth Neilan

1630 **# 2759.** GNSS Satellites as Co-locations for a Combined GNSS and SLR Analysis.
D. Thaller, K. Sosnica, A. Jaeggi, R. Dach, G. Beutler, et al.
1645 **# 4929.** VLBI2010: Next Generation VLBI System for Geodesy and Astrometry
H. Schuh, H. Hase, D. Behrend, B. Corey, C. Ma, et al.
1700 **# 5582.** The First 24-Hour GPS-VLBI Hybrid Observation and Its Result
Y. Kwak, T. Kondo, T. Gotoh, J. Amagai, H. Takiguchi, et al.
1715 **# 5084.** Future and Development of the European Combined Geodetic Network ECGN
M. Poutanen
1730 **# 3584. Invited** Monitoring Network and thermal dynamics of Permafrost in Western China
L. Zhao, Y. Ding, K. Jiao.
1745 **Discussion.**

Sunday, 3 July 2011 **1630-1800 MR213**
IAG
G02 Monitoring and Modelling of Mass Distribution and Mass Displacements by Geodetic Methods
G02S3
Chairpersons: David Crossley & Herbert Wilmes

1630 **# 4192.** Results from the GGP Network of Superconducting Gravimeters
D. Crossley, J. Hinderer, C. Kroner.
1645 **# 1674.** Noise Levels of Superconducting Gravimeters and Expected Amplitude of the Inner Core Translation: Impact on its Detectability
S. Rosat, Y. Rogister, J. Hinderer.
1700 **# 1784.** Atmospheric corrections for satellite missions and superconducting gravimeters
M. Karbon, M. Schindelegger, D. Wijaya, J. Boehm, H. Schuh.
1715 **# 810.** Hydrological effects at the Hsinchu (Taiwan) superconducting gravity station: models and observations
T. Lien, C. Hwang, J. Hinderer, C. Cheng, J. Boy, et al.
1730 **# 2164.** Observations with Superconducting Gravimeters as Constraints for Hydrological Models
T Jahr, C. Kroner & A. Weise.
1745 **# 2088.** Preliminary results from the superconducting gravimeter OSG-60 installed in West Africa (Djougou, Benin)
J. Hinderer, S. Rosat, B. Hector, M. Calvo, J.P. Boy, et al.

Sunday, 3 July 2011 1630-1800 MR205

IAGA

A012 Planetary Magnetic Fields and Geomagnetic Secular Variation

A012S3 Planetary magnetic fields

Chairpersons: Jan Simkanin TBC & David Ivers

1630 **Introduction.**
1645 **Discussion.**
1700 **Poster Discussion.**
1715 **Discussion.**
1730 **Discussion.**
1745 **Discussion.**

Sunday, 3 July 2011 1630-1800 MR214

IAGA

A050 Electrodynamics and energetic of the middle atmosphere and lower thermosphere: the local and global picture

A050S3

Chairpersons: Takuji Nakamura

1630 **# 4917.** Gravity wave propagation from lower to upper atmosphere derived from airglow and lidar measurements
S. Suzuki, G. Baumgarten, B. Kaifler, N. Kaifler, B. Williams, et al.

1645 **# 3848.** Observations Of Polar Mesosphere Summer Echoes During A Solar Cycle And The Relation With Background Electron Density
R. Latteck, W. Singer.

1700 **# 5287.** Studies of Layers in the Lower Ionosphere
R. Vincent, S. Kovalam, I. Reid, A. MacKinnon.

1715 **As above.**

1730 **# 3760.** NLC Parameters At Mid-Latitudes From Multi-Year Lidar Observations: Interannual Variation And Case Studies On The Relation With Temperatures And Ambient Winds
M. Gerding, J. Hoeffner, M. Kopp, P. Hoffmann, F.J. Luebken.

1745 **# 3734.** Stratospheric and Greenhouse Gas Effects on Mesospheric Ice Layers
F. Luebken, U. Berger.

Sunday, 3 July 2011 1630-1800 MR215

IAGA

A062 Coupling in the atmosphere-ionosphere-magnetosphere system and its response to external forcing and forcing from below

A062S2 Low Latitude Atmosphere-ionosphere Coupling Processes and Responses to Forcing from Lower Atmosphere and Magnetosphere

Chairpersons: M.A. Abdu

1630 **# 790. Invited** Topside Ionosphere Plasma Bubbles: Survival Possibilities, Seasonal/Longitudinal and Solar Activity Dependence
L. Sidorova

1645 **As above.**

1700 **# 1029. Invited** Neutral Atmosphere Ionosphere Coupling and the Occurrence of Equatorial Plasma Bubble
A. Patra

1715 **As above.**

1730 **# 640.** On the Temperature Increase to Rise the Collision Frequencies at the Equatorial E-region and the Implication on the Electric Filed
C. De Nardin, L.C.A. Resende, J. Moro, L.M. Guizelli.

1745 **# 1571.** A comparison of ionosphere models: Current Problems and Challenges in Ionospheric Modeling
T.J Fuller-Rowel, D. Anderson, R.A Akmaev, F. Wu.

Sunday, 3 July 2011 1630-1800 MR206

IAGA

A101 The Sun and the Heliosphere: New Views

A101S7 New Views of the Sun, the Interplanetary Medium, and Outer Heliosphere

Chairpersons: Karin Muglach

1630 **# 1954.** The Heliospheric Interaction as Seen by IBEX
E. Moebius, D. McComas.

1645 **As above.**

1700 **# 5225.** Observation of the Interstellar Neutral Gas Flow with the Interstellar Boundary Explorer (IBEX) over Three Consecutive Years
E. Moebius, P. Bochsler, M. Bzowski, H.O. Funsten, S.A. Fuselier, et al.

1715 **# 2734.** The interplanetary UV background in the outer helioshere from 30 years of Voyager UVS measurements.
E. Quemerais, R. Lallement, V. Izmodenov, B. Sandel.

1730 **# 2513.** The Solar Wind in the Heliosheath
J. Richardson

1745 **Discussion.**

Sunday, 3 July 2011 1630-1800 MR217

IAHS

JH01 GRACE, other remote sensing platforms and ground based methods for estimating multi-scale surface water budgets, groundwater system characterization and hydrological processes

JH01S4

Chairpersons: Mohsin Hafeez & Roland Pail

1630 **# 138.** How can radar altimetry support the management of the conventional water level networks
S. Calmant, J. Santos Da Silva, D. Moreira, F. Seyler, N. Filizola, et al.

1645 **# 163. Altimeter derived Soil Moisture Determination – Validation and Global Analysis**
P. Berry, J.O. Carter.

1700 **# 250.** Satellite-based Estimates of Global Change in Vegetation Moisture over 1988-2008
Y. Liu, R. de Jeu, M. McCabe, J. Evans, A. van Dijk.

1715 **# 397.** Estimating the root-layer soil moisture from the multiple data source of remote sensing, processed-based model and ground-based measurement for Baiyangdian Catchment of the North China
X. Mo, J. Qiu, X. Bo, S. Zhang, G. Yuan, et al.

1730 **# 341.** Third Pole Environment (TPE) Programme: A new base for the study of atmosphere-land interaction over heterogeneous landscape of the Tibetan Plateau and surrounding areas
Y. Ma, T. Yao.

1745 **Discussion.**

Sunday, 3 July 2011 1630-1800 MR102
IAHS
JHW02 **Interaction between fresh water and ecosystem in the coastal zone**
JHW02S5
Chairpersons: Kate Heal & Thomas Stieglitz

1630 **# 3946.** Management impact assessment of coastal ecosystems by linking hydrological and oceanographical models
B. Arheimer, G. Lindström, J. Nilsson, J. Sahlberg.
1645 **Discussion.**
1700 **# 5970.** Numerical Study on the Salt Transport and Distribution in the Estuarine Wetlands
C. Zhang, P. Xin, L. Li, D. Lockington.
1715 **Discussion.**

Sunday, 3 July 2011 1630-1800 MR101
IAHS
JHW04 **Subglacial water: Properties, processes and role in ice-mass dynamics**
JHW04S1
Chairpersons: Bryn Hubbard & Steffan Vogel

1630 **# 1232.** Unexpectedly high theoretical estimates of basal melting from a high precipitation temperate glacier
D. Alexander, J. Shulmeister, T. Davies.
1645 **# 4127.** A seismic investigation of the subglacial environment of Thwaites Glacier, West Antarctica
L. Peters, S. Anandakrishnan.
1700 **# 4462.** Diurnal to Decadal Ice Velocity Variations on Franz Josef Glacier (Ka Roimata o Hine Hukatere), South Westland, New Zealand.
B. Anderson, B. Goodsell, I. Owens, I. Willis, W. Lawson, et al.
1715 **# 5536.** Subglacial Environments – Challenges And Technical Developments Towards A Systematic Study
S.W. Vogel
1730 **Discussion.**
1745 **Discussion.**

Sunday, 3 July 2011 1630-1800 MR111
IAHS
HW01 **Tracer applications in sediment research**
HW01S3
Chairpersons: Adrian Collins & Gary Hancock

1630 **# 3664.** The Impact of Forest Harvesting on Fine Sediment Yields and Sources in Forested Catchments in South-Central Chile
D. Walling, P. Schuller, A. Iroumé, A. Castillo.
1645 **# 739.** Tracing Sediment Sources Following Wildfire In Forested Upland Catchments, South-Eastern Australia
H. Smith, G. Sheridan, P. Lane, P. Nyman, P. Noske, et al.
1700 **As above.**
1715 **# 3755.** Using geochemical and fallout isotope fingerprinting for the identification of fluvial sediment sources in a mesoscale catchment in Mongolia
P. Theuring, A. Jha, G. Kirchner, S. Behrens, M. Rode.
1730 **# 1048.** Sediment Linkages in a Small Catchment in the Mount Fletcher Southern Drakensberg Region, South Africa
P. Mzobe, K. Rowntree.
1745 **Discussion.**

Sunday, 3 July 2011 1630-1800 MR108
IAHS
HW06 **Expert judgement versus statistical goodness-of-fit for hydrological model evaluation**
HW06S2 **Do numerical criteria tell what we expect?**
Chairpersons: Salvatore Grimaldi

1630 **# 1461.** Automated Detection and Categorization of Hydrograph Errors for Updating Operational Hydrologic Models
A.S. Gragne, K. Alfredsen.
1645 **# 4041.** Use of various types of evaluation criteria at different stages of model implementation.
O. Semenona
1700 **# 4092.** On the significance of the performance criteria of event-based flood models
R. Moussa
1715 **# 3370.** Verification Methods for Probabilistic Streamflow Forecasts
D. Robertson, Q.J. Wang, D.L. Shrestha, A. Schepen, P. Porkhrel.
1730 **# 531.** On the Criteria of Model Performance Evaluation for Hydrological Forecasting Models
K. Cheng, Y.T. Lien.
1745 **Discussion.**

Sunday, 3 July 2011 1630-1800 MR109
IAMAS
JM02 **Data assimilation and ensemble forecasting for weather and climate**
JM02S7
Chairpersons: Jeff Walker & William Lahoz

1630 **# 1305. Invited** Satellite-Based Large-Scale Land Data Assimilation at NASA/GMAO
G. De Lannoy, R. Reichle.
1645 **As above.**
1700 **# 2382.** Data assimilation of SMOS data: making sense of soil moisture observations
W. Lahoz, T. Svendby, H. Sollund.
1715 **# 898.** Assimilation of Satellite Soil Moisture Data from AMSR-E and SMOS in NOAA-NCEP Global Forecast System
X. Zhan, W. Zheng, M. Ek.
1730 **# 1501.** Ensemble Dressing Technique for Hydrological Forecasting
D.L. Shrestha, T. Pagano, Q.J. Wang, D. Robertson.
1745 **# 4668.** Impacts of surface condition uncertainties within the Canadian Regional Ensemble Prediction System
C. Lavaysse, M. Carrera, R. Frenette, S. Belair, P. Yau, et al.

Sunday, 3 July 2011 1630-1800 MR110
IAMAS
JM06 High-impact weather and extreme climate events
JM06S11
Chairpersons: Richard Swinbank & Jun Xia

1630 **# 4695.** Development of a Tropical Cyclone Model for Risk Assessment
C. Arthur

1645 **# 4749.** An Assessment of Coastal Vulnerability for the Australian Continent: Infrastructure Vulnerable to Inundation and Recession
M. Hazelwood, R.P. Cechet, H. Anderson.

1700 **# 5614.** Concept of a Comprehensive Flood Risk Monitoring Framework for more Effective Response to Changes and Variations in Climate
S. Sooriyakumaran, J. Elliott, N. Plummer.

1715 **# 5080.** Looking Into the Past to Learn for the Future: Climate Extremes Informing Climate Change Adaptation
S. Boulter, J. Palutikof, A. Kiem, D. Stock.

1730 **Discussion.**

1745 **Discussion.**

Sunday, 3 July 2011 1630-1800 MR105
IAMAS
JM10 Monsoons, Tropical Cyclones and Tropical Dynamics
JM10S14 Extrotropical-Tropcial Interactions
Chairpersons: Harry Hendon

1630 **# 2886. Invited** Responding To The Tropics And Extratropics, Some Basic Information About Subtropical Highs
R. Grotjahn

1645 **As above.**

1700 **# 1171.** Influence of projected SST changes over summer rainfall in Southeastern South America as simulated by a two-way nesting model
C. Junquas, C. Vera, L. Li, H. Le Treut.

1715 **# 104.** Relationships between the Sea Surface Temperature and drought extremes during the South America raining season: an observational analysis
G. Silva, T. Ambrizzi.

1730 **# 4045.** Land surface effects on heavy precipitation over subtropical South America
E.H. Berbery, O. Müller, D. Alcaraz-Segura.

1745 **Discussion.**

Sunday, 3 July 2011 1630-1800 MR103
IAMAS
JM13 Precipitation measurements; instrumentation and statistics at all scales
JM13S3
Chairpersons: Geoff Austin & Daniel Schertzer

1630 **# 5122. Invited** Challenges in Measuring and Characterizing Precipitation in Mountainous Regions
A. Barros

1645 **As above.**

1700 **# 187.** Evaluating the Spatial Variation of Gridded Precipitation Products using Continental Scale Hydrological Modelling
C. Donnelly, W. Yang.

1715 **# 3554. Invited** Interpolation and simulation of precipitation with uncertainty assessment on different temporal and spatial scales
A. Bardossy

1730 **As above.**

1745 **Discussion.**

Sunday, 3 July 2011 1630-1800 MR106
IAMAS
M02 Chemistry-climate interactions
M02S3 Chemical processes and their impact on climate Part 1
Chairpersons: Greg Bodeker & Andrew Gettelman

1630 **# 788. Invited** Ozone Hole and Southern Hemisphere Climate Change
S. Son

1645 **As above.**

1700 **# 4157.** Changing stratospheric composition: Fact or Fiction? Trace constituents retrieved from SCIAMACHY and GOME
J.P. Burrows, H. Bovensmann, C. von Savigny, A. Rozanov, K. Weigel, et al.

1715 **# 5544.** Newly Detected Greenhouse and Ozone-Depleting Compounds in the Atmosphere
J. Laube, M. Bolder, C.A.M. Brenninkmeijer, P. Fraser, C.J. Hogan, et al.

1730 **# 2533.** A New Longterm Global Record of Stratospheric and Tropospheric Volcanic SO2 from Satellites
F. Prata, S. Carn, L. Clarisse, A. Richter.

1745 **# 4944.** First retrieval results of CRISTA-NF measurements during RECONCILE: new insights from remotely sensed CFC-11 data at unprecedented vertical resolution
J. Ungermann, C. Kalicinsky, J. -U. Grooss, G. Guenther, P. Knieling, et al.

Sunday, 3 July 2011 1630-1800 MR211
IAPSO
JP01 The Southern Ocean in a changing world
JP01S3
Chairpersons: Janet Sprintall

1630 **# 3713. Invited** The variability and dynamics of the Antarctic Circumpolar Current using altimetry-applied proxy techniques
S. Swart, P.S. Monteiro, I.J. Ansorge, S. Speich.

1645 **As above.**
S. Swart, P.S. Monteiro, I.J. Ansorge, S. Speich.

1700 **# 2723.** SSH anomaly and transport variability determined from Pressure Inverted Echo Sounders (PIES) deployed in the ACC south of Africa.
M. Gebler, O. Boebel, J. Schroeter, A. Macrander.

1715 **# 2464. Invited** On interpretations of multi-decadal sea surface temperature variability in the Southern Ocean
Z. Wang, E. Shuckburgh, X. Zhang, Z. Guan.

1730 **As above.**

1745 **# 2326.** Rapid Changes in the Position of Southern Ocean Fronts in a Simplified Model
C. Chapman, A. Hogg.

Sunday, 3 July 2011 1630-1800 MR203
IASPEI
JS01 Advances in Tsunami Science, Warning, and Mitigation
JS01S9
Chairpersons: Alexander Rabinovich & Stefano Tinti

1630 **# 6058.** Tohoku tsunami of 11 March 2011 as recorded on the Russian Far East Coast
G. Shevchenko, T. Ivelskaya.
1645 **Discussion.**
1700 **# 6077.** Observations and Analysis of the Tohoku Tsunami in the Far-Field: US West Coast, New Zealand and the Galapagos Islands
J. Borrero, P. Lynett, R. Weiss, D. Greer, et al.
1715 **# 6078.** The 2011 Tohoku-oki tsunami on the Northern California and Southern Oregon Coast
L. Dengler, A. Admire, J. Borrero, L. Ewing, C. Henderson, et al.
1730 **# 6083.** In-Situ, Real-Time Tsunami Observations of the 2011 Tohoku Tsunami
W. Burnett, R. Bouchard.
1745 **# 6093.** Modelling results of the tsunami triggered by Tohoku Earthquake, Japan (Mw=9. 0)
A.C. Yalciner, N. Meral Özel, M. Cevatoglu, Ö. Necmioglu, D. Kalafat, et al.

Sunday, 3 July 2011 1630-1800 MR216
IASPEI
JS02 Heat Flow, Tectonics, and Geothermal Energy
JS02S2 Heat Flow, Tectonics, and Geothermal Energy – Part 2
Chairpersons: Mike Sandiford

1630 **# 647.** Heat flow data collection for the Australian continent: Support for an emerging geothermal industry
A. Kirkby, A. Budd, E. Gerner, B. Ayling, A. Meixner, et al.
1645 **# 4667.** Regional Structure and Stress Data from High Temperature Borehole Logging in Geothermal Fields, New Zealand
D. McNamara, K. McLean, C. Massiot.
1700 **Discussion.**
1715 **# 3523.** Cyclic and non-cyclic temperature variations in high temperature geothermal springs
J. Newson, S. Zarrouk.
1730 **# 1023.** Numerical Simulations of a Low Temperature Geothermal System: Tauranga, New Zealand
S. Pearson, M. O'Sullivan.
1745 **Discussion.**

Sunday, 3 July 2011 1630-1800 MR209
IASPEI
JS12 Towards short-term earthquake prediction – Electromagnetic and other possible precursors and their generation mechanisms
JS12S3
Chairpersons: S. Pulinets & S. Uyeda

1630 **# 5051.** The prediction of earthquakes can be solved by stress measurement
P. Kalenda, L. Neumann.
1645 **# 3119.** A study for the quantitative and statistical evaluation of precursory geoelectric potential changes
T. Nagao, Y. Orihara, M. Kamogawa, A. Takeuchi, S. Uyeda.
1700 **# 2389.** A new RTM algorithm for detection of precursory seismic quiescence
T. Nagao, A. Takeuchi.
1715 **Discussion.**
1730 **Discussion.**
1745 **Discussion.**

Sunday, 3 July 2011 1630-1800 MR212
IASPEI
S02 Triggered and Induced Seismicity
S02S2
Chairpersons: Marcelo Assumpcao & Jan Sileny

1630 **# 3750.** Observational studies of earthquake preparation and generation to mitigate seismic risks in mines
H. Ogasawara, R. Durrheim, M. Nakatani, Y. Yabe, A. Milev, et al.
1645 **# 2971.** Local Prediction Equations For Peak Values And Spectral Ordinates of Ground Motion in The Region of Zelazny Most Repository, Relevant to Mining Seismicity in Legnica-Glogow Copper District in Poland
S. Lasocki, G. Lizurek.
1700 **# 2984.** How to adapt a seismic design code to mine tremors excitations
Z. Zembaty
1715 **# 4095.** How Many Earthquakes Are Caused by Mining in Australia?
E. Cranswick
1730 **# 5078.** Passive seismic mapping of rock fractures for coal gas emission
X. Luo, P. Hatherly.
1745 **Discussion.**

Sunday, 3 July 2011 1630-1800 MR218
IASPEI
S13 Seismic Imaging of the Lithosphere and Mantle
S13S4
Chairpersons: Meghan Miller & Jaroslava Plomerova

1630 **# 1976.** The structure of the crust and uppermost mantle beneath the western US revealed by ambient noise and earthquake tomography
Y. Yang, W. Shen, M. Ritzwoller.
1645 **# 3498.** Dynamic topography effects in the Korean peninsula
J. Shin, M. Sandiford.
1700 **# 3896.** 3-D Shear Wave Structure and Radial Anisotropy of Australian Region from Multi-mode Surface Waves
K. Yoshizawa, B. Kennett.
1715 **# 2354.** Simultaneous Absolute and Relative Travel-time Inversion Technique and Results Combining Independent Arrays in southeastern Australia
E. Vanacore, N. Rawlinson, M. Sambridge, H. Tkalcic.
1730 **Discussion.**
1745 **As above.**

Sunday, 3 July 2011 1630-1800 PH1

IAVCEI

JV02 Forecasting and Monitoring Volcanic Eruptions

JV02S1

Chairpersons: Setsuya Nakada & Gill Jolly

1630 **# 2870. Invited** Volcano monitoring, eruption precursor recognition, causality, and decision making
S. De La Cruz

1645 **As above.**

1700 **# 1945. Invited** Eruption forecasting and the scientific management of volcanic unrest
W. Marzocchi

1715 **As above.**

1730 **# 4074.** Forecasting and Monitoring the 2010 Eyjafjallajokull eruptions
S.S. Jakobsdottir, G.B. Gudmundsson, S. Hjaltadottir, M.J. Roberts, H. Bjornsson, et al.

1745 **# 5930.** The 2010 Eyjafjallajokull Eruption: Modelling of InSAR time series
A. Hooper, F. Sigmundsson, S. Hreinsdottir, D. Bekaert, J. Martins.

Sunday, 3 July 2011 1630-1800 MR107

IAVCEI

JV10/V19 Volcanic and seismic hazard assessments relating to settlements, infrastructure, and siting of nuclear facilities: Part 3

JV10V19S3

Chairpersons: Stephen Self & Chuck Connor

1630 **# 5976.** Temporal Clustering of Magmatic Activity in the Alluvial Basins of Southwestern Nevada, USA, Based on Geological and Geophysical Evaluations of Buried Basaltic Volcanic Features
B. Hill, J. Stamatakos.

1645 **# 2939.** Hazard Assessment for Critical Facilities at Ultra-Long Return Periods
K. Berryman, L. Wallace, C. Connor, S. Sparks, M. Cloos, et al.

1700 **As above.**

1715 **# 2846.** Earthquake Hazards and Related Stability for Repository Sites in Japanese Island Arc Setting
Y. Ogawa, S. Yoshida, H. Shiratsuchi, S. Takahashi.

1730 **# 4884.** Methodologies for evaluating tectonic phenomena for siting a HLW repository in Japan and activities for further improvement
J. Goto, R. Hataya, K. Yoshimura, E. Ishii, H. Tsuchi, et al.

1745 **# 2988.** Use of Cumulative Absolute Velocity (CAV) as a Criterion for Identifying Non-damaging Earthquakes
K. Campbell, Y. Bozorgnia.

Sunday, 3 July 2011 1630-1800 MR207

IAVCEI

JV11 Progress and Perspectives in Studies of the Continental Lithosphere

JV11S1

Chairpersons: Sierd Cloetingh & John Dawson

1630 **# 3962.** New 3D crustal velocity model for Asia
W. Stolk, M.K. Kaban, M. Tesauro, W.W.W. Beekman, S.A.P.L. Cloetingh.

1645 **# 1011.** Geodynamics and Seismicity of Northeast Asia, Western Alaska and Adjacent Continental Shelf From the Structure of the Earth's Crust, Geomorphology, Geophysical Fields, Hydrothermics, Volcanism and Satellite Imagery
B. Sedov, E. Vedernikov.

1700 **# 2884.** Seismic Features and Tectonic Evolution of the Far-Eastern Eurasian Continental Margin Around the Korean Peninsula
T. Hong, D. Ji, K. Lee, E. Jo, H. Choi.

1715 **# 1012.** Deep Structure of the Earth's Crust and Upper Mantle of North Okhotsk Sea Seismic Belt Indicates a Paleosubduction Zone
B. Sedov, E. Vedernikov.

1730 **# 1547.** An unusual Polymict Peridotite from Kimberley, South Africa: Insights into mantle metasomatism prior to kimberlite emplacement
A. Giuliani, B.A. Wyatt, D. Phillips, M.A. Kendrick.

1745 **Discussion.**

Sunday, 3 July 2011 1630-1800 MR204

IAVCEI

V20 Volcanic Systems and Mineral Deposits

V20S3

Chairpersons: Pierre-Simon Ross & Steve Beresford

1630 **# 5415.** Breccias in the Minifie Ore Zone, Lihir Gold Mine, PNG â" Geological Evolution and Ore Genesis
D. Cooke, J. Blackwell, J. Rutter, J. McPhie.

1645 **# 4519.** Architecture and evolution of zoned late Archean dolerites that host world-class Au deposits
R. Squire, R. Cas.

1700 **#4582.** Do Modern Seafloor Analogues in the Manus Basin of Papua New Guinea Suggest Exploration Strategies for Ancient Volcanic-Hosted Massive Sulfide Deposits?
R. Binns

1715 **Discussion.**

1730 **Discussion.**

1745 **Discussion.**

MONDAY, 4 JULY 2011 0830-1000 AM1

Monday, 4 July 2011 0830-1000 PH2
IUGG
U07 Mathematical tools in Geophysical Modelling
U07S1 Speakers by Invitation
Chairpersons: Matthias Holschneider & Nico Sneeuw

0830 **# 3893.** Inference of Abrupt Changes in Noisy Data Records using Bayesian Transdimensional Changepoint Models
K. Gallagher, T. Bodin, M. Sambridge.
0845 **As above.**
0900 **# 941.** Bayesian Neural Network Modeling and an Uncertainty Analysis: A Case Study from the KTB Borehole Site
S. Maiti, R.K. Tiwari.
0915 **As above.**
0930 **# 4022.** Nonlinear diffusion filtering of data on the Earth surface
K. Mikula
0945 **As above.**

Monday, 4 July 2011 0830-1000 MR206
IAG
JG03 History of Geosciences from Terrestrial to Spaceborne Observations
JG03S1
Chairpersons: J. Ádám & A. Walker

0830 **# 4023. Invited** Radiation and Ozone: Catalysts for advancing international atmospheric science programs for over half a century
H. Volkert, G. Ohring, R. Bojkov, H-J. Bolle.
0845 **As above.**
0900 **# 644.** History of Solar activities and Climate changes
A. Abdel Hady
0915 **# 1833.** The Solar System: Fifty years of "Empty" Space
J. Tatarewicz
0930 **# 1987.** Making the Inaccessible Accessible: Studies of Earth's Near-Space Environment before Satellites
G. Good
0945 **# 3976.** EROS: The Political Underpinnings of Mineral Surveys from Space during the Lyndon B. Johnson Administration
K. Harper

Monday, 4 July 2011 0830-1000 MR214
IAG
G06 Towards a Unified World Height System
G06S1
Chairpersons: Johannes Ihde & Dru Smith

0830 **# 2857.** Tide Gauge Benchmark Monitoring – The IGS TIGA Project
T. Schöne, TIGA Working Group.
0845 **As above.**
0900 **# 5167.** Oceanic height references: How to meet the needs?
M. Lequentrec-Lalancette, L. Pineau-Guillou, D. Rouxel.
0915 **As above.**
0930 **# 2002.** An experiment based on Brovar's type solution to the fixed GBVP for connecting the Brazilian Vertical Datum to a WHS
S. De Freitas, B. Heck, V. Ferreira.
0945 **# 1470.** Realization of WHS based on gravity field models free of dependencies on local vertical datums
R. Cunderlik, R. Tenzer, K. Mikula.

Monday, 4 July 2011 0830-1000 PH3
IAG, IASPEI
JG06/JS06 Tectonic Geodesy and Earthquakes
JG06JS06S3 Tectonic Geodesy and Earthquakes Part 3
Chairpersons: Davd D. Jackson & Jeff Freymueller

0830 **# 1401.** Real-time GPS seismology with a stand-alone receiver trough a variometric approach
A. Mazzoni, M. Crespi, G. Colosimo.
0845 **# 4318.** Coseismic Earthquake Deformation Modeling Using Spaceborne Gravimetry
L. Wang, C.K. Shum, F.J. Simons, A. Tassara, C. Dai, et al.
0900 **# 560.** Comparison of GPS Strain Rate Computing Methods and Their Application
Z. Jiang, Y. Wu, X. Liu.
0915 **# 5634.** Assessment of Shake Table Generated Earthquake Ground Motions Recorded Using High-Rate GPS
S. Haeberling, M. Rothacher, Y. Zhang.
0930 **# 5701.** Micro displacements obtained from very dense GPS network
M. Satomura, R. Ikuta, A. Fujita, Y. Hashimoto, S. Shimada, et al.
0945 **# 780.** The Example of Interaction between Fields of Seismicity and Surface Deformations
G. Sobolev, V. Gitis, N. Sycheva, S. Kuzikov.

Monday, 4 July 2011 0830-1000 MR207
IAGA
JA02 Climate and Weather of the Sun-Earth System – CAWSES –II early results
JA02S1
Chairpersons: Alan Rodger & Susan Avery

0830 **# 5888.** Climate and Weather of the Sun-Earth System (CAWSES-II)
S. Avery, A. Rodger.
0845 **# 3685. Invited** Highlights of the CAWSES Priority Program in Germany
F. Luebken
0900 **As above.**
0915 **# 645.** Solar activity and its impact on climate changes
A. Abdel Hady
0930 **# 1210.** High solar irradiance episode of 2001/2002 and the Earth's climate anomalies
R. Lukianova, G. Alexseev.
0945 **# 2490.** EUV-TEC Proxy for Ionospheric Variability using Satellite-borne Solar EUV Measurements
C. Jacobi, C. Unglaub, G. Schmidtke, B. Nikutowski, R. Brunner.

Monday, 4 July 2011 0830-1000 MR208

IAGA

JA03 Long-term changes in the stratosphere, mesosphere, thermosphere and ionosphere

JA03S1

Chairpersons: TBC

0830 **# 5267. Invited** What would have happened to the ozone layer if chlorofluorocarbons (CFCs) had not been regulated?
P. Newman

0845 **# 3681. Invited** Middle-Atmosphere temperature trends: Space & ground-based observations
P. Keckhut, B. Funatsu, C. Claud, A. Hauchecorne.

0900 **# 5703.** Detection of Long-Term Temperature Changes in the Stratosphere and Mesosphere by multiple satellite missions
J. Yee, W. Swartz, M. Mlynczak, J. Russel.

0915 **Discussion.**

0930 **Discussion.**

0945 **# 617.** Long term variations of the Ionosphere at the northern tropical crest of ionization at Phu Thuy-Vietnam
C. Amory, H. Pham Thi Thu, M. Le Huy.

Monday, 4 July 2011 0830-1000 MR209

IAGA

JA04 Electromagnetic oscillations from space to Earth: Celebrating 150 years and recent developments in ultra-low frequency wave research

JA04S1

Chairpersons: Brian Fraser & Malcolm Johnston

0830 **# 4233.** The Ionospheric Alfvén Resonator
R. Lysak

0845 **# 587. Retrieval of ULF wave signatures from HF skywave 'over-the-horizon' radar echoes**
S. Anderson

0900 **# 2599.** Geomagnetic pulsations and field-aligned currents caused by the lower atmospheric disturbances
T. Iyemori, K. Nakanishi, S. Yamanaka, H. Luhr, Y. Sanoo, et al.

0915 **# 4058.** Observation of Upstream Pc3-4 ULF Waves Near the Nightside Plasmapause
P. Ponomarenko, C. Waters, J.P. St. -Maurice.

0930 **# 492.** Large Wavy Flow Motions Observed at the Topside Ionosphere by ROCSAT
S. Su, C. Chao, C. Liu.

0945 **Discussion.**

Monday, 4 July 2011 0830-1000 MR205

IAGA

A041 Rock Magnetism

A041S1 Paleogeographic Reconstructions

Chairpersons: TBC

0830 **# 3085. Invited** Magnetic properties of sedimentary greigite (Fe3S4): An update
A. Roberts, L. Chang, C.J. Rowan, C.S. Horng, F. Florindo.

0845 **As above.**

0900 **# 1949.** Spin-flop behaviour in goethite as function of temperature from 4 to 300 Kelvin
M. Dekkers, F. Martin-Hernandez, G. Ballon, L. Drigo, M.M. Garcia-Herndandez, et al.

0915 **# 3875.** Ferromagnetic Resonance Spectroscopy: A Little-Known Method In Rock Magnetism
A. Gehring, J. Kind, M. Charilaou, I. Garcia-Rubio.

0930 **# 3314.** Theoretical ferromagnetic resonance spectra for interacting magnetic particles
A. Newell

0945 **# 1583.** Method in estimating mass-specific magnetic susceptibility of strongly magnetic substances and substances that are low in quantity
D. Fitriani, S. Bijaksana, L. Safiuddin.

Monday, 4 July 2011 0830-1000 MR215

IAGA

A062 Coupling in the atmosphere-ionosphere-magnetosphere system and its response to external forcing and forcing from below

A062S3 Low Latitude Atmosphere-ionosphere Coupling Processes and Responses to Forcing from Lower Atmosphere and Magnetosphere

Chairpersons: K. Groves

0830 **# 2259. Invited** Penetration of convection and overshielding electric fields to low latitude ionosphere during substorms and storms
T. Kikuchi, K.K. Hashimoto, Y. Ebihara, T. Nagatsuma.

0845 **As above.**

0900 **# 5002. Invited** Electrodynamic and Ionospheric Response at Low Latitude During Geomagnetic Storms
T. Fuller-Rowell, N. Maruyama, S. Sazykin.

0915 **As above.**

0930 **# 2350.** Response of the mid- and low-latitude ionospheric irregularities to the geomagnetic storm in October 2010
B. Ning, L. Hu, G. Li.

0945 **# 1036.** A Case Study of a Convective Ionospheric Storm (CIS) over India using Coordinated Airglow, Ionosonde and VHF radar Observations
V. Lakshmi Narayanan, A. Taori, A.K. Patra, K. Emperumal, S. Gurubaran.

Monday, 4 July 2011 0830-1000 ER002

IAGA

A112 The Sun and the Heliosphere: Physical Processes

A112S1 Origin of the Solar Magnetism. The Solar Dynamos

Chairpersons: Ana Cristina Cadavid & Mausumi Dikpati

0830 **# 5020. Invited** Magnetic field effects in the formation of Sun-like stars
D. Price

0845 **As above.**

0900 **# 823. Invited** Parity of solar global magnetic field based on the mean-field flux-transport dynamo model.
H. Hotta, T. Yokoyama.

0915 **As above.**

0930 **# 2318.** Sensitivity of a Babcock-Leighton Flux-transport Dynamo Model to Magnetic Diffusivity Profiles
E. Zita

0945 **As above.**

Monday, 4 July 2011 0830-1000 MR218

IAGA

A131 Magnetic observations from ground to space – ingredients for new geomagnetic research

A131S1 Geomagnetic observatories, their Instrumentation and Management – Basement for Geomagnetic Research

Chairpersons: Hans-Joachim Linthe

0830 **# 2498. Invited** Missing data and the accuracy of magnetic-observatory hour means
J. Love

0845 **As above.**

0900 **Discussion.**

0915 **# 3759.** Absolute vector magnetometers for spaceborn and ground observatories
J. Leger, T. Jager, F. Bertrand, S. Morales, I. Fratter, et al.

0930 **# 4180.** A step forward the realization of unmanned observatory
L. Hegymegi, I. Hrvoic, B. Heilig, A. Csontos.

0945 **# 1993.** The geomagnetic observatory on Tristan da Cunha: setup, operations and first scientific results
J. Matzka, C. Stolle.

Monday, 4 July 2011 0830-1000 MR217

IAHS

JH01 GRACE, other remote sensing platforms and ground based methods for estimating multi-scale surface water budgets, groundwater system characterization and hydrological processes

JH01S5

Chairpersons: Nick Van De Giesen & Earl Bardsley

0830 **# 502.** A Remote Sensing Based ET Algorithm for an Australian Agro-Ecosystem: SAM-ET
M. Hafeez, Y. Chemin.

0845 **# 172.** Based on meteorological observations for SEBS to retrieve surface heat fluxes using ASTER Data for Irrigation Areas of Australia
W. Ma, M. Hafeez, C. Y, R. U, Y. Ma.

0900 **# 408.** Modeling Water Balance of A Tank Cascades Irrigation System Based on Satellite and Field Observations
X. Cai, Y. Cui, N. Roost.

0915 **# 164.** Global inland water monitoring from satellite radar altimetry – a glimpse into the future
P. Berry, M.K. Salloway, R.G. Smith, J. Benveniste.

0930 **Discussion.**

Monday, 4 July 2011 0830-1000 MR219

IAHS

JHW01 Integrated flood management

JHW01S1

Chairpersons: Dasarath Jayasuriya

0830 **Introduction/Key Note IFM double Gabriel Arduino.**

0845 **As above.**

0900 **# 4274.** Innovations in Australian Flood Forecasting and the Short-term Water Information Forecasting Tools (SWIFT) program
T. Pagano, H.A.P. Hapuarachchi, D.L. Shrestha, J. Anticev, P. Ward, et al.

0915 **As above.**

0930 **# 146.** Estimation of the flooded area of the inner delta of the river Niger in Mali by hydrological balance method and by satellite data
G. Mahe, A. Mariko, D. Orange, J.P. Bricquet.

0945 **As above.**

Monday, 4 July 2011 0830-1000 MR220

IAHS

JHW03 Impacts of changing climate, snow and ice on mountain hydrology

JHW03S1

Chairpersons: TBC

0830 **Introduction.**

0845 **# 3725. Invited** Snow Energy Balance and Snow Patch Survival Mechanisms

0900 **As above.**

0915 **Discussion.**

0930 **Discussion.**

0945 **Discussion.**

Monday, 4 July 2011 0830-1000 MR111

IAHS

HW01 Tracer applications in sediment research

HW01S4

Chairpersons: Paolo Porto & Valentin Golosov

0830 **# 729.** Tracing the sources of fluvial particulate matter impacting on fish spawning gravels as part of the England Demonstration Test Catchment project
A. Collins, Y. Zhang, D. Smallman, S. Haley, L. Williams, et al.

0845 **# 3546.** Combining River Monitoring And Sediment Fingerprinting To Quantify Spatial And Temporal Dynamics Of Fine Sediment In Mountainous Catchments Of The French Alps And The Mexican Central Highlands
O. Evrard, O. Navratil, J. Nemery, C. Legout, N. Gratiot, et al.

0900 **As above.**

0915 **# 1290.** Using dual-signature tracer technology to assess the efficacy of riparian buffers for mitigating sediment loss to watercourses
A. Collins, L. Williams, S. Haley, S. Smith, S. Sherriff, et al.

0930 **# 1282.** Temporal variation of geomorphologic coupling in a Mediterranean mountain catchment, SW Turkey
K. D'haen, G. Verstraeten, P. Degryse, B. Dusar.

0945 **Discussion.**

Monday, 4 July 2011 0830-1000 MR108

IAHS

HW06 Expert judgement versus statistical goodness-of-fit for hydrological model evaluation

HW06S3 Can we build better models? Criteria for calibrating and diagnosing models

Chairpersons: Mark Thyer

0830 **# 5901.** The effect of choice of calibration Criteria on Hydrological Model Performance
Z. Bargaoui

0845 **# 5419.** Using entropy as a descriptor of flow duration for rainfall-runoff model calibration
I. Pechlivanidis, B. Jackson, H. McMillan, H. Gupta.

0900 **# 2883.** The value of considering uncertainty in design of model performance indicators
B. Croke

0915 **# 3357.** Use of Multiple Data Types to Evaluate and Diagnose Weaknesses in Hydrological Models
H. McMillan, M. Clark, D. Tetzlaff.

0930 **# 3578.** Impact of modeller's attitude in catchment modelling: stage from priori prediction to calibration
H. Holländer, SFB/TRR 38 C2 team.

0945 **Discussion.**

Monday, 4 July 2011 0830-1000 MR112

IAHS

HW14 Education in the hydrological sciences

HW14S1

Chairpersons: Earl Bardsley

0830 **# 4252.** Education in the Hydrological Sciences – the International Dimension
A. Askew

0845 **# 1785.** New Questions Regarding Physics Role in Learning Hydrology Concepts: Conceptual Mobility and Entrenchment Revealed by the Geoscience Concept Inventory
S. Anderson

0900 **# 3983.** Hydrological Science Education and Development
R. Venneker

0915 **# 3184.** Hydrology education and research in developing countries: Perspectives from southern Africa
G. Jewitt

0930 **# 3878.** Hydrological Education and Training Needs in Sub-Saharan Africa: Requirements, Progress and Constraints.
D. Hughes

0945 **Discussion.**

Monday, 4 July 2011 0830-1000 MR110

IAMAS

JM02 Data assimilation and ensemble forecasting for weather and climate

JM02S8

Chairpersons: William Lahoz

0830 **# 2484. Invited** JPL/USC GAIM: Ionospheric Data Assimilation for Monitoring Space Weather Using Global Ground and Space-Based GPS Measurements
A. Komjathy, P. Stephens, M. Butala, O. Verkhoglyadova, B. Wilson, et al.

0845 **As above.**

0900 **# 4172.** Upper Atmospheric Data Assimilation with an Ensemble Kalman Filter
T. Matsuo, I. Lee, J. Anderson, A. Richmond.

0915 **# 3033.** Data Assimilation of EUV Imaging Data into a Plasmasphere Model
S. Nakano, M. Fok, P. C:son Brandt, T. Higuchi.

0930 **# 3694.** Impact Of Stratospheric Sudden Warming On The Predictability Of Tropospheric NAM Variability
Y. Kuroda

0945 **# 5801.** Mesospheric Assimilation and Predictability Experiments Using Ground-to-Edge-of-Space (0-100 km) Prototypes of the Navy Global Numerical Weather Prediction System
S. Eckermann, F. Sassi, K.W. Hoppel, B.C. Ruston, T.F. Hogan, et al.

Monday, 4 July 2011 0830-1000 MR105

IAMAS

JM10 Monsoons, Tropical Cyclones and Tropical Dynamics

JM10S15 MJO

Chairpersons: Georg Kaser

0830 **# 2990. Invited** Exploring the Dynamics of the Madden-Julian Oscillation with a Hierarchy of Atmospheric Models
E. Maloney, A. Sobel, K. Landu, M. Khairoutdinov.

0845 **# 835. Invited** A PV View of the MJO and Equatorial Waves
C. Zhang, J. Ling.

0900 **As above.**

0915 **# 3849.** A dynamical ocean feedback mechanism for the Madden-Julian Oscillation
B. Webber, A. Matthews, K. Heywood, D. Stevens.

0930 **# 667.** Predictability of the Madden Julian Oscillation Estimated using Observational Data
R. Ding, J. Li, K.H. Seo.

0945 **# 4456.** On the Relative Roles of Circumnavigating Waves and Extratropics on the Madden-Julian Oscillation (MJO)
P. Ray, T. Li.

Monday, 4 July 2011 0830-1000 MR103

IAMAS

JM13 Precipitation measurements; instrumentation and statistics at all scales

JM13S4

Chairpersons: Andras Bardossy & Daniel Schertzer

0830 **# 4542.** On short-term ensemble predictions of rainfall
A. Seed, C. Pierce.

0845 **Discussion.**

0900 **# 1215.** A Twelve-Year Tropical Rainfall Climatology Based on a Composite of TRMM Products
J. Wang, R. Adler, G. Gu, G. Huffman, D. Bolvin.

0915 **# 715.** Model for Very Short Heavy Precipitation Forecast from Thunderstorms
M. Curic, D. Janc.

0930 **# 5256.** From an event-base to a statistical approach for the assessment of rainfall areal reduction factor with radar data: a means of improvement of a prediction method of extreme rainfalls and floods in ungauged watersheds.
C. Fouchier, A. Maire, P. Arnaud, Y. Aubert.

0945 **# 953.** A Site Specific Zenith Hydrostatic Delay (ZHD) Model
J.K. Ghosh, D. Singh, D. Kasgyap.

Monday, 4 July 2011 0830-1000 MR106
IAMAS
M02 Chemistry-climate interactions
M02S4 Chemical processes and their impact on climate Part 2
Chairpersons: John Burrows & Sachiko Hayashida

0830 **# 2492. Invited** Organic aerosols in the Earth System: An overview of our understanding
M. Kanakidou, K. Tsigaridis.
0845 **As above.**
0900 **# 2307. Invited** Southeast Asia Composition, Cloud, Climate Coupling Regional Study (SEAC4RS)
H. Maring, K. Jucks, J. Al-Saadi, R. Eckman.
0915 **As above.**
0930 **# 5265.** Urban Impact on Air Quality in RegCM/CAMx Couple for MEGAPOLI project – high resolution sensitivity study
T. Halenka, P. Huszar, M. Belda.
0945 **# 1922.** Climate-Chemistry Modelling using ACCESS: Tropospheric Chemistry
P. Hurley, M. Thatcher, M. Edwards, H. Wolff, A. Luhar.

Monday, 4 July 2011 0830-1000 MR211
IAPSO
JP01 The Southern Ocean in a changing world
JP01S4
Chairpersons: Steve Rintoul

0830 **# 892. Invited** Poleward Shift of the Polar Front Observed in Drake Passage
J. Sprintall
0845 **As above.**
0900 **Discussion.**
0915 **# 4815.** Interannual to Interdecadal variability in Southern Ocean water mass volumes and links to the Southern Annular Mode
A. Maharaj, C. Krause.
0930 **# 4445.** Eddy Response to Wind Forcing in the Southern Ocean
C. Langlais, S. Rintoul, A. Schiller.
0945 **# 5554.** The Southern Ocean overturning circulation and biogeochemical cycling
S. Rintoul, J. Sallee, D. Cossa, S. Bengtson-Nash.

Monday, 4 July 2011 0830-1000 MR203
IASPEI
JS01 Advances in Tsunami Science, Warning, and Mitigation
JS01S10
Chairpersons: Lori Dengler & Jose Borrero

0830 **# 2325.** A New Source Function of the 1964 Alaska Tsunami Based on the Near-field Numerical Modeling and Observations
J. Freymueller, E. Suleimani.
0845 **# 3378.** Numerical Experiment of Sediment Transport and a Case Study of Sediment Transport Simulation of the 2004 Indian Ocean Tsunami in Lhoknga, Banda Aceh, Indonesia
A. Gusman, Y. Tanioka, T. Takahashi.
0900 **# 4610.** The 2009 South Pacific tsunami – implications for tsunami hazard in the South Pacific
W. Power, K. Clark, J. Beavan, X. Wang, G. Prasetya, et al.
0915 **# 1972.** Distribution of heights and Damage of the Tsunami of the Samoan Earthquake of September 29, 2009 on the Coast of the Independent State of Samoa
Y. Tsuji, K. Fujima, T. Sakakiyama, T. Arikawa, D. Tatsumi, et al.
0930 **# 1413.** Canada cabled observatory records trans-Pacific tsunamis off the west coast of Vancouver Island
A. Rabinovich, R. Thomson, I. Fine.
0945 **# 1707.** Samoa (29. 09. 2009) and Chilean (27. 02. 2010) tsunami recording on the Pacific coast of Russia
G. Shevchenko, T. Ivelskaya, A. Loskutov, A. Shishkin.

Monday, 4 July 2011 0830-1000 MR216
IASPEI
JS02 Heat Flow, Tectonics, and Geothermal Energy
JS02S3 Heat Flow, Tectonics, and Geothermal Energy – Part 3
Chairpersons: Alexander Gliko

0830 **# 661.** Groundwater Temperature Changes In Kunashir Island Associated With Seismotectonic Regime
D. Demezhko, A. Yurkov, V. Outkin.
0845 **# 1786.** Reservoir Thermal Properties Determination and Pore Space Characterization from Application of Advanced Experimental Base and Theoretical Modeling
Y. Popov, I. Bayuk, R. Romushkevich, A. Parshin, S. Novikov, et al.
0900 **# 2188.** Collisional granitoids formation in rheologically layered lithosphere of overthrusted structures – numerical modeling
O. Parphenuk
0915 **Discussion.**
0930 **# 2686.** Tectonics of the Ninetyeast Ridge Derived from Spreading Records in Adjacent Oceanic Basins and Age Constraints of the Ridge
K. Krishna, H. Abraham, W. Sager, M. Pringle, F. Frey, et al.
0945 **Discussion.**

Monday, 4 July 2011 0830-1000 MR213
IASPEI
JS10 Electromagnetic studies of active processes using space technology
JS10S1
Chairpersons: Yasuhide Hobara & Jan Blecki

0830 **# 2638.** Statistical study of the ionospheric perturbation observed by low-altitude satellite in relation with major seismic activities
Y. Hobara, R. Nakamura, M. Hayakawa, M. Parrot.
0845 **# 4286.** Progress in Multidisciplinary Validation of Earthquake Atmospheric Signals by Joint Satellite and Ground Based Observations
D. Ouzounov, S. Pulinets, K. Hattori, M. Parrot, J. Liu, et al.
0900 **# 4287.** Seismic Waves in the Ionosphere and the Variability in the Lithosphere-Atmosphere-Ionosphere Coupling
E. Astafyeva, L. Rolland, P. Lognonne.
0915 **# 4957.** The Probability of Observing PEIAs Associated with Significant Earthquakes
J. Liu, H.K. Jhuang.
0930 **# 5814.** The Discussion of the Ionospheric Plasma Turbulence as a Possible Precursor of the Earthquake
J. Becki, M. Parrot, R. Wronowski, M. Kosciesza.
0945 **# 5973.** High Altitude Electric Discharges due to Ions Accelerated through the Mesosphere
C. Windsor, P. Hollis-Watts, Y. Cagle, B. Shiro, S. Pilorz, et al.

Monday, 4 July 2011 0830-1000 MR212

IASPEI

S02 Triggered and Induced Seismicity

S02S3

Chairpersons: Bernard Dost & Sergey Turuntaev

0830 **# 760.** Discussion on: Did the Zipingpu Reservoir trigger the 2008 Wenchuan earthquake?
S. Zhou, Y. Gao.

0845 **# 2559.** Poroelastic Coupling of the Zipingpu Reservoir and the 2008 Mw7. 9 Wenchuan Earthquake, China
W. Tao, T. Masterlark, Z. Shen.

0900 **# 2179.** Triggered Earthquakes in Koyna Region
H. Gupta, D. Shashidhar, K. Mallika, N. Purnachandra Rao, Y. Amrita, et al.

0915 **# 3148.** A Search for Rainfall-Triggered Earthquake Activity in the Parana Basin, Southeast Brazil
M. Assumpcao, A. Lopes, J.R. Barbosa.

0930 **# 1190.** The measurement of the staple shaft in Lubeník mine – the influence of mining technology and tectonic stress changes
P. Kalenda, L. Neumann, J. Kvetko.

0945 **Discussion.**

Monday, 4 July 2011 0830-1000 MR210

IASPEI

S07 Strong Ground Motions; their source, path, and site effects

S07S1

Chairpersons: Adrien Oth & Ariska Rudyanto

0830 **# 2996.** A critical comparison of the source scaling characteristics of individual aftershock sequences in Japan versus nation-wide seismicity
A. Oth

0845 **# 1796.** Strong motion inversion to retrieve the slip distribution on a finite fault: L'Aquila 2009 earthquake.
A. Gallo, G. Costa, P. Suhadolc.

0900 **# 2680.** Attenuation of the P- and S-waves at local distances
A. Cichowicz

0915 **# 4684.** Earthquake Ground Motion Data in Indonesia: A Preliminary Analysis
A. Rudyanto, H. Ghasemi, N. Sukanta, O. Sativa, J. Griffin, et al.

0930 **# 2716. Invited** Ground Motion Characteristics in the Chianan Plain of the 2010 Jiasian, Taiwan Earthquake
K. Wen, C.T. Chen, F.W. Cheng, J.Y. Huang.

0945 **As above.**

Monday, 4 July 2011 0830-1000 MR102

IASPEI

S09 Earthquake Early Warning Systems

S09S1

Chairpersons: Jochen Zschau & Aldo Zollo

0830 **# 3444. Invited** Performance of Earthquake Early Warning of JMA – Review of Practical Stage of Recent 3 Years
M. Hoshiba, T. Shimoyama, Y. Hasegawa, H. Naito.

0845 **As above.**

0900 **# 2494.** A Comparative Analysis of Earthquake Early Warning Algorithms used in the Seismic Alert System of Mexico City (SAS)
G. Suarez, A. Cuellar, J.M. Espinosa.

0915 **As above.**

0930 **# 3430.** Automatic P and S Wave Arrival Time Picking Compared to Manually Picking
S. Horiuchi, Y. Horiuchi, Y. Iio, Y. Sawada, S. Sekine, et al.

0945 **# 5755.** A new Instrumental Approach to Earthquake Early Warning
H. Rademacher, L. Withers, M. McGowan, C. Pearcey, C. Guralp.

Monday, 4 July 2011 0830-1000 MR109

IASPEI

S13 Seismic Imaging of the Lithosphere and Mantle

S13S5

Chairpersons: Greg Houseman & Elizabeth Vanacore

0830 **# 4740. Invited** Wide angle reflection exploration of the crust-mantle structure in a region of continental rifting and volcanism
T. Stern, A. Benson, W. Stratford.

0845 **As above.**

0900 **# 4677.** Near-vertical-incidence seismic reflection imaging of the Australian continental Moho: Effect of acquisition and processing
L. Jones

0915 **# 2529.** Deep-continental reflection seismology in Australia: a decade of advance in the understanding of the tectonics of a continent.
R. Blewett, R. Korsch, D. Huston, P. Henson.

0930 **# 4751.** Magnetotelluric Acquisition Along Deep Seismic Reflection Transects in Australia
J. Duan, P. Milligan, A. Nakamura, T. Fomin, J. Maher, et al.

0945 **# 3287.** More useful crustal models through seismically constrained gravity inversion
A. Aitken

Monday, 4 July 2011 0830-1000 PH1
IAVCEI
JV02 Forecasting and Monitoring Volcanic Eruptions
JV02S2
Chairpersons: Gill Jolly & Setsuya Nakada

0830 # **4998.** Forecasting Eruptions of Hekla Volcano, Iceland, using Borehole Strain Observations
M. Roberts, A. Linde, K. Vogfjör, S. Sacks.

0845 # **5028.** Near-Real-Time Remote Sensing of Erupting Volcanoes: the 2010 Eruption of Merapi Volcano
W. McCausland, J.S. Pallister, D.J. Schneider, J.P. Griswold.

0900 # **3080.** Increase in Volcanic Activity under Open Conduit System at Sakurajima Volcano in Japan
M. Iguchi

0915 # **3110.** Petrological Monitoring at Sakurajima Volcano, SW Japan
T. Shimano, A. Yokoo, M. Iguchi, D. Miki.

0930 # **4619.** Chronology and Monitoring of the 2011 Eruption at Kirishima Volcano (Kyushu), Japan
S. Nakada, T. Kaneko, M. Nagai, T. Kobayashi, Y. Suzuki, et al.

0945 # **2223.** Some Challenges of Monitoring a Potentially Active Volcanic Field in a Large Urban Area: Auckland Volcanic Field, New Zealand
J. Lindsay, C. Ashenden, S. Sherburn.

Monday, 4 July 2011 0830-1000 MR107
IAVCEI
V07 Subaerial and Subaqueous Lava flows
V07S1
Chairpersons: Thor Thordarson

0830 # **4166. Invited** How Lava Flows: New insights from new views
K. Cashman, H. Dietterich.

0845 **As above.**

0900 # **4079.** Experimental evidence for degassing induced crystallisation in basaltic lavas
J. Applegarth, H. Tuffen, H. Pinkerton, M.R. James.

0915 # **1917.** Effects of internal rheology on the dynamics of solidifying lava flows
J. Robertson, R. Kerr.

0930 # **4184.** Thermal Emissivity Measurements of Molten Silicates: Implications for Lava Flow Emplacement and Hazards
M. Ramsey

0945 # **3704.** Estimating Lava Bulk Rheological Properties by Modelling Field Data of an Advancing Flow-front
M. James, A. Vicari, A. Herault, G. Ganci, A. Cappello.

Monday, 4 July 2011 0830-1000 MR104
IAVCEI
V08 Volcanic Conduit and Vent Processes
V08S1 Volcanic Conduit and Vent Processes Part 1
Chairpersons: Jonathan Castro & Michael Manga

0830 # **1082.** Linking the internal structure of lava domes to eruption style: An example from Ngongotaha Dome, Taupo Volcanic Zone, New Zealand
P. Ashwell, B. Kennedy, F. von Aulock, J. Cole.

0845 # **4278.** Dynamics of pseudotachylyte generation in volcanic structures
Y. Lavallee, T.M. Mitchell, M.J. Heap, J. Kendrick, T. Hirose, et al.

0900 # **2676.** Interpretation of Crystal Size Distribution of Dome Forming Rocks
O. Melnik, J. Blundy, A. Rust, D. Muir.

0915 # **2933. Invited** Controls of extensional stress on intensity of very large magnitude explosive eruptions
A. Costa, J. Gottsmann, O. Melnik, R.S.J. Sparks.

0930 **As above.**

0945 # **2843.** Complex Plumbing of Monogenetic Scoria Cones: New Insights from the Lunar Crater Volcanic Field (Nevada, USA)
A. Hintz, G.A. Valentine.

Monday, 4 July 2011 0830-1000 MR204
IAVCEI
V12 Tectonic Controls on Volcanism
V12S1 Volcanic Conduit and Vent Processes Part 1
Chairpersons: Jim Cole

0830 # **3227. Invited.** The 2005-to-present Afar rifting episode: review and implications for fault-dike interactions
J. Rowland, T.J. Wright, C.J. Ebinger, B. Hofmann, M. Belachew, et al.

0845 **As above.**

0900 # **5299.** Temporal Links Between Rifting and Larg-scale Eruptions in the Taupo Volcanic Zone, New Zealand
D. Gravley, C.D. Deering, C.J.N. Wilson, G.S. Leonard, J.V. Rowland, et al.

0915 # **4161.** Tectonic Controls on Volcanism in the Walker Lane Rift Along the Eastern Edge of the Sierran Microplate
C. Busby, K. Putirka.

0930 # **3039.** The fissure eruptions of Fuji Volcano, Japan, during the last 2,300 years
A. Takada, T. Yamamoto, Y. Ishizuka, S. Nakano.

0945 # **1748.** The impact of tectonics earthquakes in Western Rift Valley on the volcanic activities of Nyiragongo volcano in the Virunga region
W. Mifundu Dieudonne

Monday, 4 July 2011 1030-1200 MR101
IAMAS
JM09 External forcing from above on the middle atmosphere and lower ionosphere
JM09S1
Chairpersons: Alexei Krivolutsky

1030 # **4427. Invited** Solar Cycle Signal in the Tropical Stratosphere: Forcing by Solar UV Variations and Possible Feedbacks from Below
L. Hood, B. Soukharevl.

1045 **As above.**

1100 # **5065. Invited** Solar wind influence on atmospheric processes in winter Antarctica
O. Troshichev.

1115 **As above.**

1130 # **1662.** Midlatitude mesosphere/lower thermosphere parameters during solar minimum 23/24
C. Jacobi, C. Unglaub, P. Hoffmann, M. Placke, G. Stober.

1145 # **5530.** What is the dynamic response of the thermospheric density to external forcings?
T. Dudok De Wit, S. Bruinsma.

MONDAY, 4 JULY 2011 1030-1200 AM2

Monday, 4 July 2011 1030-1200 PH2
IUGG
U07 Mathematical tools in Geophysical Modelling
U07S2 Speakers by Invitation
Chairpersons: Matthias Holschneider & Shin-Chan Han

1030 **# 3175.** Promoting, or Dealing with Sparsity in Geophysical Inverse Problems
F. Simons
1045 **As above.**
1100 **# 2763.** An Efficient Method for Large-Scale 3-D Spherical Simulations of Mantle Convection and Plate Tectonics on up to Thousands of Parallel Cores
P. Tackley
1115 **As above.**
1130 **# 1908.** Fast wind-induced migration of Leddies in the South China Sea
D. Nof
1145 **As above.**

Monday, 4 July 2011 1030-1200 MR206
IAG
JG03 History of Geosciences from Terrestrial to Spaceborne Observations
JG03S2
Chairpersons: G.A. Good & K. Harper

1030 **# 1172. Invited** European Advances during the Last Decades in Cross-Border Seismic Data Exchange and PSinSAR
A. Walker
1045 **As above.**
1100 **# 4263.** Drifting Plates and Shifting Politics: Science, Environmentalism and the Minerals Question in Antarctica, 1961-1991
A. Howkins
1115 **# 4612.** The Stommel Diagram's Intriguing Journey from the Physical to the Biological Environmental Science during the Cold War
R.E. Doel
1130 **# 2169.** Integrated marine gravity field in the south-china sea from multi-satellite altimetry and shipborne gravity
H. Hsu, C. Hwang, Y. Yang.
1145 **# 1332.** Recovery of the gravity field from GOCE data by using the invariants of the gradient tensor on the satellite orbit
J. Yu, X. Wan.

Monday, 4 July 2011 1030-1200 MR214
IAG
G06 Towards a Unified World Height System
G06S2
Chairpersons: Laura Sanchez & Mikael Lilie

1030 **# 848.** Progress Toward a Unified Geoid-Based Vertical Datum for North America
D. Smith, M. Varonneau, D. Avalos-Naranjo.
1045 **As above.**
1100 **# 3916.** A Prototype of a Geoid-Based Height System for Canada
J. Huang, M. Véronneau, J. Henton, P. Héroux.
1115 **# 913.** Performance of the New Zealand Vertical Datum 2009 following the M7. 1 Canterbury Earthquake
M. Amos, N. Donnelly.
1130 **# 1856.** AUSGeoid09: Improved GNSS-Based Height Transfer in New South Wales, Australia
V. Janssen, T. Watson.
1145 **# 2840.** The United States 2011 Geoid Slope Validation Project
G. Jeffress, D. Smith, M. Eckl, D. Roman, S. Holdorff, et al.

Monday, 4 July 2011 1030-1200 PH3
IAG, IASPEI
JG06/JS06 Tectonic Geodesy and Earthquakes
JG06JS06S4 Tectonic Geodesy and Earthquakes Part 4
Chairpersons: Valentin Mihkailov & Jeff Freymueller

1030 **# 1732.** Geodetic Observation of Strain Accumulation in the West of Java Island
I. Meilano, H.Z. Abidin, H. Andreas, I. Gumilar, D. Sarsito, et al.
1045 **# 1744.** Geometric and Kinematic Modelling of Sulawesi-East Kalimantan Zone Based on GNSS-GPS and Global Gravitation Data
D.A. Sarsito, H.Z. Abidin, B. Sapiie, W. Triyoso, I. Meilano, et al.
1100 **# 1115.** Core-mantle boundary co-seismic deformation by the dislocation theory resulting from the 2004 Sumatra earthquake
X. Zhou, W.K. Sun, C.L. Lo, G.Y. Fu.
1115 **Discussion.**
1130 **# 3363.** Detection of Medium-far Field Co-seismic Gravity Variations of the 2004 Sumatra-Andaman Earthquake from GRACE
J. Li, W.B. Shen.
1145 **Discussion.**

Monday, 4 July 2011 1030-1200 MR207
IAGA
JA02 Climate and Weather of the Sun-Earth System – CAWSES –II early results
JA02S2
Chairpersons: Susan Avery & Alan Rodger

1030 **# 4396.** Variability of Tropical Pacific Temperature and Water Vapor in Relation to Solar Cycles.
A. Ruzmaikin, H. Aumann.
1045 **# 1686.** On the climate of the Sun-Earth system: The long-term evolution of the solar wind dynamic pressure on magnetosphere
C. Demetrescu, V. Dobrica, G. Maris.
1100 **# 4898.** New Reconstruction Technique Yields Large Historical Variability in Solar Radiative Forcing
W. Schmutz, A. Shapiro, E. Rozanov.
1115 **# 4396.** Variability of Tropical Pacific Temperature and Water Vapor in Relation to Solar Cycles.
A. Ruzmaikin, H. Aumann.
1130 **# 2080.** How Will Geospace Respond to Climate Change – TG-2 of CAWSES-II
J. Lastovicka, D. Marsh,. Project Leaders.
1145 **# 619.** Statistical studies of the diurnal varation of the Equatorial F layer at Ouagadougou from 1966 to 1998
C. Amory, F. Ouattara.

Monday, 4 July 2011 **1030-1200 MR208**
IAGA
JA03 **Long-term changes in the stratosphere, mesosphere, thermosphere and ionosphere**
JA03S2
Chairpersons: TBC

1030 **Introduction.**
1045 **# 5244. Invited** Short And Long Lived Tropospheric Constituents Observed From Space: Transport And Transformation Of Air Pollution, Biogeochemistry And Climate Change
J.P. Burrows, A. Richter, F. Wittrock, M. Weber, A. Rozanov.
1100 **# 1266. Invited** Progress in Studies of Trends in the Mesosphere, Thermosphere and Ionosphere
J. Lastovicka
1115 **# 4781.** Solar Cycle and Long Term Trends in 16 years of Antarctic Hydroxyl Measurements
W. French, A.R. Klekociuk.
1130 **# 2491.** Long-term Trends, their Changes, and interannual Variability of Northern Hemisphere Midlatitude MLT Winds
C. Jacobi, R. Liu, E. Merzlyakov, C. Meek, P. Hoffmann, et al.
1145 **Discussion.**

Monday, 4 July 2011 **1030-1200 MR209**
IAGA
JA04 **Electromagnetic oscillations from space to Earth: Celebrating 150 years and recent developments in ultra-low frequency wave research**
JA04S2
Chairpersons: Peter Chi & Brian Fraser

1030 **# 4441. Invited** An Historical Perspective on ULF Waves: A Tribute to Valeria Troitskaya
B. Fraser, M. Kivelson.
1045 **As above.**
1100 **Discussion.**
1115 **# 2470.** Simultaneous Traveling Convection Vortex (TCV) Events and Pc 1-2 Wave Bursts at Cusp/Cleft Latitudes observed in Arctic Canada and Svalbard
M. Engebretson, A. Witte, J. Posch, D. Murr, M. Lessard, et al.
1130 **# 4680.** A Study of Latitudinal Distribution of Quarter-Wave ULF Pulsations
Y. Obana, I. Yoshikawa, F W. Menk, C L. Waters, M D. Sciffer, et al.
1145 **# 4843.** Generation Mechanism and Mode Conversion of Nonlinear Alfven Waves
D. Lee, K. Kim, K. Kim.

Monday, 4 July 2011 **1030-1200 MR205**
IAGA
A041 **Rock Magnetism**
A041S2 **Recent Advances in Rock and Mineral Magnetism Part 2**
Chairpersons: Mark Dekkers & Ozden Ozdemir

1030 **# 2809.** Modeling time-dependent magnetic hysteresis for interacting magnetic minerals
A. Newell, M. Niemerg, D. Bates.

Monday, 4 July 2011 **1030-1200 MR215**
IAGA
A062 **Coupling in the atmosphere-ionosphere-magnetosphere system and its response to external forcing and forcing from below**
A062S4 **Low Latitude Atmosphere-ionosphere Coupling Processes and Responses to Forcing from Lower Atmosphere and Magnetosphere**
Chairpersons: T. Kikuchi

1030 **# 5883. Invited** The Correlation of Terrestrial and Space Weather at Low Latitudes
K. Groves, K. Wiens, W. McNeil.
1045 **As above.**
1100 **# 3834. Invited** Solar forcing and lower atmospheric effects to the ionosphere observed by FORMOSAT-3/COSMIC and impacts from future FORMOSAT-7/COSMIC-II mission
C. Lin, J.Y. Liu, V. Chu, C.Y. Lin, Y.Y. Sun.
1115 **As above.**
1130 **# 2475.** Thermospheric Observations of Equatorial Wavenumber 4 Density Perturbations from WINDII Data
G. Shepherd
1145 **# 1535.** Comparing equatorial vertical density structures and ExB vertical drift velocities at three different Longitudes
E. Yizengaw, E. Zesta, M. Moldwin, A. Mebrahtu, C. Mebane, et al

Monday, 4 July 2011 **1030-1200 ER002**
IAGA
A112 **The Sun and the Heliosphere: Physical Processes**
A112S2 **Origin of the Solar Magnetism. The Solar Dynamos**
Chairpersons: Ana Cristina Cadavid

1030 **# 1250. Invited** Surface Magnetic Flux Transport Models
R. Cameron
1045 **As above.**
1100 **# 4745.** Hydromagnetic Self-Organization in Solar and Stellar Dynamos
M. Miesch, B. Brown, M. Browning, S. Brun, N. Nelson, et al.
1115 **As above.**
1130 **# 3208.** Instabilities in the Solar Tachocline
P. Cally
1145 **# 4239.** Is a High-Latitude Reverse Meridional Flow-Cell the Sun's Common Choice?
M. Dikpati, P. Gilman.

Monday, 4 July 2011 1030-1200 MR218
IAGA
A131 Magnetic observations from ground to space – ingredients for new geomagnetic research
A131S2 Geomagnetic observatories, their Instrumentation and Management – Basement for Geomagnetic Research
Chairpersons: Manuel Catalan

1030 **# 5708. Invited** Combining Observatory and Satellite Data in Geomagnetic Field Modeling
A. Chulliat
1045 **As above.**
1100 **# 3978.** SCARF – The Swarm Satellite Constellation Application and Research Facility
E. Friis-Christensen, R. Floberghagen, G. Plank, N. Olsen, G. Hulot, et al.
1115 **# 3926.** Geomagnetic field reference for Swarm satellite magnetometer inter-calibration
H. Linthe, I. Michaelis, H. Lahr.
1130 **# 1816.** From 1-minute to 1-second sampling interval at geomagnetic observatories: example of French magnetic observatories of Austral and Antarctic territories
A. Chambodut, M. Menvielle.
1145 **Discussion.**

Monday, 4 July 2011 1030-1200 MR217
IAHS
JH01 GRACE, other remote sensing platforms and ground based methods for estimating multi-scale surface water budgets, groundwater system characterization and hydrological processes
JH01S6
Chairpersons: Mohsin Hafeez & Dr Frederique Seyler

1030 **# 282.** Evaluation of high-resolution satellite precipitation products for streamflow simulation in the Mishui Basin, South China
L. Ren, S. Jiang, B. Yong, X. Yang, B. Yang.
1045 **# 276.** Flood monitoring of the Inner Niger Delta using high resolution radar and optical imagery
A. Dezetter, D. Ruelland, C. Netter.
1100 **# 232.** TRMM-forced rainfall-runoff modeling for water management purposes in small ungauged basins
B. Collischonn, A. Pante.
1115 **Discussion.**
1130 **Discussion.**
1145 **Discussion.**

Monday, 4 July 2011 1030-1200 MR219
IAHS
JHW01 Integrated flood management
JHW01S2
Chairpersons: Dasarath Jayasuriya

1030 **# 4909.** Urban Flooding Warning in Pearl River Delta City Flood Management
Y. Chen
1045 **As above.**
1100 **# 704.** A Numerical Investigation on Characteristics of Flood Propagation in Crossings and Streets in Urban Areas: Application to Changwon City, Korea
W. Jeong, J.W. Lee, Y.S. Cho.
1115 **As above.**
1130 **# 3395.** Analysis of Hazard and Damage of Pakistan Flood 2010 with Rainfall-Runoff-Inundation Model
T. Sayama, K. Fukami, S. Tanaka, K. Takeuchi.
1145 **As above.**

Monday, 4 July 2011 1030-1200 MR220
IAHS
JHW03 Impacts of changing climate, snow and ice on mountain hydrology
JHW03S2
Chairpersons: TBC

1030 **# 4871. Invited** Validation of Multiple Approaches for Modelling SWE Distribution and Subsequent Snowmelt in a Small Alpine Watershed
T. Jonas, C.D. Moeser, J. Magnusson, M. Bavay, M. Zappa.
1045 **As above.**
1100 **Discussion.**
1115 **# 429.** Climate impact on the mass and energy balance of glaciers in the southern Alps
G. Grossi, P. Caronna, R. Ranzi.
1130 **Discussion.**
1145 **# 1283.** Impact of Climate Change on Water Resources in Mountainous Catchment of the Tarim River Basin, China
Z. Xu, Z. Liu.

