INTERNATIONAL GLACIOLOGICAL SOCIETY

Registered Charity

INTERNATIONAL SYMPOSIUM ON RADIOGLACIOLOGY AND ITS APPLICATIONS

Madrid, Spain
9–13 June 2008

ORGANIZED BY:
Universidad Politécnica de Madrid

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International Glaciological Society

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THIRD CIRCULAR & PROGRAMME

May 2008

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SYMPOSIUM ON RADIOGLACIOLOGY AND ITS APPLICATIONS

The International Glaciological Society will hold an International Symposium on Radioglaciology and its Applications in 2008. The symposium will be held in Madrid, Spain, from 9–13 June.

SYMPOSIUM ORGANIZATION

Magnús Már Magnússon (International Glaciological Society).

LOCAL ARRANGEMENTS COMMITTEE

Francisco José Navarro (Chairman), Javier Jesús Lapazaran (Vice-Chairman), Jaime Otero (Secretary), María Isabel de Corcuera, María Luisa Cuadrado, Francisco Machío, Ricardo Rodríguez.

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INFORMATION ABOUT THE SYMPOSIUM MAY BE OBTAINED FROM:

International Glaciological Society, Scott Polar Research Institute,
Lensfield Rd, Cambridge CB2 1ER, UK.
Tel: +[44] (0)1223 355 974 Fax: +[44] (0)1223 336 543
Email: igsoc@igsoc.org
Web: http://www.igsoc.org/symposia/
http://sympradar08.krios-hyperion.com/

SYMPOSIUM VENUE

The symposium is to be held at the C building of the School of Telecommunication Engineering of the Technical University of Madrid. A detailed description on how to access, including maps and available public transport, can be found at http://www.etsit.upm.es/la-escuela/como-llegar.html. A pdf compiling several maps with different zoom levels can also be downloaded from the symposium website http://sympradar08.krios-hyperion.com/, under “Organization and venue” section.

Registration will take place on Sunday 8 June, from 17:30 to 19:30 (notice that, on Sunday, the registration desk will be located at the hall of A building) and on Monday 9 June, from 8:00 to 9:30 (from Monday on, at the hall of C building). Nevertheless, the registration desk will remain open through the week. Receipts and other materials will be distributed at registration. Your nametag is proof of your registration and should be worn to all events.

The icebreaker will be held on Monday 9 June, at 19:30, at the gardens of the symposium venue.

THEME

Radio echo-sounding of ice reveals the bed topography, the properties of the bed and the internal glacio-stratigraphy. In the 1970s and 80s the bed topography of the Antarctic and Greenland ice sheets were mapped using a relatively restricted range of frequencies, with analogue logging devices. Since then, ice-penetrating radar technology has developed, extending the frequency bands to target different parts and depths of glaciers, relating electromagnetic returns to the physical properties of the ice and bed, and using radar layers in forward and inverse models of ice flow.

The conference will encompass all aspects of radar-sounding of ice and glaciers and its applications to glaciology, earth science and climate studies. We will welcome studies from shallow and deep sounding of ice; how electromagnetic interactions affect satellite returns; satellite deep sounding of Earth and other planets; the physical interpretation of intra-glacial and basal returns; how crystal fabric affects electromagnetic wave propagation; snow and firn studies; estimation of accumulation rates from radar stratigraphy; synergistic coupling of radar sounding with other geophysical techniques; large-scale mapping and imaging of radar layers and basal reflections; electromagnetic modelling of radar sounding; flow modelling, dating and stratigraphic correlations from radar surveying.