Monday, 4 July 2011 1030-1200 MR111
IAHS
HW01 Tracer applications in sediment research
HW01S5
Chairpersons: Jon Olley & Desmond Walling

1030 **# 4621.** Sources of soil erosion contributing sediment in a rural Australian catchment: A comparison of fallout radionuclide, geochemical and CSIA tracing techniques
G. Hancock, A. Revill, T. Pietsch.
1045 **# 3471.** Using Sediment Fingerprinting to Identify Sources of Fine Sediment to the Great Barrier Reef
S. Wilkinson, G. Hancock, R. Bartley, A. Hawdon, R. Keen.
1100 **As above.**
1115 **Discussion.**
1130 **Final Discussion.**
1145 **Conclusion.**

Monday, 4 July 2011 1030-1200 MR108
IAHS
HW06 Expert judgement versus statistical goodness-of-fit for hydrological model evaluation
HW06S4 Reconciling expert judgement and numerical evaluation. Results and perspectives
Chairpersons: Vazken Andréassian

1030 **Short Poster Presentations.**
1045 **# 5816.** How is hydrological modelling at large improving?
M. Ferraresi
1100 **# 5550.** Expert judgement versus statistical goodness-of-fit for hydrological model evaluation: Results of experiment
C. Perrin, L. Crochemore, V. Andréassian, M. Thyer, H. Gupta, et al.
1115 **As above.**
1130 **Discussion and Perspectives.**
1145 **Discussion and Perspectives.**

Monday, 4 July 2011 1030-1200 MR109
IAHS
HW08 **Tracer hydrology as a tool for estimating flow parameters, groundwater dynamics, pollution transport and bioremediation processes in heterogeneous systems**
HW08S1
Chairpersons: Jerzy Jankowski

1030 **# 468.** Dating of young groundwater in eight porous aquifers in Alpine Basins by 18O, 3H, 3H/3He, CFC and SF6
M. Kralik, F. Humer, G. Darling, J. Sültenfuß, J. Grath.
1045 **# 817.** Carbon-14 Dating of Christchurch Groundwater with Ages in the Range 5 years to 2, 000 years
M. Stewart
1100 **# 1500.** The impact of de-icing salts on Alpine Bogs in Kosciuszko National Park
R. Hocking, R. Greene, C. Hughes, S. Johnston, S. Grover.
1115 **# 1733.** Effect of small-scale aquifer heterogeneity on the assessment of in situ biodegradation using stable carbon isotope analysis
F. D'affonseca, H. Prommer, P. Blum, P. Bayer.
1130 **# 1858.** Characterization of Buoyant Fluorescent Particles for Hydrological Field Studies
F. Tauro, M. Porfiri, S. Grimaldi.
1145 **Discussion.**

Monday, 4 July 2011 1030-1200 MR112
IAHS
HW14 **Education in the hydrological sciences**
HW14S2
Chairpersons: Tendai Sawunyama

1030 **# 2221.** The Hydrology Education Resource: a Snapshot in Time
E. Bardsley, M. Yueh.
1045 **# 3089.** Hydrology Education 2. 0
T. Wagener, B. McGlynn, M. Gooseff, K. McGuire, L. Marshall, et al.
1100 **#5272.** Hydrology for a Changing World: A Learning Framework Based on Hydrologic Synthesis and Team Science.
M. Sivapalan, S. Thompson, C. Harman, R. Schumer, J. Wilson.
1115 **Introduction to Poster Presentations.**
1130 **Discussion.**
1145 **Conclusions.**

Monday, 4 July 2011 1030-1200 MR110
IAMAS
JM02 **Data assimilation and ensemble forecasting for weather and climate**
JM02S9
Chairpersons: Craig Bishop & William Lahoz

1030 **# 5980. Invited** PREMIER: Candidate ESA Earth Explorer Mission
J. Orphal, B. Kerridge, M. Riese, D. Murtagh, J. McConnell, et al.
1045 **As above.**
1100 **# 3862.** Data Assimilation Of IASI Tropospheric Ozone Observations Into The Regional CTM CHIMERE
G. Foret, A. Coman, M. Beekmann, M. Eremenko, G. Dufour, et al.
1115 **# 4936.** Satellite Data Assimilation – Improving Environmental and Climate Monitoring and Prediction Now and into the Future
J. Le Marshall, J. Jung, Y. Xiao, P. Gregory, J. Lee.
1130 **# 5979.** MAGEAQ: a Thermal Infrared Spectrometer onboard a Geostationary Platform for CO and O3 Measurements in the Lowermost Troposphere
J. Orphal, M. Claeyman, J.L. Attié, P. Jean-Luc, W. Lahoz, et al.
1145 **# 2381.** Monitoring air quality: the role of OSSEs in determining the future observing system
W. Lahoz, Mageaq Team.

Monday, 4 July 2011 1030-1200 MR105
IAMAS
JM10 **Monsoons, Tropical Cyclones and Tropical Dynamics**
JM10S16 **MJO and Equatorial Dynamics**
Chairpersons: Matthew Wheeler

1030 **# 3048.** Rossby Wave Breaking in the Tropics Associated with Atmospheric Kelvin Waves within the MJO
K. Macritchie, P. Roundy.
1045 **# 5131.** Semiannual cycle in zonal wind over the equatorial Indian Ocean
T. Ogata, S.P. Xie.
1100 **#3435** MJO Empirical Modeling and Prediction by Past "Noise"
D. Kondrashov, M. Chekroun, M. Ghil & A. Robertson.
1115 **# 1114.** Global warming-induced tropical circulation changes and the association with atmospheric stability
C. Chou, T.C. Wu.
1130 **# 2311.** Patterns of the Global Atmospheric Flow Associated With Convectively Coupled Oceanic Kelvin Waves
P. Roundy
1145 **# 3695.** Roles of the Brazilian Plateau in the formation of the SACZ
Y. Kodama, T. Sagawa, S. Ishida, T. Yoshikane.

Monday, 4 July 2011 1030-1200 MR103
IAMAS
JM13 **Precipitation measurements; instrumentation and statistics at all scales**
JM13S5
Chairpersons: Alan Seed & Daniel Schertzer

1030 **# 1361.** Raindrop Size Distribution Retrievals with a Large Footprint VHF Profiler
B. Dolman, I. Reid, A. MacKinnon, R. Vincent.
1045 **# 5854.** X-Band Radars And Multifractal Insights On Rainfall Heterogeneity
D. Schertzer, I. Tchiguirinskaia, S. Lovejoy.
1100 **Discussion.**
1115 **# 2832.** Stochastic modeling of precipitation in time and space using a latent autoregressive model
P. Rasmussen
1130 **Conclusions.**
1145 **Discussion.**

Monday, 4 July 2011 1030-1200 MR106
IAMAS
M02 Chemistry-climate interactions
M02S5 Model predictions and attribution of chemistry-climate interactions
Chairpersons: Eugene Rozanov & Ulrike Langmatz

1030 **# 3219. Invited** The Chemistry-Climate Model Validation Project: Rationale and Results
O. Morgenstern
1045 **As above.**
1100 **# 3903. Invited** Modelling Short-Lived Climate Forcers: Climate Impacts and Interaction
K. Sudo, T. Takemura.
1115 **As above.**
1130 **# 4006. Invited** Interaction between ozone recovery and climate change in model predictions
N. Butchart, B. Collins, S. Hardiman, A. Scaife.
1145 **As above.**

Monday, 4 July 2011 1030-1200 MR211
IAPSO
JP01 The Southern Ocean in a changing world
JP01S5
Chairpersons: Nicolas Fauchereau

1030 **# 5366. Invited** Ocean Acidification Impacts in the Southern Ocean
W. Howard, D. Roberts, T. Trull, S. Bray.
1045 **As above.**
1100 **# 3944.** Pathways of anthropogenic carbon transport into the Southern Ocean
J. Sallee, R.J. Matear, A. Lenton, S.R. Rintoul.
1115 **# 1325.** Scales of variability in the bottom-up controls on primary production in the Southern Ocean
N. Fauchereau, A. Tagliabue, P. Monteiro.
1130 **Discussion.**
1145 **Discussion.**

Monday, 4 July 2011 1030-1200 MR203
IASPEI
JS01 Advances in Tsunami Science, Warning, and Mitigation
JS01S11
Chairpersons: Vasily Titov & Yushiro Fujii

1030 **Introduction.**
1045 **# 3986.** From Sumatra 2004 to Chile 2010: the systematic GPS detection of the tsunami signature in the ionosphere
G. Occhipinti, L. Rolland, P. Coisson, P. Lognonné.
1100 **# 1520.** Wave Properties and Energy Decay of the 2009 Samoa and 2010 Chile Tsunamis
A. Rabinovich, R. Candella, R. Thomson.
1115 **# 3410.** Numerical Simulation of 2010 Chilean Tsunami in Kesen-numa Bay
K. Fujima, Y. Shigihara.
1130 **# 4187.** Observed and Modeled Tsunami Current Velocities on California's North Coast
L. Dengler, A. Admire, B. Uslu, G. Crawford, J. Montoya, et al.
1145 **Discussion.**

Monday, 4 July 2011 1030-1200 MR216
IASPEI
JS02 Heat Flow, Tectonics, and Geothermal Energy
JS02S4
Chairpersons: Yuri Popov

1030 **# 2646.** Uncertainties of temperature forecast at 5 km based on a 2 km deep pilot borehole – a case study from the Czech Republic
J. Safanda, V. Cermak, P. Dedecek, M. Kresl.
1045 **# 2284.** A Cooperative Approach to Sedimentary Geothermal Reservoir Modeling, Performance Forecast, and Uncertainty Quantification
C. Clauser, C. Vogt, G. Marquart, K. Iwanowski-Strahser, J. Arnold, et al.
1100 **# 5618.** Multidisciplinary approach for defining the geothermal potential on an active volcanic system in the Andes of Chile: Tinguiririca Geothermal Prospect
J. Clavero, G. Pineda, A. Giavelli, C. Mayorga, I. Aguirre, et al.
1115 **# 2485.** Modeling of fracture zone sealing by mineral precipitation from hydrothermal solution
A. Gliko
1130 **# 1488.** A first estimation of maximum attainable temperature output in HDR reservoirs with permeable-walled fractures
R. Mohais, C. Xu, P. Dowd.
1145 **# 2708.** Measurement of the thermal conductivity and specific heat capacity of rocks using a portable electronic divided Bar
A. Antriasian

Monday, 4 July 2011 1030-1200 MR213
IASPEI
JS09 Electromagnetic Studies of Earthquakes, Active Faulting and Tsunamis
JS09S1 Electromagnetic Studies of Earthquakes, Active Faulting and Tsunamis (Networked, Tsunami and gravity waves)
Chairpersons: T. Harinarayana & M. Johnston

1030 **# 4821.** Possible Association between Anomalous Geomagnetic Variations and the Molise Earthquakes at Central Italy during 2002
K. Yumoto, E.M. Takla, P.R. Sutcliffe, V.M. Nikiforov, R. Marshall.
1045 **# 4647.** High potential of seafloor geomagnetic observatories in application to tsunami early warning
H. Toh, K. Satake, Y. Hamano, Y. Fujii, T. Goto.
1100 **# 683.** Undersea earthquake action upon the ionosphere
M. Gokhberg, E. Grekhova, S. Shalimov, G. Steblov, V. Veys.
1115 **# 1075.** On Expected Ionospheric and Atmospheric Disturbances Resulting from Earthquakes
M. Johnston
1130 **# 3914.** Transfer function entropy of the recent 2009 L'Aquila (Italy) seismic sequence
A. De Santis, G. Cianchini, L.X. Wu.
1145 **Discussion.**

Monday, 4 July 2011 1030-1200 MR212
IASPEI
S02 Triggered and Induced Seismicity
S02S4
Chairpersons: Harsh Gupta & Shiyong Zhou

1030 **# 5193.** Triggered seismicity at the Soultz-sous-Forets (France) boreholes in 2003 as a promising tool for understanding driving forces and rupturing processes in the West Bohemia/Vogtland earthquake swarms
J. Horalek, T. Fischer, L. Dorbath, J. Sileny, Z. Jechumtalova.

1045 **# 1742.** Non-linear analysis of seismicity changes in the Geysers area
O. Melchaeva, S. Turuntaev.

1100 **# 3768.** Microseismic Monitoring Of An Underground Gas Storage Facility In The Netherlands
B. Dost, D. Kraaijpoel.

1115 **# 736.** 3d Fully Hydromechanically Coupled Simulation of Seismic Event Potential Induced by Oil and Gas Extraction
D. Beck

1130 **Discussion.**

1145 **Discussion.**

Monday, 4 July 2011 1030-1200 MR210
IASPEI
S07 Strong Ground Motions; their source, path, and site effects
S07S2
Chairpersons: Kuo-Liang Wen & Atilla Ansal

1030 **# 2995. Invited** Insights into the sources of variability of ground motion parameters from regression analysis of KiK-net data in Japan
A. Oth, D. Bindi.

1045 **As above.**

1100 **Discussion.**

1115 **# 3103.** Site Effects: Selection of the Seismic Observation System, Depending on the Requirements for the Intensity of the Detected Signals.
I. Kerimov, S. Kerimov.

1130 **# 2737.** Site response from Istanbul vertical arrays and atrong motion network
A. Ansal, A. Kurtulus, G. Tönük.

1145 **# 5759.** Analysis of Earthquake H/V ratios based on Diffuse Field Theory for Plane Waves to Invert Velocity Structure
H. Kawase, S. Matsushima, F.J. Sanchez-Sesma.

Monday, 4 July 2011 1030-1200 MR102
IASPEI
S09 Earthquake Early Warning Systems
S09S2
Chairpersons: Aldo Zollo & Jochen Zschau

1030 **Introduction.**

1045 **# 1588.** Rapid determination of seimsic fault model using RTK-GPS data
T. Kobayashi, Y. Ohta, S. Miura.

1100 **# 1126.** Determination of Earthquake Early Warning Based on The Initial Phase of P-Wave (Case Study of West Java)
H. Gunawan, N. Puspito, G. Ibrahim, P. Harijadi.

1115 **Discussion.**

1130 **Discussion.**

1145 **Discussion.**

Monday, 4 July 2011 1030-1200 PH1
IAVCEI
JV02 Forecasting and Monitoring Volcanic Eruptions
JV02S3
Chairpersons: Chris Newhall & Joan Marti

1030 **# 5862.** Design, development and implementation of the IGN's multidisciplinary volcano monitoring system at Spain
J. Marti, R. Abella, M.J. Blanco, V. Cabrera, B. Casas, et al.

1045 **# 4149.** A current subject of Geophysical explorations in Japanese volcanology
T. Tsutsui, The Joint Group for the Exploration of Volcano Structure, Japan.

1100 **# 4919.** Towards Mid-Term Eruption Prediction of Izu-Oshima Volcano, Japan: Deep Low-Frequency Earthquakes, Magma Accumulation and C02 Degassing
H. Watanabe

1115 **# 861.** Forecasting of magmatic events at Popocatapetl by Geochemical Methods
A. Armienta, S. De la Cruz-Reyna, A. Soler, A. Gomez, O. Cruz, et al.

1130 **# 5055.** Hydrogeochemical survey for the Furna do Enxofre lake (Graciosa Island, Azores)
P. Antunes, F. Rodrigues.

1145 **# 4341.** Using CO2-emission from soils to identify potential volcano-birth zones at monogenetic volcanic fields
H. Delgado Granados

Monday, 4 July 2011 1030-1200 MR107
IAVCEI
V07 Subaerial and Subaqueous Lava flows
V07S2
Chairpersons: Thor Thordarson

1030 **# 2536. Invited** Eruption and Emplacement Rates of Continental Flood Basalt (CFB) Lava Flow-Fields
S. Self, T. Thordarson.

1045 **As above.**

1100 **# 4336.** Lava – Substrate Heat Transfer on Earth and Moon: Field Experiments and Numerical Simulations
S. Fagents, E. Rumpf, C. Hamilton, I. Crawford.

1115 **# 4689.** Characteristics and Origins of Slabby Pahoehoe, Rubbly Pahoehoe, and Platy-Ridged Lava Flows
C. Hamilton, J. Bleacher, L. Glaze, T. Orr, T. Thordarson.

1130 **# 3838.** Investigation of Terraced Margins Present Around Some Basaltic Lava Flows on the Terrestrial Planets
J. Zimbelman, B. Garry, J. Bleacher, L. Cumpler, S. Self, et al.

1145 **# 643.** Lava Flows and Their Role in the Growing Up of a New Arenal Volcano: Costa Rica.
E. Duarte, E. Fernandez.

Monday, 4 July 2011 1030-1200 MR104
IAVCEI
V08 Volcanic Conduit and Vent Processes
V08S2 Volcanic Conduit and Vent Processes Part 2
Chairpersons: Ben Kennedy & Oleg Melnik

1030 **# 1301.** Basaltic explosive volcanism: magma ascent, degassing and shallow external triggering of explosive volcanic eruptions.
M. Manga, R. Carey, B.F. Houghton, T. Orr, M. Patrick, et al.
1045 **# 2652. Invited** Reflections on the life cycle of gas bubbles in magmas
A. Burgisser, J. Castro, W. Degruyter, L. Forestier Coste, T. Giachetti, et al.
1100 **As above.**
1115 **# 5189.** 2D degassing on siliceous magma flow: Observations, modelling and consequences
M. Collombet, F. Albino, V. Pinel.
1130 **# 2991.** Granular Disruption During Explosive Volcanic Eruptions
J. Dufek, M. Manga, A. Patel.
1145 **Discussion.**

Monday, 4 July 2011 1030-1200 MR204
IAVCEI
V12 Tectonic Controls on Volcanism
V12S2
Chairpersons: Darren Gravley

1030 **# 3322. Invited** Consequences of Extensional Tectonics on Volcanic Eruption Style, Compositions and Source Regions: New Insights from the Southern Sierra Madre Occidental and Gulf of California Regions, Western Mexico
S. Bryan, L. Ferrari, A. Ramos Rosique, M. López Martínez, C. Allen, et al.
1045 **As above.**
1100 **Discussion.**
1115 **# 3001.** Structural Control on Early Devonian Ignimbrite Emplacement in the Siluro-Devonian Goulburn Basin, Eastern Lachlan Orogen
C. Simpson, O. Thomas, J. Fitzherbert, L. Deyssing.
1130 **# 539.** Clock Advance in Earthquake Triggering of Volcanic Eruptions
M. Bebbington, W. Marzocchi.
1145 **# 3991.** Planetary Aspects of Volcanism: Insights Into the Volcano-Tectonic Relationship on Earth
E. Canon-Tapia

MONDAY, 4 JULY 2011 1330-1500 PM1

Monday, 4 July 2011 1330-1500 PH2
IUGG
U09 Do We Really Know the Hydrological Cycle?
U09S1 Speakers by Invitation
Chairpersons: Pierre Hubert

1330 **# 2822.** Multifractal Cascades and the Emergence of Atmospheric Dynamics
D. Schertzer, S. Lovejoy.
1345 **As above.**
1400 **# 1913.** A Hymn to Entropy
D. Koutsoyiannis
1415 **As above.**
1430 **# 1018.** From where comes the precipitation?
H. Savenije
1445 **As above.**

Monday, 4 July 2011 1330-1500 MR214
IAG
G06 Towards a Unified World Height System
G06S3
Chairpersons: Jianliang Huang & Marie-Francoise Lequentrec-Lalancette

1330 **# 5952.** Are There Any Practical Applications of a WHS?
M. Lilje, G. Blick, M. Higgins, R. Sarib.
1345 **As above.**
1400 **# 957.** Comparison of Extensive Aerogravity Surveys to EGM2008.
D. Roman, S. Preaux, V. Childers, S. Holmes, T. Diehl.
1415 **# 3793.** A Global Quasi-geoid Model Determined Based on EGM08 and Combined Digital Elevation Models
J. Li, W.B. Shen.
1430 **# 5388.** Geoid of Nepal from airborne gravity survey
R. Forsberg
1445 **# 5552.** Geometrical Properties of Equipotential Surfaces and their Numerical Studies for High Resolution Earth's Gravity Field Models Expressed in Ellipsoidal Harmonics
P. Holota, O. Nesvadba.

Monday, 4 July 2011 1330-1500 PH3
IAG, IASPEI
JG06/JS06 Tectonic Geodesy and Earthquakes
JG06JS06S5 Tectonic Geodesy and Earthquakes Part 5
Chairpersons: Jeff Freymueller & David D. Jackson

1330 **# 3712.** Monitoring Deformation at the Intersection of Eurasian, Anatolian and Arabian Plates
S. Ozdemir, B. Aktug, O. Lenk, M. Kurt, E. Parmaksiz.
1345 **Discussion.**
1400 **# 1379.** The 2008 Wenchuan earthquake induced water level changes and their tectonic implications
F. Huang, Y. Zhang.
1415 **Discussion.**
1430 **# 2186.** Optimal weighting between GPS and InSAR data for joint inverse for coseismic slip distribution of the 2008 Wenchuan earthquake
C. Xu, Y. Liu, Y. Wen, Q. Wang.
1445 **As above.**

Monday, 4 July 2011 **1330-1500 MR207**

IAGA

JA02 Climate and Weather of the Sun-Earth System – CAWSES –II early results

JA02S3

Chairpersons: Alan Rodger & Susan Avery

1330 **# 1730.** Atmospheric effects of radiation belt precipitation over Antarctica
P. Espy, M. Daae, R. Hibbins, D. Newnham, F. Sarays.

1345 **# 545.** Ionospheric Response to the Space Weather Events during December 2006 in the South Pacific Region
S. Kumar, A. Kumar.

1400 **# 2906.** CAWSES-II Task Group 4: What is the Geospace Response to Variable Inputs From the Lower Atmosphere?
K. Shiokawa, J. Oberheide,. CAWSES-II, Task Group 4.

1415 **# 4073.** Longitudinal network campaign for monitoring of atmosphere -ionosphere dynamical coupling system under the CAWSES-II task group 4 activities
H. Takahashi, J. Makela, K. Shiokawa, J. Oberheide.

1430 **# 5460.** New ground-based observations of the middle atmosphere over Syowa, Antarctica (69S, 39E)
T. Nakamura, A. Mizuno, M. Abo, H. Suzuki, M.K. Ejiri, et al.

1445 **# 5435.** A new estimation method of the total momentum fluxes associated with gravity waves
K. Sato, T. Ohno, S. Watanabe.

Monday, 4 July 2011 **1330-1500 MR209**

IAGA

JA04 Electromagnetic oscillations from space to Earth: Celebrating 150 years and recent developments in ultra-low frequency wave research

JA04S3

Chairpersons: Brian Fraser

1330 **# 4424. Invited** Pulsations and Source Effects in Electromagnetic Induction Array Data
G. Egbert

1345 **As above.**

1400 **# 1078.** Absolute Magnetic Field Monitoring along the San Andreas Fault 1972-2011: What have we learned about Earthquakes, Aseismic Slip, and Volcanic Activity?
M. Johnston

1415 **As above.**

1430 **# 2480.** Cluster Observations of Band-Limited Pc 1 Waves Associated with Streaming H+ and O+ ions in the High-Latitude Flank Plasma Mantle
M. Engebretson, C. Kahlstorf, D. Murr, J. Posch, A. Keiling, et al.

1445 **# 3493.** A Simulation Study of Nonlinear MHD Wave Propagation with Time-dependent Approach.
K. Kim, D-H. Lee, K-H. Kim, K. Kim.

Monday, 4 July 2011 **1330-1500 MR102**

IAGA

A022 Electromagnetic Induction

A022S1 Electromagnetic imaging from the near-surface, lithosphere-asthenosphere, to the core: results and interpretations

Chairpersons: Kate Selway

1330 **Introduction.**

1345 **# 1872.** Natural Signals for Natural Resources
T. Harinarayana

1400 **# 1386.** Electromagnetic Model Response of Ifewara Trancurrent Fault System: A computational and Field Result
A.A. Adepelumi

1415 **# 3716.** Imaging a salt dome structure using joint inversion
M. Moorkamp, M. Jegen, B. Heincke, A.W. Roberts, R.W. Hobbs.

1430 **# 4489.** Using Marine CSEM methods to image seafloor gas hydrate
S. Constable, K. Weitemeyer.

Monday, 4 July 2011 **1330-1500 MR205**

IAGA

A043 Rock Magnetism

A043S1 Geomagnetic field strength of the past: palaeointensity techniques and applications

Chairpersons: Mimi Hill & Yuhji Yamamoto

1330 **# 1827. Invited** Using Historical Lavas to Link Rock Magnetic Properties to the Performance of Palaeointensity Techniques
M. Brown, J. Feinberg, J. Bowles.

1345 **# 5269.** Testing paleointensity determinations on a drilled core of a historic lava in Sakurajima, Japan
K. Fukuma, M. Fujii, D. Miki, N. Ishikawa.

1400 **# 996.** What is the Definition of Good Paleointensity Data?
G. Paterson

1415 **# 1950.** Challenges for paleointensity-methods due to changes in magnetic state
M. Dekkers, L.V. de Groot, M.W.L. Monster.

1430 **# 2609.** Preliminary application of the microwave LTD-DHT Shaw method to ca. 4-6 ma icelandic samples
Y. Yamamoto, M. Hill.

1445 **Discussion.**

Monday, 4 July 2011 **1330-1500 MR215**

IAGA

A062 **Coupling in the atmosphere-ionosphere-magnetosphere system and its response to external forcing and forcing from below**

A062S5 **Low Latitude Atmosphere-ionosphere Coupling Processes and Responses to Forcing from Lower Atmosphere and Magnetosphere**

Chairpersons: A.K. Patra

1330 **# 2797. Invited** Mesosphere-ionosphere coupling features through gravity- and planetary waves in the equatorial and low latitude regions
H. Takahashi, J. Makela, L.M. Lima, I. Batista, M.A. Abdu, et al.

1345 **As above.**

1400 **# 2831. Invited** Large-scale ionospheric disturbances due to the dissipation of convectively-generated gravity wave body forcing over Brazil
H. Liu, S. Vadas.

1415 **As above.**

1430 **# 626.** Stratospheric Warming Effects on the Lunar Tide in the Equatorial Electrojet
R. Stening

1445 **Discussion.**

Monday, 4 July 2011 **1330-1500 MR216**

IAGA

A091 **Magnetosphere-ionosphere coupling**

A091S1 **The plasma sheet – ionosphere, a coupled system: Sinks, sources, transport and the roles of field-aligned currents and ion outflow**

Chairpersons: Simon Wing

1330 **# 5191.** Response of the Night-side Magnetospheric Magnetic Field to Interplanetary Shocks
C. Wang

1345 **# 5022. Invited** Modeling Dynamic Effects of Changes in Plasma Sheet Entropy in Substorms
R. Wolf, C. Chen, J. Yang, B. Hu, F. Toffoletto, et al.

1400 **As above.**

1415 **# 5811. Invited** Current Sheet Thinning and Entropy Constraints During the Substorm Growth Phase
A. Otto

1430 **As above.**

1445 **# 5935.** The Energization of Solar Wind and Ionospheric Ions in the Magnetotail during CME- and CIR-driven Geomagnetic Storms
V. Peroomian, M. El-Alaoui.

Monday, 4 July 2011 **1330-1500 MR218**

IAGA

A131 **Magnetic observations from ground to space – ingredients for new geomagnetic research**

A131S3 **Geomagnetic observatories, their Instrumentation and Management – Basement for Geomagnetic Research**

Chairpersons: Pieter Kotze

1330 **# 2300. Invited** Anthropogenic noise in geomagnetic observatories
J.J. Curto, S. Marsal, J.M. Torta, M. Catalan, P. Covisa.

1345 **As above.**

1400 **# 5880.** Methods to discriminate signal from noise in magnetic observatory data
D. Kerridge, C. Turbitt, O. Baillie, E. Clarke.

1415 **# 5072.** Data acquisition system for Russian Arctic magnetometer network
A. Janzhura, O. Troshichev.

1430 **# 1170.** Automated system for recognition of artificial spikes on 1-minute and 1-second magnetograms
A. Soloviev, A. Chulliat, S. Agayan, S. Bogoutdinov, A. Gvishiani.

1445 **# 1776.** Magnetic observatories, indispensable sources in the magnetic researches in Vietnam
H.D. Chau, L.T. Thanh, N.T. Dung.

Monday, 4 July 2011 **1330-1500 MR208**

IAGA

A152 **Reporter's Review**

A152S1

Chairpersons: Mari Paz Miralles

1330 **# 5943. Invited** Is there a turbulent dynamo at work in the Sun?
P. Bushby

1345 **As above.**

1400 **As above.**

1415 **# 1521. Invited** The 'Quiet Sun': A Historical Misnomer
R. Centeno

1430 **As above.**

1445 **As above.**

Monday, 4 July 2011 **1330-1500 MR217**

IAHS

JH01 **GRACE, other remote sensing platforms and ground based methods for estimating multi-scale surface water budgets, groundwater system characterization and hydrological processes**

JH01S7

Chairpersons: TBC

1330 **Introduction.**

1345 **# 5958.** Informing hydrological models with ground-based time-lapse relative gravimetry: Potential and limitations
D. Rosbjerg, P. Bauer-Gottwein, L. Christiansen, O.B. Anderson, P. Binning.

1400 **# 500.** Surface layer sensible heat flux using Large-Aperture Scintillometer over Irrigated horticulture in Murrumbidgee Irrigation area
U. Rabbani, M. Hafeez, Y. Chemin.

1415 **# 502.** A Remote Sensing Based ET Algorithm for an Australian Agro-Ecosystem: SAM-ET
M. Hafeez, Y. Chemin.

1430 **# 503.** Real Time Irrigation Demand Forecasting using Remote Sensing and Meteorological Data in Semi-arid Regions
K. Ullah, M. Hafeez, Y. Chemin, J. Sixsmith, R. Faux.

1445 **Discussion.**

Monday, 4 July 2011 **1330-1500 MR219**
IAHS
JHW01 Integrated flood management
JHW01S3
Chairpersons: Gabriel Arduino

1330 **Introduction/Key Note Dasarath Jayasuriya Impacts of Recent Flood Events in Australia double.**
1345 **As above.**
1400 **# 546.** Flood risk analysis in the area with rapid urban development
B. Radojevic, P. Breil, B. Chocat.
1415 **As above.**
1430 **# 4446.** Exercise Watermark: Testing the United Kingdom's Preparedness for Major Flooding
K. Chandler, R. Stafford.
1445 **As above.**

Monday, 4 July 2011 **1330-1500 MR220**
IAHS
JHW03 Impacts of changing climate, snow and ice on mountain hydrology
JHW03S3
Chairpersons: TBC

1330 **# 1369.** Assessment of possible climate change impacts on runoff regime of mountainous watersheds of Eastern Siberia
O. Semenova
1345 **# 1873.** Can Precipitation Suppression due to Anthropogenic Aerosol Pollution be detected using Back Trajectory Methods?
S. Siems, T. Chubb, M. Manton.
1400 **# 2419.** Changes of Freezing Level Height and its relationship with snowline permafrost and glacier in China
Y. Guo
1415 **Discussion.**
1430 **Discussion.**
1445 **# 2696.** Sensitivity of snow processes to precipitation and temperature change: spatial variability in a small basin in the Spanish pyrenees
I. Lopez-Moreno, S. Vicente-serrano, J. Pomeroy.

Monday, 4 July 2011 **1330-1500 MR212**
IAHS
H04 Assessment of water quality under changing climate conditions
H04S1 Seasonality and Extreme Event Effects on Water Quality
Chairpersons: Jake Peters & Valentina Krysanova

1330 **Introduction.**
S. Zandaryaa
1345 **# 200.** Rainwater Quality -a measure of industrial development and pollution of ground water
R.P. Patury, S.N. Yellapu, V.P. Nekkanti & K. Chandu.
1400 **Discussion.**
1415 **# 257.** Nonpoint-source nutrient losses in interflow affected by winter processes
C Han, S.G. Xu, T.X. Luan & J.W. Liu.
1430 **# 370.** Assessment of Water Quality Variation in Amite River Watershed under Changing Climate and Land Use
Z Deng
1445 **# 349.** A comparison of deflation basin (wetland) soils from wet and dry climatic zones
M Neave & S. Rayburg.

Monday, 4 July 2011 **1330-1500 MR109**
IAHS
HW08 Tracer hydrology as a tool for estimating flow parameters, groundwater dynamics, pollution transport and bioremediation processes in heterogeneous systems
HW08S2
Chairpersons: Piotr Maloszewski

1330 **# 2152.** The validation of groundwater age dating by using of 85Kr in groundwater
M. Matsunaga, J. Shimada, M. Kagabu, R. Ikawa, S. Morita, et al.
1345 **# 2293.** Isotopic And Chemical Assessment Of Water Sources And Surface-Groundwater Relationships In The Iberá Wetland System, NE Argentina
M.S. Manzano, L. Rodríguez, J. Heredia, L. Vives, J. Nittman, et al.
1400 **# 2748.** Flow pattern and residence time of groundwater within the south-eastern taoudeni sedimentary basin (Burkina Faso, Mali)
F. Huneau, D. Dakoure, H. Celle-Jeanton, T. Vitvar, M. Ito, et al.
1415 **# 3409.** Quantifying stream losses in a fractured sandstone aquifer impacted by mining-induced subsidence using applied and environmental tracers
J. Jankowski, W. McLean, E. Reece.
1430 **# 3548.** Use of Temperature as a Tracer to Estimate Vertical Hydraulic Conductivity of Streambed in a Natural Stream
S. Lee, Yunjung. Hyun, Kang-Kun. Lee.
1445 **Discussion.**

Monday, 4 July 2011 **1330-1500 MR103**
IAMAS
JM04 Stratosphere-Troposphere-Ocean coupling in weather and climate
JM04S1
Chairpersons: G. Roff

1330 **# 5043. Invited** Potential role of the stratosphere in Atlantic Multi-decadal Variability
N. Keenlyside, N.E. Omrani.
1345 **As above.**
1400 **# 4958. Invited** From decadal climate variability to climate prediction in the North Atlantic region
W. Mueller
1415 **As above.**
1430 **# 3671.** Influence of a midlatitude oceanic frontal zone on the annular variability of the extratropical atmosphere and its vertical connectivity
H. Nakamura, F. Ogawa, T. Sampe, A. Goto, A. Kuwano-Yoshida.
1445 **# 1272.** How to understand the lagged winter stratospheric response to ENSO?
R. Ren, M. Cai, C. Xiang, G. Wu.

Monday, 4 July 2011 1330-1500 MR101
IAMAS
JM09 External forcing from above on the middle atmosphere and lower ionosphere
JM09S2
Chairpersons: Lastovicka & Krivolutsky

1330 **# 3540. Invited** Ionic Production of Hydroxyl and Nitric Acid in the Mesosphere During Solar Proton Events
P. Verronen, M.L. Santee, G.L. Manney, S. Wang, R. Lehmann, et al.
1345 **As above.**
1400 **# 895. Invited** Ionization effect of galactic cosmic rays and strong solar particle events in the middle atmosphere
I. Mironova, I. Usoskin.
1415 **As above.**
1430 **# 4973. Invited** External Forcing by Precipitating Particles – Modeling Atmospheric Ionization with AIMOS and Comparisons to Radar Measurements
J.M. Wissing, M.B. Kallenrode, J. Kieser, H. Schmidt, M.T. Rietveld.
1445 **# 4354.** Modelling D-region Transient Electron Density Enhancements Caused by Solar X-ray Flares
V. Zigman, A. Kolarski, D. Sulic.

Monday, 4 July 2011 1330-1500 MR105
IAMAS
JM10 Monsoons, Tropical Cyclones and Tropical Dynamics
JM10S17 Regional Influences
Chairpersons: Richard Grotjahn

1330 **# 4487.** Dynamical Climate Downscaling for Tropical Regions of Australia and Neighbouring Countries
J. McGregor, J.J. Katzfey, K.C. Nguyen, M.J. Thatcher.
1345 **# 4097.** Drivers of inter-annual variability in Queensland's rainfall
N. Klingaman, S. Woolnough, J. Syktus.
1400 **# 3087.** Remote influence of the tropical Atlantic on the variability and trend in North West Australia summer rainfall
Z. Lin, Y. Li.
1415 **# 4395.** Evaluating the Link Between North Australian SST and ENSO in Climate Models
J. Catto, N. Nicholls.
1430 **Discussion.**
1445 **# 2687.** The effect of orography and surface albedo on stratification in the Saharan atmospheric boundary layer: dynamics and implications for dust transport
C. Birch, G. Devine, J. Marsham, D. Parker.

Monday, 4 July 2011 1330-1500 MR110
IAMAS
M10 Tropospheric processes and processing: Pollution and biogeochemical cycling
M10S1 Air quality – Health and Policy
Chairpersons: John Burrows & Ian Galbally

1330 **# 3068. Invited** The Health Effects of Fine Particles in the Air before and during Beijing Olympics
T. Zhu, X.C. Pan, X.B. Guo, W. Huang, M. Hu, et al.
1345 **As above.**
1400 **# 1923.** The Sensitivity of Extreme Annual Air Pollution Statistics to Modelled Year and Implications for Environmental Assessments
P. Hurley
1415 **Discussion.**
1430 **Discussion.**
1445 **# 5074.** Remote Sensing of Tropospheric Trace Gases and Aerosols: Policy Relevant Science for Air Quality
R. Dickerson, J. Burrows, T. Canty, N. Krotkov, R. Salawitch, et al.

Monday, 4 July 2011 1330-1500 MR108
IAMAS
M14 Stratospheric processes and their role in climate focused on the Southern Hemisphere
M14S1
Chairpersons: Greg Bodeker

1330 **# 4055. Invited** Stratospheric Ozone Depletion and its Impact on Tropospheric Circulation and Sea Ice Extent
J. Turner
1345 **As above.**
1400 **# 5149. Invited** Antarctic Ozone Depletion and the Poleward Shift of the Southern Hemispheric Ocean Supergyre Circulation
W. Cai
1415 **As above.**
1430 **# 5185.** The Brewer-Dobson Circulation and Total Ozone from Seasonal to Decadal Time Scales
M. Weber, S. Dikty, J.P. Burrows, H. Garny, M. Dameris, et al.
1445 **# 2825.** Spatial Heterodyne Spectroscopy Approach to Stratospheric Doppler Wind Measurement
G. Shepherd, B. Solheim, S. Brown, W. Gault, A. Hollinger.

Monday, 4 July 2011 1330-1500 MR203
IASPEI
JS02 Heat Flow, Tectonics, and Geothermal Energy
JS02S12
Chairpersons: Yuichiro Tanioka & William Power

1330 **# 3488.** Seismic moment and slip distribution of the 1960 and 2010 chilean earthquakes as inferred from tsunami waveform and geodetic data
Y. Fujii, K. Satake.
1345 **Discussion.**
1400 **# 2016.** Field test on the lodging and uprooting conditions of coastal trees in Indonesia and verification of those through the 2010 Mentawai Earthquake tsunami
H. Matsutomi, K. Harada, B. Widagdo, S. Diposaptono.
1415 **# 2380.** Tsunami Field Survey for the Mentawai, Indonesia, Earthquake of October 25, 2010
K. Satake, Y. Nishimura, P. Putra, E. Yulianto, H. Sunendar, et al.
1430 **# 3822.** Turning point for countermeasures to reduce disaster vulnerability -Lessons from the 2010 Mentawai tsunami earthquake in Indonesia
M. Sugimoto, M. Pradono, K. Satake.
1445 **# 5785.** Field Survey and Numerical Modeling of the 25 October 2010 Mentawai Islands Tsunami in Indonesia
J. Borrero, H. Fritz, B. Suwargadi, L. Linlin, Q. Qiang, et al.

Monday, 4 July 2011 1330-1500 MR213
IASPEI
JS09 Electromagnetic Studies of Earthquakes, Active Faulting and Tsunamis
JS09S2 Electromagnetic Studies of Earthquakes, Active Faulting and Tsunamis (Networked, Tsunami and gravity waves (MT and Theory)
Chairpersons: M. Johnston & T. Harinarayana

1330 **# 3060.** Estimation of Variations in the Electromagnetic Field Generated by Induction Effects Accompanying with Rayleigh Waves
K. Yamazaki
1345 **# 2393.** Resistivity imaging across the tectonic zone in the western part of Tohoku region, Japan
H. Hase, S. Sakanaka, K. Aizawa, T. Koyama, T. Ogawa, et al.
1400 **# 1197.** Comparison of Kamchatkian Subterranean Electrical Operative Forerunners of Earthquakes with M8. 8 and M7, Occurred in Chile (2010/02/27) and New Zealand (2010/09/03)
V. Bobrovskiy
1415 **# 3053.** Detect Active Faults with CSAMT Method
C. Fu, D. Li, Y. Zhang, C. Xu, Q. Di.
1430 **# 1529.** MT Studies in Seismically Active Fault Region of Koyna, Western India.
T. Harinarayana, M. Narayanan, C. Reddy, A. Kumar Gupta, N. Babu.
1445 **Discussion.**

Monday, 4 July 2011 1330-1500 MR210
IASPEI
S07 Strong Ground Motions; their source, path, and site effects
S07S3
Chairpersons: Hiroshi Kawase & Mohsen Ghafory-Ashtiany

1330 **Introduction.**
1345 **# 1327.** M6. 5 Strong Ground Motion Data Base Scenario
M. Ghafory-Ashtiany, H. Hatefi-Ardekani.
1400 **Discussion.**
1415 **# 1326.** Eta-Based Design Spectra
M. Ghafory-Ashtiany, M. Mousavi, A. Azarbakht.
1430 **Discussion.**
1445 **Discussion.**

Monday, 4 July 2011 1330-1500 MR106
IASPEI
S12 Episodic Tremor, Slip, and Large Earthquakes
S12S1
Chairpersons: David D. Jackson & David Shelly

1330 **# 5793.** Variations in tremor activity and implications for lower crustal deformation along the central San Andreas Fault, California
D. Shelly
1345 **As above.**
1400 **# 1778.** The 2006 Slow Slip Event in Guerrero Constrained by Radar Interferometry
A. Hooper, D. Bekaert, E. Pathier.
1415 **# 1877.** Geometrical Constraints on World Deep Tremor
S. Ide
1430 **# 4206.** Relationships of Episodic Tremor and Slip (ETS) and Seismicity Along the Northern Cascadia Margin
H. Dragert, H. Kao, G. Rogers, K. Wang.
1445 **As above.**

Monday, 4 July 2011 1330-1500 PH1
IAVCEI
JV02 Forecasting and Monitoring Volcanic Eruptions
JV02S4
Chairpersons: Joan Marti & Chris Newhall

1330 **# 5027.** Volcano Eruption Forecasting with Limited Seismic Data
W. McCausland, R.A. White.
1345 **# 5828.** Accelerating Rock and Magma Fracture before Volcanic Eruptions: Insights from Laboratory Experiments
R. Smith, Y. Lavallee, MJ. Heap, J. Kendrick, DB. Dingwell, et al.
1400 **# 4123.** A rheological criterion for volcanic forecasting.
B. Cordonnier, L. Caricchi, M. Manga.
1415 **# 1958.** Earthquake Shocks At Taupo: Historical Caldera Unrest Events And Implications For Future Crisis Management In New Zealand
S. Potter, E. Doyle, D. Johnston, G. Jolly, B. Scott.
1430 **# 2140.** Communicating Science Advice and Probabilities to Emergency Managers
E. Doyle, D.M. Johnston, J. McClure, D. Paton.
1445 **# 2692.** Management crisis during the centennial 2010 eruption at Merapi volcano, Central Java, Indonesia
P. Jousset, A. Surono, J. Pallister.

Monday, 4 July 2011 1330-1500 MR107
IAVCEI
V07 Subaerial and Subaqueous Lava flows
V07S3
Chairpersons: Thor Thordarson

1330 **# 4296.** Determining the Eruption Style and Composition of Terrestrial Lavas Using Hyperspectral Satellite Data
R. Wright, L. Glaze, S. Baloga.
1345 **Discussion.**
1400 **# 1316.** Morphologies and Structural Features of Submarine Lava Flows Along the Axis of the South Rift Zone of Loihi Seamount, Hawaii
J. Peláez, M. Kurz, D. Fornari.
1415 **# 5798.** The March to April 2010 Fimmvöruháls basaltic lava flow field, Eyjafjallajökull volcano, Iceland
T. Thordarson, A. Hoskuldsson.
1430 **Discussion.**
1445 **Discussion.**

Monday, 4 July 2011 **1330-1500 MR104**
IAVCEI
V08 Volcanic Conduit and Vent Processes
V08S3 Volcanic Conduit and Vent Processes Part 3
Chairpersons: Paolo Papale & Ben Kennedy

1330 **# 5819.** Insights into Magma Fragmentation from Acoustic Emission Monitoring of Laboratory Experiments
R. Smith, B. Scheu, Y. Lavallee, P. Benson, DB. Dingwell.
1345 **# 3071.** Multiparametric geophysical constraints on Vulcanian explosion dynamics
J. Gottsmann, S. de Angelis, N. Fournier, M. Van Camp, S. Sacks, et al.
1400 **# 3204.** Local Infrasound Observations of the Explosive Eruptions of Redoubt Volcano, Alaska, March-April 2009
S. McNutt, K. Arnoult, J. Olson, C. Szuberla, M. West.
1415 **# 2331.** Modelling LP source process at Ngauruhoe volcano, New Zealand
A. Jolly, P. Jousset, J. Neuberg, S. Sherburn.
1430 **Discussion.**
1445 **# 5067.** Pressure oscillations and infrasound signals of degassing magma columns
L. Pioli, R. Genco, M. Ripepe, B. Azzopardi, C. Bonadonna.

MONDAY, 4 JULY 2011 1630-1800 PM2

Monday, 4 July 2011 **1630-1800 PH2**
IUGG
U09 Do We Really Know the Hydrological Cycle?
U09S2 Speakers by Invitation
Chairpersons: Hubert Savenije

1630 **# 2001.** The hydrological cycle: atmospheric moisture transports from ocean to land as seen in reanalyses
K. Trenberth
1645 **As above.**
1700 **# 2328.** Fifty Years of Water Cycle Change expressed in Ocean Salinity
P. Durack, S. Wijffels.
1715 **As above.**
1730 **# 4182.** The hydrological cycle: measurements and models
F. Seyler, S. Calmant, P. Hubert.
1745 **As above.**

Monday, 4 July 2011 **1630-1800 MR214**
IAG
G06 Towards a Unified World Height System
G06S4
Chairpersons: Matt Amos & Will Featherstone

1630 **# 1692.** Numerical approach for a unified World Height System
L. Sanchez
1645 **As above.**
1700 **# 5060.** IAG ICP1. 2 Final Results – Global Unified Height System: An Integration of Gravity and Geometric Reference
J. Ihde, G. Liebsch, U. Marti, L. Sanchez, T. Schöne, et al.
1715 **# 4001.** World Height System Unification and GOCE
M. Sideris, R. Rummel, T. Gruber, J. Ihde, P.L. Woodworth, et al.
1730 **# 3721.** Computation and Validation of Gravity Field Models on the Basis of GOCE Satellite Data
P. Ditmar, H. Hashemi Farahani, P. Ditmar, R. Klees, J. Encarnacao.
1745 **# 3634.** Local Realisation of a World Height System by Using Levelling Data
U. Marti, C. Hirt, A. Schlatter.

Monday, 4 July 2011 **1630-1800 PH3**
IAG, IASPEI
JG06/JS06 Tectonic Geodesy and Earthquakes
JG06JS06S6 Tectonic Geodesy and Earthquakes Part 6
Chairpersons: Davd D. Jackson & Valentin Mihkailov

1630 **# 4725.** Dense GPS Observation and Deformation Characteristics Around Active Fault Zones in Central Japan
T. Sagiya, M. Ohzono, T. Nishimura, K. Ozawa, Y. Hoso.
1645 **# 2590.** A slow rifting episode at the izu back-arc remotely triggered by the 2004 September earthquake in the Nankai Trough
K. Heki
1700 **# 2048.** Finite Fault Inversion of 2010 Mw 6. 9 Yushu Earthquake from ALOS and Envisat Observations
Y. Wen, C. Xu, Y. Liu.
1715 **# 3081.** Co- and Postseismic Deformation of the 14 April 2010 Ms7. 1 Yushu, Qinghai, China Earthquake Determined by GPS and InSAR Data
G. Meng, X. Su, S. Hong, Y. Shao, J. Ren.
1730 **# 2931.** Robustness of Rupture Surface Reconstruction Using SAR, GPS and Surface Data: A Case Study of Altai 27. 09. 2003 Earthquake
V. Mikhaylov, S. Polyakov, E. Kiseleva, E. Timoshkina, M. Diament, et al.
1745 **Discussion.**

Monday, 4 July 2011 **1630-1800 MR209**
IAGA
JA04 Electromagnetic oscillations from space to Earth: Celebrating 150 years and recent developments in ultra-low frequency wave research
JA04S4
Chairpersons: Malcolm Johnston & Brian Fraser

1630 **# 4820.** Main Source of Pi 2 Magnetic Pulsations based on Network Magnetometer Data
K. Yumoto, T. Uozumi, T. Tokunaga, M. Sakai, S. Imajo, et al.
1645 **# 1969.** Coherence Analysis of Daytside Pi2 Pulsations at the Equator and Nightside Pi2 Pulsations in the Auroral Region
K. Kim, K. Takahashi, H.J. Kwon, D.H. Lee, K. Yumoto.
1700 **# 3239.** Observations of a Unique Type of ULF Waves by Low-latitude Space Technology 5 Satellites
G. Le, P. Chi, R. Strangeway, J. Slavin.
1715 **# 4607.** Magnetoseismology Using Ground Observations of ULF Waves
P. Chi
1730 **# 5692.** ULF wave absorption in the Mercury's multi-ion magnetosphere
E. Kim, J. Johnson, K. Lee.
1745 **Discussion.**

Monday, 4 July 2011 1630-1800 MR102
IAGA
A022 Electromagnetic Induction
A022S2 Electromagnetic imaging from the near-surface, lithosphere-asthenosphere, to the core: results and interpretations
Chairpersons: Malcolm Ingham

1630 **# 4586.** Gondwana-related suture zone in the Prydz Bay region, Antarctica, imaged with magnetotellurics
K. Selway, J. Peacock, A. Collins, G. Heinson.
1645 **# 3598.** An upper mantle electrical conductivity profile beneath the Australian continent and a comparison with a laboratory-based model
M. Ichiki, K. Fuji-ta, L. Wang, J. Whatman, A. Hitchman.
1700 **# 1531.** Imaging the Newer Volcanic Province lithosphere from a long-period MT array in western Victoria, Australia
S. Aivazpourporgou, H. Adam, D. Willis, L. Kocijan, P. Hayman, et al.
1715 **# 1536.** Investigation of Sumatran Fault derived from Magnetotelluric Data
N. Hasan, Y. Ogawa, F. Kimata, D. Sutarno, D. Sugiyanto.
1730 **#1386.** Electromagnetic Model Response of Ifewara Trancurrent Fault System: A computational and Field Result
A.A. Adepelumi
1745 **Discussion.**

Monday, 4 July 2011 1630-1800 MR205
IAGA
A043 Rock Magnetism
A043S2 Geomagnetic field strength of the past: palaeointensity techniques and applications
Chairpersons: Yuhji Yamamoto & Mimi Hill

1630 **# 1731. Invited** How the intensity data improve the accuracy of the archeomagnetic dating.
F.J. Pavon-Carrasco, J. Rodriguez-Gonzalez, M.L. Osete, J.M. Torta.
1645 **# 2460.** Microwave Archaeointensity Methodology
M. Hill, A. Biggin, F. Stark, N. Suttie, M. Thomas.
1700 **# 1994.** Intensity of the Earth's magnetic field over the last 3000 years in Melanesia and the potential of archaeomagnetic dating
F. Stark, M. Hill, J. Cassidy, J. Shaw, P. Sheppard.
1715 **# 1195.** Paleointensities from Maui Island, Hawaii, for the last 15,000 years
H. Boehnel, E. Herrero-Bervera, M. Dekkers, J. Hagstrum, D. Champion.
1730 **# 1594. Invited** Maximum likelihood modeling of paleomagnetic axial dipole moment: insights and applications
L. Ziegler, C. Constable.
1745 **Discussion.**

Monday, 4 July 2011 1630-1800 MR215
IAGA
A062 Coupling in the atmosphere-ionosphere-magnetosphere system and its response to external forcing and forcing from below
A062S6 Low Latitude Atmosphere-ionosphere Coupling Processes and Responses to Forcing from Lower Atmosphere and Magnetosphere
Chairpersons: Han-Li Liu

1630 **# 1183. Invited** Global response of the ionosphere to atmospheric tides forced from below: Recent progress based on satellite measurements
D. Pancheva, P. Mukhtarov.
1645 **As above.**
1700 **# 1245. Invited** On the role of Atmospheric Tides in the Day-to-Day Variabilities in the Low Latitude Atmosphere-Ionosphere System
S. Gurubaran, R. Dhanya.
1715 **As above.**
1730 **# 1237.** Height Profile Of Low Latitude Ionospheric Current System Using Numerical Simulations
G. Vichare, A.J. Ridley, A.D. Richmond.
1745 **# 4852.** Dependence of the equatorial electrojet strength on the shape of Sq current system
Y. Yamazaki, K. Yumoto, D. McNamara, T. Uozumi, R. Marshall, et al.

Monday, 4 July 2011 1630-1800 MR216
IAGA
A091 Magnetosphere-ionosphere coupling
A091S2 The plasma sheet – ionosphere, a coupled system: Sinks, sources, transport and the roles of field-aligned currents and ion outflow
Chairpersons: Jay Johnson

1630 **# 4575. Invited** Numerical simulations of plasma entry, transport, and heating
J. Lyon
1645 **As above.**
1700 **# 2794. Invited** Spatial Structures Of Plasma Sheet Ions And Electrons And Their Transport Processes: THEMIS And Geotail Observations And Comparisons With The Rice Convection Model
C. Wang, M. Gkioulidou, L. Lyons, V. Angelopoulos, R. Wolf, et al.
1715 **As above.**
1730 **# 623. Invited** Observations of kinetic Alfvén wave driven plasma sheet transport
C. Chaston, Y. Yao,. ThemisTeam, ClusterTeam.
1745 **As above.**

Monday, 4 July 2011 **1630-1800 MR218**

IAGA

A131 Magnetic observations from ground to space – ingredients for new geomagnetic research

A131S4 Geomagnetic observatories, their Instrumentation and Management – Basement for Geomagnetic Research

Chairpersons: Pavel Hejda

1630 **# 2659. Invited** Report on activities of MagNetE – the group for European repeat station surveys
B. Leichter, G. Duma.

1645 **As above.**

1700 **# 1812.** The Geomagnetic Monitoring at the Brazilian Southern Space Observatory
N.J. Schuch, N.B. Trivedi, S.L.G. Dutra, S.L. Fontes, K. Yumoto, et al.

1715 **# 1241.** Storm and Substorm characteristics as observed from Maitri
R. Selvamurugan, B.M. Pathat, A. Dhar, A. Hanchinal.

Monday, 4 July 2011 **1630-1800 MR207**

IAGA

A142 Lithospheric field and related geological/ tectonic implications

A142S1 Seismological and Tectonic interpretation of geomagnetic data combined with other geophysical results

Chairpersons: TBC

1630 **# 1121.** Analysis Characteristics Signal ULF Band –EM for Earthquake precursor in Sumatera Lesson: Large Earthquake Sumatera 2000-2010
S. Ahadi, G. Ibrahim, K. Yumoto, H. Grandis, S. Saroso.

1645 **# 3581.** New Structural Traps in Vicinity of Giant Oil Fields in the South-West Iran
M. Mokhtari, I. Abdoullahie Fard.

1700 **# 3701.** Recent Seismic Activities Along The Chindwin River
A. Kumar

1715 **Discussion.**

1730 **Discussion.**

1745 **# 2128.** Digitisation of analog GEODAS marine magnetic data
T. Ishihara, M. Catalan.

Monday, 4 July 2011 **1630-1800 MR208**

IAGA

A152 Reporter's Review

A152S2

Chairpersons: Mari Paz Miralles

1630 **# 1207. Invited** The Physics of Coronal Heating and Solar Wind Acceleration: Ongoing Research and Unanswered Questions
S. Cranmer

1645 **As above.**

1700 **As above.**

1715 **# 2602. Invited** Coherent radio emissions associated with solar system shocks
I. Cairns

1730 **As above.**

1745 **As above.**

Monday, 4 July 2011 **1630-1800 MR220**

IAHS

JHW03 Impacts of changing climate, snow and ice on mountain hydrology

JHW03S4

Chairpersons: TBC

1630 **# 2864.** Changes in the Phase of Precipitation across the North American Cordillera
D. Marks, J. Pomeroy, M. Reba, P. Harder.

1645 **Discussion.**

1700 **# 3318.** Potential Impacts of Climate Change on Water Resources in the Clutha River catchment, New Zealand: More Rain and Less Snow.
R. Woods, S. Poyck, J. Hendrikx, H. McMillan, E. Hreinsson.

1715 **# 3979.** Trend analysis across the components of hydrological cycle in Illinois under climate warming
P. Yeh, M-H. Yuan, T. Oki.

1730 **# 4721.** Distributed, Hydrological Modelling to Assess Runoff Dynamics and Storage Functions Across Different Scales in the Sierra Nevada, California
J. Helmschrot, J. Lundquist.

1745 **# 4732.** Landsat imagery as a tool to investigate impacts of climatic variations on partially glacierized catchments
F. Soria, S. Kazama.

Monday, 4 July 2011 **1630-1800 MR212**

IAHS

H04 Assessment of water quality under changing climate conditions

H04S2 Seasonality and Extreme Event Effects on Water Quality and Effects on Groundwater Quality

Chairpersons: Martin Thoms & Rajendra Prasad

1630 **# 378.** Climate and contaminant transport: the role of within-storm variability on contaminant transport by surface runoff
S. Payraudeau, G.S. McGrath, C. Hinz.

1645 **# 357.** Effects of extreme events on the export of diffused pollution from an agricultural watershed in eastern China
X. Chen, Z. Yu.

1700 **# 409.** 100 years variation in nutrient discharge reconstructed, using vertical nutrient profile of sediment in an artificial river mouth lake of Seto Inland Sea, Japan
G Jin, S. Onodera, A. Amano, T. Sato & Y. Shimizu.

1715 **# 506.** The Effects of Hydrological Drought on Water Quality
K. Nosrati

1730 **# 403.** Climate variability and its impacts on the spatial and temporal variation in the quality of groundwater in an island
M.D. Nowbuth

1745 **# 519.** Influence of Anthropogenic Activities and Seasonal Variation on Groundwater Quality of Kathmandu using Multivariate Statistical Analysis
D.R. Pathak

Monday, 4 July 2011 1630-1800 MR109
IAHS
HW08 Tracer hydrology as a tool for estimating flow parameters, groundwater dynamics, pollution transport and bioremediation processes in heterogeneous systems
HW08S3
Chairpersons: Piotr Maloszewski

1630 **# 4134.** Analysis of Tracer Experiments with an Interval Arithmetic implementation of the Convolution Integral
R. Van Nooijen, M. Hrachowitz, A.G. Kolechkina.
1645 **Discussion.**
1700 **Discussion.**
1715 **# 5628.** Resolving multi-component groundwater mixing patterns in highly saline environments: the example of the former salt mining town of Stassfurt, Germany
S. Stadler, J. Sueltenfuss, C. Jahnke, A. Bohn.
1730 **Discussion.**
1745 **Discussion.**

Monday, 4 July 2011 1630-1800 MR103
IAMAS
JM04 Stratosphere-Troposphere-Ocean coupling in weather and climate
JM04S2
Chairpersons: Mueller

1630 **# 2835. Invited** Effect of Ocean Model Resolution on CCSM Climate Simulations
B. Kirtman
1645 **As above.**
1700 **# 4557. Invited** El Niño Modoki and Indian Ocean Dipole
T. Yamagata, S. Behera, T. Tozuka.
1715 **As above.**
1730 **# 4997.** Tropical upwelling and sea surface temperatures
R. Deckert, H. Garny, M. Dameris.
1745 **# 2963.** Phase synchronization between stratospheric and tropospheric quasi-biennial and semi-annual oscillations: an observational study
P. Read, A. Castrejon-Pita.

Monday, 4 July 2011 1630-1800 MR101
IAMAS
JM09 External forcing from above on the middle atmosphere and lower ionosphere
JM09S3
Chairpersons: Alexei Krivolutsky & Jan Lastovicka

1630 **# 4269. Invited** Direct Versus Indirect EPP NOx in the Stratosphere
D. Marsh, D.E. Kinnison, C.H. Jackman.
1645 **As above.**
1700 **# 2672. Invited** Composition changes after the halloween solar proton event: the high-energy particle precipitation in the atmosphere (HEPPA) model versus MIPAS data inter-comparison study
B. Funke, A. Baumgaertner, M. Callisto, T. Eogorova, C.H. Jackman, et al.
1715 **As above.**
1730 **# 3706.** A Cooling Effect in the Upper Mesosphere Associated with the 2003 Halloween Storms
J. Stadsnes, H. Nesse Tyssoy, C.J. Mertens, F. Soraas.
1745 **# 4081.** Non-zonal structure of the response in chemical composition at polar regions caused by precipitating energetic particles during October-November 2003 (3D photochemical simulations)
A. Krivolutsky, T. Vyushkova, M. Wissing, A. Repnev, L. Cherepanva.

Monday, 4 July 2011 1630-1800 MR105
IAMAS
JM10 Monsoons, Tropical Cyclones and Tropical Dynamics
JM10S18 Enso and Teleconnections
Chairpersons: Jenni Evans

1630 **# 2361. Invited** How well can we predict teleconnections of the Indian Ocean Dipole?
H.H. Hendon, S. Langford, S. Li.
1645 **As above.**
1700 **# 1263.** Potential of equatorial Atlantic variability to enhance El Niño prediction
N. Keenlyside, H. Ding, M. Latif.
1715 **# 4799.** Simulation of El Niño–Southern Oscillation in the ACCESS coupled model: phase locking to the annual cycle
H. Rashid, D. Bi, M. Dix, A. Hirst, Z. Sun, et al.
1730 **# 2345.** Different Impacts of Two Types of Pacific Ocean Warming on the Southeast Asian Rainfall during Boreal Winter
W. Chen, J. Feng, L. Wang.
1745 **# 4881.** Interannual variability of the Baiu front near Japan and tropical cyclones in the western North Pacific
T. Yamaura, T. Tomita.

Monday, 4 July 2011 1630-1800 MR110
IAMAS
M10 Tropospheric processes and processing: Pollution and biogeochemical cycling
M10S2 Trends of atmospheric constituents
Chairpersons: Kimitaka Kawamura & Tong Zhu

1630 **# 3257. Invited** Trends in Ozone in the Marine Boundary Layer over the Southern Ocean and in the Southern Hemisphere Troposphere
I. Galbally
1645 **As above.**
1700 **Discussion.**
1715 **# 1127.** What have we learned from 10 years monitoring at the puy de Dôme station
T. Charbouillot, M. Vaitiligom, L. Deguillaume, M. Brigante, A.M. Delort, et al.
1730 **Discussion.**
1745 **# 5023.** Projection of Air Quality in Melbourne, Australia in 2030s and 2070s using a Dynamic Downscaling System
S. Lee, M. Cope, S. Walsh, M. Bannister, W. Delaney, et al.

Monday, 4 July 2011 **1630-1800 MR108**

IAMAS

M14 **Stratospheric processes and their role in climate focused on the Southern Hemisphere**

M14S2

Chairpersons: Murry Salby

1630 **# 3201. Invited** Southern-Hemisphere Climate Impacts of Anthropogenic Ozone Depletion
O. Morgenstern, S. Dean.

1645 **As above.**

1700 **# 5620.** SWIFT – An Extremely Fast Semi-empirical Module for Including Polar Ozone Loss in Climate Model Systems
M. Rex, P.E. Huck, S. Kremser, G.E. Bodeker, M. Santee, et al.

1715 **# 1558.** Future scenarios of Ozone Hole recovery from CCMVAL-2 model statistics
J. Siddaway, D. Karoly, R. Dargaville, S. Petelina, A. Klekociuk.

1730 **# 4579.** Understanding future changes in the Southern Hemisphere extratropical circulation using perturbation experiments
J. Arblaster

1745 **Discussion.**

Monday, 4 July 2011 **1630-1800 MR107**

IAVCEI

V06 **The Rheology of Magmas**

V06S1

Chairpersons: Daniele Giordano & Yan Lavallee

1630 **Daniele Giordano: Introduction.**

1645 **Discussion.**

1700 **# 3016.** Rhyolite-GRD: A Modified Calibration For Viscosity of Silica-rich Melts
K. Russell, D. Giordano.

1715 **# 1593.** Melt Fracturing, Degassing and Origin of Obsidian: the Mt Pilato-Rocche Rosse Eruptions, Italy
R. Weinberg, A. Cabrera, H. Wright, G. Giordano, R. Cas, et al.

1730 **# 1519.** Investigating Lava Rheology Using Video Analysis and Numerical Models of Active Lava Flows
E. Lev

1745 **# 4031.** Viscosity Of Extraterrestrial Lavas Derived From Experiments, An Extension To Empirical Model
M.O. Chevrel, D.B. Dingwell, D. Baratoux, D. Giordano.

Monday, 4 July 2011 **1630-1800 MR104**

IAVCEI

V10 **The Dynamics of Pyroclastic Density Currents: Field Studies of Their Deposits, Computational Modelling and Experiments**

V10S1

Chairpersons: Olivier Roche & Amanda Clarke

1630 **# 2055.** Characteristics of submarine pumice-rich gravity flow deposits sourced from explosive disintegration of subaerial pyroclastic flows at the shoreline: field and experimental assessment
S. Allen, A. Freundt, K. Kurokawa.

1645 **As above.**

1700 **# 5753.** From computational modelling of pyroclastic density currents to the generation of probabilistic hazard maps.
E. Calder, E.B. Pitman, R. Wolpert, J. Berger, S. Bayarri, et al.

1715 **As above.**

1730 **# 315.** Near-vent processes of the 273 ka Poris eruption (Tenerife): ignimbrite sedimentation, hybrid deposition and phreatomagmatism
N. Smith, P. Kokelaar, M. Branney.

1745 **# 5091.** Tuffaceous sandstones from IODP Expedition 322 at Site C0011B, Nankai Trough: Sources and emplacement processes
S. Kutterolf, A. Freundt, J. Schindlbeck, RP. Scudder, KT. Pickering, et al.

Monday, 4 July 2011 **1630-1800 MR203**

IAVCEI

V14 **Monogenetic Volcanism: Magma Sources, Ascent and Eruption**

V14S1 **Geochemistry and Mantle Sources**

Chairpersons: Greg Valentine

1630 **Introduction.**

1645 **# 2446.** Building the upper oceanic crust: small, monogenetic volcanoes, widespread collapse and porosity at slow-spreading ridges
I. Yeo, K. Achenbach, R. Searle, Shipboard Scientific Party.

1700 **# 2037.** Monogenetic Volcanoes in the Central Mexican Volcanic Belt Record Silicic Slab Flux to Subarc Mantle Sources
S. Straub, A. Gomez-Tuena, F.M. Stuart, G.F. Zellmer, Y. Cai, et al.

1715 **# 921.** Chemical Development of a Monogenetic Volcanic Field, Jeju Island, Korea
M. Brenna, S.J. Cronin, I.E.M. Smith, R. Maas, K. Nemeth, et al.

1730 **# 983.** Geochemical evidence for simultaneously erupting dual magma batches at a monogenetic centre in an intra-plate setting: Mt. Gambier, Newer Volcanics Province, S.E. Australia
J. Van Otterloo, M. Raveggi, R. Cas.

1745 **# 1006.** Polymagmatic volcanism of Mt. Rouse, in the intra-plate, basaltic, late Cainozoic Newer Volcanic Province, southeastern Australia
J. Boyce, I. Nicholls, R. Keays.

TUESDAY, 5 JULY 2011 0830-1000 AM1

Tuesday, 5 July 2011 0830-1000 PH2
IUGG

U07 Mathematical tools in Geophysical Modelling
U07S3 Speakers by Invitation
Chairpersons: Matthias Holschneider & Gordon Swaters

0830 **# 3477.** Hierarchical network approach to modeling complex geophysical systems
I. Zaliapin, E. Foufoula-Georgiou, M. Ghil, Y. Kovchegov.
0845 **As above.**
0900 **# 3666.** Virtual Reality Visualization of Geophysical Data
A. Kageyama
0915 **As above.**
0930 **# 1734.** GRACE gravity field solutions using the differential gravimetry approach
M. Weigelt, W. Keller.
0945 **As above.**

Tuesday, 5 July 2011 0830-1000 MR210
IAG

G02 Monitoring and Modelling of Mass Distribution and Mass Displacements by Geodetic Methods
G02S4
Chairpersons: Nicolaas Sneeeuw & Roger Haagman

0830 **# 1628.** Seasonal precipitation effect on relative gravity observation in Dali, Yunnan
X. Zhou, W.K. Sun, H. Li, S. Okubo, S.A. Sun.
0845 **# 1130.** Signals of Soil Moisture Variations in Remote Sensing and Gravity Field Observations
S. Abelen, F. Seitz, A. Güntner, M. Schmidt.
0900 **# 2658.** Towards the time-variable gravity field from CHAMP
M. Weigelt, A. Jäggi, L. Prange, W. Keller, N. Sneeuw.
0915 **# 5873.** Weekly Solutions of Time-Variable Gravity from 1993 to 2010
F. Lemoine, D.S. Chinn, K. Le Bail, N.P. Zelensky, S. Melachroinos, et al.
0930 **# 3821.** Assessment Of The Aliasing Effect Of White Noise On Different Solutions In Gravity Recovery Simulations Of A GRACE-Like Mission
S. Iran Pour, N. Sneeuw, M. Weigelt, T. Reubelt.
0945 **# 3828.** Sampling the Earth with Satellites in Near-polar Orbit
N. Sneeuw, M. Weigelt, X. Xu.

Tuesday, 5 July 2011 0830-1000 MR208
IAG

G03 Monitoring and Modelling Earth Rotation
G03S1
Chairpersons: Richard Gross

0830 **# 1505.** A Generalized Theory of the Figure of the Earth Interior and its Application on the nutation
C. Huang, Y. Liu.
0845 **# 5766.** Atmospheric and Oceanic Excitation of the Free Core Nutation Estimated From Recent Geophysical Models
A. Brzezinski, H. Dobslaw, M. Thomas.
0900 **# 4966.** Excitation of Earth Rotation by Diurnal and Semi-diurnal Atmospheric Tides
J. Boehm, M. Schindelegger, D. Salstein, H. Schuh.
0915 **# 5714.** Impact of Atmospheric Tides and the Corresponding Oceanic Response on Subdiurnal Polar Motion Excitation
M. Thomas, H. Dobslaw, C. Kadow, K. Matthes, A. Brzezinski.
0930 **# 5358.** Regional Multi-fluid-based Geophysical Excitation of Polar Motion
J. Nastula, D.A. Salstein, R. Gross.
0945 **# 869.** Rotational Evaluations of Global Geophysical Fluid Models and Improvement in the Annual Wobble Excitation
W. Chen, W.B. Shen.

Tuesday, 5 July 2011 0830-1000 MR214
IAGA

A042 Rock Magnetism
A042S1 Rock Magnetism, Magnetic Petrology and Magnetic Anomalies
Chairpersons: David Clark

0830 **Introduction.**
0845 **As above.**
0900 **# 3335.** Long-Wavelength Regional Magnetic Field And The Tectonic Division Of The Tasmanides
R. Musgrave
0915 **# 2104.** Evaluating Faulted Strata as Likely Sources of Aeromagnetic Anomalies
V. Grauch, M.R. Hudson.
0930 **# 2523.** Non-Gaussian Distribution of In-Situ Magnetic Susceptibilities in Basement Rocks, Southwest United States
M. Gettings
0945 **# 2972.** Modeling Ground-based Magnetic Profile Data for Assessment of Concealed Mineral Deposits
M. Gettings, M. Bultman.

Tuesday, 5 July 2011 0830-1000 MR215
IAGA

A061 Coupling in the atmosphere-ionosphere-magnetosphere system and its response to external forcing and forcing from below
A061S1 Coupling Processes in the Atmosphere-Ionosphere System
Chairpersons: Dora Pancheva

0830 **# 4005. Invited** Atmosphere-ionosphere coupling effects observed by space-borne and ground-based GPS receivers
C. Lin, J.T. Chou, Y.S. Wu, J.T. Lin, M.L. Hsu, et al.
0845 **As above.**
0900 **# 5498.** Vertical Connection from Troposphere to Ionosphere Studied by Data-driven GAIA Simulation
H. Jin, Y. Miyoshi, H. Fujiwara, H. Shinagawa, K. Terada.
0915 **# 4386. Invited** Observations of planetary wave winds and temperatures in the winter mesosphere
R. Lieberman, D. Riggin, D. Ortland.
0930 **As above.**
0945 **# 1653.** Middle atmosphere gravity wave modulation at planetary wave time scales and possible coupling with the ionosphere
C. Jacobi, P. Hoffmann, C. Borries, N. Jakowski.

Tuesday, 5 July 2011 0830-1000 MR216

IAGA

A091 Magnetosphere-ionosphere coupling

A091S3 The plasma sheet – ionosphere, a coupled system: Sinks, sources, transport and the roles of field-aligned currents and ion outflow

Chairpersons: Jay Johnson

0830 **# 3330.** Field-Aligned Currents at Plasma Sheet Boundary Layers in the Magnetotail: Cluster Observation
J. Shi, Z. Cheng, T. Zhang, M. Dunlop, Z. Liu.

0845 **# 2190. Invited** Signatures of solar wind plasma entry at the flank magnetopause
B. Lavraud

0900 **As above.**

0915 **# 2815.** On the Role of Quiet-Time Thermal Oxygen (O+) Ions in Ionosphere-Magnetosphere Coupling at Magnetic Storm Onset
A. Yau, A. Howarth, Wi. Peterson, T. Abe.

0930 **# 5098. Invited** On roles of the K-H instability in the formation of the cold dense plasma sheet during northward IMF periods: PSD observations and PIC simulation
K. Seki, Y. Matsumoto, B. Lavraud, Y. Saito, H. R ème.

0945 **As above.**

Tuesday, 5 July 2011 0830-1000 MR209

IAGA

A093 Magnetosphere-ionosphere coupling

A093S1 Interhemispheric Conjugacy-nonconjugacy Effects and Coupling Processes

Chairpersons: R. Lukianova

0830 **# 2648. Invited** The Auroral Current Circuit and Interhemispheric Differences
J. De Keyser, M. Echim, R. Maggiolo.

0845 **As above.**

0900 **# 4358. Invited** Polar Cap Convection Structures and Their Relations to Plasma Sheet Dynamics
L. Lyons, Y. Nishimura, H-J. Kim, V. Amgelopoulos, C. Henselman, et al.

0915 **As above.**

0930 **# 4393.** Interhemispheric Asymmetry in the Ionospheric Transpolar Potential and the Relationship to Closure of the Bow Shock Current Through the Ionosphere
R. Lopez

0945 **# 2811.** Conjugacy and non-conjugacy of the auroral electrojet system.
J. Gjerloev, N. Shah, M. Friel, P. Martin.

Tuesday, 5 July 2011 0830-1000 MR206

IAGA

A112 The Sun and the Heliosphere: Physical Processes

A112S3 Origin of the Solar Magnetism. The Solar Dynamos

Chairpersons: Paul Cally & Mausumi Dikpati

0830 **# 5858. Invited** The Solar Dynamics Observatory: Your On-orbit Eye on the Solar Dynamo
W.D. Pesnell

0845 **As above.**

0900 **# 5604. Invited** Acoustics of the magnetic activity of the Sun
A. Donea

0915 **As above.**

0930 **# 1106. Invited** Polar coronal holes from SUMER/SoHO and Hinode observations
D. Banerjee

0945 **As above.**

Tuesday, 5 July 2011 0830-1000 MR211

IAGA

A121 Space Weather and Space Climate

A121S1 Quantitative Prediction of Space Weather

Chairpersons: Jon Linker & Janet Kozyra

0830 **# 4451. Invited** Space Weather Effects on Earth
D. Boteler

0845 **As above.**

0900 **# 5832.** Response of the Ionosphere and Thermosphere to High Speed Streams
G. Crowley

0915 **# 4548.** Real-time regional ionospheric total electron content mapping.
M. Francis, M. Terkildsen, Z. Bouya.

0930 **# 1213. Invited** A Remarkable Natural Experiment: The Extremely Quiet Sun (2007-2009) and its Effect on Earth's Radiation Belts
D. Baker

0945 **As above.**

Tuesday, 5 July 2011 0830-1000 MR207

IAGA

A142 Lithospheric field and related geological/ tectonic implications

A142S2 Seismological and Tectonic interpretation of geomagnetic data combined with other geophysical results

Chairpersons: D. Ravat & W. Mooney

0830 **# 4952.** Precambrian features of the Gamburtsev Province in East Antartica revealed from aeromagnetic and gravity data
F. Ferraccioli, C.A. Finn, T.A. Jordan, R.E. Bell, L. Anderson, et al.

0845 **# 4471.** Integrated Geophysics for Frontier Basins on Australia's Continental Margin: Successes and Challenges
R. Hackney, J. Goodwin, S. Johnston, R. Lane, P. Milligan, et al.

0900 **Discussion.**

0915 **# 1252.** Aeromagnetic Signatures of the Different Tectonic Regions of Indian Sub-Continent
A. S P, M. Rajaram.

0930 **# 543.** Investigation of perturbations in VLF signals possibly due to seismic activity
A. Collier, S. Brijraj.

0945 **# 5934.** Aeromagnetic evidence for buried volcanic structures beneath the Fukui Plain, central Japan
S. Okuma, M. Makino, T. Nakatsuka.

Tuesday, 5 July 2011 0830-1000 MR205
IAGA
A144 Lithospheric field and related geological/ tectonic implications
A144S1 Multifaceted geophysical and geological investigations of the lithospheric structures
Chairpersons: K. Veeraswamy, S.G. Gokarn

0830 # **3628. Invited** What We Can Learn From MT In Multi-Disciplinary Projects?
O. Ritter
0845 **As above.**
0900 # **1358.** Geoelectric Structure in NW Himalayas Inferred From Magnetotelluric Data
K. Veeraswamy, K.K. Abdul Azeez, T. Harinarayana.
0915 # **2469.** Geological and geophysical modeling of the Navarino Island plutons. Southernmost South America
V. Juan Francisco, J. Peroni, A. Tassone, H. Lippai, F. Hervé.
0930 # **1814.** Lithospheric Structures Beneath the Son-Mahanadi Gondwana Rift, India- Insight from Gravity Study
B. Singh, S. Priya.
0945 **Discussion.**

Tuesday, 5 July 2011 0830-1000 MR219
IAHS
H02 Cold regions hydrology in a changing climate
H02S1
Chairpersons: Daqing Yang & Bill Quinton

0830 # **320.** Recent Advances in Arctic Hydrology Research
L. Hinzman
0845 **As above.**
0900 # **367.** Streamflow Response Trends of Overlapping Permafrost and Glacierised Regimes in Northwestern Canada
R. Janowicz
0915 # **377.** Effects of snow water and active layer depth on the increasing discharge from the Arctic watersheds
H. Park, Y. Iijima, H. Yabuki, Y. Kodama, T. Ohata.
0930 # **312.** The Hydrological Parameters Change with Active Layer over Lena Basin in Siberia
B. Ye
0945 # **159.** Distributed modelling of snow- and ice-melt in the Lhasa River Basin from 1971 to 2080
M. Prasch, M. Weber, W. Mauser.

Tuesday, 5 July 2011 0830-1000 MR220
IAHS
H03 Risk in Water Resources Management
H03S1
Chairpersons: A. Schumann

0830 # **206.** Multi-Objective Storages for Flood Mitigation and Water Resources Development in Small Catchments
T. Daniell, P. Simone.
0845 **As above.** .
0900 # **290.** Reducing Uncertainty in Derived Flood Frequency Analysis Related to Rainfall Forcing and Model Calibration
U. Haberlandt, I. Radtke.
0915 # **521.** Towards understanding the differences between deterministic and probabilistic flood hazard estimation methods
M. Rogger, G. Blöschl, A. Viglione, R. Merz, R. Kirnbauer.
0930 # **421.** Drinking water extraction facilities at risk of flooding from rivers and groundwater – flood impact assessment for water extraction facilities in Ljubljana area
L. Globevnik, B. Bracic Zeleznik.
0945 # **436.** Mountain Risks in Downstream Water Resource Management in Upper Bhagirathi Basin, Indian Himalaya
R. Singh, S. Kumar.

Tuesday, 5 July 2011 0830-1000 MR212
IAHS
H04 Assessment of water quality under changing climate conditions
H04S3 Climate Change and Water Quality Assessment
Chairpersons: Sarantuyaa Zandaryaa & Rob Wilby

0830 # **155.** Increasing organic C and N fluxes from a northern Boreal river basin to the coastal areas
A. Lepistö, P. Kortelainen.
0845 **Discussion.**
0900 # **297.** Modelling Nitrate Contribution from the Red River to the Atchafalaya River Basin of the northern Gulf of Mexico, USA
Y.J. Xu & A. BryantMason.
0915 # **360.** Drinking Water Quality under Changing Climate Conditions
B. Bracic Zeleznik, B. Cencur Curk, P. Souvent.
0930 # **363.** Volcanic lakes: strategically water reservoirs?
P. Antunes
0945 # **115.** The Water Quality and Quantity Effects of Biofuel Operations in Pine Plantations of the Southeastern US
J. Nettles, M. Youssef, J. Cacho, J. Grace, Z. Leggett, et al.

Tuesday, 5 July 2011 0830-1000 MR102
IAHS
HW02 Understanding and quantifying physical and geochemical processes during artificial recharge of groundwater
HW02S1
Chairpersons: Henning Prommer

0830 **Introduction.**
0845 **Discussion.**
0900 # **5529.** Tracing Pyrite Oxidation Processes in a Deep Anaerobic Aquifer Using Sulphur Stable Isotope Analysis
S. Seibert, G. Skrzypek, C. Descourvieres, C. Hinz, H. Prommer.
0915 # **1397.** Quantifying the Artificial Recharge through defunct dug-wells (large diameter) and evaluating impact of uniform rainfall as well as extreme events
S. Sarah
0930 # **3145.** Contribution of Dams in United Arab Emirates to the Recharge of Surface Aquifers
R. Al-Dabbagh
0945 # **3505.** Hydrologic and geochemical characterization of riverbank filtration at a site in Korea
S. Lee, S. Hamm.

Tuesday, 5 July 2011 0830-1000 MR217

IAHS

HW03 Regional groundwater modelling: Approaches, challenges, and future directions

HW03S1

Chairpersons: Craig Simmons & Howard Reeves

0830 **Introduction.**

0845 **# 4298.** Regional Scale Groundwater Flow and Transport Modelling: From Conceptual Challenges to Pragmatic Numerical Solutions
P Goderniaux, S. Wildemeersch, M. Leroy, P. Orban, A. Dassargues, et al.

0900 **Discussion.**

0915 **Discussion.**

0930 **# 639.** Modeling of fresh and salt water genesis in the New Jersey shallow shelf
H. Holländer, S. Stadler, T. Hayashi, M. Mottl, Exp313 Science Party.

0945 **Discussion.**

Tuesday, 5 July 2011 0830-1000 MR103

IAMAS

JM04 Stratosphere-Troposphere-Ocean coupling in weather and climate

JM04S3

Chairpersons: Keenlyside

0830 **# 2289. Invited** Surface Climate and Stratosphere-Troposphere Interaction
A. Scaife

0845 **As above.**

0900 **# 2926.** Stratosphere-Troposphere Dynamical Coupling during Vortex-Splitting Major Stratospheric Sudden Warming Events in the Northern and Southern Hemispheres
T. Hirooka, T. Ichimaru, Y. Harada, H. Naoe, H. Mukougawa.

0915 **# 932.** Submonthly Fluctuations of Northern Hemisphere Zonal-Mean Circulation: Phase Transition and Stratosphere-Troposphere Interactions
X. Li, J. Li, X. Zhang.

0930 **# 4488.** Impact of sudden stratospheric dynamical change on the tropical convection and circulation
K. Kodera, N. Eguchi.

0945 **# 5865.** Toward understanding the dynamics of stratosphere-troposphere coupling
T. Birner, D.W.J. Thompson.

Tuesday, 5 July 2011 0830-1000 MR109

IAMAS

M04 Recent advances in middle atmosphere science

M04S1 S-T Climate

Chairpersons: Shigeo Yoden

0830 **# 2110. Invited** Is Ozone Evolving as Expected Under the Provisions of the Montreal Protocol?
G. Bodeker, B. Hassler, P. Young, R.W. Portmann, D. Kinnison.

0845 **# 3735. Invited** The Impact of Stratospheric Change on Antarctic climate
U. Langematz

0900 **As above.**

0915 **# 2758. Invited** Attribution of stratospheric ozone and circulation changes during 21st century simulated with chemistry-climate model
E. Rozanov, V. Zurbov, I. Karol, W. Schmutz.

0930 **# 2829. Invited** A 'world-avoided' Simulation Using a Fully Coupled Climate-Chemistry Model
R. Garcia

0945 **As above.**

Tuesday, 5 July 2011 0830-1000 MR108

IAMAS

M09 Three-dimensional radiative transfer in the atmosphere

M09S1 Aerosol and Clouds

Chairpersons: Claudia Emde

0830 **# 2755. Invited** Aerosol retrievals under partly Ccoudy conditions: Do we need complex 3D radiative transfer models?
E. Kassianov, M. Ovchinnikov, L. Berg, S. McFarlane, C. Flynn, et al.

0845 **As above.**

0900 **# 4129.** Correction for 3D Radiative Effects on Clear Sky Reflectance and Aerosol Optical Thickness Retrieval – A Case Study
G. Wen, A. Marshak, R. Cahalan, N. Loeb, L. Remer.

0915 **# 5783.** Aerosol Analysis near Clouds at 1 km Resolution
A. Lyapustin, T. Varnai, A. Marshak.

0930 **# 2100. Invited** Remote Sensing of Aerosol Properties in a Cloudy Atmosphere Using CALIPSO and MODIS
T. Varnai, A. Marshak, W. Yang, G. Wen, A. Lyapustin.

0945 **As above.**

Tuesday, 5 July 2011 0830-1000 MR110

IAMAS

M10 Tropospheric processes and processing: Pollution and biogeochemical cycling

M10S3 Atmospheric modeling

Chairpersons: Maria Kanakidou & Russ Dickerson

0830 **# 3675. Invited** Fire in the Air – Biomass burning in a changing climate
M. Keywood, M. Kanakidou, A. Stohl, F. Dentener, G. Grassi, et al.

0845 **# 935.** Analyzing variations on the net primary production using a state-of-the-art model in China
G. Sun, M. Mu.

0900 **# 2921.** A modeling study of black carbon aerosol using a global aerosol model with parameterized aging processes
D. Goto, N. Oshima, T. Nakajima, T. Takemura.

0915 **# 2074.** Black carbon aerosol in the Arctic: Sources, long-range transport and climate impacts
A. Stohl, D. Hirdman, P.K. Quinn, Et Al

0930 **# 3894.** Transport of Pollution to the Arctic
K. Law, JL. Thomas, JC. Raut, A. Auby, F. Ravetta, et al.

0945 **# 3270.** Aerosol optical properties over East Asia: An integrating CMAQ-simulated and satellite-retrieved aerosol data using a data assimilation technique
R.S. Park, K.M. Han, M.E. Park, C.H. Song.

Tuesday, 5 July 2011 0830-1000 MR101
IAVCEI
V02 Arc Magmatism: The Constructive and Destructive Dynamics of Convergent Margin Magmatism
V02S1
Chairpersons: Jan Lindsay & Pablo Caffe

0830 # **5412. Invited** Construction and Destruction of Continental Crust on Andean-type Margin: Messages from Central Andean Arc and Backarc Magmas
S. Kay
0845 **As above.**
0900 **Discussion.**
0915 # **1211.** Petrogenesis of strongly peraluminous volcanic rocks from northern Puna: Unraveling the crustal end member in the APVC dacite mix.
P. Caffe, R. Trumbull, W. Siebel.
0930 # **622.** The 4th September 2010 eruption of the Peteroa volcano, Argentine-Chilean border, Southern Andes
C. Risso, M. Haller.
0945 # **4868.** The origin of primitive arc basalts at the incipient stage of subduction zone development from the Hahajima Island Group, Ogasawara (Bonin) Islands
K. Kanayama, S. Umino, O. Ishizuka.

Tuesday, 5 July 2011 0830-1000 MR107
IAVCEI
V06 The Rheology of Magmas
V06S2
Chairpersons: Daniele Giordano & Claudia Romano

0830 **Lavalleé: Introduction.**
0845 # **1120. Invited** Multiphase magma rheology
L. Caricchi
0900 # **2396.** Viscosity changes during crystallization in shoshonitic magmas: new insights on the lava flows emplacement
H. Sato, F. Vetere, H. Ishibashi, R. De Rosa, P. Donato.
0915 # **2934.** Effects of crystal size and shape distribution on the rheology of magmas: insights from analogue experiments
A. Costa, C. Cimarelli, S. Mueller, H. Mader.
0930 # **1781.** What controls the ductile-brittle transition of magma? A study from Volcan de Colima (Mexico).
J. Kendrick, Y. Lavallee, E. Mariani, M. Heap, D. Dingwell.
0945 # **4277.** A failure criterion for magmas
Y. Lavallee, P.M. Benson, M.J. Heap, A. Flaws, K.U. Hess, et al.

Tuesday, 5 July 2011 0830-1000 MR104
IAVCEI
V10 The Dynamics of Pyroclastic Density Currents: Field Studies of Their Deposits, Computational Modelling and Experiments
V10S2
Chairpersons: Joe Dufek & Olivier Roche

0830 # **1090.** An extremely thick 1. 1 Ga rheomorphic ignimbrite in the Pussy Cat Group: Implications for eruption style and setting in the Musgrave Province, central Australia.
C. Medlin, R.A.F. Cas, M. Werner, R.H. Smithies.
0845 # **5214.** Three Stage Collapse of Panum Dome, Mono Craters, CA
R. Dennen, M. Bursik, P. Stokes, O. Roche.
0900 # **803.** Based surge and ground surge deposits of caldera formation from Batur volcanic complex, Bali, Indonesia
A. Nasution, R. Furukawa, A. Takada, L. Hutasoit, Z. Nasution.
0915 # **1773.** Dune bedforms formed by dilute pyroclastic density currents
G. Douillet, U. Kueppers, D. Pacheco, D. Dingwell.
0930 # **4551.** In the shoes of Tony Taylor: Results of reinvestigation of the 1951 eruption of Mount Lamington, Papua New Guinea
A. Belousov, M. Belousova, H. Patia, R. Hoblitt.
0945 **Discussion.**

Tuesday, 5 July 2011 0830-1000 MR203
IAVCEI
V14 Monogenetic Volcanism: Magma Sources, Ascent and Eruption
V14S2 Magmatic & phreatomagmatic processes
Chairpersons: Adrian Pittari

0830 # **2538.** Interpretation of the c. AD 1085 Eruption of Sunset Crater, Arizona, USA
S. Self, M. Ort, R. Amos.
0845 # **2911.** Applying Cone-Building Models to an Actual Cinder Cone: Insights from a Ground Penetrating Radar Study of Cerro Negro Volcano, Nicaragua
L. Courtland, S. Kruse, C. Connor.
0900 # **1310.** Evidence for early magmatic fragmentation induced by rapid CO2 exsolution at the maar type locality (Eifel, Germany)
J. Rausch, H.U. Schmincke.
0915 # **984.** Factors influencing alternations in magmatic and phreatomagmatic eruption styles of the monogenetic Mt. Gambier Volcanic Complex, Newer Volcanics Province, S.E. Australia
J. Van Otterloo, R. Cas, J. Castro.
0930 # **4701.** Variations in tuff ring successions and phreatomagmatic eruption processes across the Quaternary South Auckland volcanic field, New Zealand
A. Pittari, R. Briggs, T. Ilanko, A. Gibson, H. Goddard, et al.
0945 # **757.** Models of Maar Volcanoes, Lunar Crater (Nevada, USA)
G. Valentine, N. Shufelt, A. Hintz.

TUESDAY, 5 JULY 2011 1030-1200 AM2

Tuesday, 5 July 2011 1030-1200 PH2
IUGG
3C IUGG 2011 Union Plenary Lectures
3C
Chairpersons: Tom Beer

1030 # **1955.** Assessing Solar and Solar-Terrestrial Influences as a Component of Earth's Climate Change Picture
D. Baker
1100 # **613.** Hydrology and Change
D. Koutsoyiannis
1130 # **5991.** Volcanism and Global Sustainability
S. Self

Please see page 29 for Union Plenary Lecture abstracts.

TUESDAY, 5 JULY 2011 1330-1500 PM1

Tuesday, 5 July 2011 1330-1500 PH2

IUGG

U03 Recent Progress in the Studies of the Earth's Deep Interior

U03S1 Recent Progress in the Studies of the Earth's Deep Interior, Part 1
Speakers by Invitation

Chairpersons: Gauthier Hulot & Michael Bergman

1330 **# 1068.** Mapping the Mantle with Seismic Tomography
B. Kennett

1345 **As above.**

1400 **Discussion.**

1415 **# 2499.** Recent Developments and Achievements in Geomagnetic Data Assimilation
A. Fournier

1430 **As above.**

1445 **# 4089.** Constraints On The Magnetic Field At The Core-Mantle And Inner Core Boundaries From Earth's Nutations
M. Dumberry, L. Koot.

Tuesday, 5 July 2011 1330-1500 MR210

IAG

G02 Monitoring and Modelling of Mass Distribution and Mass Displacements by Geodetic Methods

G02S5

Chairpersons: Roger Haagmans & Nicolass Sneeuw

1330 **# 3933.** Status and activities in the processing of GOCE-combined models (GOCO)
D. Rieser, H. Goiginger, T. Mayer-Guerr, R. Pail, A. Maier, et al.

1345 **# 3996.** GOCE: Status Three Months into the Extended Mission
R. Haagmans, R. Floberghagen, M. Fehringer, C. Steiger, A. da Costa, et al.

1400 **# 999.** Estimations and corrections for temporal gravity variations on GOCE satellite gradiometry data
Y. Wu, Z. Luo, H. Li, G. Yang, C. Xu.

1415 **# 1156.** Topographic-isostatic reduction of GOCE gravity gradients
T. Grombein, K. Seitz, B. Heck.

1430 **# 5632.** The Goce Estimated Moho Beneath The Tibetan Plateau And Himalayas
R. Barzaghi, M. Reguzzoni, C. Braitenberg.

1445 **# 1766.** Modeling and Observing the Chile 27 February 2010 Earthquake using GOCE
J. Bouman, M. Fuchs, T. Broerse, B. Vermeersen, P. Visser, et al.

Tuesday, 5 July 2011 1330-1500 MR208

IAG

G03 Monitoring and Modelling Earth Rotation

G03S2

Chairpersons: Richard Gross

1330 **# 5008.** Decomposing LOD with Singular Spectral Analysis
K. Le Bail, J. Gipson, D. MacMillan.

1345 **# 856.** Surface mass excitations of length-of-day variations determined from SLR and GRACE
S. Jin

1400 **# 1783.** Variations in the Earth's Figure axis and Polar motion in the past 30 years
M. Cheng, J. Ries, B. Tapley.

1415 **# 4604.** The Global Scale Impact of Climate Change on the Secular Trends of Earth Rotation Parameters
K. Roy, W.R. Peltier.

1430 **# 554.** Topographic torque on the CMB: effects amplified for particular topographies.
V. Dehant, M. Folgueira.

1445 **Discussion.**

Tuesday, 5 July 2011 1330-1500 MR214

IAGA

A042 Rock Magnetism

A042S2 Rock Magnetism, Magnetic Petrology and Magnetic Anomalies

Chairpersons: Tien Grauch

1330 **# 3424. Invited** The Apparent Resultant Rotation Angle (ARRA) as a Statistic to Augment the Koenigsberger Ratio in the Study of Magnetic Field Anomalies Influenced by Remanent Magnetization
C. Foss, P. Schmidt.

1345 **As above.**

1400 **# 2459.** 3D Magnetic Property Models from 2D Inversions
J. Phillips

1415 **# 3992.** Improved Mineral Exploration Using Magnetic Exploration Models and Gradient Tensor Data
D. Clark

1430 **# 3420.** How well can a fold test be performed through interpretation of magnetic field data?
P. Schmidt, C. Foss.

1445 **# 3419.** Some magnetic anomalies from New England, NSW
P. Schmidt, C. Foss.

Tuesday, 5 July 2011 1330-1500 MR215
IAGA
A061 Coupling in the atmosphere-ionosphere-magnetosphere system and its response to external forcing and forcing from below
A061S2 Coupling Processes in the Atmosphere-Ionosphere System
Chairpersons: Marianna Shepherd

1330 **# 5992. Invited** Modeling Vertical Coupling of the Atmosphere-Ionosphere System by Gravity Waves
E. Yigit, A.S. Medvedev.
1345 **As above.**
1400 **# 4013.** Gravity Wave Heating and Cooling of the Thermosphere and its Relation to the Sensible Heat Flux
R. Walterscheid, M. Hickey, M. Schubert.
1415 **# 3292.** Interactions of Gravity Waves and Tides in the Mesopause Region
A. Liu, S. Franke.
1430 **# 1992.** Gravity Wave Propagation in a Diffusively Separated and Viscous Atmosphere
M. Hickey, R. Walterscheid, G. Schubert.
1445 **# 4544.** Atmospheric Gravity Wave Activity in the MLT Region and Their Possible Relation with Tropical Convection
S. Kovalam, R.A. Vincent, T. Tsuda, S. Gurubaran, I.M. Reid.

Tuesday, 5 July 2011 1330-1500 MR205
IAGA
A083 Space plasma processes
A083S1 Understanding the physical processes that drive tail and substorm dynamics
Chairpersons: Larry Kepko

1330 **# 2900. Invited** Pre-onset time sequence of auroral substorms
S. Zou, L. Lyons, V. Angelopoulos, S. Mende.
1345 **As above.**
1400 **# 4316. Invited** Fast Flow Channels and Their Ionospheric Signatures in Global MHD Simulations
J. Lyon, V. Merkin, F. Toffoletto, A. Pembroke.
1415 **# 2983.** Results from coupling the Rice Convection Model to Global MHD
F. Toffoletto, S. Sazykin, A. Pembroke, J. Lyon, S. Merkin, et al.
1430 **# 4177.** Substorm and Magnetic Storm Effects on the Cross-Tail Current Sheet
M. Lester, E. Davey, S. Milan, R. Fear.
1445 **# 1836.** The Growth and Evolution of Auroral Power and ULF Wave Activity During Substorms and Nightside Auroral Events
J. Rae, I. Mann, C. Watt, K. Murphy, H. Frey, et al.

Tuesday, 5 July 2011 1330-1500 MR216
IAGA
A091 Magnetosphere-ionosphere coupling
A091S4 The plasma sheet – ionosphere, a coupled system: Sinks, sources, transport and the roles of field-aligned currents and ion outflow
Chairpersons: Sorin Zaharia

1330 **# 4662. Invited** A Statistical THEMIS Analysis of Vortex-Induced Magnetic Islands at the Flank Magnetopause
S. Eriksson, D. Dyer, W-L. Teh, V. Angelopoulos, K-H. Glassmeier, et al.
1345 **As above.**
1400 **# 891. Invited** Possible mechanisms of solar wind entry into the plasma sheet related to the Kelvin-Helmholtz vortex: Recent numerical studies
T. Nakamura, H. Hasegawa, T. Izutsu, I. Shinohara, M. Fujimoto.
1415 **As above.**
1430 **# 4606.** The Role of Heavy Ions in Plasma Entry and Transport Processes
J. Johnson, P. Delamere, A. Otto, Y. Lin, S. Wing, et al.
1445 **# 4378.** Contribution of Ionospheric Oxygen to the Near-Earth Plasmasheet During Geomagnetically-Quiet Conditions
S. Elkington, W. Peterson & J. McCollough.

Tuesday, 5 July 2011 1330-1500 MR209
IAGA
A093 Magnetosphere-ionosphere coupling
A093S2 Interhemispheric Conjugacy-nonconjugacy Effects and Coupling Processes
Chairpersons: J. Gjerloev

1330 **# 5097. Invited** Auroral asymmetries in the conjugate hemispheres.
J. Stadsnes, N. Astgaard, K.M. Laundal.
1345 **# 4067.** Superposed Epoch Analyses Of The Ionospheric Convection And Auroral Evolution During Substorms: Onset Local Time And IMF By Dependences
A. Grocott, S.E. Milan.
1400 **# 1042. Invited** Inter-hemispheric asymmetry in the ionospheric convection and field-aligned currents controlled by the IMF By
A. Kozlovsky, R. Lukianova.
1415 **# 2461.** IMF dependent North-South asymmetries of high-latitude plasma convection and related thermospheric dynamics
M. Foerster, S.E. Haaland, E. Doornbos.
1430 **# 1268. Invited** First observations of simultaneous inter-hemispheric conjugate high-latitude thermospheric winds
P. Dyson, M. Kosch, C. Anderson, H-C I. Yiu, A C. Kellerman, et al.
1445 **As above.**

Tuesday, 5 July 2011 1330-1500 MR206
IAGA
A112 The Sun and the Heliosphere: Physical Processes
A112S4 Origin of the Solar Magnetism. The Solar Dynamos
Chairpersons: Mausumi Dikpati & Ana Cristina Cadavid

1330 **# 1221. Invited** Data Assimilation in Helioseismology
F. Hill
1345 **As above.**
1400 **# 1554. Invited** Data Assimilation for Dynamo Modeling and Solar Cycle Prediction
I. Kitiashvili
1415 **As above.**
1430 **# 1569.** Helioseismic Observations of Sunspot Cycle 23 and a New Paradigm in Solar Dynamo
A. Kosovichev, V. Pipin.
1445 **As above.**

Tuesday, 5 July 2011 1330-1500 MR211
IAGA
A121 Space Weather and Space Climate
A121S2 Quantitative Prediction of Space Weather
Chairpersons: Jon Linker & Geoff Crowley

1330 **# 5135.** Magnetospheric Response to High Speed Solar Wind Streams
J. Kozyra, V. Angelopoulos, P.C. Brandt, N. Buzulukova, C.A. Cattell, et al.
1345 **# 2248.** Temporal variation of the Earth-induced current contribution to the Dst index
M. Nose
1400 **# 2517. Invited** Coupled Magnetosphere Ionosphere Thermosphere simulations of the Whole Heliosphere Interval
M. Wiltberger, W. Wang, S. Solomon, S. Elkington, J. Lyon.
1415 **As above.**
1430 **# 4385. Invited** Corotating Interaction Regions: Formation and Properties
P. Riley
1445 **As above.**

Tuesday, 5 July 2011 1330-1500 MR207
IAGA
A132 Magnetic observations from ground to space – ingredients for new geomagnetic research
A132S1 Results from the decade of geopotential research and beyond
Chairpersons: Ciaran Beggan & Vincent Lesur

1330 **# 3679.** Magnetic Field Evolution From The Last Decade Of Satellite Observation
A. Jackson, C. Finlay, N. Gillet, N. Olsen.
1345 **As above.**
1400 **# 3076.** Results From the Decade of Geopotential Research in India.
M. Rajaram, S.P. Anand, Geeta. Vichare.
1415 **# 2674.** Polar geomagnetism: improving models of high-latitude magnetic fields
G. Kelly, R. Holme, A. Thomson.
1430 **# 1819.** Methods for Processing Satellite Constellation Measurements of Earth-External Magnetic Field Sources
R. Shore, K. Whaler, S. Macmillan, C. Beggan.
1445 **# 3787.** Third version of the GFZ Reference Internal Magnetic Model: GRIMM-3
V. Lesur, I. Wardisnki, M. Hamoudi.

Tuesday, 5 July 2011 1330-1500 MR219
IAHS
H02 Cold regions hydrology in a changing climate
H02S2
Chairpersons: Phil Marsh & Larry HInzman

1330 **Introduction.**
1400 **# 194.** Effects of temperature on seasonal streamflows and variation at different spatial scale in cold regions
G. Wang
1415 **# 407.** The Use of Duration Curves for Hydrological Time Series Simulation in Cold Regions
N. Eriyagama, V. Smakhtin.
1345 **Discussion.**
1430 **Discussion.**
1445 **Discussion.**

Tuesday, 5 July 2011 1330-1500 MR220
IAHS
H03 Risk in Water Resources Management
H03S2
Chairpersons: K. Takeuchi

1330 **# 122.** Imprecise probabilities to specify hydrological loads for flood risk management
A. Schumann
1345 **# 127.** Assessment Approach for Global Water Hazard and Risk Management: A Case Study in the Indus River Basin
K. Youngjoo, M. Jun, I. Hironori, F. Kazuhiko, T. Kuniyoshi.
1400 **# 372.** Assimilation of Streamflow Discharge into a Continuous Flow Forecasting Model
Y. Li, D. Ryu, Q. Wang, T. Pagano, A. Western.
1415 **# 133.** Low Flow Risk Assessment for Water Management
B. Mikhail, E. Korobkina.
1430 **# 443.** Assessing drought hazard under non-stationary conditions on South East of Spain
S. Garcia Galiano, J.D. Giraldo Osorio.
1445 **# 245.** How to quantify uncertainty in water allocation models? An exploratory analysis based on hypothetical case studies
J. Lerat, K. Tomkins, Q. Shao, L. Peeters, A. Yang.

Tuesday, 5 July 2011 1330-1500 MR212
IAHS
H04 Assessment of water quality under changing climate conditions
H04S4 Climate Change and Water Temperature and Climate Change and Water Quality Modeling
Chairpersons: Rob Wilby & Ahti Lepistö

1330 **# 505.** Impacts of climate variability and change on water temperature in an urbanizing Oregon basin
H. Chang, K. Lawler.
1345 **# 207.** Surface-Water Temperature Variations and River Corridor Properties
R. Wilby, S. Rice.
1400 **# 147.** Long term forecasting of flow and water temperature for cooling application Case study of the Rhone river (France)
M Bourqui, N. Le Moine & F. Hendrickx.

1415 **# 186.** Modelling Climate Change Effects on Nutrient Discharges from the Baltic Sea Catchment: Processes and Results
C. Donnelly, J. Strömqvist, B. Arheimer.

1430 **# 438.** Modeling the Impacts of Climate Change on Nitrogen Retention in a 4th order stream
M. Rode, H. Boyacioglu, T. Vetter, V. Krysanova.

1445 **# 460.** Modelling of Climate Change Effects on Nitrogen Loads in the Jizera Catchment, Czech Republic
M. Martinkova, V. Krysanova, C. Hesse, S. Blazkova.

Tuesday, 5 July 2011 1330-1500 MR217

IAHS

HW03 Regional groundwater modelling: Approaches, challenges, and future directions

HW03S2

Chairpersons: Mohamed Jalludin & Howard Reeves

1330 **Introduction.**

1345 **# 1396.** Removing biasness at each step of Aquifer modelling makes it more applicable for prediction and management
S. Sarah

1400 **# 5289.** We Develop our Understanding of Indus Basin by Calibrating the Predevelopment Situation. We show that by doing this, we will end up with a more Reliable Model than otherwise possible
N. Alam, T. Olsthoorn.

1415 **# 3141.** Calibration and Use of Integrated Soil and Groundwater Models in a Large Groundwater Basin in Northern Italy
C. Gandolfi, M. Giudici, G. Ponzini.

1430 **# 2961.** Groundwater Flow Model of the Baltic Artesian Basin
J. Virbulis, J. Sennikovs, U. Bethers.

1445 **Discussion.**

Tuesday, 5 July 2011 1330-1500 MR102

IAHS

HW12 Quality and quantity aspects of green and blue water: Impact on agriculture, environment, energy and industry

HW12S1

Chairpersons: U.C. Sharma & Graham Jewitt

1330 **# 209.** Indigenous Technique in Green and Blue water Management in Kandi Region of Jammu for Livelihood Security
U. Sharma, V. Sharma.

1345 **# 573.** Impact of application of untreated effluent containing sewage water on soil, crops and underground water in North-western India
M. Brar, G. Dheri, P. Roychand.

1400 **Discussion.**

1415 **Discussion.**

1430 **# 3183.** Integrating Green and Blue Water Flows to Assess the Impact of Biofuel Feedstock Production on Water Resources
G. Jewitt, R. Kunz.

1445 **As above.**

Tuesday, 5 July 2011 1330-1500 MR103

IAMAS

JM04 Stratosphere-Troposphere-Ocean coupling in weather and climate

JM04S4

Chairpersons: Alexander

1330 **# 3751. Invited** Stratospheric Planetary Wave Reflection And Its Influence On The Troposphere
N. Harnik, J. Perlwitz, T. Shaw.

1345 **As above.**

1400 **# 1559. Invited** Dynamical versus Radiative Timescales in Stratosphere-Troposphere Coupling
P. Hitchcock, T. Shepherd, S. Yoden, M. Taguchi.

1415 **As above.**

1430 **# 3902.** A Dynamical Mechanism for Southern Hemisphere Climate Change Due To The Ozone Hole
A. Orr, T. Bracegirdle, S. Hosking, T. Jung, J. Haigh, et al.

1445 **# 1582.** Rebound of Antarctic Ozone
M. Salby, E. Titova, L. Deschamps.

Tuesday, 5 July 2011 1330-1500 MR105

IAMAS

JM10 Monsoons, Tropical Cyclones and Tropical Dynamics

JM10S19 Climate and convection

Chairpersons: Chidong Zhang

1330 **# 1862. Invited** Indo-Pacific Variability, Change, and Impact in Recent Decades
W. Cai

1345 **# 5128. Invited** Variations of convection under a changing climate and implications for climate change
J. Evans

1400 **As above.**

1415 **# 4705.** Moist Hadley Circulation: Role of Wave-Convection Coupling in an Aqua-Planet GCM
T. Horinouchi

1430 **# 3248.** Evaluation of Single Column Model Simulations of Active and Suppressed Convection during TWP-ICE
C. Franklin, C. Jakob, M. Dix, A. Protat, G. Roff.

1445 **# 2059.** A Satellite Study of the Tropical Atmospheric Forcing and Response to Moist Convection
H. Masunaga

Tuesday, 5 July 2011 1330-1500 MR109
IAMAS
M04 Recent advances in middle atmosphere science
M04S2 S-T Tropical Dynamics
Chairpersons: Eugene Rozanov

1330 **# 5863. Invited** Large-scale heat budget of the tropical tropopause layer
T. Birner
1345 **# 2242. Invited** Seasonal to Decadal Variations of Water Vapor in the Tropical Lower Stratosphere Observed with Balloon-borne Cryogenic Frostpoint Hygrometers
M. Fujiwara, H. Voemel, F. Hasebe, M. Shiotani, S. Ogino, et al.
1400 **As above.**
1415 **# 2556.** The quasi-biennial oscillation in a double CO2 climate
Y. Kawatani, K. Hamilton, S. Watanabe.
1430 **# 2201.** CCSR/NIES CCM simulations for Northern Hemisphere winter responses to the QBO
Y. Yamashita, H. Akiyoshi, M. Takahashi.
1445 **Discussion.**

Tuesday, 5 July 2011 1330-1500 MR108
IAMAS
M09 Three-dimensional radiative transfer in the atmosphere
M09S2 Clouds and Radiation
Chairpersons: Evgueni Kassianov

1330 **# 5426. Invited** Airborne Spectral Shortwave Irradiance Measurements in Inhomogeneous Cloud-Aerosol Fields
S. Schmidt, P. Pilewskie.
1345 **As above.**
1400 **# 1894.** Impacts of Overlapping Horizontally Variable Clouds in an Atmospheric GCM
L. Oreopoulos, D. Lee, M. Suarez.
1415 **# 5758.** Evaluating 3D effects in 1D VIS-NIR cloud retrievals using LES cloud fields and 3D radiative transfer
S. Chellappan, A. Horvath.
1430 **# 3957.** Incorporating Three-Dimensional Radiative Transfer into Two-Stream Radiation Schemes
J. Shonk, R.J. Hogan.
1445 **Discussion.**

Tuesday, 5 July 2011 1330-1500 MR110
IAMAS
M10 Tropospheric processes and processing: Pollution and biogeochemical cycling
M10S4 Ozone and its precursors
Chairpersons: Kathy Law & Andreas Stohl

1330 **# 1752.** Tagged Ozone Production Potential of Volatile Organic Compounds
T. Butler, M. Lawrence, D. Taraborrelli, J. Lelieveld.
1345 **Discussion.**
1400 **# 925.** First Measurements of Volatile Organic Compounds (VOCs) from the Gunn Point Tropical Atmospheric Research Station
S. Lawson, M. Cheng, P. Selleck, R. Fedele, M. Keywood, et al.
1415 **Discussion.**
1430 **# 5730.** Joint Assimilation of Tropospheric Emission Spectrometer and Microwave Limb Sounder Ozone Measurements and Implications for Constraints on the Tropospheric Ozone Budget
J. Neu, K. Bowman, N. Livesey, M. Lee.
1445 **Discussion.**

Tuesday, 5 July 2011 1330-1500 MR107
IAVCEI
V01/V04 Magma chambers and intrusions: their physical and chemical dynamics
V01V04S1 Magma chambers and intrusions: their physical and chemical dynamics Part 1
Chairpersons: Catherine Annen & Othmar Muntener

1330 **# 3653. Invited** Variable views of subvolcanic magma reservoirs and processes from crystal zoning records, experimental petrology, and geodetical data
F. Costa, G.S. Mattioli.
1345 **As above.**
1400 **# 847.** High Level magma chamber and contamination processes at Colli Albani volcano, Italy
J. Cross, G. Giordano, V. Smith, E. Tomlinson, J. Roberge, et al.
1415 **# 1284.** Magma storage, ascent and extrusion during recent eruptive activity at Merapi volcano, Java, Indonesia
K. Preece, J. Barclay, R. Gertisser, R. Herd.
1430 **# 5202.** Campanian Ignimbrite cataclysmic eruption reveals the interplay between discharge of a foamy cap, caldera collapse, magma depressurization, and generation of extremely diluted pyroclastic currents
G. Orsi, R. Moretti, I. Arienzo, L. Civetta.
1445 **Discussion.**

Tuesday, 5 July 2011 1330-1500 MR101
IAVCEI
V02 Arc Magmatism: The Constructive and Destructive Dynamics of Convergent Margin Magmatism
V02S2
Chairpersons: Axel Schmitt & Pablo Caffe

1330 **# 2157. Invited** Surface heat flow variations at continental arcs: exploring the effects of magma flux rates, ponding depths, and volatile contents
G. Zellmer, M. Miyoshi, Y. Tamura, Y. Iizuka.
1345 **As above.**
1400 **# 738. Invited** Assembly of rhyolite magmas at convergent plate boundaries: a high resolution view from Mt Tarawera, NZ
P. Shane
1415 **As above.**
1430 **# 2222.** Evolution, time scales and hazards at large silicic systems in island arcs: insights from the Soufriere Volcanic Complex, Saint Lucia
J. Lindsay, A. Schmitt, R. Trumbull, D. Stockli, R. Robertson, et al.
1445 **# 4225.** Geomorphological reconstruction applied to the recent volcanoes in Martinique Island (Mount Conil and Mount Pelée)
A. Germa, P. Lahitte, X. Quidelleur.

Tuesday, 5 July 2011 1330-1500 MR104
IAVCEI
V10 The Dynamics of Pyroclastic Density Currents: Field Studies of Their Deposits, Computational Modelling and Experiments
V10S3
Chairpersons: Amanda Clarke & Joe Dufek

1330 # **4111.** Insights on Segregation and Support Mechanisms of Granular Flows from Field Analysis and Laboratory Experiments
R. Sulpizio, D. Sarocchi, R. Bartali, L.A. Rodriguez-Sedano.

1345 # **911.** Coupling numerics, experiments and field to detail the behavior of pyroclastic density currents as they interact with uneven topographies and built-up areas
D.M. Doronzo, P. Dellino, M.D. de Tullio, G. Pascazio, G.A. Valentine.

1400 # **1184.** A mechanism for amalgamation in deposits from shearing flows
P. Rowley, P. Kokelaar, D. Waltham, M. Menzies.

1415 # **2700.** Pore fluid pressure and depositional processes of laboratory air-particle gravity currents: Implications For the emplacement of pyroclastic flows
O. Roche, S. Montserrat, Y. Nia, A. Tamburrino.

1430 **Discussion.**

1445 **Discussion.**

Tuesday, 5 July 2011 1330-1500 MR203
IAVCEI
V14 Monogenetic Volcanism: Magma Sources, Ascent and Eruption
V14S3 Maars & diatremes
Chairpersons: Karoly Nemeth

1330 # **1312.** Cyclicity in fluctuating phreatomagmatic and magmatic eruptive styles at Tower Hill Volcanic Complex, southeast Australia
G. Prata, R.A.F. Cas, P.C. Hayman.

1345 # **1961.** Textural characteristics of phreatomagmatic facies of monogenetic volcanoes of Jeju Island, South Korea
K. Nemeth, S.J. Cronin, Y.K. Sohn, J. Augustin-Flores, M. Brenna.

1400 # **3009.** Maar-diatreme volcanoes: a review from top to bottom
J. White, P.S. Ross.

1415 # **2200.** Wide, Very Steep Diatremes in Soft Substrates
P. Ross, J.D.L. White, S. Selpit, N. Lefebvre, B.C. Hearn.

1430 # **909.** Castle Butte Trading Post: root zone features of a shallow maar-diatreme and fissure complex
N. Lefebvre, J.D.L. White, B.A. Kjarsgaard.

1445 # **1485.** Using forward and inverse potential field modelling to understand the subsurface morphology of maar volcanoes. Examples from the Cainozoic Newer Volcanics Province, southeastern Australia
T. Blaikie, L. Ailleres, P. Betts.

TUESDAY, 5 JULY 2011 1630-1800 PM2

Tuesday, 5 July 2011 1630-1800 PH2
IUGG
U03 Recent Progress in the Studies of the Earth's Deep Interior
U03S2 Recent Progress in the Studies of the Earth's Deep Interior, Part 2
Speakers by Invitation
Chairpersons: Satoru Tanaka & Michael Bergman

1630 # **606.** A Stable Layer at the Top of Earth's Core Formed by Barodiffusion
D. Gubbins, C. Davies.

1645 # **2699.** The Heat Flux Map at the Inner Core Boundary
B. Sreenivasan

1700 # **5136.** The Inner Core of the Earth From a Seismological Perspective
H. Tkalcic

1715 **As above.**

1730 # **4408.** Asymmetric Dynamics of the Inner Core and Impact on the Outer Core
T. Alboussiere, R. Deguen, P. Cardin, M. Melzani.

1745 **As above.**

Tuesday, 5 July 2011 1630-1800 MR210
IAG
G02 Monitoring and Modelling of Mass Distribution and Mass Displacements by Geodetic Methods
G02S6
Chairpersons: Frank Lemoine & Michael Kuhn

1630 # **2766.** Time-variable gravity field recovery from GRACE and CHAMP
A. Jaggi, U. Meyer, L. Prange, G. Beutler.

1645 # **4071.** GRACE data processing: Filtering artefacts and their mitigation in estimating the mean mass anomaly per region
P. Ditmar, E. Junge, R. Riva, H. Hashemi Farahani, M. Bierkens, et al.

1700 # **3025.** Sensitivity Analysis of the Empirical Orthogonal Functions Used in Identifying Trend Signals in the GRACE L2 Data
M. Sideris, E. Rangelova.

1715 # **3064.** Processing and Validation of GFZ's new EIGEN-GRACE06S Time Series
C. Gruber, C. Dahle, F. Flechtner, H. Neumayer, I. Daras, et al.

1730 # **5962.** Joint assimilation of GRACE and Earth rotation parameters with a global ocean model.
M. Thomas, J. Saynisch.

1745 # **2273.** Estimation and Validation of Oceanic Mass Circulation from the GRACE Mission
J. Boy, D.D. Rowlands, T.J. Sabaka, S.B. Luthcke, F.G. Lemoine.

Tuesday, 5 July 2011 1630-1800 MR208
IAG
G03 Monitoring and Modelling Earth Rotation
G03S3
Chairpersons: Richard Gross

1630 **# 1123.** Earth rotation parameters as boundary conditions for an inverse dynamic Earth system model
S. Kirschner, F. Seitz.
1645 **Discussion.**
1700 **# 3091.** Lunar Laser Ranging: Recent Results Based on Refined Modelling
J. Mueller, F. Hofmann, X. Fang, L. Biskupek.
1715 **# 3432.** AGN Core Shift and Source Structure Effects on the VLBI Reference Frame
S. Shabala, J. Lovell, C. Watson, J. Dickey.
1730 **# 2804.** Ring laser detection of the chandler wobble
U. Schreiber, A. Gebauer, T. Kluegel, J. Wells.
1745 **# 2595.** Hypotheses testings of the multi-dimension state solutions
Y. Feng

Tuesday, 5 July 2011 1630-1800 MR214
IAGA
A042 Rock Magnetism
A042S3 Rock Magnetism, Magnetic Petrology and Magnetic Anomalies
Chairpersons: Phil Schmidt

1630 **# 3156. Invited** Reconciling rock properties with bulk continental lithospheric magnetization derived from satellite anomalies
D. Ravat
1645 **As above.**
1700 **# 1777.** Total Magnetic Field Anomalies in Highly Deformed Rocks: Hitra-Snaasa Fault, Central Norway
A.R. Biedermann, A.M. Hirt, J. Ebbing.
1715 **# 4496.** Physical properties and magnetic anomalies of Cretaceous to Paleogene granitic rocks in Japan
S. Okuma, H. Kanaya, T. Nakatsuka.
1730 **Discussion.**
1745 **Discussion.**

Tuesday, 5 July 2011 1630-1800 MR215
IAGA
A061 Coupling in the atmosphere-ionosphere-magnetosphere system and its response to external forcing and forcing from below
A061S3 Coupling Processes in the Atmosphere-Ionosphere System
Chairpersons: Charles Lin

1630 **# 1202.** Investigation of Gravity Wave Sources in the Antarctic Peninsula by Using the Reverse Ray Tracing Technique
J.V. Bageston, C. Wrasse, P. Batista, D. Gobbi, R. Hibbins, et al.
1645 **Discussion.**
1700 **# 2043.** Upper Thermosphere Coupling with the Lower Atmosphere: Knowns and Unknowns
H. Liu
1715 **As above**
1730 **# 1892.** Studying Ion-neutral coupling using simultaneous measurements of neutral calcium, its ion using resonance lidars at Arecibo
S. Raizada, C. Tepley, B. Wiiliams.
1745 **# 627.** Variations of the Sq Current System using Spherical Harmonic Analysis
R. Stening, D. Winch.

Tuesday, 5 July 2011 1630-1800 MR205
IAGA
A083 Space plasma processes
A083S2 Understanding the physical processes that drive tail and substorm dynamics
Chairpersons: Suzanne Imber

1630 **# 2904. Invited** Plasma Sheet Electrons as Field-Aligned Current Carriers and Formation of Auroral Field-Aligned Potential Difference
K. Shiokawa, S. Lee, J. McFadden.
1645 **As above.**
1700 **# 2574.** Construction of magnetic reconnection in the near-earth magnetotail with geotail
T. Nagai
1715 **# 1846.** Plasma Sheet Disruption by Interchange-Generated Flow Intrusions
P. Pritchett, F. Coroniti.
1730 **# 2953.** Quasi-adiabaticity of particle dynamics and formation of large scale structure of electrostatic fields and transverse currents in the Earth magentotail
L. Zelenyi, A. Artemyev, H. Malova, A. Petrukovich.
1745 **# 3502.** THEMIS Observations of Multiple Substorm Onsets During a Non-Storm Period
C. Cheng, C.T. Russell, V. Angelopoulos, I.R. Mann, K-H. Glassmeier, et al.

Tuesday, 5 July 2011 1630-1800 MR216
IAGA
A091 Magnetosphere-ionosphere coupling
A091S5 The plasma sheet – ionosphere, a coupled system: Sinks, sources, transport and the roles of field-aligned currents and ion outflow
Chairpersons: Elizaveta Antonova

1630 **# 4714. Invited** Impact of Ionospheric Ions on the Plasma Sheet
L. Kistler, C. Mouikis, J. Liao, Y-H. Liu.
1645 **As above.**
1700 **# 3377. Invited** Resent results of ion up/outflow observed with the EISCAT radars
Y. Ogawa, S.C. Buchert.
1715 **As above.**
1730 **# 4017. Invited** Plasma Sheet Flows and Their Interaction with the inner Magnetosphere
J. Birn, M. Hesse, R. Nakamura, E. Panov.
1745 **As above.**

Tuesday, 5 July 2011 **1630-1800 MR209**

IAGA

A093 Magnetosphere-ionosphere coupling

A093S3 Interhemispheric Conjugacy-nonconjugacy Effects and Coupling Processes

Chairpersons: A. Grocott

1630 **# 4329.** Interhemispheric Conjugacy of Ionospheric Convection Seen by SuperDARN Radars
J. Baker, B. Kunduri, L. Clausen, J.M. Ruohoniemi, A. Grocott, et al.

1645 **# 4176. Invited** Interhemispheric Observations of Ionospheric Convection with SuperDARN: Results and Future Opportunities
M. Lester

1700 **As above.**

1715 **# 1844. Invited** Observations of Ionospheric Processes in Both Hemispheres
C. Valladares

1730 **As above.**

1745 **# 1209.** Parameters of the global atmospheric electric circuit as measured in the northern and southern polar regions
R. Lukianova, A. Frank-Kamenetsky, N. Kleimenova, O. Kozyreva, A. Kruglov, et al.

Tuesday, 5 July 2011 **1630-1800 MR206**

IAGA

A112 The Sun and the Heliosphere: Physical Processes

A112S5 Origin of the Solar Magnetism. The Solar Dynamos

Chairpersons: Paul Cally & Mausumi Dikpati

1630 **# 4132.** Small-scale dynamo action in the quiet sun: observational aspects
V. Abramenko

1645 **As above.**

1700 **# 989.** Intermittency and Lagrangian Coherent Structures in a Nonlinear Model of Solar Dynamo
A. Chian, E. Rempel, A. Brandenburg, M. Proctor.

1715 **As above.**

1730 **# 5947.** Latest News about the Bashful Ballerina: What do Hemispheric and Longitudinal Asymmetries imply about the Sun and Why are They Important for the Earth's Space Environment?
K. Mursula, I. Virtanen, L. Zhang, I. Usoskin.

1745 **As above.**

Tuesday, 5 July 2011 **1630-1800 MR211**

IAGA

A121 Space Weather and Space Climate

A121S3 Quantitative Prediction of Space Weather

Chairpersons: Pete Riley & Geoff Crowley

1630 **# 3972.** Quantitative Assessment of the Recent Space Weather Events Using a Suite of Models and Observations
Y. Zheng, M. Hesse, A. Pulkkinen, A. Taktakishvili, M. Kuznetsova, et al.

1645 **# 3236. Invited** Implications of Evolving Coronal Hole Distribution during the Recent Solar Minimum
S. Gibson

1700 **As above.**

1715 **Discussion.**

1730 **Discussion.**

1745 **Discussion.**

Tuesday, 5 July 2011 **1630-1800 MR207**

IAGA

A132 Magnetic observations from ground to space – ingredients for new geomagnetic research

A132S2 Results from the decade of geopotential research and beyond

Chairpersons: Ciaran Beggan & Vincent Lesur

1630 **# 2738.** The Swarm Absolute Scalar Magnetometer : new features, capabilities and performances
I. Fratter, J.C. Lalaurie, M. Venet, J.M. Léger, T. Jager, et al.

1645 **# 2779.** Core surface flows with acceleration derived from magnetic satellite measurements during the decade for geopotential research
K. Whaler, C.D. Beggan.

1700 **# 3934.** Calibration and Cleaning of Magnetic Satellite Data
R. Holme, V. Penquerc'h, A. Thomson, K. Whaler.

1715 **# 3693.** Solar Cycle Variability Of The Geomagnetic Sq Field
V. Penquerc'h, A. Chulliat.

1730 **# 3997.** ESA's Magnetic Field Mission
R. Haagmans, Y. Menard, R. Floberghagen, G. Plank.

1745 **Discussion.**

Tuesday, 5 July 2011 **1630-1800 MR218**

IAHS

H01 Conceptual and modelling studies of integrated groundwater, surface water, and ecological systems

H01S1 Improves process understanding at differnt scales and in different regions

Chairpersons: Abesser, Corinna & Nützmann, Gunnar

1630 **Introduction.**

1645 **# 5956.** The need to consider temporal variability when modeling exchange at the sediment-water interface
D. Rosenberry

1700 **As above.**

1715 **#339.** Criteria for the Concession of Rights over Integrated Groundwater-Surface Water.
C. Galvao, M. Ribeiro, J. Rego, P. Albuquerque, M. Costa.

1730 **# 280.** Impacts of climate change on water resources in Huaihe River basin, China
Q. Wang, J.Y. Zhang, J.L. Jin, C.S. Liu, X.L. Yan.

1745 **# 406.** Nutrient exchange between surface water and subsurface water in ponded shallow agricultural reservoirs of a suburban river
Y. Shimizu, S. Onodera, M. Saito.

Tuesday, 5 July 2011 1630-1800 MR219
IAHS
H02 Cold regions hydrology in a changing climate
H02S3
Chairpersons: Alex Gelfan & Baisheng Ye

1630 **# 190.** Permafrost thaw induced land-cover change in the Canadian subarctic: Implications for water resources
W. Quinton, M. Hayashi, L. Chasmer.
1645 **As above.**
1700 **Discussion.**
1715 **# 449.** Modelling hydrological consequences of climate change in the permafrost region and assessment of their uncertainty
A. Gelfan
1730 **# 361.** Monte Carlo experiments for the investigation of the predictive uncertainty in glacier melt discharge estimations from a surface energy balance approach
F. Soria
1745 **Discussion.**

Tuesday, 5 July 2011 1630-1800 MR220
IAHS
H03 Risk in Water Resources Management
H03S3
Chairpersons: S. Jain

1630 **# 106.** Optimal multi-year management of a water supply system under uncertainty: affine adjustable robust counterpart approach
U. Shamir, M. Housh, A. Ostfeld.
1645 **# 108.** Hydrological and Stochastic Uncertainty: Linking Hydrological and Water Resources Yield Models in an Uncertainty Framework
S. Mallory, D. Hughes, B. Haasbroek, GGS. Pegram, E. Kapangaziwiri.
1700 **# 175.** Water Conflict Vulnerability of Regions
N. Gunasekara, S. Kazama.
1715 **Discussion.**
1730 **# 338.** Accounting for uncertainty in the optimisation of pumping rates for sustainable aquifer management under economic and environmental constraints
L. Peeters, D. Rassam, J. Lerat.
1745 **# 400.** Risks in groundwater resource assessment of a granitic aquifer and its minimization by changing cropping pattern
S. Sarah, S. Ahmed, J. Perrin.

Tuesday, 5 July 2011 1630-1800 MR212
IAHS
H04 Assessment of water quality under changing climate conditions
H04S5 Climate Change and Water Quality Modeling and Water Quality General
Chairpersons: Valentina Krysanova & Ahti Lepistö

1630 **# 383.** Assessment of water quality under changing climate conditions in Haihe River Basin, China
Y Jia, C. Niu, H. Wang, Z. Zhou & Y. Qiu.
1645 **# 416.** Effect of Climate Change on Nutrient Discharge to Coastal area, Western Japan
Y Shimizu, S. Onodera & M. Saito.
1700 **# 253.** Predicting Water Quality Responses to a Changing Climate Using a Linked Modelling Framework: A Case Study.
F. Dyer, S. El Sawah, E. Harrison, S. Broad, B. Croke, et al.
1715 **# 413.** Estimation of Annual Nutrient Discharge Variation, using Runoff and Dissolved Load Relationship in a Suburban River Catchment, Western Japan
S Onodera, M. Kobayashi, M. Saito & Y. Shimizu.
1730 **# 451.** Geochemical properties of floodplain sediments of rivers of the European Russia as indicators for particle-bound pollutant transport in fluvial systems
V Belyaev, M.V. Markelov, V.N. Golosov, E.N. Aseeva & M.M. Petrik.
1745 **# 113.** Development of Water Quality Improvement Strategy Plan for Local City Councils in Western Australia
R Sarukkalige & D. Gamage.

Tuesday, 5 July 2011 1630-1800 MR217
IAHS
HW03 Regional groundwater modelling: Approaches, challenges, and future directions
HW03S3
Chairpersons: Chunmiao Zheng & Howard Reeves

1630 **Introduction.**
1645 **Discussion.**
1700 **# 3189.** A Mathematical Model of Groundwater Uptake by Phreatophytes and its Computer Implementation within a Regional Groundwater Model using the Analytic Element Method
D. Steward
1715 **# 5926.** Quantification of Fresh Groundwater using Time-Domain Electromagnetic and Evaluation the Performance of Skimming Wells to Control Upconing in the Indus basin, Pakistan
N. Alam, T. Olsthoorn.
1730 **Discussion.**
1745 **Conclusion.**

Tuesday, 5 July 2011 1630-1800 MR102
IAHS
HW12 Quality and quantity aspects of green and blue water: Impact on agriculture, environment, energy and industry
HW12S2
Chairpersons: M.S. Brar & Susanne Rulinski

1630 **# 5508.** The Efficiency of Agricultural Trade on Blue Water Savings in Water Scarce Regions
S. Rolinski, A. Biewald, H. Lotze-Campen, H. Hoff.
1645 **As above.**
1700 **Discussion.**
1715 **# 5836.** Social Learning to Integrate Blue and Green Water Management at Catchment Scale
J. Burte, E.S. Martins.
1730 **# 5932.** Ecosystem services of Pacific coastal wetlands: integrating climate change into hydro and irrigation Cumulative Effect Assessments in Mexico
J. Clausen, S. Contreras, F. Figueroa.
1745 **As above.**

Tuesday, 5 July 2011 1630-1800 MR103
IAMAS
JM04 Stratosphere-Troposphere-Ocean coupling in weather and climate
JM04S5
Chairpersons: P. Hitchcock

1630 **# 3286. Invited** The Effect of Stratospheric Resolution on Tropospheric Extended-range Forecasts in the ACCESS NWP Model
G. Roff, D. Thompson, H. Hendon.
1645 **As above.**
1700 **# 2197.** Tropospheric Precursors and Stratospheric Warmings
J. Cohen, J. Jones.
1715 **# 2219.** Influence of Stratospheric Sudden Warmings on the Predictability of the Northern Hemisphere Annular Mode
H. Mukougawa, S. Nagata, T. Hirooka, Y. Kuroda.
1730 **# 3478.** Dynamical Seasonal Forecasts of the Southern Annular Mode
E. Lim, H. Hendon, H. Rashid.
1745 **# 1681.** Impact of the Representation of the Stratosphere on Tropospheric Weather Forecasts
S. Mahmood

Tuesday, 5 July 2011 1630-1800 MR105
IAMAS
JM10 Monsoons, Tropical Cyclones and Tropical Dynamics
JM10S20 Climate and Precipitation
Chairpersons: Eric Maloney

1630 **# 1147. Invited** Learning About Tropical Circulation From Small Mountain Glaciers
T. Moelg, G. Kaser, NJ. Cullen.
1645 **# 2213. Invited** Glaciers as indicators of present and past variability and changes in low latitude atmospheric circulation
G. Kaser, M. GroÃŸhauser, M. Hofer, A. Jarosch, B. Marzeion, et al.
1700 **As above.**
1715 **# 5288.** Study on the Tibet Plateau climate system change and mechanism of its impact on East Asia
Y. Ma
1730 **# 1323.** South Atlantic Ocean Dipole mechanism associated with West African summer precipitation anomalies
H. Nnamchi, J. Li, R. Anyadike.
1745 **# 4565.** Principal Component Analysis of Observed and Modelled Diurnal Rainfall in the Maritime Continent
C. Teo, T-Y. Koh, J. C-F. Lo, B.C. Bhatt.

Tuesday, 5 July 2011 1630-1800 MR109
IAMAS
M04 Recent advances in middle atmosphere science
M04S3 S-T Tropical Dyn/Chem
Chairpersons: Laura Pan

1630 **# 4403.** Stratopause Temperature and Altitude Variability and Interhemispheric Links: Signal Propagation in the Middle Atmosphere
A. McDonald
1645 **# 5277.** Trace Gas Delivery of Bry to the Stratosphere: Sensitivity to TTL Transport Processes
R. Schofield, S. Fueglistaler, I. Wohltmann, M. Rex.
1700 **# 3490.** Roles of Deep Convection in the Tropical Tropopause Layer using the Nonhydrostatic Icosahedral Atmospheric Model (NICAM)
H. Kubokawa, M. Fujiwara, T. Nasuno, M. Satoh.
1715 **# 1083.** Effect of Thin Cirrus on Decadal Cloud Height Trends from MISR
A. Prasad, R. Davies.
1730 **# 2792.** Cirrus Heating and Cooling Rates
S. Massie, J. Gille, C. Craig, A. Heymsfield, S. Schmidt, et al.
1745 **Discussion.**

Tuesday, 5 July 2011 1630-1800 MR108
IAMAS
M09 Three-dimensional radiative transfer in the atmosphere
M09S3 Atmosphere and Vegetation
Chairpersons: Tamas Varnai

1630 **# 4237. Invited** Polarized Atmospheric Radiative Transfer using the Monte Carlo Method
C. Emde
1645 **As above.**
1700 **# 2011.** Spectrally-invariant approximations within atmospheric radiative transfer
A. Marshak, Y. Knyazikhin, C. Chiu, W. Wiscombe.
1715 **# 5702.** RAMI4PILPS: An Intercomparison of Formulations for the Partitioning of Solar Radiation in Land Surface Models
J. Widlowski, B. Pinty.
1730 **# 5308.** The stable stationary value of the Earth's global average atmospheric infrared optical thickness
M. Zagoni, F. Miskolczi.
1745 **Discussion.**

Tuesday, 5 July 2011 1630-1800 MR110
IAMAS
M10 Tropospheric processes and processing: Pollution and biogeochemical cycling
M10S5 Aerosols, Climate and biogeochemical cycles
Chairpersons: Melita Keywood & Manish Naja

1630 **# 3703. Invited** Low molecular weight dicarboxylic acids, glyoxal and glyoxylic acid in the North Pacific aerosols and their stable carbon isotopic composition: Source and atmospheric processing
K. Kawamura
1645 **As above.**
1700 **# 2493.** Atmospheric Organic Material and the Nutrients it carries to the Ocean
M. Kanakidou, R. Duce, J. Prospero, F. Dentener, M. Huematsu, et al.
1715 **# 3405.** Do primary and secondary aerosols mix? Interactions of natural and anthropogenic aerosol
A. Asa-Awuku, M. Miracolo, J. Kroll, A. Robinson, N. Donahue.
1745 **As above.**

Tuesday, 5 July 2011 1630-1800 MR107

IAVCEI

V01/V04 Magma chambers and intrusions: their physical and chemical dynamics

V01V04S2 Magma chambers and intrusions: their physical and chemical dynamics Part 2

Chairpersons: Alexander Cruden & Luca Caricchi

1630 **# 2896. Invited** Rehydration of Magma following Eruptions
B. Kennedy, L. Marx, Y. Lavallee, H. Tuffen, A.M. Jellinek, et al.

1645 **As above.**

1700 **# 1810.** The Petrologic Evolution and Pre-eruptive Magmatic Conditions of Nisyros Volcano (Aegean arc, Greece)
H. Kinvig, J.D. Blundy, M. Loader, J. Gottsmann.

1715 **# 2534.** Magma Chamber Conditions Leading to the Dacitic Tierra Blanca Eruption at Concepcion Volcano, Nicaragua
M. Longpre, J. Stix, J. Alvarez, M. Navarro.

1730 **# 1811.** A Petrological Analysis of the 2007-2008 dome-forming eruption of Kelut volcano, Indonesia: insights into the pre-eruptive magma system
R. Gertisser, A. Jeffery, B. O'Driscoll, H. Humaida, A. Tindle.

1745 **Discussion.**

Tuesday, 5 July 2011 1630-1800 MR101

IAVCEI

V02 Arc Magmatism: The Constructive and Destructive Dynamics of Convergent Margin Magmatism

V02S3

Chairpersons: Georg Zellmer & Axel Schmitt

1630 **# 2036. Invited** High-Ni Olivines and the Mantle Origin of Arc Andesites
S. Straub, A. Gomez-Tuena, F.M. Stuart, G.F. Zellmer, R. Espinasa-Perena, et al.

1645 **As above.**

1700 **Discussion.**

1715 **Discussion.**

1745 **Discussion.**

1730 **# 1017.** The Influence of Subducted Slab in Magma Genesis of Sunda Arc, Java Island Arc, Indonesia (An Application of Boron Analysis in Sunda Arc)
E. Handini, T. Hasenaka, M. Miyoshi, Y. Mori, K. Watanabe, et al.

1745 **Discussion.**

Tuesday, 5 July 2011 1630-1800 MR104

IAVCEI

V10 The Dynamics of Pyroclastic Density Currents: Field Studies of Their Deposits, Computational Modelling and Experiments

V10S4

Chairpersons: Joe Dufek & Amanda Clarke

1630 **# 2109.** Topographic effects on pyroclastic density current behavior
M. Manga, B. Andrews.

1645 **# 1420.** Topographically Influenced Channelization of Pyroclastic Density Currents: Mount St Helens
B. Brand, J. Dufek, C. Mackaman-Lofland.

1700 **# 3714.** 3-D numerical simulations of eruption clouds: the critical condition for column collapse
Y. Suzuki, T. Koyaguchi.

1715 **# 689.** Ash-cloud surge generation: relative contributions from collapsing lava-dome decompression and fragmentation, and subsequent flow propagation
S. Ogburn, E. Calder, A. Stinton.

1730 **As above.**

1745 **Discussion.**

Tuesday, 5 July 2011 1630-1800 MR203

IAVCEI

V14 Monogenetic Volcanism: Magma Sources, Ascent and Eruption

V14S4 Spatio-temporal analysis of monogenetic fields

Chairpersons: Adrian Pittari

1630 **# 4511.** The Geodynamic Context of the Intraplate, Basaltic Pliocene-Quaternary Newer Volcanics Province of southeastern Australia.
R. Cas, G. Giordano, L. Ailleres, P. Betts, J. van Otterloo.

1645 **# 4660.** Analysing The Spatial Distribution Of Volcanic Activity Over Time: The Young Monogenetic Newer Volcanic Province Of Southeastern Australia
E.B. Joyce, R. Hughes.

1700 **# 1218.** Statistical analysis of eruptive vent distribution from post-subduction monogenetic fields in Baja California, Mexico
A. Germa, E. Cañon-Tapia.

1715 **# 540.** Multiple Dating Methods in the Auckland Volcanic Field: Including the Kitchen Sink
M. Bebbington, S. Cronin.

1730 **# 1071.** Neogene intermediate arc type-related monogenetic volcanism in Oas-Gutai Mts., NW Romania
M. Kovacs, A. Fulop.

1745 **# 991.** Long-term shifting in fragmentation styles during the evolution of a Mio/Pliocene, intracontinental, basaltic volcanic field (Bakonyâ"Balaton Highland Volcanic Field, Western Hungary)
G. Kereszturi, K. Nemeth, G. Csillag, K. Balogh, J. Kovacs.

WEDNESDAY, 6 JULY 2011 0830-1000 AM1

Wednesday, 6 July 2011 0830-1000 PH2
IUGG
U11 Earth and Space Science in Africa
U11S1 Speakers by Invitation
Chairpersons: Charles Barton & Djillall Benouar

0830 **# 4649.** Thoughts on the tectonic of Africa
P. Dirks
0845 **As above.**
0900 **# 2720.** The Afar, Ethiopia: geophysical and remote sensing studies of late-stage continental break-up
K. Whaler, S. Hautot, M. Desissa, N.E. Johnson, S. Fisseha, et al.
0915 **As above.**
0930 **# 1050.** African Geoid Project: Current Status and Future Plans
H. Abd-Elmotaal
0945 **As above.**

Wednesday, 6 July 2011 0830-1000 MR210
IAG
G02 Monitoring and Modelling of Mass Distribution and Mass Displacements by Geodetic Methods
G02S7
Chairpersons: Jean-Paul Boy & Frank Lemoine

0830 **# 4312.** Simultaneous inversion of GRACE, GPS and ocean bottom pressure observations
P. Tregoning, A. Dehecq, S. McClusky, A. Purcell, E. Potter.
0845 **# 1878.** Terrestrial and GRACE gravity field variations in Europe
T. Jahr, A. Weise, C. Kroner, M. Abe, B. Creutzfeldt, et al.
0900 **# 3623.** A combined land uplift model in Fennoscandia based on GRACE and absolute gravimetry data
M. Naeimi, J. Mueller, O. Gitlein.
0915 **# 5809.** Modes of Mass Variability and Climate Indices: Insights from GRACE
J. Dickey, O. de Viron.
0930 **# 3925.** Mass redistributions in West Africa induced by the monsoon system: comparison of GPS, GRACE and geophysical models
O. Bock, S. Nahmani, M.N. Bouin, A. Santamaría-Gómez, G. Wöppelmann, et al.
0945 **# 3859.** Mass variations from GRACE and changes of the permafrost hydrological processes in Central Yakutia, Siberia
J. Mueller, S. Vey, J. Boike.

Wednesday, 6 July 2011 0830-1000 MR206
IAGA
A021 Electromagnetic Induction
A021S1 Recent Advances in Electromagnetic Induction: Modelling and inversion
Chairpersons: Gary Egbert & Graham Hill

0830 **# 4995. Invited** Structural Joint Inversion of Electromagnetic, Seismic and Potential Field Data: Numerical Strategies and Field Examples
L. Gallardo
0845 **As above.**
0900 **# 3715.** A computational framework for joint inversion of magnetotelluric, seismic and gravity data
M. Moorkamp, M. Jegen, B. Heincke, A.W. Roberts, R.W. Hobbs.
0915 **# 4267. Invited** 3D Vector Finite Element Forward Modeling Approaches for Transient Electromagnetic Fields Using Krylov Subspace Techniques in the Time and Frequency Domain
K. Spitzer, R.U. Boerner, O. Ernst, M. Eiermann.
0930 **As above.**
0945 **# 3166.** On the Three-Dimensional DC and Magnetic Inverse Problem
P. Martyshko, N. Fedorova, V. Pyankov, A. Roublev.

Wednesday, 6 July 2011 0830-1000 MR214
IAGA
A031 Paleomagnetism
A031S1 Magnetostratigraphy and Chronology
Chairpersons: Gillian Turner & Brad Singer

0830 **Introduction.**
0845 **# 2773.** Master curve for paleointensity and paleodirections for Swiss lacustrine sediments
J. Kind, S. Panovska, A.M. Hirt.
0900 **# 2323.** Direct dating of geomagnetic events and excursions in Plio-Pleistocene speleothems from South Africa using Uranium-lead
A. Herries, R. Pickering, P. Hopley.
0915 **# 3126.** Refining the Quaternary Geomagnetic Instability Time Scale (GITS)
B. Singer
0930 **# 3206.** How does Chinese Loess Become Magnetized?
A. Roberts, X. Zhao.
0945 **Discussion.**

Wednesday, 6 July 2011 0830-1000 MR205
IAGA
A044 Rock Magnetism
A044S1 Environmental Magnetism Part 1
Chairpersons: Ann Hirt & David Heslop

0830 **# 3086. Invited** Environmental magnetic records of atmospheric dust variability from Arabia and Asia over the last 500, 000 years
A. Roberts, E.J. Rohling, K. Grant, J.C. Larrasoaña, Q.S. Liu.
0845 **As above.**
0900 **# 3876.** Magnetic Transect Through The Namib Sand Sea In SW Africa
A. Gehring, B. Almqvist, N. Riahi, P. Weidler, S. Schultheiss.
0915 **# 4116.** Quality of urban environment in six big cities in Bulgaria deduced by magnetic studies of indoor and outdoor dust
N. Jordanova, P. Petrov, D. Jordanova, R. Yankova, T. Tsacheva.
0930 **# 2174.** Seasonal behavior of magnetic properties of PM10 at industrial and urban sites
E. Petrovsky, A. Kapicka, B. Kotlik, R. Zboril, H. Grison.
0945 **# 3388.** The Assessment of Heavy Metal Pollution of a Fe-smelting Plant in Urban River Sediments Using Environmental Magnetic and Chemical Methods
C. Zhang, Q. Qiao, B. Huang.

Wednesday, 6 July 2011 0830-1000 MR215

IAGA

A061 Coupling in the atmosphere-ionosphere-magnetosphere system and its response to external forcing and forcing from below

A061S4 Coupling Processes in the Atmosphere-Ionosphere System

Chairpersons: Huixin Liu

0830 **# 4989. Invited** Forecasting the Coherent Thermospheric Dynamic and Electrodynamic Response to Stratospheric Warmings With a Whole Atmosphere Model
T. Fuller-Rowell, R. Akmaev, H. Wang, F. Wu, T-W. Fang, et al.

0845 **As above.**

0900 **# 2830. Invited** Impacts of Planetary-Scale Waves on Thermosphere/Ionosphere During Stratospheric Sudden Warming
H. Liu

0915 **As above.**

0930 **# 2836.** Investigation of Major Stratospheric Warming Effects on Atmospheric Coupling at High Latitudes using the Extended Canadian Middle Atmosphere Mode
M. Shepherd, S. Beagley, Y.M. Cho, G. Shepherd, V. Fomichev.

0945 **# 5866.** Airglow images and wind observed at Polar Environment Atmospheric Research Laboratory during the 2009 Major Arctic Stratospheric Warming
W. Ward, S. Kristoffersen, A. Manson, C. Meek, M. Shepherd, et al.

Wednesday, 6 July 2011 0830-1000 MR207

IAGA

A063/A065 Coupling in the atmosphere-ionosphere-magnetosphere system and its response to external forcing and forcing from below

A063A065S1 Atmosphere-ionosphere coupling

Chairpersons: Hisao Takahashi & TBC

0830 **# 1186. Invited** Sudden Stratospheric Warmings: The Atmosphere-Ionosphere Coupling Paradigm
D. Pancheva, P. Mukhtarov.

0845 **As above.**

0900 **# 2255. Invited** Effects of Atmospheric Waves on Latitudinal and Temporal Variations in the Upper Atmosphere
Y. Miyoshi, H. Jin, H. Fujiwara, H. Shinagawa, K. Terada.

0915 **As above.**

0930 **# 1140.** Comparison of the dynamical response of low latitude middle atmosphere to the major stratospheric warming events in the Northern and Southern Hemispheres
S. Sundararaman, B. Ganeshan Jeya, S. Sundararajan, G. Subramanian, R. Dennis.

0945 **Discussion.**

Wednesday, 6 July 2011 0830-1000 MR208

IAGA

A072 Radiation belt dynamics and remote sensing of the Earth's plasmasphere

A072S1 Remote Sensing and Modeling of the Earth's Plasmasphere

Chairpersons: Janos Lichtenberger

0830 **# 5562. Invited** Remote Sensing Plasma Mass Density in the Vicinity of the Plasmapause Using ULF Waves
C. Waters, M. Sciffer, P. Robinson, F. Menk, I. Mann.

0845 **As above.**

0900 **# 2115. Invited** Plasma Mass Density in the Inner Magnetosphere Derived From the Frequency of Standing Alfven Waves Observed With Spacecraft
K. Takahashi, R. Denton.

0915 **As above.**

0930 **# 5049.** The Annual and Longitudinal Variations in Plasmaspheric Ion Density
F. Menk, S. Ables, R. Grew, M. Clilverd, B. Sandel.

0945 **# 4928.** Monitoring Spatiotemporal Variations of Storm-time Plasmasphere by Ground Observations of Field Line Resonance
P. Chi

Wednesday, 6 July 2011 0830-1000 MR209

IAGA

A083 Space plasma processes

A083S3 Understanding the physical processes that drive tail and substorm dynamics

Chairpersons: Tsugunobu Nagai

0830 **# 5811. Invited** Current Sheet Thinning and Entropy Constraints During the Substorm Growth Phase
A. Otto

0845 **As above.**

0900 **# 4962.** Modeling Harris current sheets with THEMIS observations
L. Kepko, S. Apatenkov, V. Angelopoulos, R. McPherron, K. -H. Glassmeier.

0915 **# 4051.** Generation and Dynamics of Bursty Bulk Flows
J. Birn, M. Hesse.

0930 **# 5005.** Causal dependence of substorms: Internal vs external triggers
S. Wing, J. Johnson.

0945 **# 4448.** Energy Release Midway Between the Magnetic Reconnection and Initial Dipolarization Regions in the Near-Earth Magnetotail and Its Role in the Substorm Onset
Y. Miyashita, S. Machida, A. Ieda, T. Takada, K. Seki, et al.

Wednesday, 6 July 2011 0830-1000 MR216

IAGA

A091 Magnetosphere-ionosphere coupling

A091S6 The plasma sheet – ionosphere, a coupled system: Sinks, sources, transport and the roles of field-aligned currents and ion outflow

Chairpersons: Sorin Zaharia

0830 **# 1055.** Distribution of plasma pressure in the high latitude magnetosphere and the possibility of the formation of local magnetic traps
E. Antonova, I.P. Kirpichev, I.N. Myagkova, M.O. Riazantseva, V.V. Vovchenko, et al.

0845 **# 4066.** Dynamic Sub-Auroral Ionospheric Electric Fields Observed By The Falkland Islands Radar During The Course Of A Geomagnetic Storm
A. Grocott, S.E. Milan, M. Lester, T.K. Yeoman, M.P. Freeman, et al.

0900 **# 2033. Invited** Impact of plasma sheet on storm-time ring current and sub-auroral ionosphere
Y. Ebihara, M.C. Fok, N. Nishitani, T. Kikuchi.

0915 **As above.**

0930 **# 2205. Invited** Auroral precipitation and images as guides to ionosphere-plasma sheet coupling
P. Newell, J. Gjerloev.

0945 **As above.**

Wednesday, 6 July 2011 0830-1000 MR103
IAGA
A102 The Sun and the Heliosphere: New Views
A102S1 Plasma interactions at solar system bodies without or with weak intrinsic magnetic field: SW & Venus, Mars
Chairpersons: Ronan Modolo

0830 **Introduction.**
0845 **# 5459.** Ion outflow channels around Venus controlled by the direction of the interplanetary magnetic field
K. Mausnaga, Y. Futaana, M. Yamauchi, S. Barabash, T. Zhang, et al.
0900 **# 4419. Invited** Mars and SW Interaction in the Light of MAVEN, an Overview
L. Andersson
0915 **As above.**
0930 **# 4418.** Processes that Enhances Ion Outflow at Mars
L. Andersson, R.E. Ergun, L.C. Ray.
0945 **Discussion.**

Wednesday, 6 July 2011 0830-1000 MR211
IAGA
A121 Space Weather and Space Climate
A121S4 Quantitative Prediction of Space Weather
Chairpersons: Janet Kozyra & Terry Forbes

0830 **# 3897. Invited** Impact of Energetic Particle Precipitation on the Atmosphere
A. Seppälä
0845 **As above.**
0900 **Discussion.**
0915 **# 2929. Invited** What are the Causes of the Largest SEP Events?
H. Cane
0930 **As above.**
0945 **Discussion.**

Wednesday, 6 July 2011 0830-1000 MR204
IAGA
A141 Lithospheric field and related geological/tectonic implications
A141S1 Modeling of lithospheric and induced magnetic fields
Chairpersons: Mohamed Hamoudi & Mita Rajaram

0830 **# 605. Invited** Analysis of Lithospheric Magnetisation in Vector Spherical Harmonics
D. Gubbins, D. Ivers, S. Masterson, D.E. Winch.
0845 **As above.**
0900 **# 1253.** Basement Structure and Mineralization of Proterozoic Chattisgarh basin, India from the Analysis of Aeromagnetic Data
A. S P, M. Rajaram, N. Nair.
0915 **# 1357.** A Major Asymmetry in the Gravity Field Over India: Cratons, Mobile Belts and Uplifts
K. Veeraswamy, U. Raval.
0930 **# 2324.** Automatic modelling and inversion of dykes from Magnetic Tensor gradient profiles – recent progress
D. Fitzgerald, H. Holstein, C. Foss.
0945 **Discussion.**

Wednesday, 6 July 2011 0830-1000 PH1
IAGA
A151 Reporter's Review
A151S1
Chairpersons: Anna Milillo & Masaki Fujimoto

0830 **# 2189. Invited** Reporter review: Magnetopause and boundary layer
B. Lavraud
0845 **As above.**
0900 **As above.**
0915 **# 1853. Invited** Auroral Phenomena
C. Watt
0930 **As above.**
0945 **As above.**

Wednesday, 6 July 2011 0830-1000 MR220
IAGA
A162 History sessions focused on IAGA subdisciplines
A162S1 History of Auroral Research
Chairpersons: TBC

0830 **# 2630. Invited** Why and how to stimulate the interest for auroras and auroral realated science
K.B. Dahle, A. Egeland.
0845 **As above.**
0900 **# 654. Invited** Auroral Research in Greenland in Connection with the first International Polar Year 1882/83
T. Jørgensen
0915 **As above.**
0930 **# 563. Invited** Hannes Alfven's Role in Auroral Research
B. Hultqvist
0945 **As above.**

Wednesday, 6 July 2011 0830-1000 MR218
IAHS
H01 Conceptual and modelling studies of integrated groundwater, surface water, and ecological systems
H01S2 Improved process understanding at different scales and in different regions
Chairpersons: Mary C. Hill & Richard Evans

0830 **# 404.** On the opportunity to directly observe surface water – groundwater interaction using electrical resistivity tomography
U. Noell, C. Wiessner, C.H. Ganz.
0845 **# 156.** The relationship between soil water behaviours and river runoffs: field observations and modelling
K Chikita, M. Islam, T. Wada & T. Ymaguchi.
0900 **# 274.** Simulation of groundwater flow and salt transport in a shallow microtidal barrier aquifer during a storm surge
S.E. Poulsen, S. Christensen, K. Ramer Rasmussen, A. Werner.
0915 **# 426.** Assessment of the groundwater flow system and water quality mixing processes in the Pantanal wetland, Brazil
K. Miyaoka, A.Y. Kojima.
0930 **# 474.** Aquifer recharge from overbank floods
R. Doble, R. Crosbie, B. Smerdon.
0945 **Discussion.**

Wednesday, 6 July 2011 0830-1000 MR219

IAHS

H02 Cold regions hydrology in a changing climate

H02S4

Chairpersons: John Pomeroy & Hotaek Park

0830 **Introduction.**

0845 **# 116.** Fluvial response to climate change: case study of Northern rivers of Russia
S. Chalov, G. Ermakova.

0900 **# 249.** Evidence for water cycle changes during past 50 years in Tibetan Plateau: Review and synthesis
Y. Zhang

0915 **# 258.** Local Understanding of Hydroclimatic Variability in Mongolia
S. Fassnacht, T. Sukh, M. Fernandes-Gimenez, M. Laituri, B. Batbuyan.

0930 **Discussion.**

0945 **Discussion.**

Wednesday, 6 July 2011 0830-1000 MR102

IAHS

HW04 Snow and ice hydrology: Principles, processes and prediction

HW04S1

Chairpersons: TBC

0830 **# 3188. Invited** Representing the Effect of the Katabatic Boundary Layer for Regional Prediction of Turbulent Energy Fluxes over Melting Glaciers
D. Moore, Joe. Shea.

0845 **As above.**

0900 **# 2895. Invited** Variation in Mass and Energy Balance of Alpine Snowcovers along a Continental Latitudinal Transect
J. Pomeroy, D. Marks, X. Fang, M. Reba.

0915 **As above.**

0930 **# 259. Invited** Scales of Snowpack Variability around Operational Measurement Stations
S. Fassnacht, A. Kashipazha, E. Blumberg, C. Heun, M. Skordahl, et al.

0945 **As above.**

Wednesday, 6 July 2011 0830-1000 MR213

IAHS

HW05 Revisiting experimental catchment studies in forest hydrology

HW05S1 Answering new questions using old datasets Part 1

Chairpersons: Leon Bren & Ashley Webb

0830 **Introduction.**

0845 **# 6099. Invited** The Present and Future Value of Catchment Experiments for Forest Hydrology
D.F. Scott

0900 **As above.**

0915 **# 4169.** The hidden treasures of long-term paired watershed monitoring in the forests of Arizona
G. Gottfried, B. Poff, D. Neary, V. Henderson & A. Tecle.

0930 **# 1925.** Comparison between statistical approach and paired catchment study in estimating water yield response to afforestation
Y. Wang, M. Bredemeier, M. Bonell, P. Yu, K. Feger, et al.

0945 **# 5556.** Revisting past paired catchment experiments
V. Andréassian, C. Perrin.

Wednesday, 6 July 2011 0830-1000 MR109

IAMAS

M04 Recent advances in middle atmosphere science

M04S4 S-T Polar Dynamics

Chairpersons: TBC

0830 **# 2027.** Vortex Splitting in the Stratosphere Induced by Synoptic-Scale Cyclogenesis in the Troposphere
A. O'Neill, C. Oatley, A. Charlton-Perez.

0845 **# 2613.** Geographical dependence observed in blocking high influence on the stratospheric variability through enhancement and suppression of upward planetary-wave propagation
K. Nishii, H. Nakamura, Y. Orsolini.

0900 **# 3142.** The Roles of Planetary and Gravity Waves during a Major Stratospheric Sudden Warming as characterized in WACCM
V. Limpasuvan, J. Richter, Y. Orsolini, F. Stordal, O-K. Kvissel.

0915 **# 2342.** East Asian Winter Monsoon, Stationary Planetary Wave Activity and the Downward Influence from the Stratosphere
W. Chen, L. Wang, K. Wei.

0930 **# 2610.** Predictability of northern winter stratospheric conditions using JMA one-month ensemble predictions for 2001/02-2009/10
M. Taguchi, H. Mukougawa, T. Hirooka, S. Noguchi, S. Yoden.

0945 **# 2153.** Determining the Date of the Polar-Vortex Breakup in the Stratosphere
W. Choi, J. Seo.

Wednesday, 6 July 2011 0830-1000 MR110

IAMAS

M10 Tropospheric processes and processing: Pollution and biogeochemical cycling

M10S6 Aerosols, chemical composition, sources

Chairpersons: Shaw Liu & Sunhee Lee

0830 **# 3753. Invited** Characteristics of Carbonaceous Aerosols from Indo-Gangetic Plain and Central Himalaya
M. Sarin, K. Ram.

0845 **Discussion.**

0900 **# 1977.** Chemical composition of atmospheric aerosols over Lake Baikal water area
T. Khodzher, L. Golobokova, U. Filippova, I. Marinayte.

0915 **# 2281.** Regional vs. local aerosol sources during the MEGAPOLI Paris campaigns
M. Furger, M. Crippa, F. Freutel, L. Poulain, S. Visser, et al.

0930 **# 3179.** Chemical Composition of Global Aerosol and the Characteristics of Spatial and Temporal Variability of Six Major Types of Aerosol in China
X. Zhang, Y.Q. Wang, L. Young, X.C. Zhang, J.Y. Sun, et al.

0945 **# 830.** Parameterizations of dust emssion (PM10) fluxes using the Naiman tower data at the Horqin desert in China during November 2007 to March 2008
S. Park

Wednesday, 6 July 2011 0830-1000 MR107
IAVCEI
V01/V04 Magma chambers and intrusions: their physical and chemical dynamics
V01V04S3 Magma chambers and intrusions: their physical and chemical dynamics Part 3
Chairpersons: Othmar Muntener & Roberto Weinberg

0830 **# 2170.** Petrologic study of pyroclastic explosion stage in Shirataka volcano, NE Japan: Synchronized eruption of multiple magma chambers
M. Ban, S. Hirotani, O. Ishizuka.
0845 **# 3196.** Tapping and mixing of zoned magmas during the plinian c. 113 ka Cao Grande phonolitic pumice eruption on Santo Antao, Cape Verde Islands
P.M. Holm, R. Wilson, A. Mortensen, E. Lindgard, M. Storey.
0900 **# 5564.** Magma reservoir dynamics of permanently degassing volcanoes: Mayon as a case study
J. Cabato, F. Costa, C. Newhall.
0915 **# 2108.** Mobilization of crystal-rich magmas and the formation of calderas
M. Manga, L. Karlstrom, M. Rudolph.
0930 **As above.**
0945 **Discussion.**

Wednesday, 6 July 2011 0830-1000 MR104
IAVCEI
V10 The Dynamics of Pyroclastic Density Currents: Field Studies of Their Deposits, Computational Modelling and Experiments
V10S5
Chairpersons: Amanda Clarke & Olivier Roche

0830 **# 3924.** Characteristics of proximal ignimbrite of the Sovana Eruptive Unit at Latera Caldera, Vulsini Volcanic District, Italy
S. Melander, G. Valentine, D. Palladino.
0845 **# 4497.** Blast-like dynamics of Pyroclastic Surges generated by collision and deflection off cliffs at Gunung Merapi 26 Oct and 5 Nov, 2010
G. Lube, S. Cronin, D.S. Sayudi, S. Sumarti, S. Subandriyo, et al.
0900 **Discussion.**
0915 **# 1092.** Application of Numerical Models to Block-and-ash Flow Hazard Assessment: Example from Merapi, Central Java, Indonesia
S. Charbonnier, R. Gertisser, C. Connor, T. Dixon.
0930 **Discussion.**
0945 **Discussion.**

Wednesday, 6 July 2011 0830-1000 MR203
IAVCEI
V14 Monogenetic Volcanism: Magma Sources, Ascent and Eruption
V14S5 Hazard & risk for monogenetic volcanism
Chairpersons: Karoly Nemeth

0830 **Introduction.**
0845 **# 1080.** The eruption history and hazard implications of the oversize Pleistocene Purrumbete maar volcano, Newer Volcanics Province, southeastern Australia
S.C. Jordan, R. Cas.
0900 **# 5243.** Determining Volcanic Risk in Auckland (DEVORA): A Multidisciplinary Project to Assess Risk in the Basaltic Auckland Volcanic Field
T. Howe, J. Lindsay, G. Jolly.
0930 **Discussion.**
0945 **Discussion.**

Wednesday, 6 July 2011 0830-1000 MR106
IAVCEI
V17 Planetary Volcanism: what's different out there, what's new, and what are we learning?
V17S1
Chairpersons: Ellen Stofan & Ashley G. Davies

0830 **# 5612. Invited** Planetary volcanism a review
D. Rothery
0845 **As above.**
0900 **# 2998. Invited** Mechanisms for Melting and Volcanism on Planetesimals, Moons and Planets
L. Elkins-Tanton
0915 **As above.**
0930 **# 3159. Invited** Monitoring Volcanic Activity on Io
I. De Pater, C. Trujillo, M. Adamkovics, A. Davies, H. Hammel, et al.
0945 **# 566. Invited** Volcanism on Jupiter's Moon Io: Results from Global Geologic Mapping
D. Williams, L. Keszthelyi, D. Crown, P. Schenk, W. Jaeger.

Wednesday, 6 July 2011 1030-1200 PH2

IUGG

U11 Earth and Space Science in Africa
U11S2 Speakers by Invitation

Chairpersons: Abdelkrim Aoudia & Kathy Whaler

1030 **# 4181.** AfricaArray: a shared vision for research and education in Africa
G. Graham, R. Durrheim, A. Nyblade, P. Dirks, R. Gibson.

1045 **As above.**

1100 **# 1136.** A Collaborative Programme in Capacity Development in Disaster Risk Reduction – Through African Universities
D. Benouar, A. Holloway.

1115 **Discussion.**

1130 **# 6097.** Active Extensional Tectonics in the East African Rift System: challenges and opportunities
A. Ayele, C.J. Ebinger.

1145 **As above.**

Wednesday, 6 July 2011 1030-1200 MR210

IAG

G02 Monitoring and Modelling of Mass Distribution and Mass Displacements by Geodetic Methods

G02S8

Chairpersons: Michael Kuhn & Jean-Paul Boy

1030 **# 2330.** Draconitic Biases in GPS Versus GRACE Estimates of Hydrology
C. Watson, P. Tregoning, R. Burgette, S. McKlusky, E.K. Potter.

1045 **# 2299.** Hydrological variations in Australia recovered by GRACE high-resolution mascons solutions
J. Boy, C.C. Carabajal, T.J. Sabaka, F.G. Lemoine, D.D. Rowlands, et al.

1100 **# 649.** Water storage changes from grace data in the La Plata Basin (Argentina)
M.C. Pacino, A. Pereira.

1115 **# 3122.** Monitoring Mass Transport in the Murray-Darling Basin, Australia Using GRACE Time-Variable Gravity and In-Situ Observations
M. Kuhn, S. Schmid, D. Rieser, IM. Anjasmara, O. Baur, et al.

1130 **# 4319.** GRACE detection of and comparison with in situ measurements of surface water changes in the Three-Gorge Reservoir of China
C. De Linage, X. Wang, J. Famiglietti, C. Zender.

1145 **# 1701.** Estimation of water storage variations in the major river basins of India using GRACE satellite gravity data
V. Tiwari, J.M. Wahr, S. Swenson.

Wednesday, 6 July 2011 1030-1200 MR206

IAGA

A021 Electromagnetic Induction
A021S2 Recent Advances in Electromagnetic Induction: Modelling and inversion

Chairpersons: Gary Egbert & Ian Ferguson

1030 **# 2256.** Can We Directly Integrate the Geomagnetically Induced Electric Field on the Earth's Surface From the Time Derivative of BZ?
H. Vanhamaki, A. Viljanen.

1045 **# 4774. Invited** Electrical structure of South Australian lithosphere: examples from 3D inversion results using cloud computing
S. Thiel, G. Heinson, C. Mudge.

1100 **As above.**

1115 **# 5396.** Shallow, bounded conductors produce negative TE-mode phases in land magnetotelluric data
K. Selway, S. Thiel.

1130 **# 3617. Invited** On the Applicability of 3D Magnetotelluric Inversion to Real World Data Sets
U. Weckmann, K. Tietze, O. Ritter.

1145 **As above.**

Wednesday, 6 July 2011 1030-1200 MR214

IAGA

A031 Paleomagnetism
A031S2 Magnetostratigraphy and Chronology

Chairpersons: Andy Herries & Gillian Turner

1030 **# 4863.** Fast Two-stage Eruptions of Emeishan Continental Flood Basalts: Geochemical and Magnetostratigraphic Constraints
Z. Yang, L. Zheng, Y. Tong, W. Yuan.

1045 **# 3556.** Paleomagnetism of Early Paleogene Marine Sediments in Southern Tibet, China: Implications to Onset of the India-Asia Collision and Size of the Greater Indian Plate
B. Huang, Z. Yi.

1100 **# 5001.** Beyond Reversals: an Attempt to Interpret Details of a Billion-Year old Sedimentary Magnetostratigraphic Sequence
G. Hulot, A. Khokhlov, V. Pavlov, Y. Gallet.

1115 **Discussion.**

1130 **Discussion.**

1145 **Discussion.**

Wednesday, 6 July 2011 1030-1200 MR205

IAGA

A044 Rock Magnetism
A044S2 Environmental Magnetism Part 2

Chairpersons: Ed Petrovsky & Andrew Roberts

1030 **Introduction.**

1045 **# 4691.** Frequency dependent susceptibility and the identification of pedogenic contribution in lateritic soil profiles
S. Bijaksana, L. Safiuddin, V. Haris.

1100 **# 4108.** Magnetism of soils applied for estimation of erosion at an agricultural land in NE Bulgaria
N. Jordanova, P. Petrov, D. Jordanova, A. Atanasova.

1115 **# 1567.** Estimation of SP magnetite mean grain size in bulk soil samples
L. Safiuddin, D. Fitriani, G. Tamuntuan, S. Bijaksana.

1130 **# 3321.** The Decomposition of Hysteresis Loops into Environmentally Meaningful Mixing Models
D. Heslop, A.P. Roberts.

1145 **Discussion.**

Wednesday, 6 July 2011 1030-1200 MR215
IAGA
A061 Coupling in the atmosphere-ionosphere-magnetosphere system and its response to external forcing and forcing from below
A061S5 Coupling Processes in the Atmosphere-Ionosphere System
Chairpersons: Han-Li Liu

1030 **# 980. Invited** Longitudinal variations in the F-region ionosphere and the topside ionosphere/plasmasphere: observations and model simulations
N. Pedatella, J. Forbes, A. Maute, A. Richmond, T.W. Fang, et al.
1045 **As above.**
1100 **# 956.** Equinoctial asymmetry of the ionospheric vertical plasma drifts
Z. Ren, W. Wan, L. Liu, Y. Chen, H. Le.
1115 **# 938. Invited** Simulation Investigation for WN4-DE3 Coupling
W. Wan, Z. Ren.
1130 **As above.**
1145 **# 3604.** Effects of Solar Eclipses in the Ionosphere
J. Lastovicka, P. Koucka Knizova, D. Kouba, J. Boska.

Wednesday, 6 July 2011 1030-1200 MR207
IAGA
A063/A065 Coupling in the atmosphere-ionosphere-magnetosphere system and its response to external forcing and forcing from below
A063A065S2 Magnetosphere-ionosphere coupling
Chairpersons: A. Bhattacharyya & TBC

1030 **# 542.** A Physical Mechanism of Positive Ionospheric Storms at low and mid Latitudes
B. Nanan, M. Yamamoto, K. Shiokawa, Y. Otsuka, G.J. Bailey.
1045 **Discussion.**
1100 **# 1238.** Simulation Study Of The Storm Time Changes In The Low Latitude Ionosphere
G. Vichare, A.J. Ridley, A.D. Richmond.
1115 **Discussion.**
1130 **Discussion.**
1145 **Discussion.**

Wednesday, 6 July 2011 1030-1200 MR208
IAGA
A072 Radiation belt dynamics and remote sensing of the Earth's plasmasphere
A072S2 Remote Sensing and Modeling of the Earth's Plasmasphere
Chairpersons: Janos Lichtenberger & Fred Menk

1030 **# 5446.** Field Line Resonance Measurements in the Inner Magnetosphere During Large Storms: Implications for Convection and Depletion
J. Duffy, A.M. Jorgensen, E. Zesta, A. Boudouridis, P.J. Chi, et al.
1045 **# 2649. Invited** Plasmaspheric Density Profiles from In Situ Measurements
J. De Keyser, F. Darrouzet.
1100 **As above.**
1115 **# 82. Invited** The Plasmasphere seen from the moon and the ionosphere
I. Yoshikawa, G. Murakami, K. Yoshioka, K. Sakai, T. Homma.
1130 **As above.**
1145 **# 4768.** Using Fedsat data and applying tomographic techniques to study the plasmasphere during the Halloween storm of October 2003.
S. Dimitrov, P. Dyson.

Wednesday, 6 July 2011 1030-1200 MR209
IAGA
A083 Space plasma processes
A083S4 Understanding the physical processes that drive tail and substorm dynamics
Chairpersons: Joachim Birn

1030 **# 3228.** Multiple Flux Ropes in the Earths Magnetotail
S. Imber, J. Slavin.
1045 **# 3966.** Near-Earth magnetotail reconnection and its connection to magnetospheric activity and up-stream driving/conditions
A.L. Borg, M.G.G.T. Taylor, S.E. Milan, J.P. Eastwood.
1100 **# 5946.** Spring-Fall Asymmetry of Substorm Strength, Geomagnetic Activity and Solar Wind: Causes and Implications
K. Mursula, E. Tanskanen, J. Love.
1115 **# 1056.** Properties of magnetospheric turbulence and localization of substorm expansion phase onset
E. Antonova, M.V. Stepanova, I.A. Kornilov, T.A. Kornilova, V. Pinto, et al.
1130 **# 2975. Invited** Dipolarization Fronts in Kinetic Simulations and THEMIS Observations: Links to Magnetic Reconnection, Current Disruption and Plasma Bubbles
M. Sitnov
1145 **As above.**

Wednesday, 6 July 2011 1030-1200 MR216
IAGA
A091 Magnetosphere-ionosphere coupling
A091S7 The plasma sheet – ionosphere, a coupled system: Sinks, sources, transport and the roles of field-aligned currents and ion outflow
Chairpersons: Simon Wing

1030 **# 4215.** Effect of Plasma Sheet Conditions and Induced Electric Fields on Inner Magnetosphere Dynamics
S. Zaharia, V. Jordanova, D. Welling.
1045 **# 2214. Invited** Numerical Experiments to Investigate the Role of Magnetic and Electric Feedback During Magnetic Storms
C. Lemon, M. Chen, T. Guild, F. Toffoletto.
1100 **As above.**
1115 **# 4543. Invited** A System-Level View of the Inner Magnetosphere: Pressure-driven Currents and their Impact on Magnetospheric and Ionospheric Dynamics
P. Brandt, M. Sitnov, I. Dandouras, S. Ohtani, E.C. Roelof.
1130 **As above.**
1145 **# 2848.** Effect of self-consistent magnetic field on plasma sheet penetration to the inner magnetosphere: force balanced RCM simulations and data comparisons
M. Gkioulidou, C.P. Wang, L.R. Lyons, R.A. Wolf.

Wednesday, 6 July 2011 1030-1200 MR212

IAGA

A092 Magnetosphere-ionosphere coupling
A092S1 Magnetosphere-Ionosphere Interactions and Auroral Processes

Chairpersons: Takeshi Sakanoi

1030 **# 5014. Invited** Rotation Driven Auroral Dynamics at Jupiter and Saturn
R.E. Ergun, L.C Ray, P.A Delamere, F. Bagenal.

1045 **As above.**

1100 **# 2798.** Features of electron cyclotron waves in the ionosphere
G. James

1115 **# 4638.** Observation of Electron Phase Bunching in Auroral Langmuir Waves
C. Kletzing, S.R. Bounds, S. Kaeppler, J. LaBelle, M. Dombrowski.

1130 **# 3385.** Changes in Mode Properties Versus Mode Conversion for Waves in Earth's Auroral Ionosphere
A. Layden, I. Cairns, P. Robinson, J. LaBelle.

Wednesday, 6 July 2011 1030-1200 MR103

IAGA

A102 The Sun and the Heliosphere: New Views
A102S2 Plasma interactions at solar system bodies without or with weak intrinsic magnetic field: SW & Titan, Mercury

Chairpersons: Ronan Modolo

1030 **# 3769. Invited** Titan's ionized environment from Cassini observations and simulations
R. Modolo

1045 **As above.**

1100 **# 2276.** Mercury and Ganymede Interactions with Their Plasma Environments
A. Milillo, S. Massetti, A. Mura, S. Orsini, X. Jia, et al.

1115 **As above.**

1130 **# 3987.** Dynamical Evolution of Sodium Emission in the Exosphere of Mercury
S. Orsini, V. Mangano, A. Milillo, A. Mura, S. Massetti, et al.

1145 **As above.**

Wednesday, 6 July 2011 1030-1200 MR211

IAGA

A121 Space Weather and Space Climate
A121S5 Quantitative Prediction of Space Weather

Chairpersons: Hilary Cane & Jon Linker

1030 **# 2987. Invited** CME Initiation
T. Forbes

1045 **As above.**

1100 **# 1176. Invited** Coronal Mass Ejections and Extreme Space Weather Events
M. Owens, M. Lockwood, L. Barnard.

1115 **As above.**

1130 **# 3415.** ARBIS 3: A Software Package for Automated Radio Burst Identification
I. Cairns, V. Lobzin, P. Robinson, G. Steward, G. Paterson.

1145 **# 4273.** Utilizing Heliospheric Imager to Improve Space Weather Forecasting
D. Webb, T. Howard.

Wednesday, 6 July 2011 1030-1200 MR204

IAGA

A141 Lithospheric field and related geological/ tectonic implications
A141S2 Modeling of lithospheric and induced magnetic fields

Chairpersons: Mohamed Hamoudi & Mita Rajaram

1030 **# 2768. Invited** The pros and cons of along-track satellite analysis in planetary magnetism
E. Thebault, F. Vervelidou, V. Lesur, M. Hamoudi.

1045 **As above.**

1100 **# 3074.** Integrated Geophysical Study over a Gondwana Basin in the Indian Sub-Continent
M. Rajaram, S.P. Anand.

1115 **# 2958.** Deep-Sea Magnetic Anomalies
J. Dyment, R. Granot, F. Szitkar, Y. Gallet, Y. Fouquet.

1130 **Discussion.**

1145 **As above.**

Wednesday, 6 July 2011 1030-1200 PH1

IAGA

A151 Reporter's Review
A151S2

Chairpersons: Masaki Fujimoto

1030 **# 3205. Invited** ULF Waves Reporter Review
F. Menk

1045 **As above.**

1100 **As above.**

1115 **# 1051. Invited** A Review of Wave-Particle Interactions in the Inner Magnetosphere
J. Bortnik

1130 **As above.**

1145 **As above.**

Wednesday, 6 July 2011 1030-1200 MR220

IAGA

A162 History sessions focused on IAGA subdisciplines
A162S2 History of Auroral Research

Chairpersons: TBC

1030 **Introduction.**

1045 **# 652.** Auroral Research in Finland up the the space age
P. Tanskanen

1100 **As above.**

1115 **Discussion.**

1130 **Discussion.**

1145 **Discussion.**

Wednesday, 6 July 2011 1030-1200 MR218

IAHS

H01 Conceptual and modelling studies of integrated groundwater, surface water, and ecological systems
H01S3 Ecohydrological studies: from process understanding to mannagement

Chairpersons: Noel Merrick & Günter Blöschl

1030 **# 233.** Groundwater – surface water exchange before and after reopening of a river meander
J. Lewandowski, G. Nuetzmann.

1045 **# 422.** Impacts of climate and regulation on groundwater and surface water interactions with floodplain ecosystem
L. Globevnik, B. Braèiè eleznik, B. Èenèur Curk.

1100 **# 154.** Strategic Monitoring To Account For High Frequent Dynamic Nutrient Concentration Of Groundwater And Surface Water
F. Van Geer, J. Rozemeijer, Y. Van der Velde, H.P. Broers.

1115 **#242.** River restoration with complex hydrological and ecological interactions: The RECORD-Project
M. Schirmer, T.Vogt.

1130 **# 356.** Modeling critical source areas in an agricultural watershed
X. Chen, Z. Yu.

1145 **Discussion.**

Wednesday, 6 July 2011 1030-1200 MR219

IAHS

H02 Cold regions hydrology in a changing climate

H02S5

Chairpersons: Steven Fassnacht & Yingsheng Zhang

1030 **Introduction.**

1045 **Discussion.**

1100 **# 132.** Seepage Process in Permafrost near Hydro Unit – Field Observation and Modeling
S. Milanovskiy, A. Petrunin, S. Velikin, V. Istratov.

1115 **# 395.** Modelling the long-term impact of climatic variability on the groundwater and surface water flows from a mountainous catchment in the Chilean Andes
D. Ruelland, H. Jourde, N. Brisset, R. Rochette, R. Oyarzun.

1130 **Discussion.**

1145 **Discussion.**

Wednesday, 6 July 2011 1030-1200 MR102

IAHS

HW04 Snow and ice hydrology: Principles, processes and prediction

HW04S2

Chairpersons: TBC

1030 **# 3929.** Snow Distribution, Wind and Topographic Control and their Respective Scaling Properties in Alpine Terrain
M. Lehning, R. Mott, M. Schirmer, N. Dawes.

1045 **# 3317.** PUB Estimates of Snowpack Climatology in the Western USA
R. Woods

1100 **# 2695.** Spatial Variability of Snow Density over Alpine Terrain: Central Spanish Pyrenees, Spain
I. Lopez-Moreno, S. Fassnacht, J. Latron, K. Musselman, J. Jared.

1115 **Discussion.**

1130 **Discussion.**

1145 **Discussion.**

Wednesday, 6 July 2011 1030-1200 MR213

IAHS

HW05 Revisiting experimental catchment studies in forest hydrology

HW05S2 Answering new questions using old datasets Part 2

Chairpersons: Mike Bonell & Jami Nettles

1030 **# 5120.** The U.S. Forest Service Experimental Forests and Ranges Network: A Continental Research Platform for Catchment Scale Research in the United States
D. Hayes, L. Rustad, J. Vose, D. Neary, G. Gottfried, et al.

1045 **# 1492.** The Brigalow Catchment Study: Forty-five years of paired, calibrated catchment monitoring of land use change in the sub-tropical, semi arid Brigalow Belt of central Queensland, Australia
C. Thornton, B. Cowie, D. Silburn.

1100 **# 5993.** Flood responses of the South Creek Experimental Catchment (Queensland) re-interpreted using new DBM modelling tools
N. Chappell

1115 **# 248.** A paired catchment approach to assessing hydrologic impacts of land use change in south-west Victoria, Australia
M. Reid, H. Zydor, M. Adelana, P. Hekmeijer, E. Dresel.

1130 **# 5825.** On the role of experimental catchments in the Brazilian Semiarid: the case of cariri
C. Galvao

1145 **# 4654.** Paired Catchment Experiments and Forest Policies
L. Bren, D. McGuire.

Wednesday, 6 July 2011 1030-1200 MR104

IAHS

HW07 Hydro-geomorphology

HW07S1

Chairpersons: Christophe Cudennec & Scott Peckham

1030 **Introduction.**

1045 **# 5893.** Hysteresis Effects in Relationship Between Discharge and Suspended Sediment Concentration on Large Rivers of Russian Arctic
N. Tananaev

1100 **# 486.** couplage de la modélisation de la courbe de tarage et le concept d'entropie pour l'estimation des débit liquides en insuffisance de données English Translate: Modelling of the rating curve and the theory of entropy coupling for the estimation of rivers discharges in insufficiency of data
A. Zeroual, B. Touaibia, A. Ammari.

1115 **# 298.** Riverine Sediment Sources to the Chenier Plain, Louisiana, USA
Y.J. Xu, T.R. Rosen.

1130 **# 763.** Soil Erosion Characters at the Riparian Zone in the Three-gorge Reservoir
X. He, H. Zhu, Y. Bao.

1145 **# 1687.** Assessment of Shallow Landslide triggering probability in Hilly terrains of India
J. Kadengal, S.KP.

Wednesday, 6 July 2011 1030-1200 MR105

IAHS

HW09 Revaluing system knowledge in water resources management

HW09S1

Chairpersons: Nick van de Giesen & Johannes Cullman

1030 **# 4968.** Integrated Assessment of the Impacts of Potential Climate Change on the Water Quantity and Quality, Morphology and Ecology of German Inland Waterways – What Can We Know, What Adaptation Options Shall We Recommend?
T. Maurer, P. Krahe, N. Nilson, M. Carambia.

1045 **# 5323.** Water Resources Vulnerability & Adaptive Management to Climate Change: Case Study in China
J. Xia

1100 **# 343.** Irrigation water management under changing climate
X. Wang, J. Zhang.

1115 **# 5036.** An Integrated Model of Hydro-environment and Socio-economy for Water Resources Management in the Haihe River Basin
Y. Jia, C. Niu, Z. Gan, J. You, Z. Zhou.
1130 **Discussion.**
1145 **Discussion.**

Wednesday, 6 July 2011 1030-1200 PH3
IAHS

HW13 Recent development of statistical tools for hydrological application
HW13S1 STAHY Workshop – Part 1
Chairpersons: George Kuczera & Dan Rosbjerg

1030 **# 4387.** Detection of non-stationarity in precipitation extremes using a max-stable process model
S. Westra, S. Sisson.
1045 **# 1746.** Homogeneity and Trend Analysis in Precipitation and Streamflow Data of the Eastern Black Sea Region, Turkey
E. Eris, N. Agiralioglu.
1100 **# 1634.** Quantile Hydrologic Model Selection and Uncertainty Assessment
S. Pande, M. Keyzer, H. Savenije, A. Gosain.
1115 **# 2147.** Statistical Modelling Approaches for Uncertainty Quantification
Q. Wang, D. Robertson, A. Schepen, D.L. Shrestha, P. Pokhrel, et al.
1130 **# 4332.** Comparing Bootstrap and Bayesian Methods to Estimate Uncertainty in Constituent Annual Loads in the Gippsland Lakes Basin
O. Vigiak, S. Norng, J. Whitford, A. Roberts.
1145 **# 4382.** System Specification Using Partial Information
A. Sharma, R. Mehrotra.

Wednesday, 6 July 2011 1030-1200 MR109
IAMAS

M04 Recent advances in middle atmosphere science
M04S5 S-T Dynamics
Chairpersons: Takeshi Horinouchi

1030 **Introduction.**
1045 **# 3796. Invited** Southern hemisphere gravity waves observed by satellite
M.J. Alexander
1100 **As above.**
1115 **# 3469.** The Role of Nonlinear Processes in the Generation of Gravity Waves by Convective Clouds and their Implications for Parameterization
T. Lane, M. Reeder.
1130 **# 2313.** The Evolution and Breaking of Anelastic Internal Wavepackets
B. Sutherland, H. Dosser, J. Scinocca.
1145 **# 3476.** Spontaneous Gravity Wave Radiation From Co-rotating Vortex Pair in an F-plane Shallow Water System
N. Sugimoto, H. Kobayashi, Y. Shimomura, K. Ishioka.

Wednesday, 6 July 2011 1030-1200 MR110
IAMAS

M10 Tropospheric processes and processing: Pollution and biogeochemical cycling
M10S7 Greenhouse Gases
Chairpersons: Maria Fatima & James Drummond

1030 **Introduction.**
1045 **Discussion.**
1100 **Discussion.**
1115 **# 1909.** Partitioning of Measured Atmospheric Carbon Dioxide into Fossil Fuel, Oceanic, and Terrestrial Biosphere Components
R. Andres, P.K. Patra, S. Piper.
1130 **# 3225.** A global transport model comparison for methane: results for two Australian sites
R. Law, Z.M. Loh, K.D. Corbin, P.B. Krummel, L.P. Steele, et al.
1145 **Discussion.**

Wednesday, 6 July 2011 1030-1200 MR107
IAVCEI

V01/V04 Magma chambers and intrusions: their physical and chemical dynamics
V01V04S4 Magma chambers and intrusions: their physical and chemical dynamics Part 4
Chairpersons: Tracy Rushmer & Alexander Cruden

1030 **# 3670.** Magma Chamber Of Miyakejima Volcano, Japan: High-Pressure Experimental Study
M. Ushioda, E. Takahashi, T. Suzuki, M. Hamada.
1045 **# 3737.** Quantifying the Role of Rock Interface Strength in Sill Formation: From Gelatine Analogue Experiments to Rock Strength Tests
J. Kavanagh, M. Pavier, R.S.J. Sparks, T. Menand, J. Blundy, et al.
1100 **# 2750.** Modelling the growth of laccoliths and large mafic sills
A. Bunger, A. Cruden.
1115 **# 3331.** Multiple use of magma pathways as a mechanism for magma hybridization: microstructural and petrological arguments
P. Hasalova, R.F. Weinberg.
1130 **# 4304.** Structure and Emplacement of the Mesoproterozoic Voisey's Bay Intrusion, Labrador, Canada
B. Saumur, A.R. Cruden, M.A. Hamilton, D. Evans-Lamswood.
1145 **Discussion.**

Wednesday, 6 July 2011 1030-1200 MR101
IAVCEI

V09 Eruption, Transport and Deposition of Pyroclasts in Plumes Using Field Studies, and Computational Modelling
V09S1
Chairpersons: Costanza Bonadonna & Antonio Costa

1030 **Introduction.**
1045 **# 2952. Invited** Mechanisms of Particle Aggregation In Volcanic Plumes and Resultant Morphologies of Aggregates
J. Gilbert, SJ. Lane, MR. James, JA. Stevenson, A. Hoskuldsson, et al.
1100 **As above.**
1115 **# 1449.** Experimental Ash Aggregation Studies and Comparison with Field Deposits
A. Van Eaton, C. Wilson.
1130 **# 3988.** Aggregation impacts on the Eyjafjallajökull ash fallout iluminated by field and laboratory high-speed imaging
J. Taddeucci, P. Scarlato, C. Montanaro, C. Cimarelli, E. Del Bello, et al.
1145 **# 1217.** Water-Magma Interaction and Ash Deposition in the 2008 Okmok Eruption, Umnak Island, Alaska.
J. Unema, M. Ort, J. Larsen, C. Neal, J. Schaefer, et al.

Wednesday, 6 July 2011 1030-1200 MR112
IAVCEI
V15 Kimberlite Volcanology
V15S1
Chairpersons: Kelly Russell & Patrick Hayman

1030 **Introduction.**
1045 **# 4228. Invited** The Holocene eruptions of the Igwisi Hills Volcanoes, Tanzania
R. Brown, S. Manya, M. Field, G. Fontana, R.S.J. Sparks, et al.
1100 **As above.**
1115 **# 1189.** Ash Aggregates in Kimberlites
L. Porritt, J.K. Russell.
1130 **# 1698.** Emplacement Temperatures of Pyroclastic and Volcaniclastic Deposits in Kimberlite Pipes in Botswana
G. Fontana, C. MacNiocaill, R.J. Brown, R.S.J. Sparks, M. Field.
1145 **Discussion.**

Wednesday, 6 July 2011 1030-1200 MR106
IAVCEI
V17 Planetary Volcanism: what's different out there, what's new, and what are we learning?
V17S2
Chairpersons: Suzanne Smrekar & Lindy Elkins-Tanton

1030 **# 1837.** Lava Flow Inflation Features on Earth, the Moon, and Mars
W. Garry, J. Zimbelman, J. Bleacher, L. Crumpler.
1045 **# 3113.** Thermal history of Mars inferred from orbital geochemistry of volcanic provinces
D. Baratoux, M.J. Toplis, M. Monnereau, O. Gasnault.
1100 **# 4072.** Recent Volcanism on Venus: Constraints on the Interior Dynamics and the Degassing History
S. Smrekar, C. Sotin, E. Stofan, N. Mueller, J. Helbert.
1115 **Discussion.**
1130 **Discussion.**
1145 **Discussion.**

WEDNESDAY, 6 JULY 2011 1330-1500 PM1

Wednesday, 6 July 2011 1330-1500 PH2
IUGG
U11 Earth and Space Science in Africa
U11S3 Speakers by Invitation
Chairpersons: Hussein Abd-Elmotaal & Atalay Ayele

1330 **Introduction.**
1345 **# 4083.** The GHYRAF (Gravity and Hydrology in Africa) project using ground and space geodesy to constrain water storage changes: latest results in West Africa
J. Hinderer, J. Pfeffer, J.P. Boy, P. Genthon, L. Seguis, et al.
1400 **Discussion.**
1415 **# 5318.** Internet connectivity in African institutions: NRENs, PingER, and eGYAfrica
C Barton, B. Barry, R.L. Cottrell & U. Kalim.
1430 **#620.** Space Science in Western Africa during the two last decades
C. Amory, F. Ouattara.
1445 **Discussion.**

Wednesday, 6 July 2011 1330-1500 MR210
IAG
GCS1 International Association of Geodesy (IAG)
GCS1
Chairpersons: Hermann Drewes

Closing Session – Part 1
 # 1330-1500.

Wednesday, 6 July 2011 1330-1500 MR214
IAGA
A032 Paleomagnetism
A032S1 Paleomagnetic Observations on the Geodynamo
Chairpersons: Emilio Herrero-Bervera & John Tarduno

1330 **# 5333.** Archeointensity variation over the last millennium in Japan
K. Fukuma, M. Ooga, K. Wakabayashi.
1345 **As above.**
1400 **# 2368.** Orientation Errors in paleomagnetic samples and their effects on data interpretation
M. Kono
1415 **As above.**
1430 **# 3333.** Palaeo-Secular Variation Recorded With 100-Year Resolution At High Latitude During The Kiaman Superchron
R. Musgrave, M. Fussell.
1445 **As above.**

Wednesday, 6 July 2011 1330-1500 MR205

IAGA

A044 Rock Magnetism
A044S3 Environmental Magnetism Part 3
Chairpersons: Neli Jordanova & Liu Qingsong

1330 **# 2752.** Schwarzsee ob solden: relationship between magnetic mineralogy and local redox conditions
A.M. Hirt, K.A. Koinig.

1345 **# 2772.** Magnetic evolution of Swiss lakes during the Holocene
J. Kind, A.U. Gehring, A.M. Hirt.

1400 **# 4065.** Mineral Magnetic and Microfossil Studies of Laminated Marine Sediments from the Southern Gulf of California – Paleoclimatic Reconstruction for Past 2000 Years
L. Perez-Cruz, J. Urrutia-Fucugauchi, L. Gomez-Lizarraga.

1415 **Discussion.**.

1430 **Discussion.**

1445 **Discussion.**

Wednesday, 6 July 2011 1330-1500 MR215

IAGA

A061 Coupling in the atmosphere-ionosphere-magnetosphere system and its response to external forcing and forcing from below
A061S6 Coupling Processes in the Atmosphere-Ionosphere System
Chairpersons: Dora Pancheva

1330 **# 868.** The ionospheric variability in China low latitude region
X. Mo

1345 **# 2269.** Equatorial Post-Sunset Variations in Ionospheric Height and the Generation of Short-Burst Spread F
K. J W. Lynn

1400 **# 1697.** Climatology of medium-scale traveling ionospheric disturbances observed by GPS network in Central China
F. Ding, W. Wan, G. Xu, B. Ning.

1415 **# 2547.** An Experiments-Based Program to Investigate Small-Scale Disturbances in the Ionosphere.
T. Harris, M. Cervera.

1430 **# 2591.** Modelling the effects of ionospheric disturbances on vertically incident ionograms using 3D magneto-ionic raytracing
M. Cervera, T.J. Harris.

1445 **Discussion.**

Wednesday, 6 July 2011 1330-1500 MR207

IAGA

A063/A065 Coupling in the atmosphere-ionosphere-magnetosphere system and its response to external forcing and forcing from below
A063A065S3 Magnetosphere-ionosphere 2
Chairpersons: C. Wang

1330 **# 2018. Invited** Equatorial Spread F/Plasma Bubble Irregularities Under Storm Time Disturbance Electric Fields
M.A. Abdu

1345 **As above.**

1400 **# 1298.** Solar Flux Dependence of Disturbance Dynamo Effects in the Post-Sunset Equatorial Ionosphere
A. Bhattacharyya, B. Kakad, K. Jeeva, K. Nair.

1415 **# 3341.** Properties of Spread-F in High and Low Latitude Ionospheres
J. Shi, W. Tao, G. Wang, G. Zherebtsov, A. Stepanov.

1430 **# 2905.** Observations of Nighttime Medium-Scale Travelling Ionospheric Disturbances by 630-nm Airglow Imagers Near the Auroral Zone
K. Shiokawa, M. Mori, S.I. Oyama, Y. Otsuka, S. Nozawa, et al.

1445 **# 3348.** Multi-frequency Investigations of HF Radar Propagation Modes
A. McDonald, R. Makarevich, V. Kumar, J. Devlin, H. Ye, et al.

Wednesday, 6 July 2011 1330-1500 MR208

IAGA

A072 Radiation belt dynamics and remote sensing of the Earth's plasmasphere
A072S3 Remote Sensing and Modeling of the Earth's Plasmasphere
Chairpersons: Fred Menk

1330 **# 4746. Invited** Data Assimilation of Plasma Density Measurements Into the Dynamic Global Core Plasma Model
A. Jorgensen, A.J. Ridley, A.M. Dodger, P.J. Chi, J. Lichtenberger, et al.

1345 **As above.**

1400 **# 3121.** Plasmaspheric electron densities: first results form Automatic Whistler Detector and Analyzer Network
J. Lichtenberger, C.S. Ferencz, D. Hamar, P. Steinbach, C. Rodger, et al.

1415 **# 3812. Invited** 25 years of Plasmaspheric Monitoring from Antarctica: the VLF Doppler experiment
M. Clilverd, N. Thomson, K. Yearby, F. Menk.

1430 **As above.**

1445 **# 5481.** Size and Movement Estimates of Exit Point Regions of Magnetospheric VLF Emissions Using Ground-Based VLF Recordings
J. Manninen, T. Turunen.

Wednesday, 6 July 2011 1330-1500 MR216

IAGA

A091 Magnetosphere-ionosphere coupling
A091S8 The plasma sheet – ionosphere, a coupled system: Sinks, sources, transport and the roles of field-aligned currents and ion outflow
Chairpersons: Sorin Zaharia

1330 **# 3172.** Coupling between the plasma sheet, ring current and ionosphere: results from combining ring current modelling and observations
Y. Zheng, S. Zaharia, A.T.Y. Lui, M C. Fok.

1345 **# 5639. Invited** Influences of Magnetosphere-Ionosphere Coupling at Low and Middle Latitudes
R. Heelis

1400 **As above.**

1415 **# 2260. Invited** Ionospheric electric field and currents during substorms as observed by SuperDARN and magnetometers at high-to-equatorial latitudes
T. Kikuchi, K.K. Hashimoto, T. Nagatsuma.

1430 **As above.**

1445 **# 4371.** Coupling of Dipolarization Front Flow Bursts to Substorm Expansion Phase Phenomena within the Magnetosphere and Ionosphere
L. Lyons, Y. Nishimura, T. Kikuchi, A. Runov, V. Angelopoulos.

Wednesday, 6 July 2011 1330-1500 MR212
IAGA
A092 Magnetosphere-ionosphere coupling
A092S2 Magnetosphere-Ionosphere Interactions and Auroral Processes
Chairpersons: Robert Ergun

1330 # **4869. Invited** Precipitation lifetime of plasma sheet electrons from the THEMIS observations: Implications for dominant mechanism of the diffuse auroras
S. Kurita, Y. Miyoshi, F. Tsuchiya, Y. Nishimura, A. Morioka, et al.
1345 **As above.**
1400 # **2204.** Ring Current Aurora
Y. Zhang, L. Paxton.
1415 # **5102.** Joule Heating, Red Arcs and the Pre-Dawn Enhancement – A Tribute to K.D. Cole.
P. Dyson
1430 # **3917.** Heating of the Lower Thermosphere during Auroral Activity: Measurements and Analysis from the Joule Sounding Rocket Missions
J. Clemmons, J. Hecht, R. Walterscheid, R. Bishop, P. Slocum, et al.
1445 # **1129.** Fluxes of energetic electrons near the external boundary of the external radiation belt and position of auroral oval
M. Riazantseva, I.N. Myagkova, E.E. Antonova, B.V. Marjin, M.V. Karavaev, et al.

Wednesday, 6 July 2011 1330-1500 MR103
IAGA
A102 The Sun and the Heliosphere: New Views
A102S3 Plasma interactions at solar system bodies without or with weak intrinsic magnetic field: Theory & simulations
Chairpersons: Naoki Terada

1330 # **3771. Invited** Modelling of Space Plasma Flows Around Weakly Magnetized Planetary Bodies
U. Motschmann
1345 **As above.**
1400 # **5026.** MHD simulations of the cold ion escape from the ionospheres of Venus and Mars
N. Terada, T. Tanaka, H. Shinagawa.
1415 **As above.**
1430 # **3782.** The ion martian foreshock: a global view from 3-dimensional hybrid and test-particle simulations
G. Chanteur, R. Modolo, E. Richer, E. Dubinin.
1445 **As above.**

Wednesday, 6 July 2011 1330-1500 MR211
IAGA
A121 Space Weather and Space Climate
A121S6 Quantitative Prediction of Space Weather
Chairpersons: Aaron Ridley & Delores Knipp

1330 # **1041.** Limb CME impact to space weather
A. Dal Lago, A. De Lucas, W.D. Gonzalez.
1345 # **1813.** The Global Muon Detector Network – GMDN and the Quantitative Prediction of Space Weather
N.J. Schuch, A. Petry, A. Dal Lago, M.R. Da Silva, C.R. Braga, et al.
1400 # **2902. Invited** Response of the Earthfs Inner Magnetosphere to the Extreme Interplanetary Conditions
K. Shiokawa
1415 **As above.**
1430 # **3486.** Interplanetary Conditions for Intense Geomagnetic Storms and the Comparison of Dst Forecast Models
E. Ji, Y-J. Moon, D-H. Lee.
1445 # **4406.** A New Method of Quantitative Analysis of Extreme Space Weather Events.
A. Ruzmaikin, J. Feynman.

Wednesday, 6 July 2011 1330-1500 MR209
IAGA
A122 Space Weather and Space Climate
A122S1 Geomagnetic networks, computation and definition of products for space weather and space climate
Chairpersons: Kalevi Mursula

1330 # **5144. Invited** History and calibration of sunspot numbers
E. Cliver, L. Svalgaard, K.H. Schatten.
1345 **As above.**
1400 # **3839.** Anti-correlation between the quiet-time level of mid-latitude magnetic field and long-term solar-wind activity
S. Nakano, H. Nagao, T. Higuchi.
1415 # **5513.** Role of Geomagnetic field measurements in space weather studies
M. Rajaram, S. Alex, B.D. Kadam, S. Mukherjee.
1430 # **1199. Invited** Secular Trends in Geomagnetic Activity
J. Love
1445 **As above.**

Wednesday, 6 July 2011 1330-1500 MR204
IAGA
A143 Lithospheric field and related geological/ tectonic implications
A143S1 World Digital Magnetic Anomaly Map
Chairpersons: Erwan Thébault & Peter Miligan

1330 # **5887.** World Digital Magnetic Anomaly Map, Second Edition
J.V. Korhonen, A. Team.
1345 # **2128.** Digitisation of analog GEODAS marine magnetic data
T. Ishihara, M. Catalan.
1400 # **4779. Invited** Magnetic Anomaly Maps from Indo-French Collaboration on the Plate Tectonic Evolution of the Indian Ocean
J. Dyment, GC. Bhattacharya, V. Yatheesh, D. Bissessur, AK. Chaubey, et al.
1415 **As above.**
1430 **Discussion.**
1445 # **3423.** Integrating Magnetic Field and Palaeomagnetic Studies
C. Foss, P. Schmidt, P. Milligan, R. Musgrave.

Wednesday, 6 July 2011 1330-1500 PH1

IAGA

A151 Reporter's Review

A151S3

Chairpersons: Anna Milillo & Masaki Fujimoto

1330 **# 4008. Invited** Tail dynamics
J. Birn

1345 **As above.**

1400 **As above.**

1415 **# 1799. Invited** Reporter Review: Global Dynamics of the Magnetosphere
M. Wiltberger

1430 **As above.**

1445 **As above.**

Wednesday, 6 July 2011 1330-1500 MR218

IAHS

H01 Conceptual and modelling studies of integrated groundwater, surface water, and ecological systems

H01S4 Advanced modelling methods and applications

Chairpersons: Elango Lakshmanan & Honglang Xiao

1330 **# 193.** Using a Combined Hydrodynamic and Mixing Model Approach to Quantify Small Saline Groundwater Input into Rivers
T. Morrison, S. Rayburg, C. Hughes.

1345 **# 317.** Developing a New Numerical Surface / subsurface Model for Designing Irrigation / drainage Systems
A. Shokri

1400 **Discussion.**

1415 **# 452.** Interactions Between Groundwater and Surface Waters of an Impacted Coastal Site in Italy: Field Studies and Numerical Modelling Results as Risk Assessment Input
A. Gigliuto, R. Vaccari, C. Righetti, S. Verdelocco, L. Moretti.

1430 **# 237.** Forecasting tools in water resources to ground public policy and management debates in sound scientific methods
D. Steward

1445 **Discussion.**

Wednesday, 6 July 2011 1330-1500 MR219

IAHS

H02 Cold regions hydrology in a changing climate

H02S6

Chairpersons: Dennis Filler & Suxia Liu

1330 **# 292.** Deduction, Induction, Abduction: The DIA Approach to Modelling Cold Regions Catchments
J. Pomeroy, X. Fang, K.R. Shook.

1345 **As above.**

1400 **Discussion.**

1415 **# 414.** The variation of acidity and ion concentration of snowmelt water in light and heavy snow year
Y. Asaoka, Y. Takeuchi, S. Kazama.

1430 **Discussion.**

1445 **Discussion.**

Wednesday, 6 July 2011 1330-1500 MR213

IAHS

HW05 Revisiting experimental catchment studies in forest hydrology

HW05S3 Fire and Other Disturbances; Defining the 'Forest' in forest hydrology 1

Chairpersons: Pat Lane & Dan Neary

1330 **# 5391.** Fire effects on hydrology: lessons from a multi scale catchment experiment
P. Lane, G. Sheridan, P. Noske, C. Sherwin, H. Smith, et al.

1345 **Discussion.**

1400 **# 4665.** Hydrologic Impacts of a Forest Fire: The Response of the Croppers Creek Project to Burning
L. Bren

1415 **# 4118.** Long-Term Forest Watershed Studies in the Southwest USA: Recycled for Wildfire and Prescribed Fire
D. Neary, G. Gottfried & P. Folliott.

1430 **# 4160.** Cascabel Prescribed Fire Long-Term Watershed Study: An Opportunity to Monitor Climate Change
G. Gottfried, D. Neary, P. Folliott & K. Koestner.

1445 **# 4848.** Forests – The missing link in forest hydrology
D. McGuire

Wednesday, 6 July 2011 1330-1500 MR104

IAHS

HW07 Hydro-geomorphology

HW07S2

Chairpersons: Christophe Cudennec & Scott Peckham

1330 **Introduction.**

1345 **Discussion.**

1400 **# 420.** The hydromorphological consequences of channel management: Lessons from upland systems in the UK
N. Entwistle, G. Heritage, D. Milan.

1415 **# 234.** Effect of Geomorphology and Climatic Conditions on Coastal Flood Risks in Southern and Western Coastal Zone of Sri Lanka
A. Wickramasooriya

1430 **# 4748.** Detailed infill mapping of natural and artificial coastal geomorphology between Wollongong and Newcastle, New South Wales, Australia
M. Hazelwood, W.A. Nicholas.

1445 **# 5794.** A minimalist model of terminal paleo-lakes: Qinghai and Chad
K. Fraedrich

Wednesday, 6 July 2011 1330-1500 MR105
IAHS
HW09 Revaluing system knowledge in water resources management
HW09S2
Chairpersons: Saket Pande & Junguo Liu

1330 **# 3124.** A Global Hyper-Resolution Hydrological Modeling System
N. Van De Giesen
1345 **Discussion.**
1400 **# 4804.** A Spatial Impact Assessment of Multiple Changes on Hydrological Regimes: A Case Study in the Upper Srepok River Basin, Central Highlands of Vietnam
T. Tran Van, K. Sunada, Y. Ichikawa.
1415 **# 1690.** Watershed Management Information System – A Conceptual Framework
P.D. Aher, J. Adinarayana, S.D. Gorantiwar.
1430 **# 1887.** L'Eau douce en milieu côtier: exemple de la Petite côte du Sénégal
N.M. Toure, A. Kane.
1445 **# 2558.** The Role of Integrated Water Resources Modelling in Mekong Policy and Planning
R. Johnston, M. Kummu.

Wednesday, 6 July 2011 1330-1500 PH3
IAHS
HW13 Recent development of statistical tools for hydrological application
HW13S2 STAHY Workshop – Part 2
Chairpersons: Hafzullah Aksoy

1330 **# 362.** Applying Short-range Ensemble Streamflow Forecasting to Korea
T. Kang, K. Kim, Y. Kim.
1345 **# 3852.** Identification of hydrological design events using copulas
E. Volpi, A. Fiori, CP. Mancini, G. Calenda.
1400 **# 4141.** A new fuzzy approach to flood estimation
J.L. Salinas, G. Blaschl, R. Viertl.
1415 **# 4806.** An iterative nesting bias correction technique to remove systematic biases in GCM outputs
R. Mehrotra, Ashish. Sharma.
1430 **# 5540.** Climate Change Impacts on Flood risk in Urban Areas due to Combined Effects of Extreme Precipitation and Sea Surges
K. Arnbjerg-Nielsen, A.N. Pedersen, P.S. Mikkelsen.
1445 **# 2719.** Simulating streamflow using remote sensing data: Artificial neural network approach
N. Gamage, V. Smakhtin, C. Perera.

Wednesday, 6 July 2011 1330-1500 MR102
IAMAS
M01 Solar UV radiation
M01S1
Chairpersons: Mario Blumthaler

1330 **# 3436. Invited** Application of array spectrometers for solar UV measurements
B.W. Forgan
1345 **As above.**
1400 **# 3515.** Can ozone cross-sections be verified from ground based spectral solar ultraviolet irradiance measurements?
J. Gröbner, P. Kiedron, J. Michalsky.
1415 **# 2024.** Vitamin D Action Spectrum Weighted Solar UV Irradiance over the US and Canada
V. Fioletov, B. McArthur, T. Mathews, L. Marrett.
1430 **# 3657.** Translating Controlled UV Exposure Experiments Into Real Life Experiences
A. Webb, R. Kift, J. Berry, L. Rhodes.
1445 **# 2298.** Erythemally weighted UV irradiances under Montreal and No Montreal Protocol conditions: 1960 to 2100
J. Gröbner, M. Hauser, E. Rozanov, T. Egorova.

Wednesday, 6 July 2011 1330-1500 MR109
IAMAS
M04 Recent advances in middle atmosphere science
M04S6 S-T Dynamics Obs.
Chairpersons: Joan Alexander

1330 **# 5436.** Program of the Antarctic Syowa MST/IS radar
K. Sato, M. Tsutsumi, T. Sato, T. Nakamura, A. Saito, et al.
1345 **# 5624.** Temperature Profiling with RASS and an enhanced lower height capable Stratospheric-Tropospheric radar
A. Mackinnon, B. Dolman, I. Reid.
1400 **# 5611.** Profiler/GPS sonde field campaign, Buckland Park, South Australia
B. Dolman, I. Reid, A. MacKinnon, R. Vincent, D. McIntosh.
1415 **# 3745.** Turbulent Layers in the Stratospheric Temperature and Wind Field Measured by LITOS
M. Gerding, A. Theuerkauf, F. -J. Luebken.
1430 **# 4046.** Evaluation of Momentum Fluxes in Constant Density Coordinates: Application to Superpressure Balloon Data during the VORCORE Campaign
R. Walterscheid, L. Gelinas, C. Mechoso, G. Schubert.
1445 **Discussion.**

Wednesday, 6 July 2011 1330-1500 MR110

IAMAS

M10 Tropospheric processes and processing: Pollution and biogeochemical cycling

M10S8 Remote Sensing of Tropospheric Trace Gases and Aerosols

Chairpersons: Manmohan Sarin & David Crisp

1330 **# 2941. Invited** Characterising Emissions from Vegetation Fires using Remote Sensing Techniques
C. Paton Walsh, E. Young, D. Griffith, S. Wilson.

1345 **# 4244.** Long Range Pollution Transport Observed with the Measurements of Pollution In The Troposphere (MOPITT) Instrument
J. Drummond, M. Deeter, D. Edwards, J.C. Gille, F. Nichitiu, et al.

1400 **# 4158.** Short and long lived tropospheric constituents observed from space: transport and transformation of air pollution, biogeochemistry and climate change
J.P. Burrows, A. Richter, F. Wittrock, M. Begoin, A. Schanhardt, et al.

1415 **Discussion.**

1430 **Discussion.**

1445 **# 5789.** Reduction of Aerosol Absorption in Beijing since 2007 from MODIS and AERONET
A. Lyapustin, A. Smirnov, B. Holben, Z. Lu, R. Kahn.

Wednesday, 6 July 2011 1330-1500 MR107

IAVCEI

V01/V04 Magma chambers and intrusions: their physical and chemical dynamics

V01V04S5 Magma chambers and intrusions: their physical and chemical dynamics Part 5

Chairpersons: Luca Caricchi & Catherine Annen

1330 **# 2731. Invited** Relationship Between Tectonism and Plutonism In Continental Arcs
M. De Saint Blanquat

1345 **As above.**

1400 **# 1590.** Granitic Magma Production and Transfer From Source to Batholiths in the Karakoram Mountains
R. Weinberg, H. Reichardt, P. Hasalova.

1415 **# 2521.** Assembly of Mesozoic plutonic complexes, north central Chile: implications for rates and mechanisms of magma chamber growth pulses
A. Cruden, C. Arevalo, D. Davis, J. Grocott, M. Hamilton, et al.

1430 **#1292.** Chrome-spinel inclusions in olivine and plagioclase as a marker and a tracer of redistribution of crystals in a differentiating magma system
T. Hoshide, M. Obata.

1445 **Discussion.**

Wednesday, 6 July 2011 1330-1500 MR101

IAVCEI

V09 Eruption, Transport and Deposition of Pyroclasts in Plumes Using Field Studies, and Computational Modelling

V09S2

Chairpersons: Costanza Bonadonna & Augusto Neri

1330 **# 3106.** Tephra sedimentation during the 2010 Eyjafjallajokull eruption (Iceland) from plume, deposit, radar and satellite observations
C. Bonadonna, R. Genco, M. Gouhier, M. Pistolesi, F. Alfano, et al.

1345 **# 2425.** Pyroclast dispersal : chemical fingerprinting of ash footprints
M. Menzies, E. Tomlinson, J. Lowe, C. Lane, V. Smith, et al.

1400 **# 3982.** Gas-pyroclast decoupling in volcanic jets from Strombolian eruptions
J. Taddeucci, P. Scarlato, M. Alatorre-Ibarguengoitia, D.M. Palladino.

1415 **# 1543.** The c. 2030 yr. BP-old Plinian eruption of El Misti volcano, Peru: characteristics of the fallout and pyroclastic flows, and eruption dynamics
G. Cobenas Benites, J.C. Thouret, C. Bonadonna.

1430 **# 1685. Invited** Volcanic Ash Transport and Dispersal Models: Evolution, Current Status and Future Perspectives
A. Folch

1445 **As above.**

Wednesday, 6 July 2011 1330-1500 MR112

IAVCEI

V15 Kimberlite Volcanology

V15S2

Chairpersons: Lucy Porritt & Kelly Russell

1330 **# 2535. Invited** Geochemistry of hypabyssal/coherent kimberlite: a global perspective with insights to mineralogy and volcanology
B. Kjarsgaard

1345 **As above.**

1400 **# 2726.** Implications of volcanic processes from the petrology of the AK06 South Lobe kimberlite
R. Ogilvie-Harris, M. Field, R.S.J. Sparks.

1415 **# 1421.** Alkaline ultramafic diatremes of the Missouri River Breaks area, Montana
S. Delpit, P.S. Ross, B.C. Hearn.

1430 **# 5598.** Characteristics of coherent kimberlite
P. Hayman

1445 **# 5546.** Distribution and paragenesis of alteration styles at the fort a la corne kimberlite field, Saskatchewan, Canada
A. Pittari, R. Cas, S. Kurszlaukis, N. Lefebvre, K. Webb.

Wednesday, 6 July 2011 1330-1500 MR106

IAVCEI

V17 Planetary Volcanism: what's different out there, what's new, and what are we learning?

V17S3

Chairpersons: David Williams & David Rothery

1330 **# 5112.** Hydrothermal activity on Enceladus
A. Davies, D. Matson, J. Castillo-Rogez, T. Johnson, J. Lunine.

1345 **# 3235.** Water All Over our Formerly Bone-dry Moon
L. Taylor, D. Taylor.

1400 **As above.**

1415 **# 3160.** Keck-OSIRIS Maps of Io: Spatial Distribution of SO2 ice and SO gas.
I. De Pater, M. Adamkovics, A. Conrad.

1430 **# 2520.** Thermal emission from active lava lakes: A key to understanding Io's interior?
A. Davies, L.P. Keszthelyi, A.S. McEwen.

1445 **Discussion.**

WEDNESDAY, 6 JULY 2011 1630-1800 PM2

Wednesday, 6 July 2011 1630-1800 MR210

IAG

GCS2 International Association of Geodesy (IAG)

GCS2

Chairpersons: Hermann Drewes

Closing Session – Part 2
 # 1630-1800.

Wednesday, 6 July 2011 1630-1800 MR214

IAGA

A032 Paleomagnetism

A032S2 Paleomagnetic Observations on the Geodynamo

Chairpersons: John Tarduno & Emilio Herrero-Bervera

1700 **# 4465.** Paleomagnetism and U-Pb Geochronology of the Grenville Dyke Swarm: a Rapid, Enigmatic Change in the Geomagnetic Field During the Late Neoproterozoic
H. Halls, A. Lovette, U. Soderlund, M. Hamilton.

1715 **As above.**

1730 **# 2839.** Rock Magnetic and Absolute Paleointensity Determination Studies of the Dacite of the Duffer Fm of the Pilbara Craton, Western Australia
E. Herrero-Bervera, J.P. Valet.

1745 **# 5772.** Observational constraints on the onset and strength of the early Earth's magnetic field
J. Tarduno, R. Cottrell, M. Kranendonk.

Wednesday, 6 July 2011 1630-1800 MR207

IAGA

A063/A065 Coupling in the atmosphere-ionosphere-magnetosphere system and its response to external forcing and forcing from below

A063A065S4 Space weather

Chairpersons: K. Shiokawa & TBC

1630 **# 3833. Invited** Ionospheric structures observed by airglow observation of FORMOSAT-2/ISUAL and radio occultation of FORMOSAT-3/COSMIC
C. Lin, M.L. Hsu, P.K. Rajesh, J.Y. Liu, C.H. Chen, et al.

1645 **As above.**

1700 **Discussion.**

1715 **# 2834.** A tensor transfer-function model of the equatorial ionospheric eastward electric field driven by ACE solar wind data
M. Nair, S. Maus.

1730 **# 5069.** Space Weather monitoring by means of the ground-based PC index
O. Troshichev, A. Janzhura.

1745 **# 5192.** Introduction to Chinese Meridian Observation Project
C. Wang

Wednesday, 6 July 2011 1630-1800 MR208

IAGA

A071 Radiation belt dynamics and remote sensing of the Earth's plasmasphere

A071S1 Radiation Belt Dynamics: drivers and impacts of acceleration and loss processes

Chairpersons: Mark Clilverd & Jacob Bortnik

1630 **# 5294. Invited** ULF Wave Driven Radial Diffusion in the Radiation Belts
I. Mann, L.G. Ozeke, I.J. Rae, K. Murphy, D.K. Milling, et al.

1645 **As above.**

1700 **# 4369.** Characteristics of ULF Waves Associated With Electron Acceleration to Relativistic Energies During Geomagnetic Storms
J. Baker, L. Clausen, J.M. Ruohoniemi, H. Singer.

1715 **Discussion.**

1730 **# 3484.** Electromagnetic Ion Cyclotron Waves at Geosynchronous Orbit: GOES Three Satellite Observations
B. Fraser, R. Grew, S. Morley, H. Singer.

1745 **# 5281.** Study of the inner magnetospheric response to pressure pulses in the solar wind based on the GEMSIS-RC model
K. Seki, T. Amano, Y. Miyoshi, Y. Matsumoto, T. Umeda, et al.

Wednesday, 6 July 2011 1630-1800 MR216

IAGA

A091 Magnetosphere-ionosphere coupling

A091S9 The plasma sheet – ionosphere, a coupled system: Sinks, sources, transport and the roles of field-aligned currents and ion outflow

Chairpersons: Larry Lyons

1630 **# 4164. Invited** Dynamics of the Ionospheric Mid-latitude and High-latitude Troughs during Substorms and Their Relationship with Field-aligned Currents and Convection Flows
S. Zou, M. Moldwin, L. Lyons, M. Nicolls, A. Coster.

1645 **As above.**

1700 **# 1871. Invited** The effect of Subauroral Polarization Streams on thermosphere: a statistical study
H. Wang, H. Luehr, K. Haeusler, P. Ritter.

1715 **As above.**

1730 **# 2901.** Field-aligned current distribution associated with substorm onset arcs
M. Gkioulidou, T. Nishimura, L. Lyons, T. Kikuchi, V. Angelopoulos, et al.

1745 **# 4148.** Near-Earth Plasma Sheet Azimuthal Pressure Gradient and Associated Auroral Development Soon Before Substorm Onset
C. Wang, X. Xing, L. Lyons, Y. Nishimura, V. Angelopoulos, et al.

Wednesday, 6 July 2011 1630-1800 MR212

IAGA

A092 Magnetosphere-ionosphere coupling
A092S3 Magnetosphere-Ionosphere Interactions and Auroral Processes

Chairpersons: Bob Lysak

1630 **# 4380. Invited** Shear Alfvén Wave Acceleration in Auroral Regions
C. Watt, R. Rankin.

1645 **As above.**

1700 **# 5353.** Non-local electron dynamics within Field Line Resonances
J. Johnson, P. Damiano.

1715 **# 2261.** Inductive Ionospheric Solver for Magnetospheric MHD Simulations
H. Vanhamaki, I. Honkonen, M. Palmroth.

1730 **# 3985.** Generation of a new R2 FAC associated with a northward turn of the interplanetary magnetic field revealed from a global MHD simulation
S. Fujita, T. Kikuchu, T. Tanaka.

1745 **Discussion.**

Wednesday, 6 July 2011 1630-1800 MR103

IAGA

A102 The Sun and the Heliosphere: New Views
A102S4 Plasma interactions at solar system bodies without or with weak intrinsic magnetic field: The Moon

Chairpersons: Naoki Terada

1630 **# 1562. Invited** A Review of SELENE Observations of the Plasma and Electromagnetic Environment of the Moon
M.N. Nishino, Y. Saito, H. Tsunakawa, Y. Kasahara, A. Kumamoto, et al.

1645 **As above.**

1700 **# 4399.** The Interaction Between the Moon and the Solar Wind
M. Holmstrom

1715 **As above.**

1730 **# 796.** Vlasov Simulation on the Interaction between the Solar Wind and a Dielectric Body
T. Umeda, Y. Ito.

1745 **As above.**

Wednesday, 6 July 2011 1630-1800 MR211

IAGA

A121 Space Weather and Space Climate
A121S7 Quantitative Prediction of Space Weather

Chairpersons: Geoff Crowley & Janet Kozyra

1630 **# 3180.** Modeling and Forecasting of the Storm-scale Structure and Dynamics of the Geomagnetic Field and Underlying Electric Currents Using the High-resolution Empirical Model TS07D
M. Sitnov, G. Stephens, A. Ukhorskiy, J. Vandegrif, N. Tsyganenko.

1645 **# 4632. Invited** Utilizing Ensembles in Upper Atmospheric Modeling
A. Ridley, D. Pawlowski, E. Yigit.

1700 **As above.**

1715 **# 3510. Invited** The Role of Large East-West Interplanetary Magnetic Field in Geoeffective Disturbances in the Thermosphere-Ionosphere System
D. Knipp, G. Crowley, J. Raeder.

1730 **As above.**

1745 **# 1981.** Modeling the Effects of Ionospheric Scintillation Based on GPS Cycle Slip Occurrence
D. Zhang, Y. Hao, Z. Xiao.

Wednesday, 6 July 2011 1630-1800 MR209

IAGA

A122 Space Weather and Space Climate
A122S2 Geomagnetic networks, computation and definition of products for space weather and space climate

Chairpersons: Toshi Iyemori & Heather McCreadie

1630 **# 3645. Invited** Extremes in Worldwide Geomagnetic Activity
A. Thomson, S. Reay, E. Dawson, C. Beggan, V. Edwards.

1645 **As above.**

1700 **# 5313.** Global, regional and local dynamics of strong geomagnetic storms
R. Kulchinskiy, I. Veselovsky, S. Agayan, A. Gvishiani, S. Bogoutdinov, et al.

1715 **# 3995.** Real-time Monitoring of Geomagnetic Activity and the Auroral Oval Latitude based on Satellite Magnetic Observations
S. Vennerstrom, T. Asikainen, K. Mursula, A. Karinen.

1730 **# 3165.** Ground based magnetometers: The workhorse of the magnetospheric-ionospheric community.
J. Gjerloev, R. Barnes.

1745 **As above.**

Wednesday, 6 July 2011 1630-1800 MR204
IAGA
A143 Lithospheric field and related geological/ tectonic implications
A143S2 Wold Digital Magnetic Anomaly Map Part 2
Chairpersons: Juha Korhonen & Peter Miligan

1630 **# 4585. Invited** The Fifth Edition Magnetic Anomaly Map of Australia, incorporating constraints from an independent continent-wide airborne geophysical survey
P. Milligan, B. Minty, R. Franklin, L. Richardson, P. Percival.
1645 **As above.**
1700 **# 4470.** Levelled ship-track magnetic and gravity data for parts of Australia's continental margins
R. Hackney, M. Morse.
1715 **# 4040. Invited** A Candidate of the 2nd version of the World Digital Magnetic Anomaly Map
V. Lesur, M. Hamoudi, J. Dyment, E. Thébault.
1730 **As above.**
1745 **# 2960.** Geomagnetic secular variation from analysis of marine crossover data
M. Catalan, M. Torta, T. Ishihara.

Wednesday, 6 July 2011 1630-1800 PH1
IAGA
A151 Reporter's Review
A151S4
Chairpersons: Anna Milillo

1630 **# 2029. Invited** Structure, dynamics and coupling of inner magnetosphere
Y. Ebihara
1645 **As above.**
1700 **As above.**
1715 **# 3614. Invited** Magnetospheres of solar system bodies other than Earth: Research 2009-2011
E. Bunce
1730 **As above.**
1745 **As above.**

Wednesday, 6 July 2011 1630-1800 MR218
IAHS
H01 Conceptual and modelling studies of integrated groundwater, surface water, and ecological systems
H01S5 Sensitivity analysis and uncertainty evaluation
Chairpersons: Corinna Abesser & Gunnar Nützmann

1630 **# 188.** Identifying Important Observations Using Cross Validation and Computationally Frugal Sensitivity Analysis Methods
M. Hill, L. Foglia, S. Mehl.
1645 **Discussion.**
1700 **# 241.** Uncertainty of climate change impact on groundwater resources using a surface-subsurface integrated model and considering various possible uncertainty sources.
P. Goderniaux, S. BrouyÃ¨re, P. Orban, A. Dassargues.
1715 **# 5955.** Multi-variable evaluation of an integrated model system covering Sweden (S-HYPE)
B. Arheimer, J. Dahné, G. Lindström, L. Marklund, J. Strömqvist.
1730 **# 425.** Interaction between river and groundwater in Jakarta megacity, coastal alluvial plain, Indonesia
R.F. Lubis, S. Onodera, K. Ohnishi, M. Saito, H. Bakti.
1745 **Discussion.**

Wednesday, 6 July 2011 1630-1800 MR213
IAHS
HW05 Revisiting experimental catchment studies in forest hydrology
HW05S4 Defining the 'Forest' in Forest Hydrology 2
Chairpersons: Don McGuire & David Scott

1630 **# 3447.** Scaling of Plantation Water USe from Headwaters to Larger Catchments within the Murray Darling Basin
A. Webb, D. McGuire.
1645 **Discussion.**
1700 **Discussion.**
1715 **# 4824.** Using 3PG+ and CAT to investigate effects of climate and land use change on catchment hydrology
P. Feikema, C. Beverly, J. Morris, P. Lane, T. Baker.
1730 **# 4817.** Integrating Multi-Scale Measurements to Investigate The Impact of Forest Thinning on Water Yield
S. Hawthorne, P. Lane, L. Bren, N. Sims.
1745 **Discussion.**

Wednesday, 6 July 2011 1630-1800 MR104
IAHS
HW07 Hydro-geomorphology
HW07S3
Chairpersons: Scott Peckham & Christophe Cudennec

1630 **# 1154.** Braided rivers: structure, types, origin and effects
S. Chalov, N. Alexeevsky.
1645 **# 4156.** Morphology of Tahitian rivers and the formation of amphitheater valleys.
J. Barriot, F. Ye, L. Sichoix.
1700 **# 4050.** Invariant morphometric properties of headwater subcatchments
R. Moussa, F. Colin, M. Rabotin, D. Hallema, A. Crabit.
1715 **# 5370.** Geomorphometric Structures of a River Network and of its Set of Riparian Wetlands
C. Cudennec, G. Storer, A. de Lavenne, J. Aouissi.
1730 **# 732.** Initiation and recession of the fluvial knickpoints: a case study from the Yalu RiverČWangtian'e volcanic region, northeastern China
H. Zhang, P. Zhang, Q. Fan.
1745 **Discussion.**

Wednesday, 6 July 2011 1630-1800 MR105
IAHS
HW09 Revaluing system knowledge in water resources management
HW09S3
Chairpersons: Johan Cullman & Junguo Liu

1630 **# 4092.** On the significance of the performance criteria of event-based flood models
R. Moussa
1645 **# 4091.** Combining Hydrograph Analysis and Distributed Temperature Sensing to assess Climate and Groundwater Impacts on Stream Habitat Conditions
E. Boegh, M. Blemmer, J. Conallin, E. Holmes, M. Karthikeyan, et al.
1700 **# 1633.** A Parsimonious Hydroeconomic Modeling Approach for Data Scarce Dryland Areas With Application to Western India
S. Pande, B. van den Boom, H. Savenije, A. Gosain.
1715 **# 5989.** Approaching Water Stress in the Alps -Transdisciplinary Analysis of Integrated Water Resources Management Options – The MontanAqua Project
B. Schaedler, R. Weingartner, F. Schneider, S. Rist, K. Herweg, et al.
1730 **Discussion.**
1745 **Discussion & Poster Presentations.**

Wednesday, 6 July 2011 1630-1800 MR219
IAHS
HW10 Water quality and sediment prediction in ungauged basins
HW10S1
Chairpersons: Berit Arheimer & Scott Wilkinson

1630 **Introduction.**
1645 **# 3756.** New online water quality monitoring techniques for improved hydrological and water quality modelling
M. Rode, U. Kiwel, S. Jiang.
1700 **# 3885.** Short-term versus long-term studies of sediment dynamics in a small subhumid mountain Mediterranean basin with badlands.
F. Gallart, N. Perez-Gallego, J. Latron, G. Catari, N. Martinez-Carreras, et al.
1715 **# 3920.** Modelling Runoff And Erosion In An Ungauged Cultivated Catchment Of Western Russia Strongly Contaminated By Chernobyl Fallout
O. Evrard, Catherine. Ottle, Nicolas. Lio Soon Shun, Vladimir. Belyaev, Nadezda. Ivanova.
1730 **# 4190.** Dryland Salinity Management in the Semi-arid Western Cape (South Africa)
R. Bugan, N.Z. Jovanovic, M. Fink, S. Kralisch, W.P. De Clercq, et al.
1745 **#4698.** Predicting statistics of river discharge in ungauged basins for water quality modelling.
F. Karim, S. Wilkinson, C. Dougall.

Wednesday, 6 July 2011 1630-1800 MR220
IAHS
HW11 Water supply and water quality in large metropolitan areas and megacities
HW11S1
Chairpersons: Valentina Krysanova

1630 **Introduction.**
1645 **# 1018.** From where comes the precipitation?
H. Savenije
1700 **As above.**
1715 **# 4137.** Exploring the derivatives of a noisy distributed temperature signal
R. Van Nooijen, O.A.C. Hoes, A.G. Kolechkina.
1730 **# 4175.** Methodologies for the estimation of mass fluxes of xenobiotics at different scales in urban areas – the cities of Halle/Saale and Leipzig (Germany)
F. Reinstorf, S. Leschik, A. Musolff, K. OsenbrÃck, M. Mader, et al.
1745 **Discussion.**

Wednesday, 6 July 2011 1630-1800 PH3
IAHS
HW13 Recent development of statistical tools for hydrological application
HW13S3 STAHY Workshop – Part 3
Chairpersons: Demetris Koutsoyiannis

1630 **# 3555.** The use of unusual hydrological events for hydrological modelling
A. Bardossy
1645 **# 5916.** Dragon-Kings, Outliers Or Hydrological Extremes?
S. Lovejoy, D. Schertzer, S. Lovejoy.
1700 **# 3090.** Conditioning hydrological models on regional signatures for probabilistic predictions in ungauged basins and for assessing climate change impacts
T. Wagener, R. Singh.
1715 **# 3221.** Modelling Rainfall Errors within a Bayesian Rainfall-runoff Inference Framework
G. Evin, D. Kavetski, G. Kuczera, M. Thyer.
1730 **# 1911.** A new Geostatistical method that decides the Priority index of Measuring Points in the optimal groundwater monitoring
S. Sarah, S. Ahmed.
1745 **Discussion.**

Wednesday, 6 July 2011 1630-1800 MR102
IAMAS
M01 Solar UV radiation
M01S2
Chairpersons: Julian Groebner

1630 **# 2518. Invited** Determination of optical depth of atmospheric trace gases from spectral direct sun observations
A. Cede
1645 **As above.**
1700 **# 5971.** A Model for the Correction of Solar Ultraviolet Radiation Retrieved from the OMI/Aura Satellite in a Tropical Environment
S. Buntoung, S. Janjai, S. Pattarapanitchai, A. Webb.
1715 **# 2438.** Case study about 3D-albedo effects on solar irradiance
M. Blumthaler, B. Mayer, R. Buras, A. Webb, A. Bais, et al.
1730 **Discussion.**
1745 **Discussion.**

Wednesday, 6 July 2011 1630-1800 MR109
IAMAS
M04 Recent advances in middle atmosphere science
M04S7 S-T Dyn/Chem
Chairpersons: Greg Bodeker

1630 **# 2487. Invited** Identification of the Tropopause Layers Using Tracer-Tracer Correlations: TTL vs. ExTL
L. Pan
1645 **# 2022. Invited** Transport and Mixing in Relation to the Upper Tropospheric/Lower Stratospheric (UTLS) Jets from Satellite and Aircraft Data
G. Manney
1700 **As above.**
1715 **# 3901.** Observations of Tropospheric and Stratospheric Intrusions in the Extratropical Upper Tropopshere and Lower Stratosphere
K. Bowman, C. Homeyer, L. Pan, E. Atlas, R. Gao, et al.
1730 **# 1152.** Numerical Experiments on Extratropical Tropopause Inversion Layer Using a Mesoscale Numerical Weather Prediction Model
S. Yoden, S. Otsuka, M. Takeshita.
1745 **Discussion.**

Wednesday, 6 July 2011 1630-1800 MR111
IAVCEI
V03 Time-scales of Magmatic Processes and Volcanological Implications
V03S1
Chairpersons: Fidel Costa

1630 **# 2879. Invited** Uranium Series Accessory Crystal Dating and Magmatic Longevity
A. Schmitt
1645 **As above.**
1700 **# 544.** Evolution of the magma system at Tarawera volcano, New Zealand, from U-Th disequilibrium dating of zircon
S. Storm, P. Shane, A.K. Schmitt, J.M. Lindsay.
1715 **# 3127.** Lying in wait: 40Ar/39Ar and 238U-230Th constraints on time scales of dacite formation beneath Volcan Santa Maria, Guatemala
B. Singer, B. Jicha, B. Beard, C. Johnson, J. Fournelle, et al.
1730 **Discussion.**
1745 **As above.**

Wednesday, 6 July 2011 1630-1800 MR101
IAVCEI
V09 Eruption, Transport and Deposition of Pyroclasts in Plumes Using Field Studies, and Computational Modelling
V09S3
Chairpersons: Costanza Bonadonna & Marcus Bursik

1630 **# 1511.** The Role of Dispersion in Ashfall Models
R. McKibbin
1645 **# 2969.** Possibilities and uncertainties in modelling atmospheric dispersion and deposition of fine volcanic ash
B. Langmann
1700 **# 3260.** Development and application of python-FALL3D: a modified procedure for modelling volcanic ash fallout in Indonesia
A. Bear-Crozier, O. Nielsen.
1715 **Poster Presentations.**
1730 **Discussion.**
1745 **Discussion.**

Wednesday, 6 July 2011 1630-1800 MR112
IAVCEI
V15 Kimberlite Volcanology
V15S3
Chairpersons: Patrick Hayman & Lucy Porritt

1630 **# 3018. Invited** Understanding The Nature Of Kimberlite Volcanoes
R. Cas, S. Sparks, K. Russell.
1645 **As above.**
1700 **# 2821.** Dynamics of Kimberlite Eruptions: New Laboratory Experiments
S. Kieffer, M. Orescanin, D. Prisco, J. Austin.
1715 **# 3010.** Kimberlite Ascent
K. Russell, L. Porritt, Y. Lavallee, D. Dingwell.
1730 **Discussion.**
1745 **Discussion.**

Thursday, 7 July 2011 0830-1000 MR203

IUGG

U05 Data Science/Informatics and Data Assimilation in Geophysical Models

U05S1 Speakers by Invitation

Chairpersons: Peter Fox & Adelina Geyer Traver

0830 **# 5276.** The Changing Nature of Knowledge Discovery and Assimilation in Geophysics and Beyond
R. Woodcock

0845 **As above.**

0900 **# 4038.** Diverse data for interdisciplinary science-another dimension of the Fourth Paradigm
M. Parsons, Ø. Godøy, El. LeDrew, T.F. de Bruin, B. Danis, et al.

0915 **As above.**

0930 **Discussion.**

0945 **Discussion.**

Thursday, 7 July 2011 0830-1000 MR205

IAGA

A033 Paleomagnetism

A033S1 Paleogeographic Reconstructions

Chairpersons: Phillip Schmidt & Jennifer Tait

0830 **# 5417.** Precambrian supercontinents and paleomagnetic data, or how 'super' are supercontinents?
S. Pisarevsky

0845 **As above.**

0900 **Discussion.**

0915 **# 4457.** Melville Bugt Dykes of Western Greenland: an Early Expression of Magmatism from the 1. 6-1. 5 Ga Fennoscandian Rapakivi Granite Province?
H. Halls, M. Hamilton, S. Denyszyn.

0930 **# 5647.** Paleomagnetism and Magnetic Mineralogy of Grenville Metamorphic and Igneous Rocks of the Adirondack Highlands, USA: Was Rodinia Stationary 1 Ga?
L. Brown, S. McEnroe.

0945 **As above.**

Thursday, 7 July 2011 0830-1000 MR207

IAGA

A063/A065 Coupling in the atmosphere-ionosphere-magnetosphere system and its response to external forcing and forcing from below

A063A065S5 Magnetic storm and thermosphere

Chairpersons: Huixin Liu

0830 **# 3531. Invited** Energy input to the dayside thermosphere when the east-west interplanetary magnetic field is large
D. Knipp, G. Crowley, J. Raeder, S. Eriksson.

0845 **As above.**

0900 **# 534. Invited** New aspects of thermospheric and ionospheric storms revealed by CHAMP
B. Nanan, M. Yamamoto, Y. Otsuka, H. Liu, H. Luhr.

0915 **As above.**

0930 **# 5006.** Modeling of thermospheric density variability?
T. Matsuo, M. Fedrezzi, T. Fuller-Rowell, M. Codrescu.

0945 **# 4271.** The effects of geomagnetic storms driven by high speed streams and corotating interaction regions on the thermosphere/ionosphere system
A. Burns, S. Solomon, W. Wang, L. Qian, J. Lei.

Thursday, 7 July 2011 0830-1000 MR208

IAGA

A071 Radiation belt dynamics and remote sensing of the Earth's plasmasphere

A071S2 Radiation Belt Dynamics: drivers and impacts of acceleration and loss processes

Chairpersons: Jacob Bortnik & Craig Rodger

0830 **# 4988. Invited** Propagation Properties of Whistler-Mode Chorus
O. Santolik, E. Macusova, D.A. Gurnett, J.S. Pickett, N. Cornilleau-Wehrlin.

0845 **As above.**

0900 **# 4637.** Waves in the Earth's Radiation Belt: The Electric and Magnetic Field Instrument Suite with Integrated Science on the Radiation Belt Storm Probes
C. Kletzing

0915 **# 4624.** Two-Dimensional Finite Element Full-Wave Model for Plasma Waves in the Inner Magnetosphere
J. Johnson, E. Valeo, E-H. Kim, C. Phillips.

0930 **# 5213.** New Type of Diffuse VLF Emissions observed on the Ground in Northern Finland
J. Manninen, T. Turunen.

0945 **# 2698.** Variation of the plasmaspheric hiss in the dusk sector of the inner magnetosphere
H. Laakso, P. Escoubet, A. Masson, M. Taylor.

Thursday, 7 July 2011 0830-1000 MR206

IAGA

A082 Space plasma processes

A082S1 Magnetopause and Magnetosheath Processes of the Earth and Planets: Reconnection, Diffusion and Boundary Dynamics

Chairpersons: Charles J. Farrugia

0830 **# 5320. Invited** Magnetosheath plasma entry at the high latitude magnetosphere during northward IMF
Q. Shi, Q.G. Zong, Z.Y. Pu, S.Y. Fu, H. Zhang, et al.

0845 **As above.**

0900 **# 2049.** Three Dimensional Shape of the Magnetopause: Global MHD Results
J. Lu, Z. Liu, K. Kabin, M. Zhao, D. Liu, et al.

0915 **# 2909.** Evidence of Strong Deformation of the Earth's Magnetosphere under Low Mach Number Solar Wind
M.N. Nishino, M. Fujimoto, T. Phan, Y. Saito, T. Mukai, et al.

0930 **# 4421.** On the Use of Absorbing Boundaries in Modeling ULF Waves in the Magnetosphere.
M. Sciffer, C. Waters, R. Lysak.

0945 **Discussion.**

Thursday, 7 July 2011 0830-1000 MR212

IAGA

A092 Magnetosphere-ionosphere coupling

A092S4 Magnetosphere-Ionosphere Interactions and Auroral Processes

Chairpersons: Robert Ergun

0830 **# 3938. Invited** Theory and Observations of Auroral Arcs: Unresolved Issues
D. Knudsen, E. Donovan, R. Kabirzadeh, E. Spanswick.

0845 **As above.**

0900 **# 4633.** Effects of Alfvenic Interactions on Magnetospheric and Ionospheric Dynamics
Y. Song, R. Lysak.

0915 **# 2113. Invited** Vorticity in Alfvenic and Quasi-static Aurorae
C. Chaston, Reimei Team, Fast Team.
0930 **As above.**
0945 **# 4234.** Mode Conversion and Phase Mixing at the Plasma Sheet Boundary Layer: A Mechanism for Poleward Boundary Intensifications
R. Lysak, Y. Song.

Thursday, 7 July 2011 0830-1000 MR216
IAGA
A113 The Sun and the Heliosphere: Physical Processes
A113S1 Solar, Interplanetary, and Magnetospheric Radio Emissions
Chairpersons: Bo Li

0830 **# 4899. Invited** Sub-THz Emission Mechanisms in Solar Flares
E. Kontar, G.D. Fleishman.
0845 **As above.**
0900 **# 4738.** Role of linear mode conversion on solar and heliospheric radio emissions at oblique density inhomogeneities
E. Kim, I. Cairns, P. Robinson, F. Schleyer.
0915 **# 4735. Invited** Solar Radio Imaging Spectrocopy in dm Wave Range --- Construction of Chinese Spectral Radioheliograph
Y. Yan, J. Zhang, Z. Chen, W. Wang, F. Liu, et al.
0930 **As above.**
0945 **# 4931.** Gyrosynchrotron emission from expanding CME loops
D. Maia

Thursday, 7 July 2011 0830-1000 MR209
IAGA
A122 Space Weather and Space Climate
A122S3 Geomagnetic networks, computation and definition of products for space weather and space climate
Chairpersons: Renata Lukianova & Juan Josef Curto

0830 **# 5209. Invited** A Statistical Study of the Longitudinal Dependence of Geomagnetic Activity
M. Menvielle, F. Mazouz, C. Lathuillare.
0845 **As above.**
0900 **# 1229.** The PC index: Review of methods
H. McCreadie, M. Menvielle.
0915 **# 3927.** Kp Index – History, Development and availability
H. Linthe
0930 **# 2207. Invited** An investigation of SuperMAG-derived AL(100) to identify substorms
P. Newell, J. Gjerloev.
0945 **As above.**

Thursday, 7 July 2011 0830-1000 MR218
IAHS
H01 Conceptual and modelling studies of integrated groundwater, surface water, and ecological systems
H01S6 Case studies and large-scale applications
Chairpersons: Gunnar Nützmann & Corinna Abesser

0830 **# 114.** Maintaining Floodplain Wetland Environments in the Flow-stressed Anabranching Ovens River, Victoria, Australia
P. Marren, K.L.M. Woods.
0845 **# 5957.** Numerical Estimation of the future sustainable Groundwater Yield in the Kok River Basin, Northern Thailand
P. Arlai
0900 **# 202.** Classification and visualization of hydrological model results for streams in the Mediterranean region
E. Querner, M. Vernooij, V. Padadoulakis, J. Froebrich.
0915 **# 294.** Estimation of groundwater fluxes by using both hydrodynamic and geochemical approaches in a heterogeneous Mediterranean system.
M. Alazard, C. Leduc, Y. Travi, R. Béji.
0930 **Discussion.**
0945 **Discussion.**

Thursday, 7 July 2011 0830-1000 MR213
IAHS
HW05 Revisiting experimental catchment studies in forest hydrology
HW05S5 Defining the 'Forest' 3; Water Quality and Aquatic Ecology 1
Chairpersons: John Stednick & Jami Nettles

0830 **# 4744.** The Effect of Understorey Renoval on Streamflow from a Eucalyptus regnans Forest
R. Benyon, P. Lane, S. Haydon.
0845 **# 1169.** The contribution of hydrological fluxes to carbon sequestration in a temperate forest plantation
K. Heal, X. Ma, N. Forrest, P. Jarvis.
0900 **# 1457.** An Ecohydrological Approach to Understand Feedbacks between Climate, Soil and Plant Physiology of Brigalow Plant Communities.
S. Arnold, C. Thornton, T. Baumgartl.
0915 **# 3427.** Estimating effects of plantation expansion and climate variability on streamflow for catchments in Australia
L. Zhang, F. Zhao, Y. Chen, R. Dixon.
0930 **# 4117.** Experimental Forest Catchment Studies Contributions to the Understanding of the Effects of Disturbances on Water Quality: Past, Present, and Future
D. Neary
0945 **# 4593.** Paired-Catchment and Stream Reach Studies of Effects of Streamside-Management-Zone Plantations on Water Quality
P. Smethurst, D. Neary, K. Petrone, C. Baillie, D. Worledge.

Thursday, 7 July 2011 0830-1000 MR104

IAHS

HW07 Hydro-geomorphology

HW07S4

Chairpersons: Christophe Cudennec & Scott Peckham

0830 **Introduction.**

0845 **# 5532.** How to Make a Connection Across the Landscape: Interactions Between Topography, Weather and Hydrological Connectivity at the Landscape Scale
S.M. Reaney, L.J. Bracken, C. Williams.

0900 **# 5585.** Jgrass-NewAge system: calibration issues and geomorphological effects in runoff production
G. Formetta, R. Rigon, A. Bellin.

0915 **# 4723.** Implementing Multi-Dimensional Topological Routing Tools and Contour Farming Practices to Improve Distributed, Process-Driven Hydrological and Erosion Modeling in the Sandspruit Catchment, South Africa
J. Helmschrot, T. Steudel, R. Bugan, H. Kipka, B. Pfennig, et al.

0930 **# 5520.** Parameterization and regionalization of topographic variability in grid-based rainfall-runoff models
R. Venneker, C L. Wong.

0945 **# 3046.** A Novel Approach for Hydrologic Response Units Delineation
U. Khan, N.K. Tuteja, A. Sharma.

Thursday, 7 July 2011 0830-1000 MR219

IAHS

HW10 Water quality and sediment prediction in ungauged basins

HW10S2

Chairpersons: Berit Arheimer & Michael Rode

0830 **# 5018.** Relationship Between Sediment Loads, Catchment Area, And Runoff For Queensland Coastal Catchments, Australia
M. Joo, B. Yu.

0845 **# 5271.** Process Controls on Scaling Behavior of Sediment Delivery: Exploration with a Network Scale Coupled Flow and Sediment Model
M. Sivapalan, S. Patil, M. Hassan, S. Ye, C. Harman.

0900 **# 5406.** Modelling Steady-State and Time-Stepping Sediment Budgets to Predict Sediment Sources and Transport in River Networks
S. Wilkinson, C. Dougall, R. Bartley, F. Cook.

0915 **# 5503.** Discharge, Sediment, and Phosphorus Modeling in a Poorly Gauged Watershed in Central China
K. Bieger, G. Harmann, N. Fohrer.

0930 **# 5782.** Bedload of Large Russian Arctic Rivers: Quantification and Prediction
N. Tananaev.

0945 **Discussion.**

Thursday, 7 July 2011 0830-1000 MR220

IAHS

HW11 Water supply and water quality in large metropolitan areas and megacities

HW11S2

Chairpersons: Hubert Savenije

0830 **# 141.** Groundwater contribution to the water supply of megacities
I. Zektser

0915 **# 5843.** Potential impacts of climate change on hydrologic ecosystem services in the metropolitan fringe
H. Chang, T. Anthony, D. Ennaanay, M. Sharma.

0930 **Discussion.**

0945 **Discussion.**

Thursday, 7 July 2011 0830-1000 MR109

IAMAS

M04 Recent advances in middle atmosphere science

M04S8 S-T Chem/Dyn

Chairpersons: Alexei Krivolutsky

0830 **# 5068.** Diagnosing origin and effects of stationary wave patterns in middle atmospheric ozone and water vapor
A. Gabriel, D. Demirhan Bari, D.H.W. Peters, I. Kirchner, I. Hoeschel, et al.

0845 **# 2465.** The effect of orographic waves on Antarctic Polar Stratospheric Cloud (PSC) occurrence and composition
S. Alexander, A. Klekociuk, M. Pitts, A. McDonald & A. Arevalo-Torres.

0900 **# 853.** Methyl Chloride from the Aura Microwave Limb Sounder: Validation and First Assessment of Global Climatology in the Upper Troposphere / Lower Stratosphere
M. Santee, N. Livesey, G. Manney, W. Read, A. Lambert.

0915 **# 533.** The Stratospheric Aerosol and Gas Experiment: Recent SAGE III/Meteor Activities and the Potential for Future Missions
C. Hill, L. Thomason, D. Flittner, J. Zawodny.

0930 **# 5545.** Chlorine isotope fractionation in halocarbons: Stratospheric and laboratory studies
J Laube, J. Kaiser, E. McKenna, M. Martin, M. Bolder, et al.

0945 **Discussion.**

Thursday, 7 July 2011 0830-1000 MR111

IAVCEI

V03 Time-scales of Magmatic Processes and Volcanological Implications

V03S2

Chairpersons: Fidel Costa

0830 **# 2880. Invited** Crystal residence ages in andesitic volcanoes
A. Kent, K. Cooper, G. Eppich, A. Koleszar, M. Salisbury.

0845 **As above.**

0900 **# 2060.** Rates and Processes of Crystallization in On-axis and Off-axis MOR Basaltic Melts
G. Zellmer, P. Dulski, Y. Iizuka, M. Perfit.

0915 **# 5123.** Unravelling the Driving Forces Behind Recent Changes in the Eruptive Behaviour of Merapi Volcano, Java, Indonesia
R. Gertisser, J. Barclay, K. Berlo, H. Handley, R. Herd, et al.

0930 **Discussion.**

0945 **Discussion.**

Thursday, 7 July 2011 0830-1000 MR103
IAVCEI
V11 Characteristics and Imaging of Pyroclasts
V11S1
Chairpersons: Kathy Cashman & Laura Pioli

0830 **# 1309. Invited** The effusive-explosive transition: Insights from 3D textural analysis of pyroclasts and conduit flow modelling
W. Degruyter, O. Bachmann, A. Burgisser, J. Dufek, M. Manga.
0845 **As above.**
0900 **# 1318.** Degassing through ductile fracturing during cooling. Origin of dense pyroclasts in a large volume ignimbrites, Cerro Galan Ignimbrite, Northern Argentina.
M. Edwards, R. Weinberg, R. Cas.
0915 **# 1556.** Influences of Pore Geometry and Permeable Gas Escape on Compaction
H. Wright, K. Cashman.
0930 **Poster Introduction.**
0945 **As above.**

Thursday, 7 July 2011 0830-1000 MR106
IAVCEI
V13 Understanding Big Volcanic Systems
V13S1
Chairpersons: James White & Scott Bryan

0830 **Introduction.**
0845 **# 3895.** How do your LIPs grow? An overview of the onset and internal architecture of flood basalts.
D. Jerram
0900 **As above.**
0915 **# 754.** Application of lava flow emplacement models to mapping volcanic provinces at the scale of individual eruptions.
C. Vye, B. Napier, L. Bateson, K. Smith.
0930 **Discussion.**
0945 **Discussion.**

Thursday, 7 July 2011 0830-1000 MR110
IAVCEI
V16 Subglacial and Subaqueous and Volcanism: processes, products and impacts
V16S1
Chairpersons: Magnus Gudmundsson

0830 **# 5309.** Basaltic Volcanism and Ice and Water: Similarities, Differences, and Scales of Observation
J. White
0845 **As above.**
0900 **# 1541.** Explosive Fragmentation of Pillow Lavas as precursors to phreatomagmatic Lapilli Tuffs? Potential examples from glaciovolcanic sequences at Askja (Dyngjufjoll) central volcano, Iceland
A. Graettinger, I. Skilling, D. McGarvie, A. Hoskuldsson, K. Strand.
0915 **# 5619.** Middle Pleistocene Subglacial Volcanism in the Pino Hachado Caldera area, southern Andes
J. Clavero, C. Tunstall, V. Ramos, A. Rivera.
0930 **# 1074.** Volcaniclastic deposits at Kima'Kho Mountain, northern British Columbia, Canada: A record of explosive glaciovolcanism
C. Ryane, J.K. Russell, B.R. Edwards, L.A. Porritt.
0945 **# 1507.** Snaebylisheidi: phased evolution of a Laki-scale eruption under ice
C. Gorny, J. White, M. Gudmundsson.

THURSDAY, 7 JULY 2011 1030-1200 AM2

Thursday, 7 July 2011 1030-1200 MR203
IUGG
U05 Data Science/Informatics and Data Assimilation in Geophysical Models
U05S2 Speakers by Invitation
Chairpersons: Richard Swinbank & Mark Parsons

1030 **# 2146.** Benford's Law in the Earth Sciences and Beyond
M. Sambridge, H. Tkalcic, A. Jackson.
1045 **As above.**
1100 **Discussion.**
1115 **Discussion.**
1130 **# 4297.** MoSST_DAS: the first working geomagnetic data assimilation system
W. Kuang, A. Tangborn.
1145 **As above.**

Thursday, 7 July 2011 1030-1200 MR205
IAGA
A033 Paleomagnetism
A033S2 Paleogeographic Reconstructions
Chairpersons: Sergei Pisarevsky & Laurie Brown

1030 **# 5966.** A Globe and a Piece of String: pioneers of palaeogeographic reconstruction
G. Turner
1045 **As above.**
1100 **Discussion.**
1115 **# 2467.** Paleomagnetic study of Mesozoic magmatic arc rocks at Cierva Point, northwest Antarctic Peninsula
V. Juan Francisco, N. Cosentino, A. Tassone, H. Lippai.
1130 **Discussion.**
1145 **Discussion.**

Thursday, 7 July 2011 1030-1200 MR208
IAGA
A071 Radiation belt dynamics and remote sensing of the Earth's plasmasphere
A071S3 Radiation Belt Dynamics: drivers and impacts of acceleration and loss processes
Chairpersons: Craig Rodger & Mark Clilverd

1030 **# 3758. Invited** Electron Precipitation due to Wave-Particle Interactions in the Earth's Radiation Belts
R. Horne
1045 **As above.**
1100 **# 1053.** Nonlinear scattering of energetic electrons by large-amplitude whistler waves
J. Bortnik, R. Thorne, W. Li, J. Albert, X. Tao.
1115 **# 4256.** Simulation of radiation belt wave-particle interactions using MHD-SDE methods
A. Chan, S. Elkington, J. Albert.
1130 **# 3002.** Adiabatic Effects on Radiation Belt Electrons at Low Altitude
X. Li, W. Tu.
1145 **# 3687.** Observations Of Subauroral Proton Luminosity Suggesting Generation By Wave/Particle Interaction
F. Søraas, K. Laundal.

Thursday, 7 July 2011 1030-1200 MR205

IAGA

A081 Space plasma processes
A081S1 New Techniques and Instrumentation in Space Plasma Physics

Chairpersons: Philippe Escoubet

1030 **# 5119.** Electron Temperature and Electron Energy Distribution Inside and Outside Equatorial Plasma Bubbles: In situ Observations from Brazil
P. Muralikrishna, F.C. de Meneses.

1045 **Discussion.**

1100 **# 1102.** Development of a digital fluxgate magnetometer using sigma-delta DAC for the SCOPE mission
K. Iguchi, A. Matsuoka, A. Fujimoto.

1115 **# 2314.** Expanding Diagnostic Capabilities of Super Dual Auroral Radar Network
P. Ponomarenko, A. Koustov, J.P. St. -Maurice.

1130 **Discussion.**

1145 **Discussion.**

Thursday, 7 July 2011 1030-1200 MR206

IAGA

A082 Space plasma processes
A082S2 Magnetopause and Magnetosheath Processes of the Earth and Planets: Reconnection, Diffusion and Boundary Dynamics

Chairpersons: Charles J. Farrugia & Benoit Lavraud

1030 **# 1613. Invited** Magnetopause Processes at the Outer Planets
S. Badman, C. Arridge, M. Fujimoto, C. Jackman, S. Kasahara, et al.

1045 **As above.**

1100 **# 1998.** 3D, multi-fluid, MHD calculations of Mars' interaction with the solar wind and applications
A. Nagy, D. Najib, G. Toth, Y. Ma.

1115 **# 5981. Invited** Electron scale physics in collisionless space plasma: Recent Cluster observations and theoretical modeling
F. Sahraoui, G. Belmont, A. Retino, M. Goldstein.

1130 **As above.**

1145 **# 3999.** Electron Cross-Talk at the Earth's Bowshock
J. Mitchell, S. Schwartz.

Thursday, 7 July 2011 1030-1200 MR212

IAGA

A092 Magnetosphere-ionosphere coupling
A092S5 Magnetosphere-Ionosphere Interactions and Auroral Processes

Chairpersons: Takeshi Sakanoi

1030 **# 2159. Invited** High-speed imaging observations of flickering aurora and breakup aurora
R. Kataoka, Y. Miyoshi, A. Yaegashi, T. Nishiyama, T. Sakanoi, et al.

1045 **As above.**

1100 **# 3930.** Multi-station optical study of substorm breakup auroral arcs
T. Sergienko, K. Axelsson, B. Gustavsson, I. Sandahl, U. Brändström.

1115 **# 5160.** A comparative study on the structures and dynamics of auroras and the fine properties of auroral particles using Reimei
M. Hirahara, Y. Fukuda, K. Seki, K. Asamura, T. Sakanoi, et al.

1130 **# 1043.** EISCAT radar studies of the high-latitude auroral arcs
A. Kozlovsky

1145 **Discussion.**

Thursday, 7 July 2011 1030-1200 MR216

IAGA

A113 The Sun and the Heliosphere: Physical Processes
A113S2 Solar, Interplanetary, and Magnetospheric Radio Emissions

Chairpersons: Dalmiro Maia

1030 **# 2225.** On A Mechanism For The Origin Of Shock-unrelated Type II Radio Emission In The Solar Corona
V. Eselevich, M. Eselevich.

1045 **# 3187.** Decimetric Type III Bursts: Generation, Propagation, and Emission Mode
B. Li, I. Cairns, Y. Yan, P. Robinson.

1100 **# 2302. Invited** Langmuir Wave Observations by STEREO and Implications for Heliospheric Radio Emission
D. Malaspina, R. Ergun, I. Cairns, S. Hess.

1115 **As above.**

1130 **# 1400.** Properties of Type III Radio Bursts at Long Wavelengths: STEREO/Waves Observations
V. Krupar, B. Cecconi, F. Nemec, M. Maksimovic, O. Santolik.

1145 **# 2045.** Type II Radio Bursts: New Analytic Formalism and Applications
J. Schmidt, I. Cairns, P. Robinson.

Thursday, 7 July 2011 1030-1200 MR209

IAGA

A122 Space Weather and Space Climate
A122S4 Geomagnetic networks, computation and definition of products for space weather and space climate

Chairpersons: Heather McCreadie & Juan Josef Curto

1030 **# 4819.** MAGDAS Project at SERC for Space Weather during IHY/ISWI (2007-2012)
K. Yumoto, Y. Yamazaki.

1045 **# 3552. Invited** New Substorm Index, Wp Index, Derived from High-resolution Geomagnetic Field Data at Low Latitude and its Comparison with AE and ASY Indices
M. Nose, T. Iyemori, N. Kumasaka, G. Cifuentes-Nava, J. Matzka, et al.

1100 **As above.**

1115 **# 2089.** Recognition of geomagnetic data disturbances of dynamic nature using fuzzy logic
A. Gvishiani, S. Agayan, S. Bogoutdinov.

1130 **# 5948.** Measuring the Ring Current: Comparing Ground-based and Satellite-based Dst Indices
K. Mursula, T. Asikainen, A. Karinen, S. Vennerstroem.

1145 **# 2229.** New method for defining solar regular geomagnetic variations: Comparing the hand-scaled Ak index and the digital Ah indices derived from two different computer methods at Sodankylä observatory
D. Martini, M. Orispää, T. Ulich, M. Lehtinen, K. Mursula, et al.

Thursday, 7 July 2011 1030-1200 MR217
IAGA
A153 Reporter's Review
A153S1
Chairpersons: Monika Korte & Alan Thomson

1030 **# 1978. Invited** Reporter Review: Recent improvements to geomagnetic observatory practice, instrumentation and global network
P. Kotze
1045 **As above.**
1100 **# 5132. Invited** New Results from Geomagnetic Secular Variation Studies
A. Chulliat
1115 **As above.**
1130 **# 2662. Invited** Reviewers report on IAGA A13. 2
C. Beggan
1145 **As above.**

Thursday, 7 July 2011 1030-1200 MR213
IAHS
HW05 Revisiting experimental catchment studies in forest hydrology
HW05S6 Water Quality and Aquatic Ecology 2
Chairpersons: Dan Neary & David Scott

1030 **Introduction.**
1045 **# 4337.** The effects of silvicultural and biofuel operations on water quality and quantity: Long term experimental watershed studies in poorly drained pine plantations, North Carolina, US.
J. Nettles, W. Skaggs, D. Amatya, G. Chescheir.
1100 **# 4849.** Minimising herbicide loss in streamflow from forest catchments
D. McGuire
1115 **# 2327.** Sediment Yield, Storage and Wood Accumulations in Forested Headwater Channels Managed for Timber Production in Southeastern Australia
P. Walsh, A. Webb, C. Thompson.
1130 **# 1070.** Predicting Stream Heads Using Digital Elevation Models and a Hydrological Model
X.C. Sun, C. Thompson.
1145 **Discussion.**

Thursday, 7 July 2011 1030-1200 MR104
IAHS
HW07 Hydro-geomorphology
HW07S5
Chairpersons: Scott Peckham & Christophe Cudennec

1030 **# 2064.** A Continuous Hydro-geomorphic Rainfall Runoff Model for Small and Ungauged Watersheds
S. Grimaldi, A. Petroselli, F. Serinaldi.
1045 **# 4260.** Streamflow Prediction in Ungauged Basins Through Geomorphology-Based Hydrograph Transposition
C. Cudennec, A. de Lavenne, H. Boudhraa, S. Chargui.
1100 **Discussion.**
1115 **# 5449.** Integrated water resources management in a micro watershed, – a Geomorphic approach -
R.P. Patury, L.K.R. Neelapu, V.P. Nekkanti, N.R. Dadi.
1130 **# 1927.** Can the Grain for Green project reduce flooding in the mountainous region of southwestern China?
P. Yu, Y. Wang, W. Xiong, L. Xu, G. Liu.
1145 **# 419.** Catchment and Local Scale Restoration Challenges In A High Energy Scottish Catchment
N. Entwistle, G. Heritage, C. Anderton.

Thursday, 7 July 2011 1030-1200 MR220
IAHS
HW11 Water supply and water quality in large metropolitan areas and megacities
HW11S3
Chairpersons: Frido Reinstorf

1030 **# 862.** Groundwater quality and urban development: the southern part of Mexico City
A. Armienta, R. Rodriguez, O. Cruz, A. Aguayo, N. Ceniceros, et al.
1045 **Discussion.**
1100 **Discussion.**
1115 **Discussion.**
1130 **Discussion.**
1145 **Discussion.**

Thursday, 7 July 2011 1030-1200 MR109
IAMAS
M04 Recent advances in middle atmosphere science
M04S9 MLT Chemistry
Chairpersons: Damian Murphy

1030 **# 3884. Invited** Middle atmospheric chemistry and dynamics: results from the Superconducting Submillimeter-Wave Limb-Emission Sounder (SMILES)
M. Shiotani
1045 **# 4888. Invited** The temporal evolution of atomic hydrogen in the upper mesosphere since 2002
M. Kaufmann, H. Schmidt, C. Lehmann, M. Riese.
1100 **As above.**
1115 **# 2774.** Ozone at the secondary maximum
A. Smith, M. Lopez-Puertas, L. Harvey, M. Mlynczak.
1130 **# 3024.** Perturbations in atomic oxygen density from airglow observations during stratospheric warming events
M. Shepherd, G. Shepherd, Y.M. Cho, S. Beagley.
1145 **# 5586.** Transformed dynamical and temperature regimes in polar MLT regions during geomagnetic storms as simulated with GCM
A. Krivolutsky, G. Zakharov, J.M. Wissing, T. Vyushkova.

Thursday, 7 July 2011 1030-1200 MR101
IAVCEI
V05 Magmatic Volatiles and Gases
V05S1 Magmatic Volatiles and Gases 1
Chairpersons: Nemesio Perez

1030 **# 759. Invited** Ten years of the intensive degassing activity of Miyakejima volcano, Japan: Advances in the activity, techniques and model
H. Shinohara, G. Saito, N. Geshi.
1045 **As above.**
1100 **Discussion.**
1115 **# 5787.** Sulfur degassing in the April – May 2010 summit eruption at Eyjafjallajökull volcano, Iceland
T. Thordarson, C. Hayward, A. Hoskuldsson.
1130 **# 896.** Geochemical investigation of volcanic-hydrothermal systems of the Lesser Antilles
E. Joseph, N. Fournier, J. Lindsay, T. Fischer.
1145 **Discussion.**

Thursday, 7 July 2011 1030-1200 MR103

IAVCEI

V11 Characteristics and Imaging of Pyroclasts

V11S2 Characteristics and Imaging of Pyroclasts Part 2

Chairpersons: Kathy Cashman & Heather Wright

1030 **# 2451. Invited** Factors controlling styles and intensity of eruption from the textural and chemical analysis of bubbles and microlites
A. Toramaru

1045 **As above.**

1100 **# 4103.** Pele's Tears and Spheres
L. Porritt, S.L. Quane, J.K. Russell.

1115 **# 5066.** The permeability of degassing basalts: bubble rise, coalescence and distribution in separate two-phase flow dynamics
L. Pioli, C. Bonadonna, B. Azzopardi.

1130 **# 2144.** Transport and Depositional Processes from Grain-Size Distribution of Consolidated Subaqueous Volcaniclastic Rocks
M. Jutzeler, S.R. Allen, J. McPhie, A. Proussevitch, D.H. Sahagian.

1145 **# 4242.** Evolution of the mafic Villa Senni caldera-forming eruption at Colli Albani volcano, Italy, indicated by textural analysis of juvenile fragments
G. Giordano, A.P. Vinkler, K.V. Cashman.

Thursday, 7 July 2011 1030-1200 MR106

IAVCEI

V13 Understanding Big Volcanic Systems

V13S2

Chairpersons: Guido Giordano & Jo Gottsman

1030 **# 5099.** Global Climate Change and Mass Extinctions in Earth History Caused by Rapid Sediment Degassing of Volcanic Basins
S. Planke, H. Svensen.

1045 **As above.**

1100 **# 4477.** A Paleoproterozoic Giant Radiating Dyke Swarm in the Dharwar Craton, Southern India
H. Halls, A. Kumar, M. Hamilton.

1115 **# 3323.** The Largest Eruptions in Earth's History
S. Bryan, I. Ukstins Peate, S. Self, D. Peate, D. Jerram, et al.

1130 **# 4572.** Extensional Setting of the Ignimbrite Flareup in the Sierra Madre Occidental Silicic Large Igneous Province
C. Busby, B. Murray, L. Ferrari, L. Solari.

1145 **Discussion.**

Thursday, 7 July 2011 1030-1200 MR110

IAVCEI

V16 Subglacial and Subaqueous and Volcanism: processes, products and impacts

V16S2

Chairpersons: Ben Edwards

1030 **# 5324. Invited** The complex interplay between magma, water and ice in the 2010 Eyjafjallajökull eruption
M. Gudmundsson, E. Magnusson, B. Oddsson, T. Hognadottir, A. Hoskuldsson, et al.

1045 **As above.**

1100 **# 5869.** Seismic Tremor Signals during the Eyjafjallajokull 2010 Eruption
K.S. Vogfjord, M J. Roberts, G. Sigurdsson, K. Jonsdottir, S. Hjaltadottir.

1115 **# 1669.** The advance of lava through ice: The Eyjafjallajökull eruption in April-May 2010
B. Oddsson, M. Gudmundsson, T. Hognadottir, E. Magnusson, F. Hoskuldsson.

1130 **# 4589.** Petrology, Lithofacies and Structure of Glaciovolcanic Pillow Ridges: Iceland and British Columbia comparisons
B. Edwards, M. Pollock, MT. Gudmundsson, JK. Russell, IP. Skilling.

1145 **# 3182.** Intrusions into Wet Tephra at Basaltic Glaciovolcanic Centers: Significance for Interpretation of Facies Architecture
A. Graettinger, I. Skilling, E. Mercurio, H. Kagy, D. McGarvie, et al.

THURSDAY, 7 JULY 2011 1330-1500 PM1

Thursday, 7 July 2011 1330-1500 MR203

IUGG

U05 Data Science/Informatics and Data Assimilation in Geophysical Models

U05S3 Speakers by Invitation

Chairpersons: Charles Barton & Weijia Kuang

1330 **# 1953.** Progress towards the adjoint dynamo problem
A. Jackson, K. Li, P. Livermore.

1345 **# 4328.** Applying the Ensemble Kalman Filter to Regional Ocean Circulation Model in the East Sea case
Y.H. Kim, G-D. Pak, K-I. Chang, S.J. Lyu.

1400 **# 1433.** Semantic Optimisation of CCS Literature Research
B.D. Gutknecht, H.J. Goetze, M. Alvers.

1415 **# 2801.** Service-oriented Scientific Data Processing
M. Goranova, B. Shishedjiev, J. Georgieva, J. Semkova, M. Georgiev.

1430 **# 5075.** The Outlook for GeoData Informatics and a role for IUGG?
P. Fox

1445 **As above.**

Thursday, 7 July 2011 1330-1500 MR208
IAGA
A071 Radiation belt dynamics and remote sensing of the Earth's plasmasphere
A071S4 Radiation Belt Dynamics: drivers and impacts of acceleration and loss processes
Chairpersons: Richard Horne & Jacob Bortnik

1330 # **1399. Invited** The effect of radiation belt particles on middle atmospheric night time ozone during enhanced geomagnetic activity
M. Daae, P. Espy, F. Sarays, D. Newnham.
1345 **As above.**
1400 # **2041.** Contrasting the efficiency of radiation belt losses caused by ducted and non-ducted whistler mode waves from ground-based transmitters
C. Rodger, B.R. Carson, S.A. Cummer, R.J. Gamble, M.A. Clilverd, et al.
1415 # **5179.** Relation between the Position of the Plasmapause and the Inner Edge of the Outer Radiation Belt
F. Darrouzet, V. Pierrard, N. Ganushkina, J. De Keyser.
1430 # **2767.** Ground-based estimates of outer radiation belt energetic electron precipitation fluxes into the atmosphere
M. Clilverd, C. Rodger, R. Gamble, T. Ulich, T. Raita, et al.
1445 **Discussion.**

Thursday, 7 July 2011 1330-1500 MR206
IAGA
A082 Space plasma processes
A082S3 Magnetopause and Magnetosheath Processes of the Earth and Planets: Reconnection, Diffusion and Boundary Dynamics
Chairpersons: Benoit Lavraud

1330 # **1845. Invited** Advances in Understanding Magnetic Reconnection at the Dayside Magnetopause
P. Pritchett
1345 **As above.**
1400 # **4663.** THEMIS-C Observations of Ion and Electron Velocity Signatures within Solar Wind Reconnection Exhausts
S. Eriksson, J.T. Gosling, T.D. Phan, J.P. McFadden, K-H. Glassmeier, et al.
1415 # **2878.** Multiple Magnetic Reconnection at the Dayside Magnetopause for Southward IMF
S. Fuselier, K. Trattner, S. Petrinec.
1430 # **3626.** IMF influence on the polar cusp: Cluster observations and MHD simulations
C.P. Escoubet, J.J. Berchem, F. Pitout, R. Richard, M.G.G.T. Taylor, et al.
1445 # **5145.** Pc1-2 ULF waves associated with the open-closed Polar Cap boundary
S. Ables, M. Sciffer, B. Fraser, S. Morley.

Thursday, 7 July 2011 1330-1500 MR212
IAGA
A092 Magnetosphere-ionosphere coupling
A092S6 Magnetosphere-Ionosphere Interactions and Auroral Processes
Chairpersons: Bob Lysak

1330 # **2819.** Characteristics of the Field-Aligned Current System
J. Gjerloev, S. Ohtani, T. Iijima, J. Slavin, G. Le, et al.
1345 # **2976.** Dayside field-aligned current source regions
S. Wing, S. Ohtani, J. Johnson, P. Newell, T. Higuchi, et al.
1400 # **2462.** Dawn-dusk and interhemispheric asymmetries of the global field-aligned current system during a geomagnetic storm period
M. Foerster, V.M. Mishin, M. Kurikalova, V.V. Mishin.
1415 # **4415.** Response of Ionospheric Convection and Magnetospheric Reconnection to Solar Wind Dynamic Pressure Enhancements: Statistical Studies and Comparison with Simulations
A. Boudouridis, D. Lummerzheim, M. Wiltberger, E. Zesta, L. Lyons, et al.
1430 # **5251.** Ionospheric signature of newly-opened field lines: a comparative study using ground-based instruments and numerical simulation
F. Pitout, P. L Blelly, J. Moen
1445 **Discussion.**

Thursday, 7 July 2011 1330-1500 MR216
IAGA
A113 The Sun and the Heliosphere: Physical Processes
A113S3 Solar, Interplanetary, and Magnetospheric Radio Emissions
Chairpersons: Bo Li & Dalmiro Maia

1330 **Introduction.**
1345 # **2827.** Front-side Type II Radio Bursts Without Shocks Near Earth
N. Gopalswamy, P. Makela, H. Xie, S. Yashiro, S. Akiyama.
1400 # **3451.** Type 11 Solar Radio Bursts: Extraction of Shock Parameters and Detailed Comparison of Theory with Observations
D. Hillan, I. Cairns, P. Robinson.
1415 # **1555. Invited** Observations of Jupiter's Decametric and Hectometric Radio Emissions by Cassini/RPWS and Voyager/PRAM.
M. Imai, A. Lecacheux, K. Imai, C. Higgins, J. Thieman.
1430 **As above.**

Thursday, 7 July 2011 1330-1500 MR217

IAGA

A153 Reporter's Review

A153S2

Chairpersons: Alan Thomson & Monika Korte

1330 **# 2592. Invited** Geomagnetic indices, space weather products, data rescue and metadata: new insights and developments
T. Iyemori

1345 **As above.**

1400 **# 2098. Invited** Interpretation of lithospheric magnetic signal – recent results
D. Ravat

1415 **As above.**

1430 **Discussion.**

1445 **Discussion.**

Thursday, 7 July 2011 1330-1500 MR213

IAHS

HW05 Revisiting experimental catchment studies in forest hydrology

HW05S7 Ecosystem Services; Climate Change impacts; Tropical Forests

Chairpersons: Yanhui Wang & Mike Bonell

1330 **# 4773.** Economic demand for water use by new tree plantations versus downstream demand
T. Nordblom, I. Hume, J. Finlayson.

1345 **# 3433.** Payments for Watershed Services (PWS): a Win-Win for Australian Forest Managers and Downstream Water Users?
A. Webb

1400 **Discussion.**

1415 **# 2471.** Inferring Potential Effects of Climate Change on Water Resources in a Mediterranean Mountain Area from Observed Data
J. Latron, P. Llorens, P. Garcia-Estringana, F. Gallart.

1430 **Discussion.**

1445 **Summary & Conclusion.**

Thursday, 7 July 2011 1330-1500 MR104

IAHS

HW07 Hydro-geomorphology

HW07S6

Chairpersons: Scott Peckham & Christophe Cudennec

1330 **# 5837.** Improving assessment of water availability integrating GIS and modelling at regional scale.
J. Burte, E.S. Martins.

1345 **# 577.** Ground Water Investigation in the Water Stressed Sahelian Zone of Northern Nigeria
I. Okeke, S. Odunuga, L. Oyebande, L. Adeoti, F. Okorie.

1400 **# 711.** Integrated geomorphological and hydrological studies for groundwater resourse evaluation in coastal areas of Sagar Island region, West Bengal, India
R.K. Majumdar, D. Das.

1415 **Discussion.**

Thursday, 7 July 2011 1330-1500 MR220

IAHS

HW11 Water supply and water quality in large metropolitan areas and megacities

HW11S4

Chairpersons: Valentina Krysanova & Hubert Savenije

1330 **Introduction.**

1345 **Discussion.**

1400 **Discussion.**

1415 **Discussion.**

1430 **Discussion.**

1445 **Conclusion.**

Thursday, 7 July 2011 1330-1500 MR109

IAMAS

M04 Recent advances in middle atmosphere science

M04S10 MLT Dynamics

Chairpersons: Bernd Funke

1330 **# 1256. Invited** Progress in Trend Investigations in the Mesosphere and Lower Thermosphere
J. Lastovicka, G. Beig.

1345 **# 3705. Invited** First Simultaneous and Co-located Measurements of Temperatures and PMSE in Antarctica
F. Luebken, JoJ. Hoeffner, R. Morris, T. Viehl, B. Kaifler.

1400 **As above.**

1415 **# 1235.** Diurnal migrating tides in the troposphere to lower-mesosphere as deduced with TIMED/SABER data and six reanalysis data sets
T. Sakazaki, M. Fujiwara, X. Zhang, M. Hagan, J. Forbes.

1430 **# 2946.** Excitation Sources of Ultrafast Kelvin Waves Simulated by the Kyushu-GCM
Y. Chen, S. Miyahara.

1445 **# 3291.** Interhemispheric Dynamical Coupling to the Southern Mesosphere and Lower Thermosphere
D. Murphy, S. Alexander, R. Vincent.

Thursday, 7 July 2011 1330-1500 MR101

IAVCEI

V05 Magmatic Volatiles and Gases

V05S2 Magmatic Volatiles and Gases 2

Chairpersons: Toshiya Mori

1330 **# 4915. Invited** Solubility of multicomponent fluids in magmas
R. Botcharnikov

1345 **As above.**

1400 **# 4193.** The partitioning of S and Cl between andesite melts and volatiles
Z. Zajacz, P.A. Candela, P.M. Piccoli.

1415 **# 5085.** Bromine in Plininan eruptions: Sources for ozone holes
S. Kutterolf, T. Hansteen, K. Appel, A. Freundt, K. Krüger, et al.

1430 **# 5717.** An Update of the Global CO2 Emission from Subaerial Volcanism
N. Perez, P. Hernandez, G. Melian, E. Padron, D. Nolasco, et al.

1445 **Discussion.**

Thursday, 7 July 2011 **1330-1500 MR103**
IAVCEI
V11 **Characteristics and Imaging of Pyroclasts**
V11S3
Chairpersons: Laura Pioli & Heather Wright

1330 **Poster Introduction.**
1345 **# 1830.** Insights on rhyolitic eruption dynamic from textural analysis: the example of the May 2008 Chaitén eruption (Chile)
F. Alfano, C. Bonadonna, L. Gurioli.
1400 **Discussion.**
1415 **# 1435.** Characterizing Bubbles That Drive Explosive Eruptions: Measuring Syn-Eruptive Bubble Sizes in Fine Ash
K. Genareau, A. Proussevitch, G. Mulukutla, D. Sahagian.
1430 **Discussion.**
1445 **Discussion.**

Thursday, 7 July 2011 **1330-1500 MR106**
IAVCEI
V13 **Understanding Big Volcanic Systems**
V13S3
Chairpersons: Guido Giordano & Joan Marti

1330 **# 2544.** The long-lived supervolcanic Cerro Galan system, NW Argentina a the repeated production and eruption of large volumes of chemically similar silicic magma from 5. 6 to 2 Ma
C. Folkes, S. de Silva, H. Wright, I. Bindeman, A. Schmitt, et al.
1345 **# 1549.** Collapse, eruption and products of the crystal rich, >1000 km3, Permian Ora ignimbrite and caldera super-eruption, Southern Alps, Northern Italy.
M. Willcock, R. Cas, G. Giordano, C. Morelli, R. Weinberg, et al.
1400 **# 1809.** Caldera Formation on Nisyros (Greece) and its Relationship with the Large Kos-Nisyros Magmatic System
H. Kinvig, J. Gottsmann, J.D. Blundy, J. Marti, R.S.J. Sparks.
1415 **# 4600.** QMAP Rotorua, New Zealand: A New Regional Map of Taupo Volcanic Zoneâ™s Caldera Volcanoes Highlighting Episodic, Shifting Volcanism and Rifting
G. Leonard, C J N. Wilson, D M. Gravley, A T. Calvert, J V. Rowland.
1430 **# 5285.** Deception Island caldera (South Shetland Islands, Antarctica): revisited
A. Geyer, J. Marti Molist, G. Aguirre-Díaz.
1445 **# 1890.** The magmatic feeding system of the big Klyuchevskaya Group of Volcanoes (Kamchatka), its deep structure, properties and mechanism of activity
S. Fedotov, N. Zharinov, L. Gontovaya, A. Sobisevich.

Thursday, 7 July 2011 **1330-1500 MR110**
IAVCEI
V16 **Subglacial and Subaqueous and Volcanism: processes, products and impacts**
V16S3
Chairpersons: James White

1330 **# 3167.** Ten years of monitoring the construction and destruction of the submarine flanks of the Soufriere Hills volcano, Montserrat
J. Trofimovs, S. Sparks, A. Le Friant, M. Palmer, C. Deplus, et al.
1345 **# 2927.** Eruptive Processes of Submarine Bombs and their Fragments in the Miocene Josoji Formation, Shimane Peninsula, SW Japan
K. Kano
1400 **# 2235.** Evidence of Miocene-Pliocene Surtseyan volcanism, mafic cryptodome, pillow lava and hyaloclastite formation, northern Chatham Island, SW-Pacific
B. Stewart, K. Nemeth.
1415 **# 2145.** The Subaqueous Ohanapecosh Formation (Washington State, USA): Eruption-fed and Resedimented Facies in a Subaqueous, Below Wave-base Continental Basin
M. Jutzeler, J. McPhie, S.R. Allen.
1430 **# 2447.** New Insights into Diking Processes from High Resolution Bathymetry of Pillow Ridges on the Juan de Fuca and Gorda Ridges
I. Yeo, D. Clague, J. Paduan, D. Caress.
1445 **Discussion.**

THURSDAY, 7 JULY 2011 1630-1800

Closing Ceremony & Farewell Drinks **1630-1800**
Plenary Room 2 & Exhibition Area, Ground Floor

POSTER PROGRAM

All posters are on display for one (1) day only. A dedicated poster session is held each day of the General Assembly between 1500 – 1630. Poster Presenters will be available at their posters scattered through the Exhibition Area on the Ground Level for interested delegates. On Friday 1 and Monday 4 July at 1800 - 1900, join fellow delegates for poster social sessions. See page 19 for more information.

A number of additional posters may be on display which are not listed in this handbook. These can be found under the General Contribution area.

The below index provides you with the date and association.

The detailed listing provides you with additional information – for each day: Symposium Code and Title, followed by the list of posters: poster number, abstract proceedings reference number, abstract title, presenting author and co-authors. Please see page 7 for the poster floorplan.

All changes to the printed handbook can be viewed at either of the program update board located on Ground and Level 2. This listing only includes registered and accepted poster presentations 6 June 2011. Program is correct at time of printing.

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TUESDAY, 28 JUNE 2011

IAMAS Tuesday, 28 June 2011
M11 Ice in the Atmosphere: Formation, Measurement, Modeling and Impacts

1 **# 4345.** Using a-train to define the relationship between cirrus cloud properties and the large-scale environment
E. Berry & G. Mace.

2 **# 1436.** Lagrangian Measurements and Modelling of Cirrus Clouds
A. Cirisan, I. Engel, M. Brabec, F. Wienhold, P. Spichtinger, et al.

3 **# 2863.** Ice nucleating properties of volcanic ash particles from the Eyjafjallajökull volcanic eruption
J. Fan, G. Kulkarni, A. Zelenyuk & J. Beranek.

4 **# 709.** Measurement of a Changing Moisture Climate
J. Hallett

5 **# 1482.** Evolution of an Arctic Storm: Impacts of atmosphere "Cocean" Cice coupled dynamics
A. Huang & W. Perrie.

6 **# 5891.** Satellite Detection of Liquid Water in Tropical Clouds Between -20 and -40 deg. C
D. Mitchell & R. d'Entremont.

7 **# 5236.** Ice Microphysical Properties in Stratiform Region of a Baiu Frontal Convective System Observed by Hydrometeor Videosonde
T. Ohigashi, S. Miyai, K. Tsuboki & E. Nakakita.

8 **# 1713.** Development of a detailed ice melting scheme within bin microphysics in a 3D cloud model: An analysis based on an idealized simulation case.
C. Planche, A.I. Flossmann & W. Wobrock.

9 **# 4592.** Treatment of particle types in a refined cloud microphysics retrieval scheme
K. Sato & H. Okamoto.

10 **# 5278.** Microphysical Model Description and Implications for Water Transport Through the Tropical Tropopause Layer
R. Schofield, I. Wohltmann & M. Rex.

11 **# 4027.** The Storm Peak Lab Cloud Property Validation Experiment: Description and Early Results
M. Schwartz, J. Mace, L. Avallone, M. Shupe, R. Marchand, et al.

IAPSO Tuesday, 28 June 2011
P01 General topics of ocean physics and chemistry

15 **# 4953.** Surface manifestation of baroclinic tides estimated from multi-mission-satellite altimetry
W. Bosch & R. Savcenko.

16 **# 3774.** Contribution Of The Changjiang River Discharge To Sea Surface Warming In The Yellow And East China Seas In Summer
C.J. Jang & T. Park.

17 **# 3021.** Interannual Variability of the North Pacific Subtropical Countercurrent: Role of Local Ocean-atmosphere Interaction
F. Kobashi & S.P. Xie.

18 **# 2593.** Satellite derived chlorophyll a westward propagation across the South Pacific Ocean
A. Maharaj, A. Belo Do Couto & N. J Holbrook.

19 **# 4652.** Climate Drift in the CMIP3 Models
L. Muir, A. Sen Gupta, P. Brown, D. Durack, S.E. Monselesan, et al.

20 **# 2950.** Development of the Practical River Run-Up Model of Tsunami based on Non-Linear Dispersive Wave Theory
Y. Murashima, D. Koshimura, H. Oka, Y. Murata, K. Fujima, et al.

21 **# 5675.** Numerical study on the impact of the 18.6-year period nodal tidal cycle on the mid-latitude North Pacific ocean
S. Osafune & I. Yasuda.

22 **# 3158.** Improvement of Ocean Tide Corrections in the West and East Coasts of Canada by Least-squares Spectrum Analysis
M. Sideris, F. Tang & Y. Gao.

23 **# 2468.** Rossby Waves and Current Bands in the Northeast Pacific
M. Stacey & S. Donohue.

24 **# 3379.** Interdecadal variability of the Pacific subtropical cell: sensitivities to effective ocean optical properties
G. Yamanaka, H. Ishizaki, H. Tsujino, M. Hirabara & H. Nakano.

IAPSO Tuesday, 28 June 2011
P03 Ocean Mixing

28 **# 3489.** Diapycnal mixing generated by breaking of tide-induced large-amplitude internal waves
S. Abe & T. Nakamura.

29 **# 5442.** Assessment of Turbulence Closure Models for Resonant Inertial Response in the Oceanic Mixed Layer Using Large Eddy Simulations
N. Furuichi, T. Hibiya & Y. Niwa.

30 **# 2600.** Formation of a seasonal thermocline simulated by large eddy simulation
G. Goh & Y. Noh.

31 **# 4202.** The ocean mixed layer depth and transition layer thickness as observed from Argo and CTD profiles
R. Helber, B. Kara, J. Richman, M. Carnes, C. Barron, et al.

32 **# 3519.** Vertical Propagation Of The Near-Inertial Waves During The Typhoon Rammason Observed By The Moored ADCP In The Tropical Western Pacific Ocean
E. Kim & J. Chull.

33 **# 2134.** Influence of lunar nodal tides on intermediate and deep waters of the East/Japan Sea
H.J. Lee, J.H. Park & K.T. Jung.

34 **# 2605.** Prediction of the diurnal warming of sea surface temperature using the atmosphere-ocean mixed layer coupled model
E.J. Lee, Y. Noh & D.H. Kim.

35 **# 4587.** Influence of rotating wind on Langmuir turbulence
H.S. Min

36 **# 1281.** Buoyancy Scale Effects in Geophysical Turbulence Simulations
M. Waite

WEDNESDAY, 29 JUNE 2011

IUGG U02 — **Wednesday, 29 June 2011**
Grand Challenges in Natural Hazards Research and Risk Analysis

1 # **100.** Natural Hazards in Mega City of Jakarta (Indonesia)
H.Z. Abidin, I. Gumilar, H. Andreas, Y.E. Pohan & Y. Fukuda.

2 # **5815.** A Cyberinfrastructure Tool to Support the Response to Extreme Events: The Tungurahua Volcano Community Mitigation Case Study
J. Bajo & C. Renschler.

3 # **4785.** A national early warning system for rainfall-induced landslides in Italy
F. Guzzetti, M. Rossi, S. Peruccacci, M.T. Brunetti, I. Marchesini, et al.

4 # **4761.** Risk to the population posed by different natural hazards in Italy
F. Guzzetti, P. Salvati, C. Bianchi & M. Rossi.

5 # **1646.** Mechanisms of rain-induced landslide events of 2008 in hills of Chittagong City of Bangladesh
Y.A. Khan

6 # **5403.** Addressing Geophysical Hazards through Continuously Operating GPS Observational Network and Integrated Ocean Drilling Program
Y. Kontar

7 # **3939.** Seismic Hazard Predictability
V. Kossobokov & A. Nekrasova.

8 # **6052.** Coseismic displacement waveforms from high-rate GPS data: a comparison of two methodologies applied to the Tohoku-oki earthquake
A. Mazzoni, M. Crespi, G. Colosimo, M. Branzanti, H. Dragert, et al.

9 # **1038.** Artificial Neural Networks Modelling For Landslides Hazard Zonation In A Part Of The Himalaya.
L. Nwankwo & P. Champati-ray.

10 # **5304.** Time-dependent ground shaking scenarios: an operational approach
A. Peresan, G.F. Panza, F. Vaccari & F. Romanelli.

11 # **4694.** Integrated Natural Resources and Extreme Events Management: Decision Support Tools for More Resilient Communities
C. Renschler

IACS C01 — **Wednesday, 29 June 2011**
Remote Sensing of the Cryosphere – linking and validating measurements from satellite, air, and ground

15 # **2978.** Spatial Variation of snow accumulation along the Japanese-Swedish Antarctic Expedition over the East Antarctica
H. Enomoto, S. Surdyk, S. Sugiyama, S. Fujita, P. Holmulund, et al.

16 # **3593.** Investigation Of Sea Ice Formation On Arctic Shelves By Means Of Helicopter-Borne Ice Thickness Measurements And Different Satellites
T. Krumpen, S. Hendricks, S. Willmes & L. Kaleschke.

17 # **3268.** Retrieval of Snow Surface Roughness from MODIS: Case Study for Sastrugi over the South Pole
K. Kuchiki, T. Aoki, M. Niwano, H. Motoyoshi & H. Iwabuchi.

18 # **2355.** Aerial Imaging of Sea Ice with LiDAR and Photos
J. Lieser

19 # **1538.** Mass balance in the grounding zone of the Beardmore Glacier, Antarctica, based on satellite and ground based remote sensing measurements
O. Marsh, W. Rack & N.R. Golledge.

20 # **3542.** Evolution of the snow surface at Dome C, Antarctica, observed by ground-based near-infrared photography and passive microwave satellite
S. Morin, N. Champollion, G. Picard, L. Arnaud, E. Lefebvre, et al.

21 # **3296.** Numerical Simulations of an Aircraft Mounted FMCW Snow Cover Radar
D. Murphy, N. Galin, J. Lieser & A. Worby.

22 # **5451.** Mapping surface roughness of snow and ice from the Multi-angle Imaging SpectroRadiometer (MISR)
A. Nolin & E. Mar.

23 # **2563.** Seasonal polarimetric radar response of Eastern Siberia
S. Park, Y. Yamaguchi & G. Singh.

24 # **5159.** The Relation Between Freeboard Height and Ice Thickness at the McMurdo Ice Shelf, Antarctica, Measured by Near Surface Remote Sensing Methods and Satellite Altimetry
W. Rack & C. Haas.

25 # **4570.** UAV Borne Surface Roughness Characterisation Using GPS Kinematic Time Differencing and a Laser Distance Meter over Antarctica
W. Rack & J. Pinchin.

IACS C03 — **Wednesday, 29 June 2011**
Morphology of Snow and Ice on the Ground and in the Atmosphere

30 # **5829.** On the Relationships Between Key Physical Properties of Snow at the Microstructure Scale.
F. Flin, N. Calonne, C. Geindreau, S. Rolland du Roscoat, B. Lesaffre, et al.

31 # **4018.** The Liquid Water Content in Sea Ice Pressure Ridges determined by Surface Nuclear Magnetic Resonance
L. Rabenstein, J. Lehmann-Horn, A. Nuber, M. Hertrich, S. Hendricks, et al.

32 # **5162.** Compaction and Accumulation of Antarctic Snow Measured By Ground Penetrating Radar
W. Rack, N. Kruetzmann, A. McDonald & S. George.

33 # **4090.** Morphology and crystallography of Ice grains in Antarctic deep drilling samples (EDML): Cryogenic EBSD, X-ray Laue diffraction and optical microscopy
I. Weikusat

IACS C04 **Wednesday, 29 June 2011**
Glacier and Ice Cap Fluctuations

37 # **1419.** Reconstructions Of Mountain Glaciers (The Northern Caucasus)
I. Bushueva

38 # **2395.** Characterizing the Atmospheric Controls on Glacier Behaviour in the Southern Alps of New Zealand
N. Cullen, J. Conway, B. Anderson, A. Mackintosh, T. Moelg, et al.

39 # **1657.** A multi-method approach to the long term volume change study of Storglaciären
A. Mercer & P. Jansson.

40 # **1658.** The Practical Implications of Errors in Remote Sensing of Area Change of Small Glaciers
A. Mercer

41 # **3224.** Subaqueous Terminus Morphology Of Lake-Calving Glaciers: Aoraki/Mount Cook National Park, New Zealand
C. Robertson, M. Brook, I. Fuller & K. Holt.

42 # **665.** Multi-decadal ice velocity and elevation changes on a monsoonal maritime glacier: Hailuogou Glacier, China
Y. Zhang, K. Fujita, S. Liu, Q. Liu & X. Wang.

43 # **300.** Mass balance of Potanin glacier, Mongolian Altai
K. Konya, T. kadota, F. Nakazawa, G. Davaa & K. Purevdagva.

IAG G01 **Wednesday, 29 June 2011**
Reference Frames from Regional to Global Scales

47 # **4783.** Studies and research on the use of the ETRS-89 coordinate system and of the ellipsoid GRS-80 in Romania and of the Quasi-stereographical cartographic projection, GRS-80 ellipsoid and pole projection, same as in the 1970 stereographic map projection.
G. Badescu, O. Stefan, R. Badescu & O. Roman.

48 # **5823.** VLBI tracking of GLONASS satellites – a progress report
R. Barzaghi, S. Pogrebenko, D. Duev, R. Haas, S. Casey, et al.

49 # **3517.** The Results of ASG-EUPOS Processing in the Context of ETRS89 Realization in Poland
J. Bogusz, M. Figurski, K. Szafranek & A. Kenyeres.

50 # **1414.** Vernal Point and the Knowledge Management of the Earth as a Dynamic System
I. Chavez-Sumarriva, T. Chavez C. & N. Chavez.

51 # **3910.** Changes in the Argentine Geodetic Reference Frame due to the earthquake occurred in Chile in February 2010
S. Cimbaro & D. Piñón.

52 # **5445.** MARBLE (Multiple Antenna Radio-interferometry for Baseline Length Evaluation): Development of a compact VLBI system for calibrating GNSS and electronic distance measurement devices
R. Ichikawa, A. Ishii, H. Takigouchi, M. Kimura & S. Kurihara.

53 # **2769.** GLONASS time transfer in UTC generation
Z. Jiang & W. Lewandowski.

54 # **3932.** Detection of Offsets in GPS timeseries Experiment (DOGEx)
M. King & S. Williams.

55 # **668.** Managing crustal motion models using GIS
C. Pearson & K. Kelly.

56 # **4558.** Rebuilding the New Zealand Geodetic Network Following the Canterbury Earthquake
J. Ritchie, M. Amos & N. Donnelly.

57 # **5797.** An investigation on the spectral Peaks in IGS REPRO1 time series
M. Santos, J. Mtamakaya & M. Craymer.

58 # **1344.** Spatiotemporal related Signal and Noise Analysis of GPS Monitoring Series of the Base Stations in China
Y. Shen & W. Li.

59 # **2557.** Geocenter Motion from Reprocessed IGS Products
N. Wei, C. Shi, J. Liu & X. Zou.

60 # **2639.** Stability of the Swiss terrestrial reference frame CHTRF
A. Wiget, E. Brockmann, D. Ineichen, M. Kistler, U. Marti, et al.

IAG G04 **Wednesday, 29 June 2011**
Multisensor Systems for Engineering Geodesy

64 # **3507.** GNSS-based Multi-sensor System for Structural Monitoring Applications
J. Bogusz, M. Figurski & M. Wrona.

65 # **5645.** Astro-geodetic measurements of deflections of the vertical by means of the low-cost clip-on CCD system DAEDALUS for total stations.
B. Buerki & S. Guillaume.

66 # **697.** Indoor Locating and Inventory Management based on RFID-Radar Detecting Data
C.C. Chang, P.C. Lou & Y.G. Hsieh.

67 # **4645.** Application of Artificial Intelligence and Multi-sensor Systems in Navigation and Engineering Geodesy
D. Grejner-Brzezinska, G. Retscher & C. Toth.

68 # **3837.** Determination of the Earth's Gravity Field by using a Car-Mounted GNSS/IMS System
P. Hafner, K. Landfahrer, R. Lesjak & N. Kuehtreiber.

69 # **5905.** I2GPS: Integrated Interferometry and GNSS for Precision Survey
R. Hanssen, P. Mahapatra, A. Fromberg, M. Komac, R. Holley, et al.

70 # **2072.** Indoor navigation on the Edge – Report of IAG WG 4.1.2
G. Retscher & A. Kealy.

IAMAS M03 — Wednesday, 29 June 2011 — Aerosol-Cloud-Precipitation-Radiation-Interactions

74 # **4629.** Spatial distribution of aerosol optical characteristics over the ocean from ship-borne sky radiometer measurements
K. Aoki

75 # **1605.** Changing Cold Season Weather Characteristics on the Territory of Verhniaya Volga (Nizhniy Novgorod Region) in the Last 25 Years
A. Krivolutsky, N. Bezrukova, E. Stulov, V. Sokolov, O.Nikitina, et al.

76 # **1440.** Improvement of daily gridded Precipitation Data Using Synoptic Observation Data over Iran
J. Bodaghjamali, S. Javanmard, A. Yatagai & F. Noorian.

77 # **1098.** Observations of Cloud Phase Properties over the Southern Ocean from A-Train
Y. Huang, S. Siems, M. Manton & A. Morrison.

78 # **1426.** Assessment and Validation of PERSIANN System Rainfall Data Using Surface-Based Raingauge Data over Iran
S. Javanmard, E. Baranizadeh & Y. Abedini.

79 # **1366.** Investigating over Silver Iodide cloud seeding effect on natural precipitation process using numerical cloud model
S. Javanmard, M. Karimpirhayati & Y. Abedini.

80 # **5061.** On the role of sulphur emissions from clean power generation for regional climate
W. Junkermann, B. Vogel & M. Sutton.

81 # **721.** Impact of crystal geometry on the retention of chemical species in a mixed phase cloud
Y. Long, N. Chaumerliac & L. Deguillaume.

82 # **3000.** Australian Aerosols and Their Impacts on Surface Radiation
F. Mills, L. Weber, C.Y. Chee, O. Kalashnikova & A. Eldering.

83 # **5607.** Polarimetric Radar Retrieval of DSDs in Seeded and Non-seeded Clouds During CSRP
J. Peter, V. Bringi, M. Thurai & P. May.

84 # **1205.** Numerical simulation of frontal clouds accompanied by dangerous events in Crimea
G. Pirnach

85 # **3366.** Simulation of rain scavenging and comparison with observation
I. Tsai, J. Chen & S. Hsu.

87 # **5171.** Climatology of the CCN number concentration at the high alpine site Jungfraujoch (3580 m asl, Switzerland)
E. Weingartner, Z. Jurányi, M. Gysel, N. Bukowiecki & U. Baltensperger.

88 # **3951.** Comparison of ambient aerosol extinction coefficients obtained from in-situ, MAX-DOAS and LIDAR measurements in Cabauw (Netherlands)
E. Weingartner, P. Zieger, B. Henzing, G. De Leeuw, J. Mikkila, et al.

89 # **5727.** Smoke Effect on the Evaporation Efficiency in the Amazon Basin
M. Yamasoe, A. Araujo, A. Manzi & R. Aguiar.

90 # **927.** Intensified reduction in summertime light rainfall over mountains compared with plains in Eastern China
J. Yang & D.Y. Gong.

91 # **1242.** Characterization of the Relationship between Aerosol and CCN on a high Mountain in Southeast China
Y. Yin, Z. Lin, C. Chen & W. Tan.

92 # **1491.** Aerosol dynamics and transport in a regional area
H. Zhang & F. Wang.

93 # **749.** Changes in solar radiation and their influence on temperature in China
H. Zhang, Q. Yin, T. Nakajima & J. He.

94 # **2236.** A Climatology of Aerosol Optical Depth over China from Recent 10 Years of MODIS Remote Sensing Data
X. Zheng, T. Zhao & Y. Luo.

95 # **1929.** Impact of Aerosols on Cloud in a Polluted Episode in North China
C. Zhou, X. Zhang & S. Gong.

IAMAS M06 — Wednesday, 29 June 2011 — Bioaerosols in the Earth system

100 # **657.** Compared the ice freezing temperature of biological with abiotic ice nucleators
R. Du, Y.L. Wang, Z.M. Li & Y.G. Zhou.

101 # **632.** Is there important potential role of bacteria in atmospheric ice nucleation?
R. Du, Y.L. Wang, Y.G. Zhou & Z.M. Li.

102 # **4088.** Determination of airborne plant pathogens by DNA analysis: fungus-like microorganisms
J. Froehlich, C. Ruzene-Nespoli, V. Despres & U. Poeschl.

103 # **4100.** The effect of bacterial ice nucleators in the atmosphere on the frequency and intensity of lightning simulated in the BRAMS model
F. Gonçalves

104 # **1247.** Biotransformation of methanol and formaldehyde by bacteria isolated from clouds. Comparison with radical chemistry
M. Vaitilingom, H. Slavomira, L. Deguillaume, M. Traikia, V. Vinatier, et al.

105 # **5052.** Living microorganisms in clouds: their identification and possible roles in cloud physicochemical processes
M. Vaitilingom, P. Amato, N. Gaiani, L. Deguillaume, E. Attard, et al.

IAMAS M07 — Wednesday, 29 June 2011 — Advances in atmospheric dynamics

110 # **701.** A dynamical explanation for the effects of MJO on precipitation in South West Asia
F. Ahmadi-Givi, M.A. Nasr Esfahany & A.R. Mohebolhojeh.

111 # **735.** Atmosphere teleconnection patterns and seasonal climate prediction on South America
T. Ambrizzi, M. Sacco, S. Ferraz & R. da Rocha.

112 # **904.** Dynamic Of The Earth's General Circulation At Different Rotation Rates
J.R. Dias Pinto, R.P. da Rocha & T. Ambrizzi.

113 # **903.** Relations Between Structure Evolution And Energy Cycle Of Different Types Of Cyclones
J.R. Dias Pinto & R.P. da Rocha.

114 # **4331.** The Anomalously Zonal Structure of The Atlantic Jet During Winter Of 2009-10 – Possible Causes And Implications
N. Harnik, E. Galanti & O. Martius.

115 # **1481.** Effects of the Physical Process Ensemble Technique on Simulation of the Summer Precipitation over China
A. Huang & Y. Zhang.

116 # **4581.** Medium-scale Travelling Waves in a Basic Flow with Non-uniform Potential Vorticity
K. Iga

117 # **3550.** Dominant Mode of Climate Variability, Inter-model Diversity and Projected Future Changes over the Summertime Western North Pacific in Coupled Models
Y. Kosaka & H. Nakamura.

118 # **3719.** Summertime blocking and Rossby wave breaking in a high-resolution GCM
M. Mori, M. Kimoto, M. Watanabe, Y. Chikamoto, T. Mochizuki, et al.

119 # **2434.** Spectral Resonances of Orographic Drag in Nonhydrostatic Mesoscale
R. Room & M. Zirk.

120 **# 3082.** Superrotation Strength Estimated from Algebraic Equations
H. Yamamoto & S. Yoden.
121 **# 1343.** Study on Flow Properties of Convective Boundary Layer over Thermally Inhomogeneous Surfaces
R. Yuan, T. Luo & X. Wu.

IAMAS Wednesday, 29 June 2011
M08 The impact of solar variability on the Earth

124 **# 2713.** The effect of strong isolated geomagnetic storms on the atmospheric circulation in the Northern-Hemisphere winter
H. Davidkovova, J. Bochnicek, P. Hejda & R. Huth.
125 **# 5070.** Effects of the 11-year solar cycle on zonal asymmetries in middle atmospheric temperature, ozone and water vapor
A. Gabriel, H. Schmidt & D.H.W. Peters.
126 **# 4935.** Luni-solar Interactions in Cloudiness, Fog and Precipitation
L. Hejkrlík
127 **# 4999.** The Influence of Different Spectral Solar Irradiance Data on Stratospheric Heating Rates and Temperature
U. Langematz, S. Oberlaender, K. Matthes, M. Kunze & A. Kubin.
128 **# 4104.** The Influence of the Sea Surface Temperatures on the 11-year Solar Signal in the Indian Monsoon Circulation
U. Langematz, A. Kubin & P. Joeckel.
129 **# 2614.** Influence of geomagnetic activity on the North Atlantic oscillation: nonlinearity and multi-decadal modulation
Y. Li, H. Liu, M. Jarvis, M. Clilverd & B. Bates.
130 **# 4430.** Time Lag Between 11-year Solar Cycle and Climate System in Tropical Pacific
S. Petelina & G. Khachikjan.
131 **# 1027.** Anomalous 2009/2010 Winter Atmospheric Circulations Influenced by the 2007-2009 Solar Cycle Minimum
H. Weng

IAMAS Wednesday, 29 June 2011
M12 Mesoscale and synoptic scale meteorology in the Arctic and Antarctic

135 **# 2690.** Modelling the vertical structure of the central Arctic boundary layer: ASCOS case studies
C. Birch, P. Brooks, A. Earnshaw., T. Lock, S. Mauritsen, et al.
136 **# 4453.** Summer Climate of the McMurdo Dry Valleys from 15 Years of Polar WRF Simulations
D. Bromwich & D. Steinhoff.
137 **# 1517.** Mesoscale Cyclones over Antarctica and the Southern Ocean.
M. D'amico, A. Lynch, M. Tsukernik & P. Uotila.
138 **# 5806.** Contribution of the Surface and Snowdrift Sublimation to the Surface Mass Balance at the Belgian Antarctic Station Princess Elisabeth, East Antarctica
I. Gorodetskaya, W. Thiery, N.P.M. van Lipzig, R. Bintanja & M.R. van den Broeke.
139 **# 5805.** Synoptic Controls of Accumulation at the Belgian Antarctic Station Princess Elisabeth During 2009-2010 via the Moisture Transport Pathways During Warm Events
I. Gorodetskaya, N.P.M. van Lipzig, W. Boot, C. Reijmer, S. Kneifel, et al.
140 **# 901.** The Ebb and Flow of Antarctic Meteorological Data
M. Lazzara, K. Willmot & L. Keller.
141 **# 3786.** Meteorological and Biometeorological Conditions in the Norwegian Arctic during the First (1882/1883) and the Fourth (2007/2008) International Polar Years
R. Przybylak & A. Arazny.
142 **# 789.** Air-Sea Interaction Near Polynyas and Leads from Experimental Data and Numerical Modeling
I. Repina & D. Chechin.
143 **# 3344.** Synoptic and Mesoscale Modes of Precipitation Delivery at Coastal Ice Core Sites in the Ross Sea Region, Antartcica
K. Sinclair, N. Bertler & W. Trompetter.
144 **# 1279.** Atmospheric Causes of Climate Change In The Antarctic Peninsula Region
V. Tymofeyev & V. Martazinova.
145 **# 3036.** Influences of the East Asian marginal sea on weather around the Arctic area
M. Yamamoto & N. Hirose.

IAMAS Wednesday, 29 June 2011
M13 Mineral dust: Its impact on the atmosphere and the ocean

150 **# 4059.** A new mineralogical database for atmospheric dust to estimate soluble iron fluxes to surface ocean
K. Desboeufs, E. Journet, Y. Balkanski & S. Harrison.
151 **# 3669.** Simulation of Mineral Dust Aerosol and its Radiative Forcing Over Iran Using the Coupled Aerosol HAM Model and the Weather Research and Forecasting WRF Model
M. Rezazadeh, P. Irannejad & R. Mashayekhi.

IAPSO Wednesday, 29 June 2011
P06 Eastern and Western Boundary Currents

154 **# 2254.** Cold water flow and upper-ocean currents in the Bismarck Sea from December 2001 to January 2002
T. Hasegawa, K. Ando & H. Sasaki.
155 **# 4976.** Stability of dipole forced gyres on the beta plane
S. Herbette, A. Colin de Verdière & A. Hochet.
156 **# 2353.** A Comprehensive Observation Of The Air-Sea Interaction North Of The Kuroshio Extension In KT-09-21 Cruise In October 2009
N. Iwasaka, M. Kobashi, M. Konda, K. Kubota, T. Kutsuwada, et al.
157 **# 4530.** Rain Band Along the Kuroshio in the East China Sea
T. Miyama, M. Nonaka & H. Nakamura.
158 **# 798.** Decadal shifts of the Kuroshio Extension jet: Application of thin-jet theory
Y. Sasaki & N. Schneider.
159 **# 2334.** Roles of SST anomalies on the wintertime turbulent heat fluxes in the Kuroshio/Oyashio Confluence Region
S. Sugimoto & K. Hanawa.
160 **# 5473.** The Origin of the Water in the Augulhas Rings
M. Tsugawa & H. Hasumi.
161 **# 4455.** Diurnal Cycles of Turbulence in the Ocean Surface Mixed Layer in the Kuroshio-Oyashio Transition Region in KT-09-21 Cruise in October 2009.
K. Uehara, E. Oka, M. Konda, F. Kobashi, N. Iwasaka, et al.
162 **# 4482.** Long-term Variations of the Kuroshio Path South of Japan
N. Usui, H. Tsujino & H. Nakano.
163 **# 3230.** Observation of the poleward jet separated from the Kuroshio Extension
T. Wagawa, S. Ito, Y. Shimizu, S. Kakehi & D. Ambe.
164 **# 1105.** Application of conditional nonlinear optimal perturbation method to the predictability study of the Kuroshio path variation
Q. Wang, M. Mu & H.A. Dijkstra.

THURSDAY, 30 JUNE 2011

IAG Thursday, 30 June 2011
G05 Geodetic Imaging Techniques

1 **# 2286.** Landslides inventory based on airborne laser scanning data – case study Roznow Lake, Southern Poland
A. Borkowski, Z. Perski, T. Wojciechowski & G. Jozkow.
2 **# 1596.** InSAR Techniques and Applications for Monitoring Sinkholes in North West Plains of Iran, Hamadan Province
R. Heidari & B. Mohaghegh.
3 **# 2336.** CORSnet-NSW and Airborne LiDAR: A Match Made in Heaven
G. Jones, O. Colombo, V. Janssen, S. Brunker & C. Rizos.
4 **# 1699.** Application of InSAR in Subsidence Monitoring and Analysis, Case Study: Hamadan State of Iran
B. Mohaghegh, M. Ehteshami-Moinabadi & R. Heidari.
5 **# 3851.** Crustal deformation researches in Japanese InSAR community (PIXEL)
T. Ozawa, M. Furuya, Y. Fukushima, Y. Aoki, S. Ando, et al.
6 **# 1866.** Monitoring Coastal Erosion on Galveston Island Using Airborne and Terrestrial LiDAR Scanning
M. Sideris, I. Ali & A. Braun.
7 **# 2054.** Radar Cross Section (RCS) Analysis of Artificial Corner Reflectors based on Physical Optics Method
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10 **# 4425.** ENSO-SAM Teleconnections and Decadal Variability
D. Bromwich, K. Hines, A. Wilson & A. Lucas.
11 **# 4444.** Progress and Overview of the Arctic System Reanalysis
D. Bromwich, L. Bai, K. Hines, S.H. Wang & B. Kuo.

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15 **# 4859.** Long-term variability of rainfall characteristics in the Philippines since the 20th century
I. Akasaka, W. Morishima, M. Zaiki, H. Kubota, K. Masuda, et al.
16 **# 2689.** Modelling mesoscale convective systems over West Africa: AMMA case study
C. Birch, D. Parker, S. Milton, C. Bain & C. Taylor.
17 **# 822.** The impact of Atlantic Ocean on the multidecadal fluctuation of ENSO–South Asian monsoon relationship in a coupled GCM
W. Chen, B. Dong & R. Lu.
18 **# 5687.** Simulated interannual and interdecadal variability of the Indian summer monsoon: combined role of ENSO and Indian Ocean Dipole (IOD)
A. Cherchi & A. Navarra.
19 **# 1196.** Relationships between different phases of the South American monsoon
A. Grimm & L. Yorinori.
20 **# 3784.** Stable Isotopes In Precipitation Over Japan
K. Ichiyanagi, M. Tanoue & J. Shimada.
21 **# 3496.** Changes Of The Seasonal Evolution Of The Asian Summer Monsoon Under Global Warming Condition In The CMIP3 Multi-Model Experiments
T. Inoue & H. Ueda.
22 **# 692.** ISO modulating effect on the summertime circulation patterns for southern Taiwan's monsoon rainfall and the associated during July to September
K. Ko & Y. Tzeng.
23 **# 3709.** Winter Climate Extremes in China from the Perspective of East Asian Trough
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24 **# 873.** A monsoon-like Southwest Australian circulation and its relation with rainfall in Southwest Western Australia
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25 **# 833.** How the inertial instability affect the Indian Summer Monsoon onset processes
B. Liu, J. He & G. Wu.
26 **# 1230.** Interhemispheric Atmospheric Mass Oscillation and Its Relation to Interannual Variations of Asia Monsoon in Boreal Summer
C. Lu, Z. Guan, L. Wang & J. Cai.
27 **# 3564.** Long-term Changes in Precipitation Extremes Over the Bangladesh
J. Matsumoto, N. Endo, T. Hayashi, T. Terao, F. Murata, et al.
28 **# 4794.** Daytime thermodynamic and airflow structures over northeast Bangladesh during the pre-monsoon season: a case study on 25 April 2010
F. Murata, T. Terao, M. Kiguchi, A. Fukushima, K. Takahashi, et al.
29 **# 561.** Asymmetry of ENSO transition/duration and their simulations in WCRP CMIP3 Multi-model Experiments
M. Ohba
30 **# 4250.** Precipitation Variability Over the South Asian Monsoon Heat Low and Associated Teleconnections
S. Saeed, W.A. Muller, S. Hagemann, D. Jacob, M. Mujumdar, et al.
31 **# 4640.** The variability of stable isotopes in rainfall in response to the Australian monsoon
R. Suwarman, K. Ichiyanagi & Y. Manabu.
32 **# 3810.** Spatial Variation of Stable Isotopes in Precipitation at Kumamoto, Japan
M. Tanoue, K. Ichiyanagi & J. Shimada.
33 **# 3610.** Interannual Variability of the Baiu Season near Japan Evaluated from the Equivalent Potential Temperature
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34 **# 1367.** Future Projections of the Asian Summer Monsoon in the Stream-2 Integrations of the EU-ENSEMBLES Project
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35 **# 5652.** The effect of seasonally varying optical properties of the Arabian Sea on SST biases and the Indian summer monsoon in a coupled GCM
A. Turner & M. Joshi.
36 **# 1317.** The Influence of Anomalous Diabatic Heating Over Tibetan Plateau in Spring on The Asian Tropical Circulation and Monsoon Onset
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37 **# 4770.** Influence of Tropical Disturbances and the Asian Winter Monsoon on Rainfall Variability in Central Vietnam
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38 **# 650.** Deep Atmospheric Response to the Spring Kuroshio Current over the East China Sea
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39 **# 4889.** Spatiotemporal Differences in the Interannual Variability of Baiu Frontal Activity in June
T. Yamaura & T. Tomita.
40 **# 4757.** Changes in ISOs over the East Asian monsoon and their modulations
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F. Zheng & J. Li.

42 **# 590.** The relation of vegetation over the Tibetan Plateau to the rainfall in China in boreal summer
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49 **# 4224.** Numerical modelling analysis of horizontal water exchange above underwater slopes in South-East Baltic
I. Chubarenko & E. Esiukova.
50 **# 5275.** Structure of vertical temperature, salinity and density profiles in SE part of the Baltic sea on the base of field data (2003-2006, r/v 'Professor Stokman')
I. Chubarenko & N. Chubarenko-Stepanova.
51 **# 3797.** Characteristics of diurnal internal waves near the Japanese coast in the southwestern part of the Japan Sea
Y. Igeta, T. Watanabe, O. Katoh & H. Yamada.
52 **# 5674.** Acoustic Measurement of Ocean Currents near Taiwan
C. Liu, C. Huang, A. Kaneko, M. Hsu, C. Lee, et al.
53 **# 2620.** Numerical study on lagrangian inter-tidal transports in shallow seas
X. Mao, W. Jiang & P. Zhang.
54 **# 4969.** Transportation and sedimentation of particulate organic matter in Okhotsk Sea
S. Nagao, Y. Mikami, O. Seki, T. Aramaki, Y. Kato, et al.
55 **# 6010.** Buoyancy frequency and diffusive heat flux at Foul Bay (Red Sea)
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56 **# 6007.** Impact of wave action at different areas of Alexandria coast, Egypt
S. Sharaf El-Din, G. F. Soliman, H.A. Abou-Tahoun & E.E.M. Ebtessam.
57 **# 5795.** A 25 years-long record of anoxia in a semi-enclosed sea. A case study: the NW Adriatic Shelf, Italy.
S. Sparnocchia, F. Alvisi & S. Cozzi.
58 **# 2510.** Seasonal and interannual variability of subsurface waters flowing through the Strait of Sicily during the last decade
S. Sparnocchia, A. Sanchez-Roman, K. Schroeder, G.P. Gasparini & M. Borghini.
59 **# 4876.** Evolution of plume with abrupt change in river discharge: case study of the Yellow River in China
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60 **# 2619.** Seasonal variation of chlorophyll a and its mechanism in the Yellow Sea and East China Sea
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66 **# 841.** Focal mechanisms of large earthquakes in Turkey
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67 **# 5315.** Discriminating between Blasts, Collapses and Natural Seismic Events
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70 **# 5872.** The Garfagnana (Italy) Earthquake of 7th September 1920: Reassessment of the Main Seismological Parameters
G. Ferrari, B. Palombo, G. Vannucci & D. Tripone.
71 **# 703.** Seismic activity in Iranian Plateau during 2009-20
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S. Karimiparidari & M. Zarac.
77 **# 2044.** Iterative Algorithm based on Weighted Average Velocities for Efficient Inversion Hypocentral Parameters
W. Kim, T.K. Hong & T.S. Kang.
78 **# 3641.** Passive Seismic Imaging with Ambient Noise of Fluid Migration through the Crust in the Earthquake Swarm Area of W-Bohemia/Czech Republic
M. Korn, M. Fallahi & C. Sens-Schönfelder.
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S. Matsumoto, K. Uehira, T. Matsushima & H. Shimizu.
80 **# 3532.** Source Parameters Of A Moderate Yellow Sea Earthquake In 2011
S. Park, M. Kong, W. Yun & E. Park.
81 **# 3233.** Surface Wave Back-Projection for Near Real-Time Determination of Global and Regional Earthquake Locations, Magnitudes and Mechanisms
J. Polet & H. Thio.
82 **# 5588.** Waveform through the subducted plate under the Tokyo region in Japan observed by a ultra-dense seismic network (MeSO-net) and seismic activity around mega-thrust earthquakes area.
S. Sakai, S. Nakagawa, K. Nanjo, K. Kasahara, H. Tsuruoka, et al.
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84 **# 3163.** Timeliness of the ISC data

D. Storchak, E. Delahaye, J. Harris, B. Dando & I. Bondar.

85 **# 839.** Focal mechanism solutions of earthquakes of Iran
N. Tahernia & M.R. Gheitanchi.

86 **# 2586.** The 2006 Kiholo Bay, Hawaii, earthquake sequence: Variation in stress drops of small earthquakes consistent with the main shock slip distribution
T. Yamada, P. Okubo & C. Wolfe.

87 **# 3599.** Hypocenter relocation of major earthquakes and the comparison with the interplate quasi-static slip rate in the hyuga-nada, SW Japan subduction zone
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96 **# 2290.** Fault Shape Effect on Early Phase of Nucleation
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97 **# 3667.** Re-Examination Of Damage Distribution And Source Of The 1751 Takada And 1828 Sanjo Earthquakes In Central Japan
A. Nishiyama, K. Satake, T. Yata & A. Urabe.

98 **# 5147.** Distribution of the numbers of casualties in squares in Edo(Tokyo) city due to the Ansei Edo Earthquake of November 11th, 1855
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102 **# 3648.** Initial Rupture Process of the 2009 Suruga-Bay Earthquake
F. Goto, H. Takenaka & T. Nakamura.

103 **# 2706.** A new technique of joint inversion of teleseismic data and InSAR data, and the application to the rupture process study of the 2009 L'Aquila MW6.3 earthquake
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C. Chimpliganond, R. Dantas, M. Von Huelsen & G.S. Franca.

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109 **# 5665.** A low-frequency laboratory apparatus for characterizing mechanical properties of rocks
B. Gurevich, V. Mikhaltsevitch & M. Lebedev.

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S. Karalliyadda, M. Savage & T. Stern.

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M. Miller, A. Allam, L. Alpert & T. Becker.

112 **# 2076.** Relation between Coda-Q and stress loaded to an elastic body ~Estimation of physical state parameters derived by stochastic seismic measurement~
K. Okamoto, H. Mikada, T. Goto & J. Takekawa.

113 **# 3794.** Inverting Anisotropy and Crustal Structure beneath Taiwan Region by Using Tele-Seismic Receiver Functions
W. Peng-Keng

114 **# 2450.** Variations of Seismic Anisotropy in the Mantle Lithosphere of the Archean Part of the Fennoscandian Shield
J. Plomerova, L. Vecsey, V. Babuska & LAPNET Working Group.

115 **# 4282.** What really causes the noise in shear wave splitting measurements?
M. Savage, E. Walsh & R. Arnold.

116 **# 1088.** Seismic Attenuation Anisotropy in the Southernmost Part of the Taupo Volcanic Zone, North Island, New Zealand
S. Syuhada, M. Savage & J. Townend.

117 **# 5467.** Seismic anisotropy apparently caused by contamination of P-S or S-P converted wave
Y. Tono, Y. Fukao & S. Tsuboi.

118 **# 1462.** Crustal cracks in areas of active deformation: Investigating shear-wave splitting in relation to strain and stress
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V. Babuska & J. Plomerova.

2 **# 2606.** The rate of deformation of Australia estimated from an earthquake catalogue and a numerical model of the plate
D. Burbidge & M. Leonard.

3 **# 1702.** The Potential of Satellite Gravity and Gravity Gradiometry in Deciphering Structural Setting of the Himalayan Collision Zone
V. Tiwari, B. Singh & K. Arora.

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6 **# 5955.** Multi-variable evaluation of an integrated model system covering Sweden (S-HYPE)
B. Arheimer, J. Dahné, G. Lindström, L. Marklund & J. Strömqvist.

7 **# 5963.** New Geodetic Methodology Applied to Monitor the Teide Volcano Unrest
M. Berrocoso, A. Garcia, A. Fernandez-Ros, A. Perez-Pena & R. Ortiz.

8 **# 3570.** 3D Lithosperic Structure of the North China Craton from the Teleseismic Receiver Function
Z. Ding, Y. Wu, X. Wang & L. Zhu.

9 **# 3147.** Experiment of Studying Low-energy Seismic Activity in Elbrus Volcanic Area Using Underground Seismic Array
V. Kovalevskiy & A. Sobisevitch.

10 **# 2051.** Pacific Adaptation Strategy Assistance Program: Climate prediction capacities strengthened in the National Meteorological Services
Y. Kuleshov, A. Charles, A. Cottrill, D. Jones, H. Hendon, et al.

11 **# 969.** Web-based Training in Hydrometeorology from the COMET Program
A. Laing & A. Laing.

12 **# 1704.** Petrological and geochemical variations during the explosive caldera forming cycle at Vico Volcano, Central Italy
M.I. Laird, R. Cas, G. Giordano & M. Raveggi.

13 **# 3042.** Study on the Spatial Characteristics of Gravity Earth Tidal Factor of China
H. Li, Z. Liu, J. Wei, L. Xing, C. Shen, et al.

14 **# 5378.** Transport of emissions from the 2009 Australian forest fires through the stratosphere: a comparison of MLS observations with FLEXPART and other model calculations.
G. Manney, N. Livesey, M. Fromm, O. Cooper & H. Pumphrey.

15 **# 2907.** Hydraulic modelling of magma plumbing system inferred from geodetic observations: Implications from the 2009 Sakurajima eruptive activity
S. Minami, M. Iguchi, H. Mikada, T. Goto & J. Takekawa.

16 **# 411.** Effect of Subsurface and River Water Interaction on Nutrient Component in Tidal Rivers in Western Japan and Southern Korea
S. Onodera, Y. Kato, Y. Shimizu, M. Saito & H. Oyagi.

17 **# 1345.** A constrained total least-squares adjustment model based on the Newton-Gauss approach of non-linear adjustment
Y. Shen, Y. Chen, J. Lu & W. Chen.

18 **# 5425.** Quantifying Geophysical Causes of Present-Day Sea Level Rise
Y. Shen, C. Shum, J. Guo & K. Cheng.

19 **# 1063.** Relationship between cutoff-low systems in the Southern Hemisphere and large scale phenomena
M. Simões Reboita, R. Nieto, R. Garreaud, R. Porfírio da Rocha, T. Ambrizzi, et al.

20 **# 2271.** Attenuation for P and S waves in the frequency range 0.2 – 8 Hz in the upper mantle beneath Iberia from recordings of the very deep 2010 Spanish earthquake
D. Stich, E. Del Pezzo, J. Morales, J. Ibáñez & F. Bianco.

21 **# 5158.** Damage of the tsunami of the Solomon Islands earthquake of April 2nd, 2007
Y. Tsuji, Y. Nishimura, Y. Tanioka, Y. Nakamura & Y. Namegaya.

22 **# 6016.** Research on the coseismic response of well water level and temperature caused by Japan M9 Earthquake
X. Yang, B. Zhang, X. Sun & Y. Liu.

23 **# 281.** Study on adaptation of different climate zones using XAJ Model
L. Zhang, J.Y. Zhang, G.Q. Wang & Y.H. He.

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27 **# 5361.** A Role of Loading Rate in Snow Avalanche Release
P. Chernous, N. Barashev, Y. Fedorenko, E. Podolsky & O. Abe.

28 **# 5464.** Slushflows in the Khibiny Mountains. Description, Statistics, Diagnostics.
P. Chernous & O. Tyapkina.

29 **# 4201.** Glaciers as an Icon of Climate Change: Experience from Slovenia
B. Erhartič

30 **# 6068.** pSNOWPACK: A forecasting tool for avalanche warning services.
C. Fierz, S. Bellaire & J.B. Jamieson.

31 **# 3752.** The Effect of Drifting Snow Sublimation in Mountains
M. Lehning, C. Groot-Zwaaftink, R. Mott, H. Lowe & N. Dawes.

32 **# 3543.** Reconstructing snow accumulation time series at a high Alpine site from a blending of observations and modelling.
S. Morin, I. Clemenzi, F. Pellicciotti, M. Carenzo, Y. Lejeune, et al.

33 **# 5635.** Atmospheric turbulence effects on air movement in snow and associated heat and moisture transport
M.B. Parlange, H. Huwald, C.W. Higgins, H.J. Oldroyd & A.W. Nolin.

34 **# 4000.** Determining thermal diffusivity of snow from highly resolved temperature measurements
M.B. Parlange, H.J. Oldroyd, H. Huwald & C.W. Higgins.

35 **# 3831.** Sub-surface heat flux in snow from fiber-optic distributed temperature sensing
M.B. Parlange, R. Mutzner, H. Huwald, S. Williams & A.W. Nolin.

36 **# 4841.** Field observations of short- and long-wave radiation in blowing snow
K. Sugiura, T. Aoki, Y. Kodama, H. Motoyoshi & T. Ishimaru.

37 **# 1649.** Crocus-SURFEX: A new simulation platform dedicated to study snow-cover processes
V. Vionnet, E. Brun, S. Morin, A. Boone, S. Faroux, et al.

38 **# 4717.** Heat-balance and Snowmelt over Glaciers in Bolivia
T. Yamazaki, Y. Asaoka, H. Tanaka & E. Ramirez.

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R. Burgette, C. Watson, P. Tregoning, R. Coleman, J. Roberts, et al.

43 # **2130.** The mass variations and height changes of Antarctica ice sheet by using GRACE and ICESat data
W. Hanjiang, C. Pengfei, L. Huanling, L. Junhai & Z. Guangbin.

44 # **4146.** Combining radar altimetry and gravimetry over antarctica for improved mass balance studies
B. Legresy, L. Seoane-Corral & G. Ramillien.

45 # **2859.** High-Altitude Glacier Observatory â" Ground Truth for CryoSat-2
T. Schöne, C. Zech, A. Zubovich, H. Thoss & U. Wetzel.

46 # **5108.** Absolute gravity changes from GIA models and measurements at Greenland GNET stations.
G. Strykowski, J.E. Nielsen, R. Forsberg & F.B. Madsen.

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D. Alves, J. Monico, M. Shimabukuru, L. Dalbelo & P. Oliveira Jr.

51 # **3922.** Studies and research on the use of GNSS and the Romanian position determination system ROMPOS, in Romanian geodesy works
G. Badescu, O. Stefan, R. Badescu & O. Roman.

52 # **5876.** UNAVCO Development and Testing Activities in Support of Next Generation GNSS Networks
F. Blume, C. Meertens, L. Estey, H. Berglund & V. Andreatta.

53 # **3464.** Supporting Modules for Real-time Services of Polish GBAS
J. Bogusz, M. Figurski, J. Bosy, B. Kontny, A. Krankowski, et al.

54 # **3911.** Ntrip Service in Argentina
S. Cimbaro & D. Piñón.

55 # **1689.** Characterisation of time correlated noise in large GPS networks
M. Hackl, R. Malservisi & U. Hugentobler.

56 # **3836.** Investigations on a Real-Time PPP Client
P. Hafner, K. Huber, R. Lesjak, R. Weber, G. Thaler, et al.

57 # **4759.** PPP Analysis of Real-Time GDA94 Orbit Corrections
L. Huisman, C. Hu & R.J.P. van Bree.

58 # **3339.** Estimates of ocean tide loading displacements using precise point positioning in Antarctica
Y. Jianguo, J. Zhang, F. Li & W.F. Hao.

59 # **5833.** Station calibration of the SWEPOS GNSS Network
M. Lidberg, P. Jarlemark, J M. Johansson, T. Kempe, L. Jivall, et al.

60 # **4026.** Comparing GPS and GPS/GLONASS Solutions within Permanent Regional Network
T. Liwosz & J. Rogowski.

61 # **1150.** A realistic and easy-to-implement weighting model for GNSS phase observations
X. Luo, M. Mayer & B. Heck.

62 # **2337.** Research on GNSS integrity monitoring system
J. Mi & Y. Dang.

63 # **2068.** Position time series analysis of Iranian Permanent GPS Stations
S.M. Razeghi, A. Amiri Simkooei & M.A. Sharifi.

64 # **5182.** Global Assessment of UNB's Online Precise Point Positioning Software
M. Santos, L. Urquhart, C. Garcia, R. Langley & R. Leandro.

65 # **2647.** Evaluation of IGS reproduction precise ephemeris applying the analysis of the Japanese domestic GPS network data
S. Shimada

66 # **3382.** Measuring Integrity Characteristics of Real-Time Kinematic Positioning Solutions with Predicated Mean Square Error
J. Wang, Y. Feng & C. Wang.

67 # **2165.** Automatic Online GNSS Precise Positioning Service
Q. Zhao, M. Li, C. Shi & C. Xiong.

68 # **2061.** Equivalence of Existing Network RTK Methods under the PPP Mode
Q. Zhao, X. Zou, M.R. Ge, W.M. Tang & J.N. Liu.

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R. Ewanlen & S. Shaowen.

73 # **4787.** Indian Ocean Observing System (IndOOS): Present Status
Y. Masumoto, W. Yu & G. Meyers.

74 # **4704.** Satellite Footprint-Scale Spatial Coherence of Sea Surface Salinity along a Latitudinal Transect in the Pacific Ocean
K. Seo, D. Ryu & H.C. Kim.

75 # **2057.** Long Period Evolution of the Thar Desert (India) and Comparison with East Africa
K. Veeraswamy & U. Raval.

76 # **4431.** A new rapidly deployable wind profiler network for atmospheric research
J.J. Wang, S.A. Cohn, W.O.J. Brown, B. Lindseth, C. Martin, et al.

77 # **5124.** CentNet-A deployable 100-station network for surface exchange research
J.J. Wang, S.P. Oncley, S. Semmer, T.W. Horst, J. Militzer, et al.

78 # **5125.** GCOS Reference Upper Air Network (GRUAN): Progress and Plans
J.J. Wang, P.W. Thorne, H. Voemel, F. Immler & M. Sommer.

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J. Drummond, P.O. Wennberg, V.J. Hipkin, G.C. Toon & M. Allen.

81 # **5802.** Scale-dependent Infrared Radiative Damping Rates on Mars and Their Role in the Deposition of Gravity-wave Momentum Flux
S. Eckermann, J. Ma, X. Zhu & J. Hollingsworth.

82 # **5106.** A revised inventory, geographical distribution and fundamental properties of glacier-like forms (GLFs) on Mars
B. Hubbard, C. Souness & R. Milliken.

83 # **5565.** Venus superrotation simulated by an atmospheric general circulation model with a new radiative transfer parameterization
K. Ikeda & M. Takahashi.

84 # **2694.** The effect of spectrally resolved irradiances during the Archean as modeled with EMAC-FUB
M. Kunze, M. Godolt, A. Hamann-Reinus, U. Langematz, H. Rauer, et al.

85 # **3338.** Simulation of the CO2 Ice Clouds and Wind Fields in the Mesosphere of Mars using a General Circulation Model
T. Kuroda

IAMAS **Friday, 1 July 2011**
JM08 **Predictability of the coupled climate system, climate system feedbacks and sensitivity to external forcing**

88 **# 4376.** Mapping the Surface Temperature Variability and Trends from Observations, Reanalysis Systems and Model Simulations
N. Andronova & M. Jarrett.

89 **# 900.** An introduction to the coupled model FGOALS2-s
Q. Bao, Wu. P, Y. Lin, Yu. Y, T. Liu, et al.

90 **# 2359.** Pacific Climate Change in the later half of the 1990s Predicted by MIROC
Y. Chikamoto, M. Kimoto, M. Ishii, M. Watanabe, T. Mochizuki, et al.

91 **# 5475.** Future Weather Patterns in New Zealand Determined by Synoptic Classification Using Kidson Types
A. McDonald, S. Parsons & J. Renwick.

92 **# 3373.** Determining the Time of Emergence of Climate Change over Natural Variability at Regional Scales
L. Muir, S. Wijffels, J. Brown & P. Durack.

93 **# 3662.** Evaluating Decadal Climate Predictability in the Atlantic Sector with the IPSL Model
A. Persechino, J. Mignot, D. Swingedouw, E. Guilyardi & S. Labetoulle.

94 **# 2132.** Large-scale water budget features over the tropics diagnosed from satellite observations and model simulations
B. Sohn, A. Lim & S.W. Yeh.

95 **# 4268.** A sea ice sensitivity study with the ACCESS/AusCOM model
P. Uotila, S. O'Farrell, S. Marsland & D. Bi.

96 **# 2212.** Understanding and Partitioning Simulated Future Climates for Australia using Ocean Warming Indices
I. Watterson

97 **# 3442.** Quasi-quadrennial Coupling Between Moisture Circulation over East Asia and ENSO
L. Xiuzhen & W. Zhou.

IAMAS **Friday, 1 July 2011**
JM11 **From Ice-house to Green-house: Studies of Natural and Human-Induced Climate Change**

100 **# 4775.** Water Cycle Change in the Tropical Indo-Pacific During the Mid-Holocene: Investigations Using MIROC AOGCM, AGCM and OGCM
R. Ohgaito, A. Oka, A. Abe-Ouchi & N. Kurita.

101 **# 4910.** Micro Climate Change, Geohazards and Livelihood Security in Western Hiamalaya
B.W. Pandey

IAMAS, IAGA **Friday, 1 July 2011**
JM12/A06.4 **Thunderstorms: from troposphere to mesosphere and beyond / Thunderstorms: Upwards and Downwards Coupling of the Atmospheric Layers and near-Earth Space**

105 **# 512.** Development and Validation of a VLF Propagation Model
A. Collier, S.G. Meyer & C.J. Rodger.

106 **# 5311.** A connection between thunderstorms and mid-latitude F-region ionosphere.
V. Kumar, P. Dyson, M. Parkinson, P. May & C. C. Jakob.

107 **# 3545.** Nowcasting Thunderstorm Activity in Europe
C. Price, E. Galanti, M. Kohn, K. Lagouvardos & V. Kotroni.

109 **# 4878.** Morphology of Sprites Observed Above Central Europe During Three Consecutive Summers
G. Satori, V. Barta & J. Bor.

IAPSO **Friday, 1 July 2011**
JP02 **Future state of the Arctic and potential impact**

112 **# 1444.** Recent changes of the thermohaline structure of the Arctic Ocean surface layer
E. Chernyavskaya & L. Timokhov.

113 **# 3683.** Arctic Sea-ice Decline Simulated in an Atmosphere-ice-ocean Coupled Model MIROC5
Y. Komuro, T. Suzuki, M. Ishii, M. Watanabe, T. Yokohata, et al.

114 **# 3481.** Arctic Cyclone Climatology: Present and Future
T. Spengler & A. Ballinger.

IAPSO **Friday, 1 July 2011**
P04 **Thermohaline Circulation (THC) and Deep Currents**

117 **# 3949.** Ventilation processes in the Ross Sea investigated with CFC data
G. Budillon, S. Saviano, D. Cianelli, S. Massolo, R. Messa, et al.

118 **# 5161.** Towards the Ability of the Adjoint Method to recover a decadal AMOC Variability
L. Czeschel, M. Braedgam, C. Eden & J. Baehr.

119 **# 4383.** The diffusive ocean conveyor
M. Holzer, F. Primeau & T. DeVries.

120 **# 2512.** The oxygen-nitrate relationship in the world ocean
M. Ishizu, K. Richards & F. Ascani.

121 **# 5640.** High-resolution modeling on the Antarctic Bottom Water formation
Y. Matsumura & H. Hasumi.

122 **# 4035.** Seismic Imaging, Modelling and Observation of the Wyville Thomson Ridge Dense Water Overflow
J. Polton, R. Hobbs, O. Perratt, V. Vlasenko & M. Inall.

123 **# 4762.** Cabbeling Effect on the Water Mass Transformation in the Southern Ocean
S. Urakawa & H. Hasumi.

124 **# 1584.** Intertropical convergence zone migration during Marine Isotope Stage 3
R. Zuraida, W. Kuhnt, A. Holbourn, A. Duerkop & D. Nuernberg.

IASPEI, IAVCEI **Friday, 1 July 2011**
JS05/JV04 **The Davies mantle: reconciling geophysical and geochemical perspectives**

136 # **1907.** Using seismic tomography and geodynamic models to understand global slab mass flux
L. Boschi, L. Boschi & B. Steinberger.
137 # **5017.** A geochemical and isotopic comparison between Pico and São Jorge islands, Azores
Z. França, L.P. Ribeiro, B. Rodrigues & V.H. Forjaz.
138 # **3293.** The Influence Of Temperature, Grain Size And Partial Melting On Seismic Wave Speeds And Attenuation – Towards A Robust Laboratory-Based Model
I. Jackson, U.H. Faul, S.J.S. Morris, Y. Kono & J.D. Fitz Gerald.
139 # **3389.** Testing Absolute Plate Reference Frames with Coupled Plate Tectonic and Mantle Convection Models and Seismic Tomography
G. Shephard, R.D. Muller, H.P. Bunge & B. Schuberth.
140 # **2262.** A numerical model of three-dimensional mantle convection with long-lived continental lithosphere
M. Yoshida

IASPEI **Friday, 1 July 2011**
JS07 **Antarctic and Arctic Research**

145 # **4292.** The Greenland Ice Sheet Monitoring Network (GLISN)
K. Anderson & GLISN International Steering Committee.
146 # **5644.** Seasonality of microseismic signal in Antarctica, and its link to sea ice.
A. Chambodut, M. Grob & E. Stutzmann.
147 # **4138.** Analysing subglacial landscape evolution and basal hydrology in the Gamburtsev Province of East Antarctica
F. Ferraccioli
148 # **5389.** ICEGRAV: New airborne geophysics in the Antarctic Peninsula and East Antarctica
R. Forsberg, A. Olesen, M. Ghidella, J. Greenbaum & A. Gidskehaug.
149 # **4340.** Fine-Resolution Ku-band Altimeter for Airborne Measurements Over Ice Sheets and Sea Ice
P. Gogineni, A. Patel, C. Leuschen, F. Rodriguez-Morales, D. Gomez, et al.
150 # **4674.** A fresh view on physical properties of Antarctic fast ice
P. Heil & J. Hutchings.
151 # **5071.** Russian center for collecting and processing data from Arctic and Antarctic geophysical network
A. Janzhura & O. Troshichev.
152 # **2125.** On a Baroclinic Eddy with High Temperature Maximum and Low Potential Vorticity in the Western Canada Basin
Y. Kawaguchi, M. Itoh, S. Nishino & T. Kikuchi.
153 # **2118.** Annual and seasonal atmospheric temperature trends over Antarctica for 2001-2008 derived from GPS radio occultation observations
Y. Kuleshov, K. Zhang, E. Fu, X. Wang, Y. Feng, et al.
154 # **2119.** Is the Antarctic atmosphere warming or cooling?
Y. Kuleshov, K. Zhang, E. Fu, X. Wang, Y. Feng, et al.
155 # **5840.** Polar seismic ups and downs: lessons learned from GLISN network data
M.M. Reusch
156 # **3856.** Long-Term Program of Absolute Gravity Measurements in Antarctica
Y. Rogister, L. Hothem & J. Hinderer.
157 # **4049.** Plate tectonic constraints on the Lomonosov Ridge – North Greenland Shelf inferred from a new aeromagnetic grid compilation
A. Vestergaard

IASPEI **Friday, 1 July 2011**
S05 **Infrastructure for seismology (FDSN)**

160 # **4326.** The GSN Data Quality Initiative
K. Anderson
161 # **2753.** ORFEUS: Seismological waveform data archiving and access in Europe
T. Van Eck, R. Sleeman, G.J. Hazel, L. Trani & A. Spinuso.

IASPEI **Friday, 1 July 2011**
S11 **Earthquake forecasting and testing**

164 # **699.** Is the Nicoya Seismic Gap in Northern Costa Rica Overdue?
V. Gonzalez, M. Protti, S. Schwartz, T. Dixon, A. Newman, et al.
165 # **2178.** Correlation between Coulomb Stress Changes Imparted by Large Historical Strike-Slip Earthquakes and Current Seismicity in Japan
T. Ishibe, K. Shimazaki, H. Tsuruoka, Y. Yamanaka, K. Satake, et al.
166 # **5103.** Application of S-Transform of State Vectors for Earthquake Forecasting
S. Mehrabian & A. Amini.
167 # **1067.** The Effect of Static Coulomb Stress Changes on Earthquake Occurrence in Southern California
A. Strader
168 # **3256.** Report on prospective evaluation of the 3-month and 1-day CSEP-Japan earthquake forecasts
S. Yokoi, H. Tsuruoka, K. Nanjo & N. Hirata.

IASPEI Friday, 1 July 2011
S14 Plate Boundary Processes

170 **# 3602.** Subduction Structure of the Izu-Bonin Arc, Central Japan, and its Implications for the Seismic Activity
R. Arai, T. Iwasaki, H. Sato, S. Abe & N. Hirata.

171 **# 4697.** Crustal structure around the source area of the 1952 Tokachi-oki earthquake by an airgun-OBS seismic experiment at the Kuril Trench subduction zone
R. Azuma, Y. Murai, K. Katsumata, Y. Nishimura, T. Yamada, et al.

172 **# 4115.** Seismicity of the Earth 1900-2010: The Australia Plate and Vicinity
K.P. Furlong, M. Herman, G. Hayes & H. Benz.

173 **# 700.** Tectonic Segmentation of the Subduction Seismogenic Zone Along the Southern Terminus of the Middle American Trench
V. Gonzalez, M. Protti & S. Schwartz.

174 **# 3271.** A New View on the Space-Time Pattern of Great or Large Earthquakes in the Northern Japan to Southern Kurile Subduction Zones
T. Harada, K. Satake & K. Ishibashi.

175 **# 3860.** Active Tectonics of Tokyo Metropolitan Area
T. Ishiyama, H. Sato, N. Kato, T. Iwasaki & S. Abe.

176 **# 5242.** Crustal structure of the Izu Collision zone, central Japan, revealed by dense seismic array observations
E. Kurashimo, H. Sato, S. Abe, N. Kato, M. Ishikawa, et al.

177 **# 3392.** Tectonic Fabric Map of the Ocean Basins
K. Matthews, R.D. Müller, P. Wessel & J. Whittaker.

178 **# 2541.** Slab tearing in 3-D models of subduction and continental collision: Application to the Banda Sea
M. Miller, L. Alpert & T. Becker.

179 **# 4122.** Numerical models of Oblique Extensional and Compressional Deformation
L. Moresi & M. Faccenda.

180 **# 4609.** Geometry of the upper surface of Philippine Sea plate beneath Kanto, central Japan, revealed by seismic reflection profiling
H. Sato, S. Abe, T. Iwasaki, E. Kurashimo, R. Arai, et al.

Poster Social 1800 – 1900
Poster & Exhibition Area, Ground Floor

Join fellow delegates to enjoy canapés and refreshments while roaming among the posters and exhibits. The Poster Social Sessions give general assembly attendees a unique opportunity to learn more about the research being supported by the IUGG 2011 scientific program.

SATURDAY, 2 JULY 2011

IUGG U021 **Saturday, 2 July 2011**
Grand Challenges in Natural Hazards Research and Risk Analysis: Earth on the Edge – Recent Pacific Rim Disasters

1 # **6020.** Kamchatkian Subterranean Electric Operative Forerunners of Catastrophic Earthquake with M9, occurred close to Honshu Island 2011/03/11
V. Bobrovskiy

2 # **6095.** (Invited Poster Presentation) The Maule earthquake in Chile, February 27, 2010
H. Drewes, S. Barrientos, L. Sánchez & R. Maturana.

3 # **6021.** Numerical modelling to assess the impact of recent tsunamis on groundwater quality and identification of remedial measures
L. Elango & C. Sivakumar.

4 # **6044.** Analysis of Korea Peninsular Displacements from Sendai-Oki Earthquake using Global Navigation Satellite System
J. Ha, M.B. Heo, K. Nam & E. Sim.

5 # **6035.** ALOS/PALSAR Images of the 2011 Tohoku Earthquake (II): Deformation Associated with the Induced Activities
M. Hashimoto, Y. Takada, Y. Fukushima, T. Ozawa, M. Furuya, et al.

6 # **6055.** The 2011 Tohoku earthquake slip distribution: joint inversion of GPS and ocean bottom pressure sensor data.
A. Hooper, W. Simons, J. Pietrzak, R. Riva & M. Naeije.

7 # **6051.** Relation between the interplate coupling distribution before and the slip at the time of the 2011 East Japan Earthquake (Mw 9.0)
R. Ikuta, S. Shimada & M. Satomura.

8 # **6047.** Precursors of the Tohoku earthquake (M=9) – what was the trigger?
P. Kalenda & L. Neumann.

9 # **6046.** Tracing of travelling of stress-deformation waves after the Tohoku earthquake
P. Kalenda, K. Holub, J. Rusajova & L. Neumann.

10 # **6029.** Strong Motion Characteristics of the Off Pacific Coast, Tohoku, Japan Earthquake of March 11, 2011 in Terms of the Damage Potential to Buildings
H. Kawase, S. Matsushima & B. Baoyintu.

11 # **6037.** The Role of Aftershocks in Studying the Global Ecology State Changes
I. Kerimov & S. Kerimov.

12 # **6036.** Why March 2011 Tohoki earthquake, such a catastrophic event has been missed?
I. Kerimov & S. Kerimov.

13 # **6025.** 2011 Megathrust earthquake in Japan revealed existance of two types of great earthquakes
J. Koyama, K. Yoshizawa, K. Yomogida & M. Tsuzuki.

14 # **6022.** Japan Seismic Catastrophe 11 of March 2011. Long-term prediction by microseismic noise properties.
A. Lyubushin

15 # **6015.** Co- and post-seismic deformation of the Mw9.0 2011 Off-Tohoku Earthquake and strain accumulation observed by GEONET
T. Nishimura, S. Ozawa, H. Suito, T. Kobayashi, M. Tobita, et al.

16 # **6043.** ALOS/PALSAR Images of the 2011 Tohoku Earthquake (I): Coseismic deformations and Tsunami affected area
T. Ozawa, Y. Fukushima, S. Okuyama, Y. Takada, M. Hashimoto, et al.

17 # **6023.** Crustal Deformation Associated with the 2011 Off the Pacific Coast of Tohoku Earthquake (M9.0)
T. Sagiya, T. Ito, T. Watanabe & K. Ozawa.

18 # **6057.** 2011 Mw 9.0 Sendai-Oki Earthquake Coseismic Deformation and Tsunami Observed by Space Geodetic Sensors
C. Shum, C. Ji, Z. Lu, F. Simon, L. Wang, et al.

19 # **6053.** 2010 Mw 8.8 Great Maule Earthquake Coseismic Slip Constrained by GRACE
L. Wang, C.K. Shum, F. Simons, A. Tassara, C. Ji, et al.

20 # **6059.** Possible effects of the 2011 Tohoku earthquake on activity at Shinmoe-dake volcano, southwest Japan: Insights from strain data measured in vaults
K. Yamazaki, M. Teraishi, S. Komatsu, Y. Sonoda & Y. Kano.

IUGG U03 **Saturday, 2 July 2011**
Recent Progress in the Studies of the Earth's Deep Interior

25 # **3879.** Grain growth and loss of texture during annealing of alloys, and the translation of Earths inner core
M. Bergman, D. Lewis, I. Myint, L. Slivka, S. Karato, et al.

26 # **3915.** South Atlantic anomaly and core-mantle boundary
A. De Santis & E. Qamili.

27 # **4568.** Latitudinal Dependence of Some Effects of Anisotropic Thermal Diffusivity in the Earth's Core
M. Matsushima

28 # **2421.** Adjoint tomography of East Asia
M. Obayashi, Y. Tono, S. Tsuboi & D. Suetsugu.

29 # **5747.** Numerical simulations of magnetostrophic dynamo
A. Sakuraba

30 # **4892.** Variations of ancient geomagnetic intensity due to protocore dissolution by growing liquid core
S. Starchenko & Y. Pushkarev.

31 # **2882.** Depth Variation of Inner Core Hemisphericity from PKP(DF) and PKP(Cdiff): P-Wave Velocity and Attenuation Structures for Equatorial Paths
S. Tanaka

32 # **3728.** Can seismic anisotropy be used to constrain flow patterns in the lowermost mantle?
J. Wookey, A. Walker, A. Nowacki, A. Forte & J.M. Kendall.

33 # **985.** On the Differential Rotation of the Earth's Inner Core From Testing the Nature of Differences in Repetitive Seismic Waveforms
M. Young, H. Tkalcic & S. Ngo.

IUGG U10 **Saturday, 2 July 2011**
Climate Change: a 360 Degree-View from IUGG Associations

36 # **1801.** Climate change impacts on the water quality: A case study of the Rosetta Branch in the Nile Delta, Egypt
A. El-Sadek

37 # **1566.** A palaeoclimate record from Northern Australia
K. Gordon

38 # **2783.** Pitfalls in the use of inversion methods for extracting information on climate change from borehole temperature data
V. Hamza, R. Cardoso & F. Silva Dias.

39 # **3297.** An Assessment of the Greenhouse Gas Contribution to Global Warming Based on a Multi-model Ensemble
E. Park, E.J. Lee, W.T. Kwon & S.Y. Hong.

40 # **5305.** Clues for non-stationarity of seismicity: climatic modulation of seismic hazard
A. Peresan & G.F. Panza.

41 # **837.** Geothermal Climate Change Observatory in South India: Results From the First Year of Operation
S. Roy & V.V. Akkiraju.

42 # **3539.** Historical Land Use Change And Its Impact On Regional Climate In North Japan
T. Sato & T. Sasaki.

43 # **5407.** Stained glass and climate change: How are they connected?

C. Simmons & L. Mysak.

44 **# 2017.** Propagation of Long-term Annual Temperature Signals in Shallow Subsurface Environment
Y. Sun, J.Y. Liu, C.H. Wang, C.H. Chen & D.L. Chen.

45 **# 491.** Four-Dimensional Structures and Physical Process of the Decadal Abrupt Changes of the Northern Extratropical Ocean-Atmosphere System in 1980s
D. Xiao, J. Li & P. Zhao.

46 **# 580.** Mechanism of stratospheric decadal abrupt cooling in the Early 1990s as influenced by the Pinatubo eruption
D. Xiao & J. Li.

47 **# 3431.** Implementing a dynamic carbon-nitrogen scheme into the Common Land Model
Q. Zhang, Y. J. Dai, D. Y. Ji, M. Chen, Y. P. Wang, et al.

IACS JC01 — **Saturday, 2 July 2011**
Arctic System Modelling

50 **# 844.** New mathematical approach to permafrost methane emission modelling
I. Sudakov & S. Vakulenko.

IACS JC04 — **Saturday, 2 July 2011**
Ice Shelves and Glacier Tongues – Ice on the Edge

52 **# 2980.** Antarctic Warming Event Derived by Satellite Microwave Observation and AWS Data over East Antarctica
H. Enomoto, N. Alimasi, S. Takahashi, T. Kameda & H. Motoyama.

53 **# 5745.** Ice rises under rising sea level
T. Kleiner, M. Rueckamp, A. Humbert & M.A. Lange.

54 **# 5733.** Modeling the flow of ice on different levels of approximation by using a nesting approach
T. Kleiner & A. Humbert.

55 **# 5543.** Characteristics of the Darwin-Hatherton Glacial System Grounding Zone, Antarctica
W. Rack, M. Riger-Kusk, W. Lawson & B. Anderson.

56 **# 3150.** Vertical and Horizontal Structure of Fimbul Ice Shelf Revealed by a Ground Based FMCW Radar
A. Sinisalo, A. Humbert, K. Langley, H. Anschütz, E. Isaksson, et al.

57 **# 4555.** Long-term freshening of Adelie Depression Dense Shelf Water
G. Williams, T. Tamura, K. Kusahara, B. Galton-Fenzi & B. Legrésy.

IAG JG01 — **Saturday, 2 July 2011**
Space Geodesy-based Atmospheric Remote Sensing as a Synergistic Link between Geodesy and Meteorology

60 **# 791.** Remote sensing of the Australian tropopause by GNSS
J. Awange, J. Khandu, J. Wickert, T. Schmidt, M. Sharifi, et al.

61 **# 4967.** Benchmarking Campaign for Ray-traced Tropospheric Delays
J. Boehm, V. Nafisi, T. Hobiger, L. Urquhart, F. Zus, et al.

62 **# 3516.** Usage of Troposphere Model Estimated by Mezoscale Numerical Weather Model for GNSS Processing
J. Bogusz, K. Kroszczynski, M. Figurski & K. Szafranek.

63 **# 1299.** Water vapour estimation using three different techniques for the South American region and their comparisons
G. Colosimo, A. Calori, M. Genda, M. Crespi, C. Brunini, et al.

64 **# 2722.** Fusion of InSAR and GNSS observations for the determination of atmospheric water vapour
T. Fuhrmann, F. Alshawaf, X. Luo, A. Knöpfler, A. Schenk, et al.

65 **# 3300.** GPS climatology with GEONET: Long term behaviors of atmospheric delays and bias in their gradients reflecting the tilt of geoid
K. Heki & K. Yoshida.

66 **# 4010.** Data assimilation of ground-based GPS precipitable water vapor to mesoscale numerical weather prediction model and its impact on ray-traced atmospheric total slant delays for GNSS positioning
R. Ichikawa, T. Hobiger, Y. Shoji, Y. Koyama & T. Kondo.

67 **# 4790.** Assessing the effects of rainfall events on GPS Radio Occultation Signals: A case study of Victoria
Y. Li, K. Zhang, C. Wang & R. Norman.

68 **# 4106.** GPS Based and Meteorological IPW Data Sets – Conformity and Quality Assessment
T. Liwosz & T. Liwosz.

69 **# 5021.** Preliminary integrated solutions of troposphere tomography using both ground-based and space-borne satellite systems
T. Manning, K. Zhang, D. Wen, C. Wang & R. Norman.

70 **# 4766.** Comparing GPS Radio Occultation observations with Radiosonde measurements in the Australian region
R. Norman, J. Le Marshall, K. Zhang, C. Wang, T. Manning, et al.

71 **# 4765.** Simulating GPS Radio Occultation using 3-D ray tracing
R. Norman, J. Le Marshall, K. Zhang, C. Wang, D. Wen, et al.

72 **# 5483.** An Accuracy Analysis of the Troposphere Models Applied for Water Vapour Estimations Based on Radiosounding Data
S. Rozsa

73 **# 5484.** Near-real Time Estimation of Integrated Water Vapour from GNSS Observations in Hungary
S. Rozsa, A. Kenyeres & T. Weidinger.

74 **# 3252.** Deriving Accurate Atmospheric Mass Density from Precision Position Information of Space Objects
J. Sang, C. Smith & K. Zhang.

75 **# 5064.** Evaluation of Asymmetric Tropospheric Delay Models by Ray-tracing Through Numerical Weather Models
M. Santos, L. Urquhart & F. Nievinski.

76 **# 5186.** Report from Sub-Commission 4.3: Remote Sensing and Modelling of the Atmosphere
M. Santos & J. Wickert.

77 **# 1110.** Quantification of attitude error in GPS orbit determination of FORMOSAT-3/COSMIC satellites
T. Tseng, C. Hwang & S. Yang.

78 **# 1886.** Determination of Atmospheric Turbulence Using Dedicated GPS-networks and Ultra-stable Frequency Standards
U. Weinbach, M. Vennebusch & S. Schinn.

IAGA **Saturday, 2 July 2011**
JA01 **Fluids in the crust and mantle: Geodynamic and seismological consequences – geophysical and geological constraints**

80 **# 3468.** An electrical conductivity network model within the hydrous rock and mineral
K. Fuji-Ta, M. Seki, T. Katsura & M. Ichiki.
81 **# 3108.** Investigation of Resistivity Structure beneath the Eastern Marmara Sea by 2D Modeling of OBEM data
Y. Ogawa, T. Kaya, T. Kasaya, S. Tank, M.K. Tuncer, et al.
82 **# 4750.** Resistivity imaging by Magnetotelluric method in Ishikari-teichi-toen fault zone
Y. Yamaya, T. Mogi, H. Hase, R. Honda, T. Hashimoto, et al.
83 **# 5268.** Imaging Heterogeneous Electrical Resistivity Structures Around the 2007 Noto Hanto Earthquake
R. Yoshimura, N. Oshiman, H. Ichihara & M. Uyeshima.

IAGA **Saturday, 2 July 2011**
JA05 **Data rescue, digitisation and metadata requirements in geophysics**

85 **# 5780.** Metadata in geomagnetism: experiences at the World Data Centre for Geomagnetism, Edinburgh
E. Clarke, S. Reay, E. Dawson, S. Macmillan & S. Flower.
86 **# 5677.** Recognition and digitization of scanned magnetogram images
A. Soloviev, J. Mabie, S. Bogoutdinov & A. Gvishiani.

IAGA **Saturday, 2 July 2011**
A011 **Planetary Magnetic Fields and Geomagnetic Secular Variation**

90 **# 4874.** An Improved Sedimentary Database for the Reconstruction of the Holocene Geomagnetic Field
M. Brown, M. Korte & U. Frank.
91 **# 629.** The analysis of geomagnetic anomaly field of Chinese mainland and its adjacent areas during 1960~2000
Y. Feng, Z.C. An, J.J. Pan, H. Sun & F. Mao.
92 **# 1980.** The 2007 Geomagnetic Jerk: A Southern African Perspective
P. Kotze, A. Geese & M. Korte.
93 **# 5669.** Model of Earth's magnetic field an its variation for the last decades
V. Lesur & I. Wardinski.
94 **# 5676.** Radial vorticity constraint in the core flow modeling
V. Lesur & S. Asari.
95 **# 1815.** Long Periods (1.0 – 10mHz) Geomagnetic Pulsations with Solar Cycle in the South Atlantic Magnetic Anomaly Region
J.P. Marchezi, S.L.G. Dutra, N.J. Schuch, N.B. Trivedi, A.C. Da Silva, et al.
96 **# 2771.** Analysis of holocene lake sediment magnetic records: Evidence for periodicities and error estimates for field modelling
S. Panovska & C.C. Finlay.
97 **# 2003.** Regional Orthogonal Model of Geomagnetic Secular Variation in the Europe for 1980-2009
L. Sidorova, S. Filippov & D. Abramova.
98 **# 5657.** The geomagnetic field for the interval 1590-2010 and its sources in the Earth's core
S. Starchenko & S. Yakovleva.
99 **# 3005.** A review of the archaeomagnetic database of R.L. DuBois
R. Sternberg & I. Hagmann.
100 **# 630.** The research of geomagnetic internal field variation of Chinese mainland and adjacent areas during 1960~2000
H. Sun, Z.C. An, J.J. Pan, Y. Feng & F. Mao.
101 **# 2761.** The axial dipole strength and flow in the outer core
K. Whaler, R. Holme & C.A. Lynch.
102 **# 5768.** Ekman-Hartmann Layer at Anisotropic Viscosity
J. Brestensky, A. Benerji Babu, H.P. Rani & T. Soltis.
103 **# 3680.** Effects of Magnetic Buoyancy on MHD Stability in Planetary Cores
D. Ivers
104 **# 2185.** Hydromagnetic Dynamos in Rotating Non-Uniformly Stratified Spherical Fluid Shells in Dependence on the Rayleigh Number
J. Simkanin, P. Hejda & D. Saxonbergova.
105 **# 4893.** Critical Stability of Convection in the Terrestrial Planets
S. Starchenko & M. Kotelnikova.
106 **# 1297.** Contribution of Solar Variability to Annual Mean Geomagnetic Field at a Low Latitude Observatory
A. Bhattacharyya, S. Alex & B. Kadam.
107 **# 4880.** Earth's Dynamo Limit of Predictability: the Key Role of Magnetic Dissipation
G. Hulot, F. Lhuillier & J. Aubert.
108 **# 4879.** The Secular Variation Timescale and its Application to Rescale the Time Axis of Dynamo Simulations
G. Hulot, F. Lhuillier, A. Fournier & J. Aubert.

IAGA **Saturday, 2 July 2011**
A101 **The Sun and the Heliosphere: New Views**

112 **# 1465.** Magnetic Field Effects on Wave Propagation in the Solar Atmosphere from SOT-Hinode Data
A.C. Cadavid & J. Lawrence.

IAMAS **Saturday, 2 July 2011**
JM01 **Geoengineering: Can it limit climate change and its impacts?**

115 **# 3777.** Response of precipitation over land to solar forcing and CO2 forcing
M. Abe, H. Shiogama, T. Yokohata, S. Emori & T. Nozawa.
116 **# 5212.** Mineral CO2 Sequestration Experiments on Hawaiian Picritic Basalts
K. Johnson, B.P. McGrail, H.T. Schaef & A.T. Owen.
117 **# 3494.** Volcanic Signals into the Ocean Under Global Warming
T. Sakamoto & H. Shiogama.
118 **# 1244.** Estimation Of Forest Tree Biomass And Carbon Stock Using Geoinformation Technology
J. Subin, S. Kumar & M. G.

IAMAS **Saturday, 2 July 2011**
JM02 **Data assimilation and ensemble forecasting for weather and climate**

120 **# 1415.** Effects of Blocking on the Characteristics of the Mediterranean Cyclones
F. Ahmadi-Givi, L. Shabrang & P. Irannejad.
121 **# 4500.** Accounting for non-linearity with an ensemble outer-loop
C. Bishop & D. Hodyss.
122 **# 820.** Operational assimilation of satellite derived soil moisture at the Met Office
I. Dharssi, K. Bovis, B. Macpherson & C. Jones.
123 **# 1463.** Importance of the initial and boundary conditions for WRF model
B. Lamash & L. Gonchukov.
124 **# 1464.** Investigation of the themperature regime on the Kamchatka Peninsula
B. Lamash, O. Shkaberda & L. Vasilevskaya.
125 **# 843.** Real-time flood forecasting based on ensemble rainfall prediction in Shihmen Reservoir watershed
Y. Liao, K.T. Lee & J.Y. Ho.
126 **# 5744.** Use of inflow forecasts in reservoir operations
E.S. Martins, D.S. Reis Jr, M. Firmino & J. Burte.

127 # **1898.** CLIMSOIL – GIS data base and methodology for estimating impacts of climate change on soil temperatures and related risks for Austrian agriculture
E. Murer & J. Eitzinger.
128 # **4800.** An Inter-comparison of Observation System Experiments for Stratospheric Ozone between LETKF Data Assimilation Systems with CCSR/NIES CCM, MRI CCM, and CHASER CTM
T. Nakamura, M. Deushi, K. Miyazaki, C. Kobayashi, H. Akiyoshi, et al.
129 # **4862.** Massively parallel particle filter and a grouping strategy
S. Nakano & T. Higuchi.
130 # **3459.** ACCESS Global and Regional Ensemble Prediction System
M. Naughton, D. Smith, A. Sulaiman & T. O'Kane.
131 # **1410.** Short Range Temperature Forecast Verification of WRF Model over Iran
F. Taghavi & A. Neyestani.
132 # **5453.** Recent Developments in Satellite Data Assimilation in the Bureau of Meteorology'S ACCESS NWP Suite
C. Tingwell, B. Harris, J. Le Marshall, J. Lee & P. Steinle.
133 # **4432.** On-line estimation of the observation error covariance matrix for ensemble-based filters
G. Ueno
134 # **5653.** A Regional Enemble Kalman Filter Data Assimilation System for FAA application
X. Wang, K. Zhu, M. Xue, J. Whitaker & S. Benjamin.
135 # **5660.** Toward optimal design of storm-scale ensemble: object-oriented hierarchical cluster analysis of a convection-allowing ensemble during the Hazardous Weather Testbed 2009 Spring Experiment
X. Wang, A. Johnson, F. Kong & X. Ming.
136 # **3421.** Coupled Ensemble Initialisation for a New Intraseasonal Forecast System Using POAMA at the Bureau of Meteorology
Y. Yin, O. Alves & D. Hudson.

IAMAS JM06 **Saturday, 2 July 2011**
High-impact weather and extreme climate events

140 # **4696.** Severe Wind Hazard using Climate-simulated Wind Speeds
C. Arthur, A. Sanabria & R. Cechet.
141 # **226.** Scales and impacts of a heavy rainfall using spatial extremes estimation
Z. Bargaoui
142 # **5731.** Analysis of Simulated Trends of Regional Heat Wave Occurrence in Central/Eastern Europe
J. Bartholy, R. Pongracz & E.B. Bartha.
143 # **5722.** How Wet and Dry Climatic Conditions Are Likely to Change in Central/Eastern Europe?
J. Bartholy, R. Pongracz, O. Torek, B. Hollosi & I. Pieczka.
144 # **1446.** Dust Storm Risk Reduction over Iran Challenges and Approaches
J. Bodaghjamali, A. Noorian & S. Javanmard.
145 # **4037.** The effect of a midlevel potential vorticity anomaly on the circulation about a cold front
J. Chagnon
146 # **714.** Criteria for Heat and Cold Wave Duration Indexes
M. Curic
147 # **3803.** Observed Climate Variability In Extreme Wind Waves Over The Global Ocean During The Last 130 Years (1880-2009)
S. Gulev & V. Grigorieva.
148 # **5264.** Does validation bias in RegCM3 affect the climate change signal on extremes
T. Halenka, M. Belda & J. Miksovsky.
149 # **616.** Drought quantitative analysis using a new numerical taxonomy model
S. Hejjam, A. Ghafari & F. Zanir.
150 # **5279.** Study of drought proneness using Markov chain
S. Hejjam & V. Sarvghad Moghaddam.
151 # **1472.** Exploring links between trends and multidecadal variability in average rainfall and rainfall extremes
D. Jakob
152 # **2670.** Climate track in river flooding in Europe
Z. Kundzewicz
153 # **1868.** Drought and record high temperatures in southeast Australia
N. Nicholls & S. Larsen.
154 # **3947.** A Downscale Experiment on the Heavy Precipitation during the Jakarta Flood Event in January-February 2007
S. Otsuka, N. Trilaksono & S. Yoden.
155 # **1971.** The representation of the Southern Hemisphere Semiannual Oscillationâ in the ERA-Interim reanalysis
I. Simmonds & R. Badlan.
156 # **2635.** Connection between asymmetry of monthly mean summer temperature and strongest heat waves: Present day climate and future changes
E. Volodin & A. Yurova.
157 # **1391.** Decadal variation of Arctic Oscillations and their different climatic impacts in winter
Z. Xie & C. Bueh.

IAMAS M02 **Saturday, 2 July 2011**
Chemistry-climate interactions

160 # **3547.** Investigating Biological Sources Of Iodine Emissions In The Sea Ice Zone
H. Atkinson, H. Roscoe, P. Liss & C. Hughes.
161 # **3340.** Modelling stratospheric ozone chemistry impacts on Southern Hemisphere circulation
R. Dargaville, D. Karoly & O. Morgenstern.
162 # **2594.** Impacts of increases in greenhouse gases and ozone recovery on lower stratospheric circulation through 21st century: Comparison with fixed-halogen and climate simulations
M. Deushi & K. Shibata.
163 # **1527.** Tropical Australian aerosol and cloud condensation nuclei (CCN)
R. Fedele, M. Keywood, J. Gras, S. Lawson & N. Porter.
164 # **5705.** The Evolution of Stratospheric Ozone in Sensitivity Studies with the Chemistry-Climate-Model EMAC-FUB
U. Langematz, S. Meul, S. Oberlaender & A. Kubin.
165 # **5184.** Imaging Fabry-Perot Interferometer for Tropospheric Pollution Monitoring
A. Larar
166 # **4411.** On The Use Of In Situ Chemical Tracer Measurements in Diagnosing Chemistry Climate Models
L. Pan, L.A. Munchak, D.E. Kinnison, W.J. Randel, E.L. Atlas, et al.
167 # **3741.** Comparison Between Ground-Based And Satellite H2O Measurements At Observatoire De Haute Provence In France
A. Sarkissian, S. Alkasm & P. Keckhut.
168 # **4945.** 3-D tomographic reconstruction of atmospheric volumes in the UTLS from infrared limb-imager measurements
J. Ungermann, M. Kaufmann & P. Preusse.

IAPSO JP03 **Saturday, 2 July 2011**
Global and regional sea-level change

170 # **4346.** Global Inundation Maps for Sea-Level Rise Increases Between One and Six Meters
D. Braaten, R.J. Rowley, J.C. Kostelnick, X. Li, J. Meisel, et al.

171 # **1471.** Variations in the dynamic sea surface topography at the Southwest Pacific Ocean and Tasman Sea
R. Cunderlik, R. Tenzer, V. Gladkikh & K. Mikula.

172 # **4700.** Sea level changes from altimetry and tide gauges in the south-eastern Australian coastal region
X. Deng, O. Andersen & Y. Cheng.

173 # **5196.** Greenland Ice Sheet Model Intercomparison Experiment for ice2sea
T. Edwards, A. Payne & S. Shannon.

174 # **5197.** Ice2sea – the Future Glacial Contribution to Sea-Level Rise
T. Edwards & D. Vaughan.

175 # **3612.** The Permanent Service for Mean Sea Level in the 21st Century
S. Holgate, A. Matthews, K. Gordon & L. Rickards.

176 # **2805.** Ensemble ice and sea-level change projections with the Earth system model of intermediate complexity LOVECLIM
P. Huybrechts, H. Goelzer, S. Raper, M.F. Loutre & T. Fichefet.

177 # **1113.** Caribbean Sea Level Variability
L. Jackson & J.E. Mound.

178 # **2182.** Global Mean Sea Level Change over 1993 – 2010 from Multi-altimetric Measurements
T. Jin, J.C. Li, W.P. Jiang & H.J. Wen.

179 # **5402.** Pacific Sea Level Variability Simulated in a Global Ocean Circulation Model
H. Kang & O. Seo.

180 # **2458.** Tracing the Upper Ocean's 'Missing Heat'
C. Katsman & G.J. van Oldenborgh.

181 # **1300.** Caspian sea level change and coastal dynamics of the Cheleken peninsula
R. Kurbanov, V. Kulikova & N. Moiseeva.

182 # **1988.** Decomposition of Sea Level Rise in the Southern North Sea
H. Moser, H. Hein, S. Mai & U. Barjenbruch.

183 # **78.** Sea Surface Dynamics in the Gulf of Thailand and South China Sea using altimetry data
S. Niemnil, M. Naeije & I. Trisirisatayawong.

184 # **726.** Sea Level Rise In Southeast United States
J. O'Brien

185 # **5492.** Decadal variability of sea level in the Mediterranean Sea in connection with local climate and large-scale climate indicators.
F. Raicich

186 # **1941.** Non parametric estimation of the sea state bias in Jason-1 measurements and their effect on Mediterranean mean sea surface height
A. Rami, S. Kahlouche, M. Haddad & M. Bakhti.

187 # **3749.** Response Of Greenland Ice Sheet To Global Warming Simulated By A High-Resolution Ice Sheet Model
F. Saito, A. Abe-Ouchi & K. Takahashi.

188 # **3579.** Long-Term Regional Sea Level Change Due To The Changes In Water Mass Quality For The Period 1995-2005
T. Suzuki & M. Ishii.

189 # **3218.** Analysis of the Sea Level Changes in New Zealand
R. Tenzer & V. Gladkikh.

190 # **3867.** COASTALT: Coastal Altimetry Contributes to Regional Sea Level Monitoring
P. Woodworth, P. Cipollini & J. Benveniste.

191 # **2357.** Regional sea-level change projection in the tropical Pacific under global warming
X. Zhang, J. Church, D. Monselesan & S. Platten.

IAPSO P05 **Saturday, 2 July 2011**
New insights from Sustained Ocean Observing Systems

195 # **1214.** Indonesian Throughflow Eddies and Heat Fluxes into the Tropical Indian Ocean: Comparison of Satellite and In-Situ Data with Model Output
A. Delman, J. Sprintall, J. McClean & L. Talley.

196 # **1645.** RAPID 26N: towards a Decade-Long Time Series of Observations of the Meridional Overturning Circulation
E. Frajka-Williams, S. Cunningham, D. Rayner & H. Bryden.

197 # **2790.** The autonomous expendable instrument system (AXIS)
D. Fratantoni

198 # **5040.** Variations in the Tsushima Warm Current through the Tsushima Straits from 10 Years of ADCP Observations
K. Fukudome, J.H. Yoon, A. Ostrovskii & T. Takikawa.

199 # **5757.** Utilization of coastal radars for monitoring sea ice drift and deformations
J. Haapala, I. Heiler, J. Karvonen, M. Lensu & A. Niemi.

200 # **4404.** Australia's Integrated Marine Observing System (IMOS) – meeting the needs of the marine and climate research community
K. Hill, M. McGowen, T. Moltmann & R. Proctor.

201 # **4669.** Characteristics of summer shallow mixed layer development in the North Western Pacific Ocean using Gridded Argo Mixed layer Depth Dataset (MILA GPV)
S. Hosoda

202 # **4882.** Coastal Sea Surface Height Monitoring in the Tsushima Strait
K. Ichikawa, A. Morimoto, Y. Yoshikawa, K. Fukudome & JH. Yoon.

203 # **5919.** Topografically induced internal waves in the Northeast Atlantic Ocean
V. Melnikov

204 # **1996.** Evolving Methodologies in a Coastal Observatory
M. Palmer, J. Polton, C. Mahaffey, J. Howarth & P. Knight.

205 # **2505.** A contribution to the Mediterranean Sea water and heat budget definition: links between the Tyrrhenian and the Ligurian Seas
S. Sparnocchia, K. Schroeder, L. Coppola, G.P. Gasparini & M. Borghini.

206 # **884.** An Application of Self-Organising Maps Method in Recent Adriatic Environmental Studies and Its Perspectives
I. Vilibic & H. Mihanovic.

207 # **5031.** Recent Findings from an Intensive Ocean Monitoring System in the Tsushima Strait
Y. Yoshikawa, K. Ichikawa, K. Fukudome, J.H. Yoon, T. Matsuno, et al.

IASPEI Saturday, 2 July 2011
JS03 Scientific Results from Seafloor Networks

210 # **5166.** Submarine landslide-induced tsunami recorded by ocean-bottom pressure gauges during an earthquake on 11 August 2009 in Suruga Bay, Japan
T. Baba, H. Matsumoto & Y. Kaneda.

211 # **5548.** Long-term monitoring of gas seepage at the submarine North Anatolian Fault (Marmara Sea, Turkey)
P. Favali, G. Marinaro, D. Embriaco, G. Etiope, F. Frugoni, et al.

212 # **5601.** EMSO: European Multidisciplinary Seafloor Observatory
P. Favali

213 # **5605.** Tsunami Detector Prototype for Near-shore Generation Areas Tested in Stand-alone and in Cabled Seafloor Observatories
P. Favali, F. Chierici, L. Pignagnoli, D. Embriaco, G. Marinaro, et al.

214 # **5613.** Experiment in Antarctica with MABEL Seafloor Multidisciplinary Observatory
P. Favali, G. Falcone, G. Marinaro, G.B. Cimini, F. Frugoni, et al.

215 # **2903.** Seismic Properties of a South Korean Navy Vessel Sinking and North Korean Nuclear Explosions
T. Hong & S. Rhee.

216 # **5404.** Natural Hazards Mapping of the Great Lakes with Ocean Bottom Seismographs
Y. Kontar

217 # **5491.** Modeling of seismic wave propagation for ocean-floor data observed with the DONET system
T. Nakamura, H. Takenaka, T. Okamoto, M. Nakano & Y. Kaneda.

218 # **2142.** Australian Bathymetry Data Status and Future
M. Spinoccia

IASPEI, IAVCEI Saturday, 2 July 2011
JS04/JV03 Physics and Chemistry of Earth Materials with Implications for Earth Structure and Processes

127 # **5623.** A Minor Variation of the Upper Mantle Processes in the Tertiary Japan Margin: Implications from the Petrology of the Nobi Beach Peridotite, the Circum-Izu Massif Peridotite in the Central Japan
N. Abe

128 # **1548.** Red Metagranites of the Gennargentu Igneous Complex: Evidence of SiO2-K2O-rich silicate melt re-mobilisation
A. Giuliani, M. Gaeta, S. Perilla & V. Misiti.

129 # **3483.** Role of water in continental melting
P. Hasalova & R.F. Weinberg.

130 # **103.** Heat flow Evolution of Sichuan Basin during Permian-Triassic
L. He & J. Wang.

131 # **5257.** Some Aspects of the Behaviour of Calcite Rocks in Deformation Experiments
S. Mehrabian & S. Mizani.

132 # **3981.** Wave Velocity Measurements at 1 GPa up to 1000°C Using Ultrasonic Interferometry
B. Poe, P. Del Gaudio, A. Iarocci & P. Scarlato.

133 # **1340.** Growth and Recrystallization of Diamond in the Upper Mantle
E. Rubanova, W. Griffin & S. O'Reilly.

134 # **1392.** Analysis of thermal pressure for geophysical minerals using phenomenological equations of state
K.S. Singh

135 # **1393.** Analysis of volume dependence of the Gruneisen parameter for the lower mantle and core of the earth
K.S. Singh

IASPEI Saturday, 2 July 2011
S08 Seismic Hazard and Risk – The Global Earthquake Model

220 # **2856.** Are different ground motion prediction equations required for the Appalachians of eastern North America?
J. Adams, A. Bent & W. Edwards.

221 # **3467.** Improved Earthquake Hazard Assessment for Indonesia
P. Cummins, S. Hidayati, I. Meliano, D. Natawidjaja, S. Suhardjono, et al.

222 # **5547.** Seismic hazard of Po River levees
R. Daminelli, D. Gerosa, A. Marcellini, A. Tento & L. Villa.

223 # **120.** Estimation of Site response parameters for Kochi City India – Seismic Microzonation
D. Shanker, A. Kumar, H.N. Singh, V.N. Neelakandan & V. Shravan Kumar.

224 # **955.** Global Instrumental Seismic Catalog. I Early Instrumental Period: 1900-1963
A. Villasenor, E.R. Engdahl, I. Bondar & D. Storchak.

225 # **1069.** Relationships Between Earthquakes and Mapped Faults
D. Weiser

IASPEI Saturday, 2 July 2011
S10 Physics of the seismic process: from laboratory studies to field observations

228 # **845.** Evaluation Of Seismicity In The Western And Central Himalayas
U. Ghosh & P. Bhattacharya.

229 # **5339.** Using Elastic Wave Modelling to learn more about the M5.4 Alum Rock Earthquake of 2007
M. Hildyard, J. Bedford & N. Houlie.

230 # **5252.** Co-seismic Processes in the Area of the Sumatra December 2004 and March 2005 Earthquakes Revealed by GRACE and GPS Data
V. Mikhaylov, I. Panet, F. Pollitz, M. Diament, P. Banerjee, et al.

231 # **2429.** Depth-recursive Tomography Reveals the Focal Zones of West Bohemia Earthquake Swarms and their Sealing Caps as Distinct Low and High-velocity Anomalies
M. Novotny, A. Spicak & F.H. Weinlich.

232 # **5434.** Modelling of geoacoustic emission's zones and dilatancy of rocks
A. Perezhogin

233 # **2424.** Properties Of Seismic Swarm Dynamics
A. Ponomarev, M. Potanina, V. Smirnov & P. Bernard.

234 # **2217.** Computational Aspects of Earthquake Simulations
J. Rundle, E. Heien, B. Yikilmaz, D.L. Turcotte & L.H. Kellogg.

IASPEI Saturday, 2 July 2011
S17/S18 Earthquakes and public health / Using NMSOP and other educational modules and tools for online and in-person training courses

237 # **3144.** Risk Analysis of Deterioration of the Health State of People Who Have Undergone Earthquakes
S. Bayda

238 # **3107.** CERG-C: a multidisciplinary in-person training on the assessment and management of geological and climate related risk
C. Frischknecht, C. Bonadonna, D. Consuegra, D. Faeh, C. Gregg, et al.

239 # **3781.** Crustal structure of the Dead Sea basin from local earthquake tomography
R. Hofstetter, C. Dorbath & M. Calò.

240 # **2154.** A National Seismometers in Schools project in Australia
M. Sambridge & SIS team.

241 # **5376.** The IASPEI Standard Seismic Phase List
J. Schweitzer, P. Bormann & D. Storchak.

IAVCEI Saturday, 2 July 2011
JV05 Using Geodesy on Volcanoes to Understand Volcanic, Tectonic, and Hydrothermal Forces

245 # **4333.** Geodesy on Concepcion volcano (Nicaragua)
M. Berrocoso, A. Garcia, A. de Gil, M. Navarro, D. Chavarria, et al.

246 # **4334.** The spatial inclinometer and spatial dilatometer and its application to study the deformation of Deception volcano (Antarctica)
M. Berrocoso, G. Prates, LM. Pecci, A. Fernandez-Ros, A. de Gil, et al.

247 # **5835.** Inflation and Deflation of the Krísuvík Geothermal Area, SW Iceland, from 2009 to Present
S. Hreinsdottir, K. Michalczewska, T. Arnadottir, P. Einarsson, G. Gudmundsson, et al.

248 # **4529.** InSAR and tilt constraints on Kilauea volcano deflation-inflation event source models
P. Lundgren, M. Poland, A. Miklius & S.H. Yun.

249 # **4414.** Crustal Deformation of Miyake-jima Volcano Detected by New InSAR Time-Series Analysis
T. Ozawa & H. Ueda.

250 # **3775.** A Combination of InSAR and Soil Gas Measurements for Determining the Background Behaviour of the Quiescent Santorini Volcano
M. Parks, J. Biggs, T.A. Mather, D.M. Pyle & M. Edmonds.

IAVCEI Saturday, 2 July 2011
JV08 Remote Sensing of Volcanic Hazards and the Risk to Global Aviation

254 # **3890.** Recent Volcanic Ash in Costa Rica. Intermittent but Damaging.
E. Duarte & E. Fernandez.

255 # **3883.** Volcanic Plume-Top Altitudes during the Eyjafjallajökull 2010 Eruption
M. Roberts, P. Arason, H. Bjornsson & G.N. Petersen.

256 # **3827.** The Impacts of Volcanic Ash Fall on Critical Infrastructure Systems
V. Sword-Daniels, T. Rossetto, J. Twigg, D. Johnston, T. Wilson, et al.

257 # **5908.** Resuspension of Volcanic Ash in South Iceland After the Eruption of Eyjafjallajökull Volcano 2010
K.S. Vogfjord, S. von Loewis, K. Weber, C. Fischer & A. Vogel.

IAVCEI, IASPEI Saturday, 2 July 2011
JV12/JS08 Volcano Seismology

260 # **3892.** Changes in the Seismic Activity of Yasur Volcano (Vanuatu) Induced by a M=7.3 Earthquake as Seen by Coda Wave Interferometry
J. Battaglia, J.P. Metaxian & E. Garaebiti.

261 # **1768.** Mud volcanic phenomena in North-Western Caucasus: results of complementary geological and geophysical studies
S. Fedotov, A. Sobisevich, V. Kovalevsky, A. Gorbatikov, B. Glinsky, et al.

262 # **4831.** Stress field during dyke intrusion stage in Miyake Volcano 2000 eruption
Y. Kohno, E. Fujita, H. Ueda, T. Tanada & M. Ukawa.

263 # **3692.** The New Geophysical Observatory in Northern Caucasus (Elbrus Volcanic Area) and Results of Analysis of Multi-parameter Streams of Experimental Data
V. Kovalevskiy, L. Sobisevitch, A. Sobisevitch, K. Kanonidi & I. Filippov.

264 # **4154.** Analysis of Some Recent VT Swarm Activity on the Soufriere Hills Volcano, Montserrat
V. Miller, C.J. Ammon, B. Voight & S. De Angelis.

265 # **741.** A Model of the Eruptive Process at Colima volcano (western Mexico) based on the Analysis of the Associated Seismic Signals of Vulcanian Explosions for the 2003-2005 Eruptive Period.
F.J. Nunez Cornu, R. White & C. Suarez Plascencia.

266 # **5580.** Waveform parameters of volcano seismic events by the triangle diagram
V. Saltykov, Y. Kugaenko & I. Nuzhdina.

267 # **2270.** Ocean noise triggering of rhythmic long period events at Deception Island volcano
D. Stich, J. Almendros, E. Carmona, F. Mancilla, P. Danecek, et al.

268 # **3031.** Three-dimensional P-wave velocity structure revealed by seismic experiment at Sakurajima volcano, Japan
T. Tameguri & M. Iguchi.

269 # **5878.** Volcanic tremor triggered by shockwaves
K.S. Vogfjord, K. Jonsdottir, C. Bean & M. Ripepe.

Poster Social 1800 – 1900
Poster & Exhibition Area, Ground Floor

Join fellow delegates to enjoy canapés and refreshments while roaming among the posters and exhibits. The Poster Social Sessions give general assembly attendees a unique opportunity to learn more about the research being supported by the IUGG 2011 scientific program.

SUNDAY, 3 JULY 2011

IUGG Sunday, 3 July 2011
U01 Science & Nuclear Test Ban Monitoring

1 **# 5110.** Network Performance of the CTBT Monitoring Regime
J. Carter, M. Krysta, R. Le Bras, P. Mialle, M. Nikkinen, et al.
2 **# 5570.** Capacity Building in the Context of the Comprehensive Nuclear-Test-Ban Treaty
J. Coyne, L. Zerbo & B. Djermouni.
3 **# 5571.** Infrasound Calibration in the Eastern Mediterranean
J. Coyne, J. Given, P. Grenard & L. Zerbo.
4 **# 4195.** Interdisciplinary Research in Seismology and Infrasound
C. De Groot-Hedlin, K. Walker & M. Hedlin.
5 **# 5975.** The CTBTO hydroacoustic monitoring network
A. Forbes, P. Grenard & G. Haralabus.
6 **# 3881.** Large-Scale Controlled Surface Explosion Sources At Sayarim, Israel, For IMS Infrasound Calibration
Y. Gitterman
7 **# 5704.** Science and Technology Foresight for the Provisional Technical Secretariat of the CTBTO
P. Grenard & P. Steeghs.
8 **# 5725.** The CTBTO hydroacoustic monitoring network
A. Forbes & G. Haralabus.
9 **# 4077.** Studies of Infrasonic Propagation Using Dense Seismic Networks
M. Hedlin & C. de Groot-Hedlin.
10 **# 4986.** New hybrid broadband sensors for the NORSAR arrays
J. Schweitzer, M. Roth, J. Fyen & P.W. Larsen.

IAG Sunday, 3 July 2011
JG04 Structure and Deformation of Plate Interiors

13 **# 2351.** Inversion of Crust Effective Viscosity in Tibet Based on the Velocity Derived from GNSS
Y. Dang & Q. Yang.
14 **# 2234.** Seismic Velocities and Basin Lithology within a Petroleum Framework
A. Goncharov, G. Nelson & S. Johnston.
15 **# 1574.** 3-D simulation of tectonic evolution around the Kanto Region of Japan due to the collision of the Izu-Bonin Arc
A. Hashima, T. Sato, T. Ito & T. Miyauchi.
16 **# 2175.** High Sensitive tilt measurements near TRIES Research Laboratory, Japan
G. Jentzsch, M. Queitsch, A. Weise, H. Ishii & Y. Asai.
17 **# 1940.** Separation of sources and 3D gravity data inversion for the Thuringian Basin
G. Jentzsch, T. Jahr & I. Prudkin.
18 **# 5595.** The orogeny of Taiwan from Absolute Gravimetry and GPS: observation and model
R. Kao, C. Hwang, C.W. Lee, F. Masson, R. Bayer, et al.
19 **# 4546.** Style of Shortening Deformation Along the Eastern Margin of Niigata Basin, Central Japan
N. Kato, H. Sato & T. Ishiyama.
20 **# 3678.** Local Diversity Of Contemporary Horizontal Deformation Field Of The Earth's Crust On The Area Of Central Europe Determined From GPS Data
B. Kontny
21 **# 4186.** Constraining Nubia plate rigidity from Continuous GPS observations
R. Malservisi, U. Hugentobler, M. Hackl & R. Wonnacott.
22 **# 3780.** The Italian present-day stress map
P. Montone, M.T. Mariucci & S. Pierdominici.
23 **# 5013.** Monitoring Local Crustal Deformations in Western Finland Using GPS Measurements
M. Poutanen, S. Nyberg & U. Kallio.
24 **# 5383.** Analysis of Ausgeoid09 in South Australia
G. Sandford
25 **# 2739.** A New thermal model of the North American lithosphere
M. Tesauro, M. Kaban, S. Cloetingh & W. Mooney.

IAG Sunday, 3 July 2011
JG05 Integrated Earth Observing Systems

26 **# 4155.** An XML Schema for GGP Data Archiving
J. Barriot, A. Gabillon, Y. Verschelle & M. Aureau.
27 **# 4135.** ICET Activities at the Geodesy Observatory of Tahiti
J. Barriot, Y. Verschelle, L. Sichoix & M. Aureau.
28 **# 1820.** Vietnam magnetic and ionospheric observatories are ready to be integrated in the geoss
H.D. Chau, L.T. Thanh & N.T. Dung.
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P. Novak, J. Dousa, V. Filler, J. Kostelecky, J. Kostelecky (jr), et al.
32 **# 2097.** The GGOS Portal – a "social network" for geodata
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34 **# 1711.** High precision deformation monitoring at the Geodynamic Observatory Moxa/Thuringia, Germany: The new three-component laser-strainmeter assembly
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41 # **1882.** Independent component analysis (ICA) of GRACE-derived Australian hydrological signals
J. Awange, E. Forootan, J. Kusche & B. Heck.

42 # **5739.** Static and time-variable gravity field model EIGEN-6
R. Biancale, C. Foerste, S. Bruinsma, F. Flechtner & J.M. Lemoine.

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W. Bosch & D. Dettmering.

45 # **2274.** Large-scale hydrological variations in Africa observed by the GRACE mission
J. Boy, C.C. Carabajal, D.D. Rowlands, T.J. Sabaka, S.B. Luthcke, et al.

46 # **2634.** Validation of GOCE gravity gradients via the cross-over approach
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49 # **5689.** Long-Term Climate Change Signals From Satellite Gravimetry
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50 # **4320.** Using GRACE-derived estimates of Surface Water storage to constrain River Routing Models in the Amazon River basin
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52 # **4070.** Analysis of noise in the GRACE K-band ranging data
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53 # **5695.** Observing Congo Basin Storage Change Using GRACE
J. Duan, M. Zhong, H. Lee, C.K. Shum, D. Alsdorf, et al.

54 # **2264.** Land Hydrology Compensates Deglaciation-induced Sea-level Rise
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55 # **3063.** Performance analysis of satellite constellations for the next generation of gravity missions
C. Gruber, A. Loecher, J.C. Raimondo, J. Kusche & F. Flechtner.

56 # **3065.** Regional Gravity fields from GRACE observations
C. Gruber, M. Schmeer, I. Daras, F. Flechtner, M. Schmidt, et al.

57 # **3898.** Submonthly GRACE solutions from localising integral equations and Kalman filtering
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60 # **2340.** Separation of the Geodetic Signals of Glacial Isostatic Adjustment and Secular Change of Terrestrial Water Storage in North Europe and North America
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70 # **3465.** Analysis of time variations of the gravity field over Europe obtained from GRACE data in terms of geoid height and mass variations
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72 # **3880.** On Consistence of Seasonal Crustal Deformation Derived from GRACE Data and Hydrology Models and measured by GPS and Absolute Gravimeter at the Jozefoslaw Observatory in Poland
T. Liwosz, M. Barlik, T. Liwosz, T. Olszak & J. Rogowski.

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N. Tangdamrongsub, C. Hwang, C.K. Shum, L. Wang & C. Dai.

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C. Tocho, L. Guarracino & M. Varni.

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H. Wilmes, H. Wziontek & S. Bonvalo.

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Y. Wu, H. Li, Z. Luo, B. Zhong & L. Xing.

98 **# 1874.** Long-term gravity changes in China mainland obtained from GRACE and terrestrial gravity measurements
L. Xing, H. Li, S. Xuan, H. Tan & K. Kang.

99 **# 3575.** Long-arc analysis of satellite gravity data using the dynamic method
X. Xu, J. Li, X. Zou & S. Zhang.

100 **# 2343.** The Analysis of the Gravity Field Recovery from GOCE Nearly Repeated Period Observations Based on the SA Method
X. Xu, J. Li, W.P. Jiang, S.J. Zhang & H. Wu.

101 **# 3008.** A New Approach For Calculating Vertical Deflection of China Sea from Satellite Altimetry
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102 **# 2335.** The optimized method of precise regional quasi-geoid determination
L. Zhang, Y. Dang & C. Zhang.

103 **# 1321.** New Formulation to Compute Co-seismic Gravity Vector Changes and Applied in the 2004 Sumatra-Andaman Earthquake (M9.3)
X. Zhou & W. Sun.

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C. Farias, A.M.G. Lourenço, T.C. Carneiro & T.H.C. Nunes.
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A. Gelfan, L. Sarmento & S. Koide.
125 **# 465.** Elimination of uncertainties in the daily and monthly natural hydrologic time series
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126 **# 205.** Relationship between maximum annual discharge and Standardized Precipitation Index(SPI) in a representative basin of Iran
S. Hejjam & A. Jafari Panah.
127 **# 88.** Interaction of Climate Drivers and their Impact on Australian Rainfall
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130 **# 285.** A Simple Method to Estimate Soil Thermal Diffusivity
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132 **# 461.** Uncertainties resulted from using different hydrological models for assessing the hydrological impact of climate change in different regions
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T. Hosono, M. Taniguchi, W. Burnett, M. Ono, T. Tokunaga, et al.
137 **# 2584.** Factors controlling the temporal variations in mixing rates of groundwater with seawater in a subterranean estuary revealed by 222Rn tracer
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138 **# 350.** Numerical simulation of seawater intrusion by sea level rise due to global warming – a case study of Noubi Plain in Japan –
T. Onishi, S. Okano, K. Hiramatsu, S. Nishimura & H. Shimizu.
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J. Liu, Y. Chen, D. Su, D. Shu & D. Lu.
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F. Okorie, I. Okeke, A. Nnaji, C. Chibo, P. Duru, et al.
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154 **# 2258.** New Distribution Functions for Short-term precipitation during the snowless season in Japan
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M. Eble, G. Mungov, D. Denbo, D. Walsh & K. Stroker.

176 **# 488.** Palaeotsunami magnitude, frequency and source (PMFS) modelling – progress in small steps
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H. Gokon, S. Koshimura, M. Matsuoka, K. Imai & Y. Namegaya.

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K. Goto, J. Takahashi, F. Imamura, T. Takahashi & J.J. Wijetunge.

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Y. Hayashi, A. Weniza & Y. Fujii.

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N. Horspool, O. Nielsen, J. Sexton, J. Griffin & T. Dhu.

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184 **# 3138.** Preliminary Modeling of Tsunami Generation, Propagation and Inundation in the Aegean Sea
U. Kanoglu, N. Kalligeris, E. Flouri, V. Dougalis, B. Aydin, et al.

185 **# 4294.** Signatures of Krakatau Tsunami Recorded by Tide Gauges along the European Atlantic Coast
M. Karpytchev, M. Karpytchev, H. Hebert & G. Woppelmann.

186 **# 2495.** Can GPS Total Electron Content Measurements Be Used to Augment Tsunami Early Warning Systems?
A. Komjathy, D. Galvan & M. Hickey.

187 **# 4599.** 2D and 3D numerical simulation of tsunami inundation by Lattice Boltzmann Method
S. Koshimura, T. Fukui, M. Matsuyama & Y. Suga.

188 **# 4614.** Field survey of the 2010 tsunami in Chile
S. Koshimura, M. Matsuoka, M. Matsuyama, T. Yoshii, E. Mas, et al.

189 **# 5175.** FDTD Computation of Nearfield Tsunami as a Seismic Wave Using Elastodynamic Equation with the Cowling Approximation of Self-Gravitation
T. Kuramoto, H. Takenaka, T. Nakamura, T. Okamoto & G. Toyokuni.

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Y. Nishimura, Y. Nakamura & P. Putra.

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T. Ohata, H. Mikada, T. Goto & J. Takekawa.

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M. Protti, S. Chacon & V. Gonzalez.

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T. Schöne, C. Kahfid, J. Subarya, C. Illigner, R. Zech, et al.

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G. Shevchenko, D. Zolotukhin & I. Tikhonov.

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T. Tachibana & Y. Tsuji.

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198 **# 2992.** A Hybrid Probabilistic and Deterministic Analysis to Assess Tsunami Hazard for the Pacific Coasts of Central America
S. Tinti, A. Armigliato, B. Brizuela & G. Pagnoni.

199 **# 2162.** Atmospheric Forcing of Tsunami-like Long Period Sea Level Oscillations along the Coast of Vancouver Island, British Columbia
S. Tinti, J. Sepic, I. Fine, A.B. Rabinovich & R.E. Thomson.

200 **# 3234.** Accuracy of tsunami numerical simulation with high-resolution topographic data
R. Tsudaka, Y. Shigihara & K. Fujima.

201 **# 4693.** Near-field tsunami forecasting from ocean bottom pressure and onshore GPS data
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H. Hase & M. Uyeshima.

206 **# 4514.** Resistivity Structure Around the Aira Caldera, SW Japan, Inferred from the Magnetotelluric Measurements
W. Kanda, T. Kasaya, H. Yakiwara, H. Ichihara, T. Hashimoto, et al.

207 **# 5263.** On the Heterogeneous Electrical Structure Around Earthquake Swarm Region
R. Yoshimura, N. Oshiman, T. Kasaya, Y. Iio & K. Omura.

208 **# 2035.** Hydrothermal systems, ground fluid flow and geological discontinuities inferred by self-potential surveys over several active volcanoes; long term evolution
J. Zlotnicki, Y. Sasai, M.J.S. Johnston & Y. Nishida.

209 **# 2588.** Crypto-domes, Intrusions and Hydrothermal System Characterised by 3D Geomagnetic Inversion and VLF-EM in an Active Volcano (El Chichón, Mexico)
M. Jutzeler, M. Roache & N. Varley.

210 **# 5986.** Acoustic monitoring at active seafloor volcanoes using autonomous underwater vehicle
H. Kumagai, T. Kasaya, M. Asada & M. Kinoshita.

211 **# 3965.** Mixed Electrical Conduction in Hydrous Natural Silicate Liquids
B. Poe, D. Di Genova, C. Romano, D. Dingwell, H. Behrens, et al.

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6 **# 2352.** A New Newton-Type Iterative Formula of the Ranging Positioning Equations
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7 **# 5222.** Petrophysical characterisation lithology identification of Beda formation, Sirt basin, Libya using well logging records
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26 **# 3216.** The average subsurface rock density in New Zealand estimated using the QMAP and PETLAB datasets
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54 **# 705.** Interpretation of Ground Magnetic Anomalies around Some Parts of Ilesha Southeastern Schist Belt Southwestern, Nigeria.
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55 **# 4718.** Dayside Outer Magnetosphere Pc2 EMIC Waves: CLUSTER and Ground Observations
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57 **# 6031.** The Ages and Mechanism of Monogenetic Volcanoes of the Bajawa Volcanic Complex, East Nusa Tenggara, Indonesia
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81 # **1678.** Plate boundary deformation following the December 26, 2004 Andaman-Sumatra Earthquake revealed by Global Positioning System Observations and Moment Tensor Solutions
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82 # **1119.** Seismotectonics and geodynamics of northeast Himalaya region from GPS observations
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83 # **3748.** b- Value and Energy Release Pattern in Seismogenic Region of Nepal Himalaya and vicinity – Paradigm of Earthquake Hazard
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84 # **3937.** Viscous Lithospheric Structure beneath Sumatra Inferred from Post-seismic Gravity Changes Detected by GRACE
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85 # **802.** Inverse analysis of crustal deformation using GPS measurements before and after Wenchuan 8.0Ms earthquake
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98 # **1057.** A Comparison between FFT and numerical integration of the geoid model in the state of Sao Paulo – Brazil
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99 # **4230.** On the Determination of the Offset in the South Korean Vertical Datum with respect to a global datum
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100 # **2226.** The solution of ill-posed problem in downward continuation of airborne gravity data
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101 # **2430.** The Update of Korean Precision Geoid Model
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102 # **5168.** Analysis of two geoid computation methods in a oceanic high relief area.
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103 # **5115.** GOCE and the geoid in South America
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Z. Sima, M. Bursa, S. Kenyon, J. Kouba, Vi. Vatrt, et al.

112 # **3214.** Joint adjustment of the levelling networks in New Zealand using levelling, tide-gauge, and EGM2008 gravity data
R. Tenzer, A. Abdalla, L. Gan & M. Amos.

113 # **3212.** The differences between the normal, orthometric, and normal-orthometric heights in New Zealand
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115 # **2729.** Geoid determination using heterogeneous data under the theory of integrated geodesy
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129 **# 4344.** Propagation characteristics of Pc1 geomagnetic pulsations at subauroral and low latitudes
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130 **# 2519.** ULF wave propagation influences on Ionospheric Doppler velocity variation modeling
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131 **# 2641.** Evidence of Pc3-4 Cavity Modes Observed in CHAMP Satellite Magnetometer Data
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132 **# 3620.** A Case Study of Upstream Wave Transmission to the Ground at Very High and Low Latitude
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134 **# 2959.** Dislocations in magnetic minerals
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137 **# 621.** Ionospheric Plasma Bubbles Dynamics in the Brazilian Sector Using OI 630.0 nm Emission Imaging
J. Abalde, P. Fagundes, Y. Sahai, J. Bittencourt, V. Pillat, et al.
138 **# 1030.** Quiet time Variability of Daytime Vertical ExB Drift in the Indian Sector
A. Patra
139 **# 1800.** Climatological Study of the Es-Layers Behavior over Equatorial Region during Disturbed Periods of Solar Cycle 23
L. Resende, C. Denardini, I. Batista, J. Moro & L. Guizelli.
140 **# 1094.** Comparison between the Total Electron Content (TEC) and the foF2 frequency over an Equatorial region during a solar maximum (year 2000) and minimum (year 2008) using GPS and Ionosonde measurements
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141 **# 2715.** The impact of sudden stratospheric warming on low latitude ionosphere over Brazil
I. Batista, M.A. Abdu, P. Nogueira, R. Paes, J. Souza, et al.
142 **# 1139.** Atmosphere – Ionosphere Coupling at low latitudes by 16 day waves
D. Ramani & G. Subramanian.
143 **# 1060.** Differences in the Cosmic Noise Absorption as seen by SARINET during Sept. 3, 2008 Moderate Geomagnetic Storm
J. Moro, E. Correia, C. Denardini, M. Abdu, N. Schuch, et al.
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A. Santos, A. Abdu & J. Sobral.

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152 **# 5773.** A New Magnetic Observatory on South Georgia
E. Clarke, T. Harris, S. Flower, C W. Turbitt & A. Swan.
153 **# 5770.** Jim Carrigan Observatory and Directional Drilling in Alaska
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155 **# 5633.** Investigation of the magnetic field dynamics at the arti obervatory and manchazh puligon
P. Martyshko, N. Fedorova, O. Kusonskii & A. Bebnev.
156 **# 4711.** Geomagnetic field measurement at the Cheongyang Observatory in Korea
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N. Kawano
162 **# 1132.** Integrated real time flood forecasting with Extended Kalman filter and meta-Gaussian error modeling on the Lo river basin (Vietnam)
R. Ranzi, H.S. Nguyen, S. Barontini, M.C. Vu, G. Grossi, et al.

IAHS **Monday, 4 July 2011**
JHW03 **Impacts of changing climate, snow and ice on mountain hydrology**

165 **# 597.** The effect of Cryosphere change on hydrology and ecosystem in China
Y. Ding, S. Liu, B. Ye, L. Zhao & Q. Zhao.
166 **# 4618.** Changing Hazards and Snow Conditions at 2 ka and the Present Determined from Debris-flow Deposits at Misti Volcano, Southern Peru
C. Harpel, S. de Silva & G. Salas.
167 **# 4722.** Climate Driven Changes of Hydrological Dynamics in Tributary Catchments of the Endorheic Glacial-fed Nam Co, Tibet
J. Helmschrot, S. Biskop & P. Krause.
168 **# 1857.** Climate Change and the Great Snowforest of Canada
H. Knudsvig, T. Mlynowski, S. Dery & D. Coxson.
169 **# 469.** Groundwater temperature increase and isotope trends in porous aquifers and springs: Difficult parameters in climate change research
M. Kralik
170 **# 5514.** A hydrological simulation using downscaling output data for the Lena River basin
X. Ma, M. Hara & K. Suzuki.
171 **# 4603.** Snow chemical study in the Japan Alps
K. Suzuki

IAHS **Monday, 4 July 2011**
HW06 **Expert judgement versus statistical goodness-of-fit for hydrological model evaluation**

174 **# 3315.** The Effectiveness of Hydrological Models Sreamflow Prediction With Better Representations Of Data And Model Uncertainties: Incorporating Sequential Monte Carlo Sampler With Hierarchical Mixtures Of Experts.
E. Jeremiah, A. Sharma, L. Marshall & S. Sisson.
175 **# 524.** Performance of a conceptual model in a complex river system and with scarce data: Case of Letaba River system
Z. Katambara & J. Ndiritu.

IAHS **Monday, 4 July 2011**
HW08 **Tracer hydrology as a tool for estimating flow parameters, groundwater dynamics, pollution transport and bioremediation processes in heterogeneous systems**

178 **# 2015.** Distribution of oxygen-18 and deuterium in streamwaters across Japan
M. Katsuyama, T. Yoshioka & E. Konohira.
179 **# 2292.** Isotopic Assessment Of Groundwater-Wetlands Dynamics, Pollution Sources And Natural Attenuation Processes In A Sector Of The Doñana Ramsar Site, SW Spain
M.S. Manzano, H. Higueras, E. Custodio, I. Juárez, R. Aravena, et al.
180 **# 1510.** Simplified Mathematical Models for Tracer Transport in Layered Aquifer Systems
R. McKibbin, A. Ali & W. Sweatman.
181 **# 2507.** Continuous Variation of Mean Transit Time with Streamflow at Toenepi Catchment Shown by Tritium Measurements
M. Stewart, U. Morgenstern & R. Stenger.

IAHS **Monday, 4 July 2011**
HW14 **Education in the hydrological sciences**

120 **# 5504.** Teaching Hydrological Modelling as a Subsidiary Subject
K. Bieger, G. Harmann & N. Fohrer.
121 **# 328.** Virtual Boat of Knowledge for Water Resources Education
T. Chang, A. Copley, Y. Fang, R. Capper & B. Blevins.
122 **# 1398.** Public participation in measuring the rainfall, provides adequate measurement and water education
S. Sarah

IAMAS **Monday, 4 July 2011**
JM10PS2 **Monsoons, Tropical Cyclones and Tropical Dynamics – Tropcial Cyclones**

124 **# 5827.** Tropical cyclone count forecasting using a dynamical Seasonal Prediction System: sensitivity to improved ocean initialization
A. Alessandri, A. Borrelli, S. Gualdi, E. Scoccimarro & S. Masina.
125 **# 1564.** The Combined Influence of El-Nino and Western North Pacific Tropical Cyclone Activity on the Rainfall over Monsoon Asia during Active Tropical Cyclone Season of July to October
M. Ariffin
126 **# 5495.** Typhoon Rainfall in Taiwan: Interactions among TCs, terrain, and monsoons
C. Chang, Y. Yang & H. Kuo.
127 **# 6048.** Satellite altimetry sees large tropical cyclone Yasi towards Queensland, Australia
X. Deng
128 **# 1575.** A Bayesian seasonal forecast model of Australian region tropical cyclone formation
N. Holbrook & A. Werner.
129 **# 1331.** Interaction between a Simulated Typhoon-like Vortex and Purely Thermal Perturbations
H. Hong, C. Xuejing & Z. Ming.
130 **# 1239.** Upper Ocean Response to Tropical Cyclones in Western North Pacific
J. Jiang & Q. Qian.
131 **# 4508.** Relationship between Rainfall Intensity and Pressure Fall Rate of Tropical Cyclones Examined Using GSMaP Precipitation Data
Y. Kodama & K. Nomura.
132 **# 2657.** Seasonality of Super Typhoon activities in the Western North Pacific
C.Y. Li & W. Zhou.
133 **# 1145.** Comparisons of the Pressure Wind Relationship for Tropical Cyclones in Three Major Ocean Basins and Data from Two Different Centers
S. Moten
134 **# 4068.** Structure and Evolution of Developing and Non-developing African Easterly Waves during NAMMA
N. Ramos, S.C. Aberson & V. Morris
135 **# 1479.** Westerly Wind Bursts and their Relationship with ENSO in CMIP3 Models
A. Seiki, Y.N. Takayabu, T. Yasuda, N. Sato, C. Takahashi, et al.
136 **# 1337.** The research on tracks and Characteristics of Binary Tropical Cyclones Interaction over the Western North Pacific Ocean
H. Xiaogang

IAMAS **Monday, 4 July 2011**
M14 **Stratospheric processes and their role in climate focused on the Southern Hemisphere**

140 **# 4253.** Decadal Changes In Downward Stratosphere-Troposphere Wave Coupling In The Southern Hemisphere And The Role Of Ozone Depletion
N. Harnik, T. Shaw & J. Perlwitz.

141 **# 3277.** Long-term Behaviour of Zonal Asymmetry in Antarctic Stratospheric Ozone
A. Klekociuk, J. Siddaway, S. Alexander, S. Petelina, A. Grytsai, et al.

142 **# 963.** Assessing the influence of ozone hole depletion and recovery on Southern Hemisphere hydrological climate change
A. Purich, S.W. Son & J. Derome.

IASPEI **Monday, 4 July 2011**
JS02 **Heat Flow, Tectonics, and Geothermal Energy**

145 **# 2407.** Ground-air temperature coupling: Results of long-term temperature-time monitoring at two experimental borehole sites in the Czech Republic
V. Cermak, J. Safanda, P. Dedecek & M. Kresl.

146 **# 2297.** Rock heterogeneity imaged by on the optical scanning of thermal conductivity
C. Clauser, R. Jorand & C. Vogt.

147 **# 2285.** Rock Permeability Estimation based on Chemical Tracer Observation using Ensemble Kalman Filtering – the Soultz-sous-Forêts Case
C. Clauser, G. Marquart & C. Vogt.

148 **# 663.** A Role of Thermal Effusivity in Heat Transfer through the Upper Active Layer
D. Demezhko & A. Kotlovanova.

149 **# 2448.** Searching for a Better Place to Demonstrate Geothermal Power in China
S. Huang, M. Feng, Y. Chen, C. Jin & X. Li.

150 **# 1007.** Measurements of thermal conductivities under high pressure in core samples from an ocean scientific drilling project
W. Lin, O. Tadai, T. Hirose, W. Tanikawa, M. Takahashi, et al.

151 **# 2420.** An example of air-ground temperature coupling and shallow subsurface thermal regime: data from Portugal, Slovenia and Czech Republic
J. Safanda, A. Correia, D. Rajver, P. Dedecek, V. Cermak, et al.

IASPEI **Monday, 4 July 2011**
JS09 **Electromagnetic Studies of Earthquakes, Active Faulting and Tsunamis**

153 **# 1178.** Astro-Tectonic Coordinate System And The Results Of Subterranean Electrical Measurements On Kamchatka And Italy
V. Bobrovskiy, F. Stoppa & G. Iezzi.

IASPEI **Monday, 4 July 2011**
JS10 **Electromagnetic studies of active processes using space technology**

154 **# 5010.** Coseismic Ionospheric Disturbances in the Southern Hemisphere
E. Astafyeva & P. Lognonne.

IASPEI **Monday, 4 July 2011**
S02 **Triggered and Induced Seismicity**

156 **# 918.** Evidence That The 2008 Mw7.9 Wenchuan Earthquake Could Not Have Been Induced By The Zipingpu Reservoir
K. Deng & S. Zhou.

157 **# 2203.** Reservoir Triggered Seismicity in Brazil
G. Franca, C. Chimpliganond & M. Von Huelsen.

158 **# 3102.** The Artificial Impact to the Medium and Possibilities to Manage Its Stressed State
I. Kerimov & S. Kerimov.

IASPEI **Monday, 4 July 2011**
S07 **Strong Ground Motions; their source, path, and site effects**

160 **# 2866.** The June 23 2010 Mw 5.0 Val-des-Bois, Quebec intraplate earthquake generated the strongest shaking in Ottawa's history
J. Adams, S. Halchuk, S. Hayek, J. Drysdale & L. Lin.

161 **# 3649.** Determination The Site Characteristics Of KMA Seismic Stations Using Microtremor Data
K. Hye Seon, T.S. Lee, S.C. Park & B.G. Jo.

162 **# 1046.** Site Effects Assessment Using Empirical Methods in Tehran, Iran
S. Mehrabian & M. Rafiei Gazani.

163 **# 1884.** Evaluation of Efffect of strong ground motion on Residual Drift of Steel Frames Designed with Direct Displacement-Based Design Method
E. Moaddab, A. Kiani, S. Manie & B. Hoseini hashemi.

164 **# 4370.** Seismic ground rotations from the wave passage effects – a stochastic approach
Z. Zembaty

IASPEI **Monday, 4 July 2011**
S09 **Earthquake Early Warning Systems**

166 **# 1756.** Test of a threshold-based Earthquake Early Warning method using Japanese data
S. Colombelli, O. Amoroso, A. Zollo & H. Kanamori.

167 **# 945.** Potensial Issued of Earthquake Early Warning and Decision Support System (Lesson from Tasikmalaya Earthquake, West of Java)
H. Gunawan, N. Puspito & G. Ibrahim.

168 **# 3563.** Improved Combination of Multiple Stations for Magnitude Estimation in Earthquake Early Warning Systems
M. Hildyard & M. Braim.

169 **# 3445.** Expectation of ground motion using real time data of neighbor stations -A method of seismic intensity expectation without earthquake source parameters in EEW-
M. Hoshiba

170 **# 5890.** Seismic Early Warning in Iceland
K.S. Vogfjord, E. Kjartansson & H. Sveinbjornsson.

IASPEI Monday, 4 July 2011
S12 Episodic Tremor, Slip, and Large Earthquakes

173 # **5392.** Detection of short-term slow slip events in southwestern Japan using GPS data
T. Nishimura & H. Suito.

174 # **5622.** Depth-dependent behaviour and interaction of slow earthquakes along the plate interface in Nankai subduction zone
K. Obara, T. Matsuzawa, H. Hirose, Y. Asano, S. Tanaka, et al.

175 # **4828.** Complementarity of Coseismic slip, Afterslip and Slow Slip on the Western Nankai Trough Plate Boundary
T. Sagiya & H. Okazaki.

176 # **3067.** Existence of Interplate Aseismic Slip around 1990 in Bungo Channel, Southwest Japan, Inferred from Continuous Observations of Strain in a Vault
K. Yamazaki, M. Teraishi, Y. Sonoda, S. Komatsu & N. Oshiman.

IAVCEI Monday, 4 July 2011
JV02 Forecasting and Monitoring Volcanic Eruptions

180 # **5898.** Magma movements at Eyjafjallajökull 2009-2010 tracked with high-precision earthquake locations
K.S. Vogfjord, S. Hjaltadottir & R. Slunga.

181 # **5587.** Low-frequency earthquakes at Kizimen volcano, Kamchatka: 2010-2011 explosive eruption
V. Saltykov, Y. Kugaenko & I. Nuzhdina.

182 # **4911.** Continuous monitoring of Sakurajima and Kirishima volcanoes by means of RADARSAT-2
H. Sasaki, M. Sakagami, S. Fujiwara, T. Sato, A. Kasuga, et al.

183 # **2406.** Monitoring volcanoes by Self-Organizing Map (SOM) analysis
R. Carniel, L. Barbui, A. Jolly & S. Sherburn.

184 # **3079.** Enhancement of Monitoring System of Volcanoes in Java and Sumatra, Indonesia under JST-JICA Project
M. Iguchi, T. Nishimura, T. Ohkura, S., M. Hendrasto, et al.

185 # **3638.** Seismic evidence of volcanic unrest in Tenerife Island
A. Garcia, C. Lopez, M. J. Blanco & R. Ortiz.

186 # **3766.** Relation between Regional Tectonic Earthquakes and Volcanic Activity in Canary Islands and Forecasting Implications
R. Ortiz, M. Tarraga, R. Abella, C. Lopez, A. Garcia, et al.

187 # **1193.** Seismic Precursors to Eruptions at Volcanoes in Extensional Stress Fields
R. Wall, C. Kilburn, P. Meredith & P. Sammonds.

188 # **4853.** Ground deformation and gravity monitoring during the 1993-2000 recharging of Mt. Etna: evidences of magma storage, upraise and flank instability
G. Currenti, A. Bonaccorso, A. Bonforte, C. Del Negro & F. Greco.

189 # **5280.** Development of a hybrid ground based volcano deformation observation system
S. Roedelsperger, C. Gerstenecker, G. Laeufer & D. Steineck.

190 # **3240.** Prior Processes of Outburst of a Vulcanian Eruption
A. Yokoo, M. Iguchi, T. Tameguri & K. Yamamoto.

191 # **3177.** Quantifying Patterns of Volcano-Tectonic Precursors to Eruptions
C. Kilburn

192 # **3660.** Magma Dike Intrusion Simulation By Discrete Element Method
E. Fujita

193 # **5922.** Monitoring of Thermal and Hydrothermal Activity of Santa Ana Volcano post-2005 Eruption
E. Gallant, B. Martinez-Hackert, J. Bajo, D. Escobar & E. Gutierrez.

194 # **3014.** Long-term Sustainability of a Hot Crater Lake: Insights from Numerical Simulations
A. Terada & T. Hashimoto.

195 # **2404.** Interaction Between Hydrothermal Systems and Ascending Magma Beneath Chokai Volcano, Japan, During the Last 3, 000 Years: Implication from Characterization of Volcanic Ash
T. Ohba, S. Hayashi, M. Ban, A. Kondo, S. Suzuki, et al.

196 # **3037.** Formation of a Zoned Magma Chamber and its Temporal Evolution during the Historic Eruptive Activity of Tarumai Volcano, Japan: Petrological Implication for a Long Term Eruption Prediction for an Active Volcano
M. Nakagawa, N. Hiraga & R. Furukawa.

197 # **920.** Robust Estimation for the Weibull Process Applied to Eruption Records
T. Wang & M. Bebbington.

198 # **1595.** The Use of Analogues in Volcanic Eruption Forecasting.
A. Winson & C.G. Newhall.

IAVCEI Monday, 4 July 2011
V07 Subaerial and Subaqueous Lava flows

200 # **1789.** Remote Assessment of Glassy and Vesicular Textures on Silicic Lava Domes through Intensity and Amplitude Analysis of Ground-based LIDAR Data
S. Anderson & D. Finnegan.

201 # **4080.** The development of compound lava flow fields: insights from the 2008-9 eruption of Mt Etna, Sicily
J. Applegarth, M.R. James & H. Pinkerton.

202 # **1560.** Bifurcating Lava Flows in Hawai'i: Implications for Flow Advance and Morphology
H. Dietterich & K. Cashman.

203 # **1918.** Isothermal kinetics of channeled viscoplastic lava flows
J. Robertson & R. Kerr.

204 # **4636.** Emplacement mechanism of submarine large sheet flows from the Oman Ophiolite
S. Umino

205 # **4763.** Cooling history and formation process of obsidian lava from the Shirataki obsidian-rhyolite lava complex, northern Hokkaido, Japan
K. Wada, K. Sano & E. Sato.

206 # **4295.** Constraints on the Partitioning of Kilaueas Lavas Between Surface Flows and Tubed Flows, Estimated from Infrared Satellite Data, Sulfur Dioxide Flux Measurements, and in Situ Observations
R. Wright, W. Koeppen, M. Patrick, T. Orr & J. Sutton.

IAVCEI Monday, 4 July 2011
V12 Tectonic Controls on Volcanism

208 **# 1863.** Eocene accretion of the Gorgona terrane and the Tumaco Forearc Basin formation in Western Colombia (S.A.)
C. Borrero, H. Murcia, A. Pardo, A. Cardona, E. Sebastian, et al.

209 **# 1924.** Subduction-related signature in late-variscan lamprophyres from the catalonian coastal ranges (northeast Spain)
Z. França, T. Ubide, C. Galé, E. Arranz, M. Lago, et al.

210 **# 2243.** Imaging the magmatic system of the Tongariro Volcanic Complex, New Zealand: Preliminary Results from Magnetotellurics
G. Hill, T.G. Caldwell, H.M. Bibby, Y. Ogawa, S.L. Bennie, et al.

211 **# 5101.** The Wallaby Plateau: A Complex Structural High at the Outer Corner of a Rift-Shear Margin Transition
S. Planke, A.A. Antobreh, J.I. Faleide & PA. Symonds.

212 **# 2780.** Morphometric analysis methods for submarine volcanoes, application to the Kermadec Arc, SW Pacific
S. Wormald, I. Wright, J. Bull, G. Lamarche & D. Sanderson.

IAVCEI Monday, 4 July 2011
V20 Volcanic Systems and Mineral Deposits

214 **# 908.** Miocene arc-type volcanic system and related vein-type epithermal mineralisations from Gutâi Volcanic Zone (Eastern Carpathians, Romania)
M. Kovacs & A. Fulop.

TUESDAY, 5 JULY 2011

IAG G03 — **Tuesday, 5 July 2011**
Monitoring and Modelling Earth Rotation

1 # **2787.** Report of Activities During 2007-2011 of IAG Commission 3 on Earth Rotation and Geodynamics
R. Gross
2 # **4082.** IERS Working group on Combination of Space Geodetic Techniques at the Observation Level (COL)
R. Biancale, D. Gambis, M. Seitz, J.Y. Richard, S. Loyer, et al.
3 # **2095.** ERIS – The Earth Rotation Information System
B. Richter & A. Niederhoefer.
4 # **2096.** IVS combination centre at BKG – Combined solution vs. individual solution
B. Richter & S. Bachmann.
5 # **1013.** On the Probe Orbit Elements and EOPs with Relativistic Delta VLBI Model of CE-1
W. Yan, E. Wei & J. Liu.
6 # **1014.** Analysis of the EOPs and Positioning Parameters of Probe with CE-1¡s VLBI and Differential VLBI Observations
W. Yan, E. Wei, Q. Shi & X. Li.
7 # **5053.** Analysis of the Angular Momentum Budget in an Earth System Model
K. Matthes & C. Petrick.
8 # **3618.** Assimilation of Earth Rotation Parameters into an Atmosphere Model
K. Matthes & Lisa. Neef.
9 # **3847.** Study of Parametric Resonance in Earth Nutation
Y. Rogister, Y. Ziegler, H. Legros & S. Rosat.
10 # **5860.** The Rotational Modes of a Triaxial Convecting Earth
A. Trinh, A. Rivoldini, V. Dehant & T. Van Hoolst.
11 # **4047.** Glacial isostasy and the geoid: Rotational feedback again
R. Drummond & W. R. Peltier.

IAGA A042 — **Tuesday, 5 July 2011**
Rock Magnetism, Magnetic Petrology and Magnetic Anomalies

15 # **4261.** Remanent magnetic anomalies and effect of exsolution lamellae on magnetic properties of crustal rocks
L. Brown, S. McEnroe, P. Robinson & K. Fabian.
16 # **1295.** An effective method of enhancing magnetic data using normalized derivatives
J. De Souza, F.J.F. Ferreira, A.B.S. Bongiolo & L.G. Castro.
17 # **3282.** Some Quantitative Textural Measures of Magnetic Survey Data
M. Gettings & M. Bultman.

IAGA A061 — **Tuesday, 5 July 2011**
Coupling in the atmosphere-ionosphere-magnetosphere system and its response to external forcing and forcing from below

19 # **4060.** Planetary Waves and Winter Anomaly of Ionospheric Absorption in East Asia Sector
Y. Hao, D. Zhang & Z. Xiao.
20 # **2489.** Use of Television Broadcasting Signals for Mesosphere/Lower Thermosphere Wind Measurements by the Meteor Radiolocation Method
C. Jacobi, V. Kukush & A. Oleynikov.
21 # **4955.** Three dimensional Marsf exosphere : multi-species thermal and nonthermal models
R. Modolo, M. Yagi, F. Leblanc, J.Y. Chaufray, M. Mancini, et al.
22 # **1775.** Observation of a Stratospheric Secondary Ozone Maximum at European High Latitudes
R. Werner, K. Stebel, G. Hansen, U.P. Hoppe & R. Kivi.

IAGA A083 — **Tuesday, 5 July 2011**
Space plasma processes

24 # **5478.** On the Relationship Between Recurrent Substorm-Related Activations and IMF variations
C. Cheng, C.T. Russell & J. Weygand.
25 # **514.** Simulating chorus generation via Particle-in-cell simulations
A. Collier, E.J. Koen & S.K. Maharaj.
26 # **3499.** Discrete Structures in the Magnetotail Lobes
R. Koleva & E. Grigorenko.
27 # **3501.** Multi-point Investigation of the Magnetospheric Response to Complex Interplanetary Driving: a Case Study
R. Koleva & A. Bochev.
28 # **4468.** A statistical study of auroral upward field-aligned current using THEMIS electron data
S. Lee, K. Shiokawa, J.P. McFadden & Y. Nishimura.
29 # **4372.** Statistical Relationship Between ULF Wave Activity in IMF and the Cross Polar Cap Potential Drop
L. Lyons, H. Kim & A. Boundouridis.

IAGA A091 — **Tuesday, 5 July 2011**
Magnetosphere-ionosphere coupling

31 # **2977.** Dayside field-aligned current source regions
S. Wing, S. Ohtani, J. Johnson, P. Newell, T. Higuchi, et al.
32 # **3689.** Tail Reconnection for IMF Northwards, Non-substorm Intervals: the Influence of By
J. Rash
33 # **5169.** Displacement of conjugate point during a substorm in a global MHD simulation
S. Saita, A. Kadokura, N. Sato, S. Fujita, T. Tanaka, et al.
34 # **1112.** Observations of Near-conjugate High Latitude Substorms and Their Low Latitude Implications
A.K. Sinha, A.K. Singh, B. Pathan, B. Jayashree, R. Rawat, et al.

IAGA A112 Tuesday, 5 July 2011
The Sun and the Heliosphere: Physical Processes

36 **# 1039.** Modeling of differential rotation of rapidly rotating stars
H. Hotta & T. Yokoyama.
37 **# 2317.** Magnetic advection due to diffusivity gradients
E. Zita
38 **# 5450.** Waves in the polar corona as seen by AIA/SDO
D. Banerjee & S. Krishna Prasad.

IAGA A121 Tuesday, 5 July 2011
Space Weather and Space Climate

40 **# 5857.** Real-time Space Weather Forecasts Via ASTRA's Android Phone App
G. Crowley
41 **# 3889.** Early Alert of Solar Radiation Hazard
P. Evenson, T. Kuwabara, J. Bieber, J. Clem & R. Pyle.
42 **# 4549.** Ionospheric Scintillation monitoring using GPS
M. Francis & M. Terkildsen.
43 **# 3677.** Solar wind and interplanetary magnetic field: interlink between processes on the Sun and geomagnetic activity
P. Hejda & J. Bochnicek.
44 **# 3636.** Parallel GUMICS
I. Honkonen, P. Janhunen & M. Palmroth.
45 **# 1586.** A new method for forecast of peak and ascent time of solar cycle
B. Kakad
46 **# 2898.** MHD Modeling of Real CME Events
J. Linker, R. Lionello, Z. Mikic, P. Riley, V. Titov, et al.
47 **# 1728.** Multi-directional Muon Detector automatic barometric calibration
N.J. Schuch, M. Colpo, C. Kato, A. Lago & N. Schuch.
48 **# 3500.** Recent Observations of Space Radiation Environment in a Human Phantom onboard ISS
J. Semkova, R. Koleva, S. Malchev, N. Bankov, V. Banghin, et al.
49 **# 3736.** The Low Latitude F-region Irregularities Response to the Geomagnetic Storm
Y. Sun & J.Y. Liu.
50 **# 3329.** Statistical Characteristics of Energetic Electron Precipitation and VLF Emissions at Syowa Station During Sudden Commencements
H. Tadokoro, Y. Miyoshi, H. Yamagishi, H. Miyaoka & Y. Tanaka.
51 **# 4947.** On the Location of the Terrestrial Magnetopause and Bow Shock under Extreme Solar Wind Conditions
M. Tatrallyay, G. Erdos, Z. Nemeth, M I. Verigin & S. Vennerstrom.
52 **# 4948.** Statistical Analysis of Energetic Storm Particle Event Parameters
M. Tatrallyay, K. Kecskemety & P. Kiraly.

IAGA A142 Tuesday, 5 July 2011
Lithospheric field and related geological/ tectonic implications

55 **# 4007.** Oceanic Spreading in the Bransfield Strait (West Antarctica) from Magnetic and Gravity Data
M. Catalan, J. Galindo-Zaldivar, J. Martín Davila, A. Maldonado, Y.M. Martos, et al.
56 **# 4971.** Imprints of Rodinia break-up revealed in interior East Antarctica
F. Ferraccioli
58 **# 1539.** Resistivity Structure of Volcanic Zones derived from Magnetotelluric Data using Phase tensor and Induction Vector Analysis
N. Hasan, Y. Ogawa & D. Sutarno.

IAGA A161 Tuesday, 5 July 2011
History sessions focused on IAGA subdisciplines – The History of Space Weather Forecasting

60 **# 5039.** Development of Space Weather Forecasting in Canada
D. Boteler, H.L. Lam, L. Trichtchenko, D. Danskin & J. Parmelee.
61 **# 5038.** The Development of the International Space Environment Service
D. Boteler
62 **# 3952.** Some results of magnetic and ionospheric studies in Vietnam
H.D. Chau, L. Thanh & N. Dung.
63 **# 4478.** Historical Overview of the Space Weather Activities in Brazil of the ISES Regional Warning Centre
C. De Nardin, H. Takahashi, J.D. da Silva, J.E.R. Costa, A. Dal Lago, et al.
64 **# 5964.** Early Space Weather Forecasting
J. Kennewell & P. Wilkinson.
65 **# 5965.** Historical Rules of Thumb in Space Weather Forecasting
J. Kennewell & P. Wilkinson.
66 **# 2555.** Forecasting Solar Particle Events – Historical Notes
P. Wilkinson, O. Giersch & J. Kennewell.
67 **# 2551.** The Development of the Australian Space Forecast Centre
P. Wilkinson & J. Kennewell.

IAHS H03 **Tuesday, 5 July 2011**
Risk in Water Resources Management

70 **# 446.** Reducing the uncertainty associated with water resources planning in a developing country basin with limited runoff data through AI rainfall-runoff modelling
A. Adeloye

71 **# 123.** Risks in hydrological modelling due to uncertainties in discharge determination
M. Booij, S. Van den Tillaart & M. Krol.

72 **# 99.** Prévention du risque pluvial par l'élaboration des courbes intensité- durée-fréquence (IDF) : Application à la ville de Tipasa dans le Nord Ouest Algérien
M. Boukhelifa, B. Touaibia & P. Hubert.

73 **# 221.** Over exploitation of ground water a threat to sustainable productivity and food security
M. Brar & P. Roychand.

74 **# 273.** Applying skill and cost-loss analysis to deterministic and probabilistic nutrient concentration predictions
J. Exbrayat, N.R. Viney, H.G. Frede & L. Breuer.

75 **# 216.** Daily Reservoir Operating Rules by Implicit Stochastic Optimization and Artificial Neural Networks in Semiarid Brazil
C. Farias, C.A.G. Santos & A.B. Celeste.

76 **# 441.** Assessment of extreme flood characteristics based on a dynamic-stochastic model of runoff generation and the probable maximum discharge
A. Gelfan & L. Kuchment.

77 **# 229.** Physically-based groundwater vulnerability assessment using sensitivity analysis methods
P. Goderniaux, J. Beaujean, J.M. Lemieux & S. Brouyère.

78 **# 430.** Multi Model approach in flood forecasting systems and flood hazard map preparation at the local and regional scale
G. Grossi

79 **# 476.** Risk-Based Assessment of Water Availability in a Changing Climate
A. Kassem, T. Hamory, I. Vouk & D. Harvey.

80 **# 454.** The Risks of Agricultural Development and Irrigation in the Countries of the Mediterranean Basin
M.A. Lange, A. Bruggeman & M. El-Maayar.

81 **# 153.** Assessing the impacts of global changes on the water resources of the Mediterranean basin
M. Milano, D. Ruelland, S. Fernandez, A. Dezetter, S. Ardoin-Bardin, et al.

82 **# 388.** Incorporating hydrologic reliability in rural rainwater harvesting and run-of-river supply
J. Ndiritu, J. Odiyo, R. Makungo, C. Ntuli & B. Mwaka.

83 **# 231.** Uncertainties in Water Supply and the Impact on Human Development in Nigeria
S. Odunuga, I. Okeke, F. Okorie & A. Olaniyi.

84 **# 211.** The Application of Rural Threshold Water Consumption Model in Water Supply Studies
I. Okeke, L. Oyebande & S. Odunuga.

85 **# 448.** Application of a particle swarm optimization to the tank model
C. Santos, P. Freire, S. Mishra & A. Soares Jr.

86 **# 112.** Evaluation of combined contribution of uncertainty sources to total output uncertainty in water resource estimation in South Africa
T. Sawunyama, D.A. Hughes & S.J.L. Mallory.

87 **# 208.** Managing Socio-economic and Hydrological Risks in the Northeast India
U. Sharma & V. Sharma.

88 **# 424.** Small farm dams research project in the semiarid northeastern region of Brazil
A.C. Souza Da Silva, A.M. Passerat de Silans, G. Souza da Silva, F. Augusta dos Santos & R. de Queiroz Porto.

89 **# 371.** Uncertain rating curves: implications for streamflow data, modelling and decision-making
K. Tomkins & J. Lerat.

90 **# 271.** Influence of Various Factors on Controlling the Groundwater Levels in Hard Rock Terrain and its Importance in the Management of Groundwater
B. Umrikar & B.C. Maggirwar.

91 **# 342.** Water demand forecasting under changing environment: a system dynamics approach
X. Wang & J. Zhang.

92 **# 445.** Development and Application of Water Allocation Model based on ET-Control
J. You, Z. Gan & H. Gan.

93 **# 129.** Determination of Inundation Area Based on Flood Hazard for a Global Water Risk Assessment
K. Youngjoo, P. Jonggeol & T. Kuniyoshi.

IAHS H04 **Tuesday, 5 July 2011**
Assessment of water quality under changing climate conditions

94 **# 403.** Climate variability and its impacts on the spatial and temporal variation in the quality of groundwater in an island
M.D. Nowbuth

95 **# 347.** Assessment of Climate Change and Fertilizers in Water Quality
S.R. Saghravani & M. Sa'ari.

96 **# 289.** Spatial Analysis of the Yamuna River Water Quality in Pre and Post Monsoon Periods
R. Singh

IAHS HW02 **Tuesday, 5 July 2011**
Understanding and quantifying physical and geochemical processes during artificial recharge of groundwater

100 **# 3403.** Effect of Heterogeneity of Hydraulic Conductivity on Groundwater Flow and Spontaneous Potential
Y. Ozaki, H. Mikada, T.N. Goto, J. Takekawa, M. Tsujimura, et al.

101 **# 4920.** Perched water table formation and waterlogging during aquifer recharge in a gradually layered soil
R. Ranzi, S. Barontini, M. Peli, M. Bakker & TA. Bogaard.

IAHS HW03 **Tuesday, 5 July 2011**
Regional groundwater modelling: Approaches, challenges, and future directions

103 **# 5439.** Methodology for Calculating Equivalent Field Scale Soil Hydraulic System Parameters Taking Into Account Hysterisis
J. Barriot, M. Aureau, L. Sichoix, C. Tetavahi & R. Haverkamp.

104 **# 4764.** Consistency in Regional Groundwater Balance using the Australian Hydrological Geospatial Fabric (Geofabric)
E. Carrara, C. Daamen, J. Devonshire, D. Smith & A. Wall.

105 **# 89.** Regional Study of Groundwater and Bedrock Structures
T. Chang & E. McPeek.

106 **# 1240.** A development of dimensional designing equation of a permeable reactive barrier-aquifer system with the consideration of multispecies transport
H. Chen & E. Park.

107 **# 493.** Inferring the Chemical and Physical Parameters of Groundwater of Some Villages in Sri Lanka for the Occurrence of Fluoride
D. Jayawardana, A. Pitawala & H. Ishiga.

108 **# 5216.** Regional modelling with local detail in the Ogallala Aquifer: Comparison of MODFLOW and a sloping base model
D. Steward & A.J. Allen.

IAHS Tuesday, 5 July 2011
HW12 Quality and quantity aspects of green and blue water: Impact on agriculture, environment, energy and industry

109 **# 2749.** Groundwater resources of Uzbekistan, Central Asia: an environmental overview
F. Huneau, S. Rakhmatullaev, J. Kazbekov, M. Motelica-Heino, P. Le Coustumer, et al.

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JM04 Stratosphere-Troposphere-Ocean coupling in weather and climate

111 **# 3457.** Factors Affecting Interannual Variability of Australian Rainfall
P. Baines
112 **# 1294.** Tropical cyclones detection using GPS radio occultation data
R. Biondi, S.P. Ho, S. Syndergaard & T. Neubert.
113 **# 1148.** Tropical stratospheric response to major stratospheric warming in Northern winter
B. Ganesan Jaya, S. Sundararaman & M. Lal.
114 **# 3743.** Sensitivity of wave instability to the UTLS baroclinicity
T. Iwasaki & C. Kodama.
115 **# 1064.** Cyclones over the South Atlantic Ocean in a Synoptic Environment with Appearance of Blocking
M. Simões Reboita, J.R. Dias Pinto & R. Arizono.

IAMAS Tuesday, 5 July 2011
JM10PS3 Monsoons, Tropical Cyclones and Tropical Dynamics – Tropcial Dynamics

117 **# 702.** Interaction of the North Atlantic baroclinic wave packets and the Mediterranean storm track
F. Ahmadi-Givi, M.A. Nasr Esfahany & A.R. Mohebolhojeh.
118 **# 1052.** A characterization of the low level flow crossing Santa Cruz de La Sierra during LLJ events through a Lagrangian methodology
T. Ambrizzi, A. Drumond, J. Marengo, R. Nieto, L. Gimeno, et al.
119 **# 4398.** Validating Convection-Permitting Models Using an Automated Convective-Cell Tracking Algorithm (TITAN)
S. Caine, T. Lane, P. May, J. Pinto, C. Jakob, et al.
120 **# 4390.** Changes in North Australian Rainfall in terms of Wet Season Regimes
J. Catto & C. Jakob.
121 **# 5058.** Structure and characteristics of submonthly-scale waves propagating along the Indian Ocean ITCZ
Y. Fukutomi & T. Yasunari.
122 **# 3823.** Extratropical Enhancement of Tropical Precipitation Systems Observed over the Western North Pacific during the Early Summer in 2010
B. Geng, M. Katumata, H. Yamada, R. Shirooka & K. Yoneyama.
123 **# 5664.** Impacts of the ENSO and IOD on interannual rainfall variability in Jakarta, Indonesia
J. Hamada, S. Mori, M. Yamanaka, U. Haryoko & F. Syamsudin.
124 **# 3522.** Intraseasonal Mixed Layer Temperature Variation in the Equatorial Indian Ocean
T. Horii, I. Ueki, K. Ando, A. Seiki, T. Hasegawa, et al.
125 **# 2240.** Decadal to Bi-Decadal Rainfall Variation in the Western Pacific: A Footprint of South Pacific Decadal Variability?
H. Hsu
126 **# 1478.** Impact of the inhomogeneous characteristics of temperature variation on the extreme precipitation events
Y. Huang & Y. Qian.
127 **# 2570.** Dramatic shift in Indonesian rainfall
J. Kaempf & Y. Awaluddin.
128 **# 4096.** Using a case-study approach to improve the Madden-Julian oscillation in the Hadley Centre climate model
N. Klingaman & S. Woolnough.
129 **# 4533.** Effects of the SST Cold Tongue in South China Sea on the Climate of Maritime Continent
S. Koseki, T.Y. Koh & C.K. Teo.
130 **# 4463.** Convectively-Generated Gravity Waves Observed During TWP-ICE
C.M. Nguyen, M.J. Reeder & T. Lane.
131 **# 1579.** Relationship between the Interannual Variability of Moisture Budgets over Southern Indian Ocean and Sea Surface Temperature during boreal summer
Y. Qiao, W. Huang & M. Jian.
132 **# 2477.** Global Atmospheric Circulation associated with the MJO in Varying Tropical Sea Surface Temperature States
N. Sakaeda
133 **# 2803.** Tropical Tropospheric Profile Associated with Convectively Coupled Oceanic Kelvin Waves
R. Setzenfand
134 **# 4850.** Fall Precipitation and Its Interannual Variability in Central Vietnam
T. Tomita & R. Maeda.
135 **# 4025.** The rectified response to the Madden-Julian Oscillation
B. Webber, A. Matthews, K. Heywood & D. Stevens.
136 **# 2539.** Application of large scale dynamics in a single column model and its comparison with climate statistic
H. Zhu & A. Sobel.

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M10 **Tropospheric processes and processing: Pollution and biogeochemical cycling**

140 **# 2488.** Long-Term Observations of Pollution from Space
J.P. Burrows, A. Richter, F. Wittrock, A. Hilboll, J. Leitao, et al.
141 **# 1753.** Emission Scenarios for Global Megacity Impact Studies
T. Butler, H. van der Gon, M. Russo, Z. Stock & M. Lawrence.
142 **# 3290.** Comparison of total CO columns simulated from regional chemistry-transport modelling with MOPITT-retrieved total CO columns over East Asia
J.H. Choi, K.M. Han, S.J. Lee & C.H. Song.
143 **# 4245.** The Measurements of Pollution In The Troposphere (MOPITT) Instrument 11 years of Continuous Carbon Monoxide Measurements
J. Drummond, M. Deeter, D. Edwards, J.C. Gille, F. Nichitiu, et al.
144 **# 3676.** Organic composition of aerosol in the remote marine atmosphere
M. Keywood, S. Sai Hang Ho, J. Chow & J. Gras.
145 **# 5024.** Contribution of Secondary Organic Aerosol in Urban Air Quality: A Comparison Study of Modelled and Observed SOA
S. Lee, M. Cope & M. Keywood.
146 **# 1931.** A study of the cloud condensation nuclei activity for urban ambient aerosols before and after oxidation
W. Lin & H. Hung.
147 **# 936.** Development of Hail Events in Beijing associated with Mongolian Cold Vortex
H. Liu, Y. Zheng, Z. Wang, W. Wo & H. Zhuo.
148 **# 3283.** The impact of NH3 emissions on aerosol optical depth and aerosol optical properties over East Asia
M.E. Park, R.S. Park, K.H. Han & C.H. Song.
149 **# 2943.** Changing Global Ethane Concentrations
C. Paton Walsh, C. Chan Miller, N. Jones, D. Griffith, K. Strong, et al.
150 **# 4854.** Middle and upper tropospheric CH4 concentrations derived from GOSAT/TANSO-FTS TIR
N. Saitoh, Y. Nasu, M. Touno, S. Hayashida, R. Imasu, et al.
151 **# 2346.** Factors controlling the strength of holiday effect
P. Tan & P.Y. Chen.

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V02 **Arc Magmatism: The Constructive and Destructive Dynamics of Convergent Margin Magmatism**

153 **# 1005.** The Middle Pumice eruption, Santorini, Greece: welding characteristics of a Plinian air-fall deposit
J. Boyce & R. Gertisser.
154 **# 5573.** Preservation of Geochemical Diversity Signals the Occurrence of Multiple Melting Regimes at the Southern End of the North Fiji Basin
P. Durance
155 **# 4303.** Evolution of the Lesser Antilles arc since the Oligocene inferred from K-Ar dating and geochemical analyses of Martinique Island lavas
A. Germa, X. Quidelleur, P. lahitte, S. Labanieh & C. Chauvel.
156 **# 1795.** Recurrent, Chemically Zoned Explosive Eruptions at Cosiguina Volcano, Nicaragua
M. Longpre, J. Stix, E. Espinoza & A. Munoz.

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V09 **Eruption, Transport and Deposition of Pyroclasts in Plumes Using Field Studies, and Computational Modelling**

158 **# 3017.** Modifying Tephra2 to better describe a horizontally spreading umbrella cloud
K. Mannen, L. Connor, C. Connor, L. Courtland, A. Volentik, et al.
159 **# 5698.** The Central Mediterranean volcanic ash hazard evaluated from geological data
R. Sulpizio, G. Zanchetta, B. Caron, P. Dellino, D. Mele, et al.

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V10 **The Dynamics of Pyroclastic Density Currents: Field Studies of Their Deposits, Computational Modelling and Experiments**

160 **# 3538.** Run out increase of pyroclastic flows caused by substrate erosion: An experimental study and its Implications
O. Roche, A. Mangeney, O. Hungr, N. Mangold, G. Faccanoni, et al.

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V14 **Monogenetic Volcanism: Magma Sources, Ascent and Eruption**

163 **# 1486.** Geophysical and volcanological insights into the subsurface morphology and eruptive history of the Red Rock Volcanic Complex, Newer Volcanics Province, southeastern Australia
T. Blaikie, F. Piganis, L. Ailleres, P. Betts & R. Cas.
164 **# 4512.** Pyroclastic Density Current Hazards in the Auckland Volcanic Field (New Zealand): Maungataketake Volcano
B. Brand, D. Gravley, S. Bloomberg, K. Nemeth, J. Augustin-Flores, et al.
165 **# 3630.** Hot Spot Magmatism on the Western Australian Continental Margin
K. Dadd & L. Kellerson.
166 **# 1671.** A physical model for gas burst overpressure in strombolian eruptions: the role of magma drainage around rising slugs.
E. Del Bello, E. Llewellin, J. Taddeucci, P. Scarlato & S. Lane.
167 **# 1081.** Factors influencing the eruption intensity of maar volcanoes, using the Pleistocene Purrumbete maar, Newer Volcanics Province, southeastern Australia, as an example
S.C. Jordan & R. Cas.
168 **# 4673.** A New Assessment Of Risk And Hazard For The Young Volcanoes Of Australia

E.B. Joyce

169 **# 3241.** Effect of pre-eruptive surface inclination on the morphology of Quaternary scoria cones located on Tenerife (Canary Islands, Spain)
G. Kereszturi, G. Jordan, F.J. Doniz-Paez, K. Nemeth & C. Guillén-Martín.

170 **# 3238.** Morphometry-based spatio-temporal evolution of monogenetic volcanism along the Southern Volcanic Zone of Tenerife (Canary Islands, Spain)
G. Kereszturi, K. Nemeth, F.J. Doniz-Paez, G. Jordan & S.J. Cronin.

171 **# 990.** Spatial distribution of monogenetic vents on Jeju Island (South Korea)
G. Kereszturi, K. Nemeth, M. Bebbington, S.J. Cronin, J. Procter, et al.

172 **# 2341.** Monogenetic volcanic fields: Spatial distribution and volcanic lineaments as indicators for crustal controls?
N. Le Corvec, D. Legrand, J. Rowland & K.B. Sporli.

173 **# 1962.** Grain component characterization of pyroclastic surge deposits at Maungataketake volcano, New Zealand: implications for eruption mechanisms.
K. Nemeth, J. Augustin-Flores, J. Lindsay, S.J. Cronin & B.D. Brand.

174 **# 2496.** Neogene-Quaternary maar volcanism in the Cappadocian Volcanic Province in Central Anatolia, Turkey: revisited
K. Nemeth, G. Gençaliolu-Kucu & R.B. Stewart.

175 **# 5146.** The role of collapsing and rafting of scoria cones on eruption style changes and final cone morphology: los morados scoria cone, Mendoza, Argentina
K. Nemeth, C. Risso, F. Nullo & G. Kereszturi.

176 **# 1313.** Varied eruptive styles and vent migration at the 35ka Tower Hill Volcanic Complex, southeast Australia
G. Prata, R.A.F. Cas & P.C. Hayman.

177 **# 602.** Morphological evolution of La Barda volcano, Southern Andean retroarc, Argentina
C. Risso, F. Nullo, K. Németh & M. Gaddi.

178 **# 3994.** The explosive activity of Xitle volcano, Mexico City: A reappraisal
J. Taddeucci, C. Cimarelli, M.N. Guilbaud, M. Alatorre-Ibargüengoitia & H. Delgado-Granados.

179 **# 5295.** Eruptive history and subsurface structure of a nested maar-scoria cone volcano, Mount Noorat Volcanic Complex, Newer Volcanics Province
J. Van Den Hove

180 **# 675.** Study on geological characteristics of Quaternary volcanoes in the Halaha River and Chaoer River area in Daxing'an Mountain range, NE China
Y. Zhao, Q. Fan & J. Sui.

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IUGG Wednesday, 6 July 2011
U11 Earth and Space Science in Africa

1 # **805.** Solar activities and Climate change hazards
A. Abdel Hady
2 # **618.** Geomagnetism, Solar wind and Solar activity during solar cycle 23
C. Amory, J.L. Zerbo, F. Ouattara, J.P. Legrand & J. Richardson.
3 # **758.** Monitoring of the Nile Basin waters from space
J. Awange, A. Hunegnaw, O. Baur, K. Fleming, B. Heck, et al.
4 # **2685.** Investigations of the West African monsoon hydrological cycle with a network of ground-based GPS receivers
O. Bock, S. Nahmani, R. Meynadier, M.N. Bouin, F. Guichard, et al.
5 # **799.** The Realization of the Geocentric Datum of Nigeria: Preliminary Results
J. Dodo, T.A. Yakubu, U.R. Udozie & L.M. Ojigi.
6 # **4731.** A study of the vegetation change and climate memory in Africa using a dynamic global vegetation model
S. Ishii, H. Sato & T. Yamazaki.
7 # **1979.** Earth – and Space Physics Research at the Hermanus Magnetic Observatory
P. Kotze, L.A. McKinnell, P. Sutcliffe, B. Opperman & A. Collier.

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A021 Electromagnetic Induction

10 # **3154.** Thickness Retrieval of Deformed Sea Ice with Airborne Electromagnetic Induction Sounding: Error Evaluation using a 3D Finite Element Forward Model
S. Hendricks & C. Haas.
11 # **3083.** Three-Dimensional Inversion of Single Profile Magnetotelluric Data, Generated for Resistivity Models with Local and Extensive Inhomogeneities
P. Pushkarev & P. Ivanov.
12 # **3077.** Exploration Study over Rock Deep Geological Structure in Preselected Site of High Level Waste with CSAMT method
Z. An, Q. Di & C. Fu.
13 # **1249.** Induction Studies in the Andaman-Nicobar Islands: preliminary results
K. Arora, N. Nagarajan, A. Kuvshinov & M. Chandrasekharam.
14 # **4811.** A Magnetotelluric Survey Along the Georgina-Arunta Deep Seismic Reflection Transect, Northern Territory, Australia
J. Duan, J. Duan, P. Milligan, A. Nakamura & J. Maher.
15 # **1333.** Hydrocarbon Prospects Across Narmada-Tapti Rift in Deccan Trap, Central India: Inferences from Integrated Interpretation of Magnetotelluric and Geochemical Prospecting Studies
A.A. Kizhakkekara Kunjavaran, T. Satish Kumar, S. Basava, T. Harinarayana & M. Dayal A.
16 # **1676.** A magnetotelluric Investigation along a 40 km profile in Kangerlussuaq, West Greenland
L. Kother, A. Junge, J. Matzka, A. LÃ¶wer & N. Olsen.
17 # **824.** Crustal structure of the north Sikkim Himalaya by magnetotelluric studies
A. Manglik & G. Pavankumar.
18 # **5340.** AMT exploration of a gold deposit in the North-East of Russia
P. Pushkarev, A. Koshurnikov, V. Makarov & I. Khasanov.
19 # **2808.** Exploration of a potential graphite agglomeration along terrane-boundaries using geomagnetic depth sounding
S. Schnaidt & K. Bahr.
20 # **4914.** Inversion of global induction data. From data analysis to the 3-D model of mantle conductivity.
A. Semenov & A. Kuvshinov.
21 # **2806.** Investigation of the crustal conductor at terrane-borders using magnetotellurics in Western and Southern Germany
B. Sommer & K. Bahr.
22 # **1870.** EM Induction Studies in Lakshdweep Islands: An overview
P. Subba Rao & A.K. Singh.

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A044 Rock Magnetism

23 # **584.** Diagenetic alterations of magnetic signals in Labrador Sea sediments (IODP Sites U1305, U1306, and U1307)
N. Kawamura, N. Ishikawa & M. Torii.
24 # **5734.** Magnetic grain-size proxy for Pleistocene East Antarctic deep water inflow to the south Challenger Plateau, New Zealand
F. Nelson & G.S. Wilson.

IAGA Wednesday, 6 July 2011
A063/A065 Coupling in the atmosphere-ionosphere-magnetosphere system and its response to external forcing and forcing from below

26 # **1840.** Investigation of the temporal characteristics of tec and l-band scintillation at the equatorial stations of Lagos and Ilorin in Nigeria during solar minimum
L. Amaeshi, C. Carrano, P. Doherty, K. Groves & J. Adeniyi.
27 # **1989.** Longitudinal variability of X component during solar minimum period of 1995
T. Arunachalam
28 # **1601.** Importance of ionospheric equatorial VHF Scintillation in the Indian region to study Sun-Earth interactions
S. Banola, R.N. Maurya & T.K. Pant.
29 # **5082.** Study of CME geoeffectiveness from SuperDARN convection data
C. Hanuise & A. Marchaudon.
30 # **3858.** IUse of GPS Measurements to Probe the Irregularity Oval in the Northern Hemisphere
V. Kuznetsov, I. Shagimuratov, I. Ephishov & A. Krankowski.
31 # **4873.** Fluctuation Characteristics of Magnetic Disturbances During CME Events – Indication of Diffusion Processes at Mid- and Low Latitudes
D. Pancheva, T. Nikolova & P. Nenovski.
32 # **1599.** Quiet-time variability of the GPS TEC and EEJ strength over Indian region and their connection to the major Sudden Stratospheric Warming (SSWs) events during 2005/2006
S. Sripathi, S. Alex, S. Gurubaran & A. Bhattacharyya.
33 # **3023.** The Effect of Cross Polar Cap Potential on the Equatorial Ion Upflow: A Statistical Study
H. Wang, W. Xiong & J.S. Xu.

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A071 Radiation belt dynamics and remote sensing of the Earth's plasmasphere

35 # **2799.** Early results for the balloon array for radiation-belt relativistic electron losses (BARREL) NASA Mission
B. Anderson, R. Millan, M. McCarthy, J. Sample, D. Smith, et al.
36 # **511.** Statistical Analysis of Outer Electron Radiation Belt Dropouts: Geosynchronous and Low Earth Orbit Responses
A. Collier & O. Ogunjobi.
37 # **513.** The Creation of a Statistical Lightning Model
A. Collier & M. van Zyl.

38 **# 2966.** Trajectories of electrons in a realistic model of the Earth's magnetic field
A. Collier & M. Nemair.
39 **# 515.** Unusual Observation of Chorus at L=2.6
A. Collier, B. Delport, C.J. Rodger, M.A. Clilverd & M. Parrot.
40 **# 4666.** EMIC waves, Plasmaspheric density, and Radiation Belt loss: A CRRES study
A. Halford, B. Fraser, S. Morley, R. Friedel & J. Koller.
41 **# 1889.** Detail study of spectral structures of whistler mode chorus emissions
E. Macusova, O. Santolik, J.S. Pickett, D.A. Gurnett & N. Cornilleau-Wehrlin.
42 **# 5672.** Night-Time Ground-Based VLF Emissions in the Magnetic Storm on 27 Feb – 3 Mar 2008
J. Manninen, N. Kleimenova, O. Kozyreva, T. Raita & M. Parrot.
43 **# 4975.** Equatorial Noise Emissions Observed by Cluster and DEMETER Spacecraft
O. Santolik, F. Nemec, Z. Hrbackova & M. Parrot.
44 **# 4420.** Relating ULF Wave Equatorial Electric and Ground Magnetic Fields.
M. Sciffer & C. Waters.
45 **# 4389.** Whistler-mode Wave Growth and Propagation
C. Watt, R. Rankin & A. Degeling.

IAGA A092 **Wednesday, 6 July 2011**
Magnetosphere-ionosphere coupling

47 **# 2650.** Electrostatic Aurora and Waves
J. De Keyser, Y. Voitenko, M. Echim & R. Maggiolo.
48 **# 3855.** Ion Beams over the Polar Cap and Polar Cap Arcs
J. De Keyser, R. Maggiolo, E. Echim & C. Simon.
49 **# 1754.** Study of the 5577Å and 6300Å emissions characteristics during substorms
V. Guineva, I. Despirak, R. Werner & E. Trondsen.
50 **# 4846.** Solar zenith angle dependence of plasma density and temperature in the polar cap ionosphere and low-altitude magnetosphere during geomagnetically quiet periods at solar maximum
N. Kitamura, Y. Ogawa, Y. Nishimura, N. Terada, T. Ono, et al.
51 **# 5056.** Storm-time electron density enhancements in the cleft ion fountain
N. Kitamura, Y. Nishimura, N. Terada, T. Ono, A. Shinbori, et al.
52 **# 3655.** The Phenomenon Which Were Observed On Board The ISS During A RF Ionosphere Modification
V. Kuznetsov, Y. Ruzhin, V. Kovalev, G. Karabadzhak, Y. Plastinin, et al.
53 **# 4009.** Mars – Solar wind interaction: 3D GCM-Ionosphere model to describe the Martian ionospheric dynamics and its coupling with neutral atmosphere
R. Modolo, J.Y. Chaufray, F. Gonzales-Galindo, F. Forget, M.A. Lopez-Valverde, et al.
54 **# 3700.** Temporal and spatial variations of pulsating auroras obtained from ground-based observations with a high-speed EMCCD camera at Poker Flat Research Range
T. Nishiyama, T. Sakanoi, Y. Miyoshi, R. Kataoka, K. Asamura, et al.
55 **# 3536.** Precise Characteristics of Black Aurora Obtained with Reimei Image-particle Data
T. Sakanoi, Y. Miyoshi, Y. Ebihara, T. Takada, A. Demekhov, et al.
56 **# 3473.** Precipitation of Electrons with the Energy of Tens-hundreds keV in the 11-year Solar Activity Cycle
S. Samsonov
57 **# 2917.** Seasonal dependence of geomagnetic field variations on the ground associated with geomagnetic sudden commencements
A. Shinbori, Y. Tsuji, T. Kikuchi, T. Araki, A. Ikeda, et al.
58 **# 1010.** Different response of dayside auroras to increases in solar wind dynamic pressure
Y. Yang, J.Y. Lu, J.S. Wang, Z. Peng & Q. Qing.

IAGA A102 **Wednesday, 6 July 2011**
The Sun and the Heliosphere: New Views

60 **# 2724.** Atmospheric Escape from Mars, Venus and Titan During Rough Space Weather
N. Edberg, H. Nilsson, M. Lester, S.W.H.C. Cowley, K. Agren, et al.
61 **# 2919.** Interaction between lunar magnetic anomalies and electrons in the Earth's magnetosphere
Y. Harada, S. Machida, Y. Saito, S. Yokota & H. Tsunakawa.
62 **# 4400.** Modeling the Solar Wind Proton Velocity Space Distribution Function in the Near Lunar Wake
M. Holmstrom, S. Fatemi & Y. Futaana.
63 **# 4402.** Multiple Ion Acceleration at Martian Bow Shock
M. Holmstrom, M. Yamauchi, Y. Futaana, R. Lundin, S. Barabash, et al.
64 **# 4039.** On the Helium balance in the Martian atmosphere
M. Holmstrom, G. Stenberg, H. Nilsson, Y. Futaana, S. Barabash, et al.
65 **# 3770.** Solar Wind interaction with Mars neutral environment from hybrid simulations: improved spatial resolution
R. Modolo, M. Mancini, F. Leblanc, G. Chanteur, JY. Chaufray, et al.
66 **# 4743.** Interaction between the Moon and the Earth's magnetosphere observed by MAP-PACE on Kaguya
Y. Saito, S. Yokota, M. Nishino, T. Yamamoto, K. Uemura, et al.

IAGA A122 **Wednesday, 6 July 2011**
Space Weather and Space Climate

68 **# 2301.** Automatic detection of SC using neural networks
J.J. Curto & A. Segarra.
69 **# 5590.** Space climate: Toward a characterization at hale and gleissberg cycles timescales
C. Demetrescu, V. Dobrica & G. Maris.
70 **# 1772.** Normal and Abnormal Behavior of Magnetic Field Variations During Solar Quiet Days Observed at MAGDAS Chain in Egypt
R. Elhawary, K. Yumoto, A. Mahrous & E. Ghamry.
71 **# 1417.** Detection and Structural Analysis of Geomagnetic Storms Using Methods of Fuzzy Logic in GIS Environment
R. Kulchinskiy, S. Agayan, A. Gvishiani & S. Bogoutdinov.
72 **# 5526.** Asymmetry features of the 27.08.2001 substorm inferred from the magnetogram inversion technique
R. Lukianova, V.M. Mishin, V.V. Mishin & L. Sapronova.
73 **# 5235.** RMS-based Planetary Geomagnetic Activity Indices
M. Menvielle, J.J. Valette, M. Pau & C. Lathuillère.
74 **# 5210.** The Geomagnetic Activity Evolution During the Last 140 Years as Described By aa Indices
M. Menvielle
75 **# 3754.** Singular Ssectrum analysis of solar activity influence over space climate
R. Rajaram
76 **# 1705.** Geoeffectiveness of Multiple Solar Flares and Associated Solar Energetic Particle Events During Solar Cycle 23
R. Rawat & S. Alex.
77 **# 682.** Geomagnetically Induced Currents in a Power Grid of Northeastern Spain from EBR observatory records
J.M. Torta, L. Serrano, J.J. Curto & J.R. Regue.

IAGA **Wednesday, 6 July 2011**
A141 **Lithospheric field and related geological/ tectonic implications**

80 **# 2666.** Separation of oceanic and continental crustal field spectra using slepian functions
C. Beggan & F. Simons.

81 **# 4485.** Magnetisation in the Oceanic Lithosphere and Prediction of its Magnetic Field Using Vector Spherical Harmonics
D. Gubbins, S. Masterton, R.D. Muller & K. Hemant.

83 **# 5853.** A Candidate Model for the Second Edition of WDMAM by Team GTK
J.V. Korhonen & T. GTK.

84 **# 5920.** Observed regional magnetic anomaly change in Sweden between 1965 and 1998
J.V. Korhonen, S. Aaro, S. Bystrom & G. Schwarz.

85 **# 3597.** Gradient Magnetic Surveys At The Altitudes Of 20-40 Km: A New Method Of Isolating The Anomalous Magnetic Field Of The Earth; Application Of The Results
V. Kuznetsov & Y. Tsvetkov.

IAHS **Wednesday, 6 July 2011**
H01 **Conceptual and modelling studies of integrated groundwater, surface water, and ecological systems**

87 **# 309.** Toward Improved Estimations of Groundwater Recharge and Evapotranspiration Using Coupled vs. Integrated Hydrologic Models
H. Ajami, M. McCabe, J. Evans & S. Stisen.

88 **# 415.** Hydrological Modelling in Irrigated Areas – A Case Study in Zhanghe Irrigation System, China
X. Cai, Y. Cui, N. Roost & D. Molden.

89 **# 126.** Groundwater temperature as a tracer to estimate anthropogenic impacts: past, present, and future
L. Gunawardhana & S. Kazama.

90 **# 128.** Transit times of soil water in a small gneiss watershed with thick soil and weathered layers using deuterium excess modelling
N. Kabeya, A. Shimizu, K. Tamai, S. Iida & T. Shimizu.

91 **# 472.** Application of the USLE and SWAT model to estimate erosion and diffuse pollution in two tropical watersheds subjected to different uses
R. Minoti, F. Silva, F. Lombardi-Neto, S. Koide & S. Crestana.

92 **# 346.** Prediction of Groundwater Flow and Phosphorus Transport Using Visual MODFLOW
S.R. Saghravani & M. Sa'ari.

93 **# 260.** Modelling Amazonian Floodplains Hydrology From In Situ and Satellite Data
P. Seyler, M.P. Bonnet, F. Satge, B. Lamback & G. Boaventura.

94 **# 405.** Evaluation of a developed rainfall-runoff-model which uses regionalization data for the semi-arid region
G. Souza Da Silva, A. Passerat de Silans & C. das Neves Almeida.

95 **# 110.** Understanding Hydrological Processes and Estimating Model Parameter Values in Large Basins: The Case of the Congo River Basin.
R. Tshimanga, D.A. Hughes & E. Kapangaziwiri.

96 **# 353.** Water availability assessment in data scarce catchments: Case study of the Ping river basin, Thailand
S. Visessri

97 **# 125.** Prediction of Ungauged Basins – Catchment Response Regionalisation and Uncertain Criteria Conditioning
A. Wyatt & S. Franks.

98 **# 269.** The analysis of water and salt movement in reclamation regions under a semi-arid climate
S. Xu, Y. Xu & X.Z. Xu.

99 **# 439.** Model Coupling for Forecast of Groundwater Evolution under Intensive Human Activities
J. You, H. Gan, C. Lu, Q. Song & S. Du.

IAHS **Wednesday, 6 July 2011**
HW04 **Snow and ice hydrology: Principles, processes and prediction**

100 **# 2853.** Parameter Transfer in a Conceptual Snow Model
A. Slater, M.P. Clark, B. Rajagopalan, A.P. Barrett & J.L. McCreight.

IAHS **Wednesday, 6 July 2011**
HW07 **Hydro-geomorphology**

104 **# 1745.** 'Monitoring, Remote Sensing and Numerical Modeling in analysis of wetland hydrodynamics. Study Case CiÃ©nagas del Name'
F. Baladron, A. de la Fuente, Y. Nino, X. Vargas & M. Contreras.

105 **# 5429.** Watershed Study of the Punaruu River Basin in Tahiti (French Polynesia)
J. Barriot, T. Riviere, L. Sichoix, C. Tetavahi, R. Haverkamp, et al.

106 **# 5377.** Automatic hydrogeomorphologic Units (HGMU) Mapping at Watershed Scale from LiDAR Data: Toward a Functional Assessment of Wetlands
C. Cudennec, S. Rapinel, A. Thomas, L. Hubert-Moy, B. Clement, et al.

107 **# 5764.** Impact of climate change on catchment sediment yield
G. Grossi & M.C. Rulli.

108 **# 5763.** Sediment yield in different vegetation scenarios after wildfire
G. Grossi, E. Ravizzola & M.C. Rulli.

109 **# 5487.** Spatial Patterns of Rainfall Erosive Index based on Monthly Rainfall Amount in Han River Watershed, Korea
J. Lee, J. Shin & J.H. Heo.

110 **# 4547.** Sediment Disasters Induced by Large Scale Landslides Occurred in South-Eastern Taiwan during Typhoon Morakot in 2009
S. Peng & S.C. Lu.

112 **# 142.** Monitoring of the Morphologic Evolution of the Doñana National Park Marsh by Means of Microtopography Analysis
J.C. Robredo, J.A. Mintegui Aguirre, C. de Gonzalo Aranoa & J.I. García Viñas.

113 **# 4564.** Simplified Lumped Runoff Model Using Distributed Rainfall Data with Flood Concentration System
K. Shiraki, M. Aoki & H. Yokoyama.

114 **# 318.** Numerical Modeling of Deep Drainage Galleries for Landslide Stabilisation: a Case Study in Taleghan, Iran
A. Shokri

115 **# 694.** Geomorphic Analysis of Active Deformation from DEM based Drainage Network in Lamone Catchment Emilia Romagna Apennines (N. Italy)
S. Siddiqui & S.A. Mahmood.

116 **# 693.** Geomorphic Indices Anaylsis to Monitor Surface Deformation using Digital Elevation Model in Secchia River Basin (N. Apennines)
S. Siddiqui & S.A. Mahmood.
117 **# 1619.** Water Scarce Area Identification Using Geo Information Technology
J. Subin, S. Kumar, G. Madhu & S. Rajendran.
118 **# 3058.** Creation of global erosion GIS and evaluation the role of relief in the sediment discharge
O. Yermolaev, K. Maltsev & V. Mozzherin.
119 **# 3057.** Spatial structure of the basin erosion in the Humid Plains (based on the example of the Russian Plain)
O. Yermolaev

IAHS HW09 — **Wednesday, 6 July 2011**
Revaluing system knowledge in water resources management

121 **# 5505.** Hydrologic and Hydraulic Modelling on Three Scales for Assessing Macroinvertebrate Habitat Conditions
K. Bieger, J. Kiesel, B. Schmalz, D. Hering & N. Fohrer.
122 **# 5522.** Sharing knowledge on Hydrochemical Buffer Zones for IWRM: Three Experiments of Science-Policy Linking in Brittany, France
C. Cudennec, Y. Vernay, JB. Narcy, P. Merot, C. Gascuel, et al.
123 **# 1990.** New Climate Conditions of Surface and Groundwater Resources Formation within European Russia
R. Dzhamalov, G. Krichevets, N. Frolova & T. Safronova.
124 **# 3817.** A Study on the Identity of Environmental Conservation and Policy for the Taiwan Reservoir Watershed Areas
S. Lu & S.H. Peng.
125 **# 3443.** Knowledge and Modelling Gaps for Human-Centred Integrated Water Resources Planning
J. Ndiritu

IAHS HW13 — **Wednesday, 6 July 2011**
Recent development of statistical tools for hydrological application

127 **# 1726.** Artificial Neural Network Models Combined with Simple Statistical Hydrology Tools
H. Aksoy & A. Dahamsheh.
128 **# 4270.** Similarity-Based Regionalization to Parameterize Velocity in a GIUH-Type Approach
C. Cudennec, A. de Lavenne & E. Cestin.
129 **# 1860.** A Comparison of Two Hydrologic Post-processing Methods
Q. Duan, C. Miao, D. Jiang, J. Schaake & L. Zhao.
130 **# 3887.** Using qualitative flow statuses for characterizing regimes of temporary streams
F. Gallart, N. Prat, E M. Garcia-Roger, J. Latron, M. Rieradevall, et al.
131 **# 5430.** Inflow in South Eastern Australia catchments: orographic effects and large-scale climatic influences.
M. Griffiths & B. Timbal.
132 **# 4974.** Applications of a copula-based multivariate frequency analysis in rainfall and runoff modeling
S. Vandenberghe, N.E.C. Verhoest & B. De Baets.
133 **# 2063.** Synthetic Design Hydrograph definition using GSTSP distribution functions
S. Grimaldi & F. Serinaldi.
135 **# 5130.** Regional Flood Frequency Analysis using Bayesian Generalized Least Squares in a Region-of-Influence Context
G. Kuczera
136 **# 5961.** Assessment of Future Depth-Duration-Frequency Relationship Considering Climate Change in South Korea
J. Shin, K. Joo & J. Heo.
137 **# 5871.** Spatial and Temporal Rainfall Patterns and Characterization of Heavy Rain Events in the Tropical Island of Tahiti
L. Sichoix & J.P. Barriot.
138 **# 2742.** Hierarchical bayesian analysis: A new path forward for the PUB initiative
T. Smith, L. Marshall & A. Sharma.
139 **# 4832.** Identification and determination of fresh flows using a hydrological time-series for rivers in the Murray-Darling Basin
C. Smith, M. Coleman & I. Burns.
140 **# 4126.** The Maximum Likelihood Method for the Burr XII implemented in Interval Analysis
R. Van Nooijen, E. Ellouze-Gargouri & A.G. Kolechkina.

IAMAS M01 — **Wednesday, 6 July 2011**
Solar UV radiation

142 **# 1307.** Evaluation of the time interval necessary to induce erythema and to produce Vitamin D: Preliminary results of measurements performed in Brazil and France
M. Correa, S. Godin-Beekman, M. Haeffelin, A. Pasmino & E. Mahe.
143 **# 1308.** SolAmigo DL Project: A Brazilian contribution for public awareness regarding the skin cancer prevention
M. Correa, R.J.S.P. Souza, A.P.S. FigueIredo, M.F. Rezende-Junior & L.F. Silva.
144 **# 5041.** Impact of UV and climate change on Skin Cancer incidence in Australia
L. Deschamps & J. Makin.
145 **# 3544.** New ozone retrieval schemes from Brewer spectroradiometer data.
J. Gröbner, P. Kiedron & A. Redondas.
146 **# 2228.** Global Simulations of Surface UV in a Changing Climate
S. Watanabe, K. Sudo, T. Nagashima, T. Takemura, H. Kawase, et al.

IAMAS M04 **Wednesday, 6 July 2011**
Recent advances in middle atmosphere science

148 **# 2466.** Rayleigh lidar observations of gravity-wave activity in the wintertime upper stratosphere and lower mesosphere (USLM) above Davis, Antarctica (69°S, 78°E)
S. Alexander, A. Klekociuk & D. Murphy.

149 **# 5879.** The role of transient tropospheric forcing in stochastic low-order models of sudden stratospheric warmings
T. Birner & J.P. Sjoberg.

150 **# 2435.** Effects of stratospheric ozone on polar-night jet oscillation: A case study of northern winter 2003-2004
M. Deushi & Y. Kuroda.

151 **# 4782.** Coupling between the Polar Mesopause and the Lower Atmosphere Investigated with Long-Term Satellite and Ground-based Observations
W. French & A.R. Klekociuk.

152 **# 2241.** Wave Activity in the Tropical Tropopause Layer in Reanalysis and Chemistry Climate Model Data
M. Fujiwara, J. Suzuki, A. Gettelman, M. Hegglin, H. Akiyoshi, et al.

153 **# 5073.** The influence of zonally asymmetric atmospheric transport on middle atmospheric ozone and water vapor
A. Gabriel, D. Demirhan-Bari, H. Koernich & D.H.W. Peters.

154 **# 1144.** Signatures of long period Kelvin waves in the low latitude mesosphere observed by MF radar winds and SABER/TIMED temperature during 2007 Indian summer monsoon
B. Ganesan Jaya, S. Sundararaman, S. Sundararajan, M. Lal & G. Subramanian.

155 **# 1518.** Detecting overshooting convection in the TTL
M. Hassim, T. Lane & P. May.

156 **# 532.** SAGE II Observations of Aerosol in the Upper Troposphere/Lower Stratosphere
C. Hill, L. Thomason & J. Vernier.

157 **# 3143.** Mesospheric Intrusion and Anomalous Chemistry During and After a Major Stratospheric Sudden Warming
V. Limpasuvan, O. Kvissel, Y. Orsolini, F. Stordal, J. Richter, et al.

158 **# 5037.** Momentum budget analysis on the seasonal variation of the diurnal tide by using the Whole Atmosphere Community Climate Model (WACCM4) and its comparison with the meteor radar and satellite observations
X. Lu, H.L. Liu, A. Liu, Q. Wu & S. Franke.

159 **# 2023.** Stratopause Evolution and Transport from Satellite Data and Data Assimilation System (DAS) Products
G. Manney, K. Minschwaner, S. Polavarapu, S. Ren, K. Hoppel, et al.

160 **# 5709.** SMILES observation on global distribution of minor constituents and the QBO
Y. Naito, N. Nishi, E. Nishimoto, M. Suzuki, C. Mitsuda, et al.

161 **# 1495.** Future change in the quasi-biennial oscillation influence on the extratropical stratosphere in the Northern Hemisphere winter simulated with an MRI chemistry climate
H. Naoe & K. Shibata.

162 **# 5617.** Intraseasonal to Interannual Variations of Ozone over the Northern Subtropical Region Revealed by Ozonesonde Observations in Hanoi
S. Ogino, M. Fujiwara, M. Shiotani, F. Hasebe, J. Matsumoto, et al.

163 **# 1236.** Diurnal variations of upper tropospheric and lower stratospheric winds over Japan as revealed with middle and upper atmosphere radar (34.85‹N, 136.10‹E) and five reanalysis data sets
T. Sakazaki, M. Fujiwara & H. Hashiguchi.

164 **# 5437.** Global characteristics of vertical wavenumber spectra based on a high-resolution climate model
K. Sato, I. Takano, Y. Kawatani & S. Watanabe.

165 **# 1991.** Use of aerological measurement and ERA reanalysis for the assimilation of Brewer and Dobson total ozone series.
P. Skrivankova, K. Vanicek, L. Metelka & M. Stanek.

166 **# 4949.** Tomographic Retrieval Approach for Mesoscale Gravity Wave Observations by the PREMIER Infrared Limb-Sounder
J. Ungermann, L. Hoffmann, P. Preusse, M. Kaufmann & M. Riese.

167 **# 3028.** Study on Comparing Radio Occultation Techniques Using GPS Measurements Over the Australian Area
C. Wang, K. Zhang, R. Norman, Y. Li, J. Le Marshall, et al.

168 **# 5659.** Non-linear interactions between polar tides and stationary planetary waves in the extended Canadian Middle Atmospheric Model (CMAM)
W. Ward, J. Du & F. Cooper.

IAVCEI V01/V04 **Wednesday, 6 July 2011**
Magma chambers and intrusions: their physical and chemical dynamics

170 **# 4167.** Thermal Aureoles and the Dynamics of Intrusions
C. Annen, J.C. Schumacher & B. Scaillet.

171 **# 4922.** Petrological, thermal and rheological constraints on the re-mobilization of magmatic mushes
L. Caricchi, C. Annen & J. Blundy.

172 **# 674.** Preliminary research of magma mixing and explosive mechanism of the Millennium eruption of Changbaishan (Tianchi) volcano, China
Q. Fan, J. Sui, N. Li, Y. Zhao & Q. Sun.

173 **# 1921.** Origin of lavas and xenoliths of graciosa volcanic island (Açores, Portugal))
Z. França, P. Larrea, M. Lago, E. Widom, C. Galé, et al.

174 **# 3783.** The Fate of Crystals in Thermally Zoned Magma Chambers
C. Freda, M. Masotta & M. Gaeta.

175 **# 5282.** Imaging large volcanic systems through density anomaly inversion models: the Southern Bolivian Altiplano
J. Gottsmann, R. Del Potro, A. Camacho & M. Sunagua.

176 **# 1122.** Can punctuated melt extraction from a crystal mush explain the 'Daly Gap' in shield volcanoes?
E. Hartung, B. Kennedy & C. Deering.

177 **# 1095.** Syn-depositional, crystal-rich, rhyolite porphyry intrusions co-magmatic with rheomorphic ignimbrite, in the late Mesoproterozoic Pussy Cat Group: Implications for felsic volcanism in the Musgrave Province, central Australia.
C. Medlin, R.A.F. Cas, M. Werner & R.H. Smithies.

178 **# 4153.** SEA-CALIPSO active-source seismic experiment successfully images magma chamber and crustal structure under Soufriere Hills Volcano, Montserrat
V. Miller, B. Voight, R.S.J. Sparks, J. Hammond, C. Annen, et al.

179 **# 1788.** Magmatic Evolution of the Austurhorn Intrusive Complex, SE Iceland: Insights from Zircon Geochemistry, Zoning, and Morphology
A. Padilla, C.F. Miller, T.L. Carley & J.L. Wooden.

180 **# 4168.** Imaging the Soufrière Hills Volcano Shallow Magma Chamber: Coupling Seismic Tomography and Thermal Models
M. Paulatto, C. Annen, T.J. Henstock, E. Kiddle, T.A. Minshull, et al.

181 **# 1260.** Crystallized Magma Chamber under the Region of the Uzon-Geysernaya Volcanotectonic Depression (Kamchatka) by the Data of Low-Frequensy Microseismic Sounding
V. Saltykov, Y. Kugaenko, A. Gorbatikov & M. Stepanova.

182 **# 1264.** The Thermal State of the Crust: a Critical Constraint on the Formation of Large Magma Chambers
A. Schöpa, C. Annen & S. de Silva.

183 **# 5592.** Magma compositions of the 1998 and 2004 eruptions at Grimsvotn volcano, Iceland: Implications for magma source and plumbing
T. Thordarson, T. Jude-Eton & G. Fitton.

184 **# 1592.** Dyke Swarm and Granitic Magma Transfer From Source to Batholith: the Karakoram Shear Zone, Indian Himalayas
R. Weinberg & H. Reichardt.

IAVCEI V06 Wednesday, 6 July 2011 The Rheology of Magmas

187 **# 1044.** Fracturing of Volcanic Edifices and Dyking during Magma Ascent
P. Benson, M. Heap, Y. Lavallee, P. Selvadurai, A. Flaws, et al.

188 **# 1493.** Dissection of crystal bearing melts rheology.
B. Cordonnier, B. Kauss & M. Manga.

189 **# 2824.** Laboratory viscosity measurement of crystal-bearing magma: a case study for the 1778 Izu-Oshima basalt
H. Ishibashi & H. Sato.

190 **# 5348.** Heat capacity of H2O- and CO2- bearing aluminosilicate magmas
C. Romano & C. Romano.

191 **# 5349.** Partial Molar Volumes of H2O and CO2 in Latitic and Trachytic Magmas
C. Romano, D. Di Genova, M. Alletti, B. Scaillet & H. Behrens.

192 **# 5347.** The Effect of H2O and CO2 on the Liquid Viscosity of Aluminosilicate Magmas
C. Romano, D. Di Genova, M. Alletti, B. Scaillet & H. Behrens.

193 **# 5345.** The Multiphase Rheology of Crystal- and Vesicle-bearing Magma from Monte Nuovo (Campi Flegrei, Italy)
C. Romano, A. Vona, D. Giordano & J.K. Russell.

194 **# 2408.** Pre-eruptive magma viscosity: an important measure of magma eruptibility
S. Takeuchi

195 **# 634.** Effects of the curvature of a lava channel on velocity and stress fields
A. Tallarico, A. Valerio & M. Dragoni.

196 **# 5096.** Magma Ascent and Effusion from a Tensile Fracture Propagating to the Earth's Surface
A. Tallarico, S. Santini & M. Dragoni.

197 **# 3873.** The Role of Advection in the Cooling Process of a Lava Flow with Temperature Dependent Pseudoplastic Reology
A. Tallarico, M. Filippucci & M. Dragoni.

IAVCEI V08 Wednesday, 6 July 2011 Volcanic Conduit and Vent Processes

200 **# 1670.** Bursting dynamics of geysers eruptions: high speed imaging, infrasonic signature, and possible inferences for Strombolian activity
E. Del Bello, J. Taddeucci, P. Scarlato, D. Andronico, C. Cimarelli, et al.

201 **# 1319.** Fragmentation of phenocrysts, magmas and melt-crystal separation; examples from the 2.56Ma Cerro Galan Ignimbrite, Northern Argentina.
M. Edwards, R. Cas & R. Weinberg.

202 **# 2564.** Understanding permanent degassing volcanoes: the case of Mayon (Philippines)
T. Girona, F. Costa & C. Newhall.

203 **# 653.** Conduit drilling at Hiyoriyama cryptodome, Kuttara volcano, Hokkaido, Japan
Y. Goto, S. Sakuma & S. Nakada.

204 **# 1780.** Extreme Frictional Processes at the Conduit Margin during the 2004-2008 volcanic eruption of Mount St. Helens (USA)
J. Kendrick, Y. Lavallee, A. Ferk, D. Perugini, R. Leonhardt, et al.

205 **# 3739.** Evolution of the cretaceous dadaepo basin, SE Korea, In response to oblique subduction of the izanagi plate
C. Kim, H. cho, C. Kim, M. Son & Y. Sohn.

206 **# 3731.** Mafic Tephra-Filled Volcanic Neck (Yangpo Diatreme) In The Miocene Janggi Basin, SE Korea, And Its Relevant Structures
C. Kim, S. Jung, J. Ki, M. Son & Y. Sohn.

207 **# 3129.** Effects of Lateral Gas Escape on Transitions from Lava Dome Eruptions to Explosive Eruptions
T. Kozono & T. Koyaguchi.

208 **# 3194.** Changes in Eruptive Style: Examples from Ngauruhoe, New Zealand, 1954-55 and 1974-75
J. Krippner, R. Briggs, A. Pittari & G. Kilgour.

209 **# 2442.** Drop of Decompression Rate of Magma Terminates Volcanic Eruptions
T. Miwa & N. Geshi.

210 **# 2251.** Origin of steady convection in Erebus lava lake, Antarctica
I. Molina, A. Burgisser & C. Oppenheimer.

211 **# 1200.** Relating lake level and lake temperature to hydrological loading for the Boiling Lake, Dominica
D. Robertson, E. Joseph, N. Fournier & H. Woith.

212 **# 3665.** Magma Mixing In A Conduit With Magma Pocket
E. Sato & K. Yamasaki.

213 **# 4933.** Bursting and Jetting Drives Ballistic-Dominated Eruptions at Stromboli (Italy)
L. Vanderkluysen, A. Harris, L. Colò, M. Ripepe & J. Dehn.

IAVCEI V17 Wednesday, 6 July 2011 Planetary Volcanism: what's different out there, what's new, and what are we learning?

215 **# 4029.** Rheology Of Lava Flows From Iceland Derived From Geometrical Parameters And Experimental Techniques
M.O. Chevrel, T. Platz, E. Hauber & D.B. Dingwell.

216 **# 4676.** Geologic Image Analysis Software (GIAS 2.0): New Tools for Characterizing Planetary-scale Patterns of Geospatial Distribution
C. Hamilton & C. Beggan.

THURSDAY, 7 JULY 2011

IUGG U05 — **Thursday, 7 July 2011**
Data Science/Informatics and Data Assimilation in Geophysical Models

1 # **5076.** The importance of science provenance in geophysical observing systems.
P. Fox, S. Zednik & P. West.
2 # **4625.** The Australian Integrated Marine Observing System: delivering data for marine researchers
K. Hill, M. McGowen, K. Roberts & R. Proctor.
3 # **1166.** Geoscience data intellectual processing and dissemination using GIS
R. Krasnoperov, A. Berezko, A. Lebedev, A. Rybkina & A. Soloviev.
4 # **5775.** Modern Data Center Services Supporting Science
S. McLean, J. Varner, J. Cartwright, J. Boucher, D. Neufeld, et al.
5 # **4264.** 4DVAR Assimilation of MODAS Synthetics in the Monterey Bay Using the NAVY Coastal Ocean Model
H. Ngodock & M. Carrier.

IAGA A031 — **Thursday, 7 July 2011**
Paleomagnetism

7 # **1227.** Detailed Paleomagnetic Study of the Pringle Falls Excursion recorded by 5 widely separated profiles found along the Deschutes River, Oregon USA
E. Herrero-Bervera & E. Canon-Tapia.
8 # **1847.** Magnetostratigraphy of the Miocene deposits in the marginal part of Carpathian Foredeep, Poland and western Ukraine, central Europe – preliminary results
J. Roszkowska-remin
9 # **3209.** Late Albian Reverse Polarity Chron Within the Cretaceous Normal Superchron: K-Ar Dating and Magnetostratigraphic Study of Cretaceous and Oligocene Igneous Rocks From Mixteca Terrane, Southern Mexico
J. Urrutia-Fucugauchi, S. Galina-Hidalgo, L. Perez-Cruz, M. Ruiz-Castellanos & D. Terrell.
10 # **1957.** Closing the Pacific dipole window? – historical secular variation in the south-west Pacific
M. Ingham, E. Ingham & G. Turner.

IAGA A034 — **Thursday, 7 July 2011**
Paleomagnetism: Tectonics and Deformation

13 # **3178.** Magnetic susceptibility development in experimentally compacted Rochester Shale powder aggregates
P. Benson, R. Bruijn, B. Almqvist & A. Hirt.
14 # **3854.** Melt Migration In Columnar Jointed Basalt From Hreppholar, Iceland: Evidence From Magnetic Anisotropy And Rock Magnetic Properties
A.M. Hirt, B.S.G. Almqvist, S. Bosshard, H.B. Mattson & G. Hetényi.
15 # **1850.** Magnetic Fabrics As Strain Indicator on the Rocks From Itajai Basin, Southern Brazil
I. Raposo, C. Drukas & M. Basei.
16 # **5141.** Magnetic Fabrics from Plastically Deformed Magnetite in High-Temperature Shear Experiments and Implications for Magnetite Rheology
J. Till, M. Jackson & B. Moskowitz.
17 # **1965.** Palaeomagnetic constraints on Cenozoic deformation within a NW part of the Pacific-Australia plate boundary zone in New Zealand
G. Turner, T. Little & D. Michalk.

IAGA A072 — **Thursday, 7 July 2011**
Radiation belt dynamics and remote sensing of the Earth's plasmasphere

20 # **4877.** Temporal Variation and Spatial Distribution of the Electron Temperature in the Plasmasphere
T. Abe
21 # **5180.** Detection of Whistlers with a VLF Antenna Located in Belgium – Retrieval of Plasmaspheric Electron Density Profiles
F. Darrouzet, J. De Keyser, S. Ranvier, H. Lamy & J. Lichtenberger.
22 # **3650.** Annual Variation of the Plasmasphere Mass Density at L = 1.6-1.8 as Deduced from Geomagnetic Field Line Resonance Measurements
M. Vellante, M. Foerster, U. Villante, T.L. Zhang & W. Magnes.

IAGA A081 — **Thursday, 7 July 2011**
Space plasma processes : New Techniques and Instrumentation in Space Plasma Physics

24 # **4368.** New SuperDARN Radar Instrumentation for Ionospheric Research at Mid-Latitudes
J. Baker, J. M. Ruohoniemi, R. Greenwald, L. Clausen, S. Shepherd, et al.
25 # **5907.** World Map of Magnetic Observatories: 2011
P. Chi
26 # **2743.** Observations magnetosphere-ionosphere coupling effects at middle latitudes by HF sounding
V. Kim & Y. Ruzhin.
27 # **1631.** Wavelet-technique of calculation of geomagnetic activity K-index
O. Mandrikova, S. Smirnov & I. Solov'ev.
28 # **5685.** EISCAT_3D: A European Three-Dimensional Imaging Radar for Atmospheric and Geospace Research
A. Tjulin & EISCAT_3D Project Team.
29 # **783.** Mutual Impedance Probes as Diagnostic Tools for Space Plasmas
J.G. Trotignon

IAGA A082 — **Thursday, 7 July 2011**
Space plasma processes: Magnetopause and Magnetosheath Processes of the Earth and Planets: Reconnection, Diffusion and Boundary Dynamics

31 # **5638.** Observations of Accelerated Flows in the Magnetosheath Caused by the Draping of the IMF Around the Magnetosphere
C. Farrugia, B. Harris, N. Erkaev & H. Biernat.
32 # **5637.** On Accelerated Magnetosheath Flows under Northward IMF
C. Farrugia, N. Erkaev, B. Harris & H. Biernat.
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Daniell, T. ..... H03S1_5AM1
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Dewey, J. ..... JA05S1_2AM1
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Ejiri, M.K. ..... A050_3PP111
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Emde, C. ..... U12S2_28AM2
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Eris, E. ..... HW13S1_6AM2
Eriyagama, N. ..... H02S2_5PM1
Ershadi, A. ..... JH02S6_2AM2
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Erskine, W. ..... HW01S2_3PM1
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Espy, P. ..... JA02S3_4PM1
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Evans, J. ..... JM10S19_5PM1
Evans, L. ..... S14S4_2AM2
Evenson, P. ..... A121_5PP041
Evin, G. ..... HW13S3_6PM2
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Fan, J. ..... M03S5_30AM1
Fan, J. ..... M11_28PP003
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Feng, J. ..... JM10S6_1PM1
Feng, M. ..... P06S6_30PM2
Feng, Y. ..... G03S3_5PM2
Feng, Y. ..... A011_2PP091
Fernandoy, F. ..... C02S4_29AM1
Ferraccioli, F. ..... JS07S1_1PM1
Ferraccioli, F. ..... A142S2_5AM1
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Ferraresi, M. ..... HW10_7PP061
Ferrari, G. ..... JA05S2_2AM2
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Fichtner, A. ..... S13S3_3PM1
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Flin, F. ..... C03S1_29AM1
Flin, F. ..... C03_29PP030
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Foerster, M. ..... A092S6_7PM1
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Folch, A. ..... V09S2_6PM1
Foley, M. ..... JM13_3PP143
Folkes, C. ..... V13S3_7PM1
Fomin, T. ..... S13_3PP218
Fonseca, P. ..... V20S1_3AM1
Fontana, G. ..... V15S1_6AM2
Forbes, A. ..... JS03S3_3AM1
Forbes, A. ..... U01_3PP005
Forbes, T. ..... A121S5_6AM2
Foret, G. ..... JM02S9_4AM2
Forgan, B.W. ..... M01S1_6PM1
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Forsberg, R. ..... G06S3_4PM1
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Fouchier, C. ..... JM13S4_4AM1
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Franklin, C. ..... M03S3_29PM1
Franklin, C. ..... JM10S19_5PM1
Fraser, A. ..... C01S2_29AM2
Fraser, A. ..... JM05S3_30PM2
Fraser, B. ..... JA04S2_4AM2
Fraser, B. ..... A071S1_6PM2
Fratantoni, D. ..... P01S4_29AM1
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Fraunie, P. ..... P02S2_30AM1
Freda, C. ..... V01/V04_6PP174
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Frederiksen, J. ..... M07S2_29AM2
Freitag, J. ..... C03S2_29AM2
French, W. ..... JA03S2_4AM2
French, W. ..... M04_6PP151
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Freymueller, J. ..... JS01S10_4AM1
Friis-Christensen, E. ..... A131S2_4AM2
Frischknecht, C. ..... S17/S18_2PP238
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Fu, C. ..... JS09S2_4PM1
Fu, G. ..... JH02S8_2PM2
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Fujii, Y. ..... JS01S8_3PM1
Fujii, Y. ..... JS01S12_4PM1
Fujima, K. ..... JS01S11_4AM2
Fujita, E. ..... JV02_4PP192
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Fuji-Ta, K. ..... JA01_2PP080
Fujiwara, M. ..... M04S2_5PM1
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Fuller-Rowell, T. ..... A061S4_6AM1
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Furger, M. ..... M10S6_6AM1
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Furlong, K.P. ..... U02S6_2PM2
Furlong, K.P. ..... S14_1PP172
Furuichi, N. ..... P03S3_28PM1
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Fyke, J. ..... JM11S2_1AM1

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Gallant, E. ..... JV02_4PP193
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Gallart, F. ..... HW10S1_6PM2
Gallart, F. ..... HW13_6PP130
Gallée, H. ..... M12S3_29PM2
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Gallo, A. ..... S0103S3_1AM1
Gallo, A. ..... S07S1_4AM1
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Galvin, A. ..... A101S5_3AM1
Gamage, N. ..... HW13S2_6PM1
Ganachaud, A. ..... P05S4_2AM2
Gandolfi, C. ..... HW03S2_5PM1
Ganesan Jaya, B. ..... JM04_5PP113
Ganesan Jaya, B. ..... M04_6PP154
Garaebiti, E. ..... JV01S2_1PM2
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