TOPICS

The suggested topics include:

1. Deep sounding, including:
   Subglacial topography, ice-bed interface, bed structure, subglacial lakes, subglacial water channels, sounding subglacial material.
2. Internal structure, including:
   Internal stratigraphy and correlation of ice cores, detection of structures (buried crevasses, folding, faults, etc.), englacial water channels, polythermal structure, physical properties of ice (density-porosity, water content of temperate ice, etc.), electrical properties of ice, echo-free structure in ice.
3. Shallow sounding, including:
   Internal stratigraphy: snow, firn, superimposed ice, estimation of accumulation rates, sea ice.
4. Planetary/orbital sounding, including:
   Theoretical aspects, sounding ice masses from satellite, ice cover of Mars, Europa and Enceladus
5. Numerical modelling (direct and inverse problems), including:
   Ice flow, dating layers, inversion of flow parameters.
6. Instrumentation and processing techniques, including:
   Radar equipment (coherent radar, synthetic aperture radar, etc.), complementary geophysical techniques, processing of radar data.
7. Theoretical and empirical aspects of propagation of electromagnetic waves in ice, including:
   Influence of ice fabric and physical properties, volume and interface scattering.

SESSIONS AND POSTERS

Oral and poster sessions will all take place at the C building of the symposium venue.

Oral presentations:

Oral presentations will be allowed 20 minutes *inclusive* of time for discussion. The session chairs will be asked to ensure that every presentation starts and finishes according to the schedule.

Presentations will be given in the Conference Room of C building. An overhead projector, video and DVD players, and a PC running MS PowerPoint (Office 2007) and Acrobat Reader (8.1) are available for presentations. Presentations should be uploaded from CD/DVD or USB memory stick/flash drive with sufficient advance to the presentations.

Posters presentations

Posters will be displayed on the hall of C building. Poster introductions will be allowed 2 minute and *one or two overheads*. PowerPoint presentations etc. are discouraged due to the additional time required.

Each poster will be allocated an individual panel 125 cm wide and 135 high, the lower edge being 50 cm above the ground. Preferred poster size is A0 with landscape orientation (if A0 portrait, its lower edge would be ca. 65 cm above the ground). Velcro will be provided.

SOCIAL PROGRAMME

Sunday (17:30 - 19:30)	Registration at symposium venue (also Monday 8:00 - 9:30).
Monday (19:30 - 21:30)	Icebreaker at garden of symposium venue.
Tuesday (19:45- 23:45)	Banquet at Finca Los Jarales (Torrelodones, north of Madrid). Buses will pick up symposium participants and accompanying persons at main hotels at 19:45. More details will be provided during symposium.
Wednesday (13:45 – 23:45)	Mid-week excursion to Toledo. Departure from symposium venue at 13:45, immediately after lunch. Buffet dinner in Toledo.

THEMATIC PUBLICATION

The Council of the IGS has decided to change the editorial policy of the Annals of Glaciology. The Annals will be published as a thematic journal whose themes will be chosen by the IGS Council on a regular basis. Such themes may run parallel to the themes of symposia or may be independent. Thus the Council has decided to publish an Annals issue whose theme will be “Radioglaciology and its Applications”. Submissions are open to anyone. All papers should be submitted through the IGS online submission system and will be refereed and edited according to the Society's regular standards before being accepted for publication. Papers submitted for consideration in the Annals cannot be submitted to another publication as well.

The new page charge policy for publishing in the Annals of Glaciology has not been announced yet but that information will be made available soon.

ACCOMPANYING PERSONS PROGRAMME

The accompanying person registration fee includes the icebreaker, the mid-week excursion and the banquet. A sightseeing tour of Madrid and short excursions near Madrid are available, at additional cost, through the travel agency website. Staff will be on hand at the registration/information desk during the conference and will assist with further arrangements.

LOCATION AND WEATHER

Spain covers an area of 505,990 km² (195,364 sq. miles), including the Balearic and Canary Islands and two small north-African cities, Ceuta and Melilla. It occupies about 85 per cent of the Iberian Peninsula, surrounded by the Atlantic ocean at the west and the Mediterranean sea at the east, and separated from France by the mountain chain of the Pyrenees. At the South, less than 13 km (8 mi) separate Spain from Africa in the narrowest area of the Gibraltar Strait. Spanish topography is characterised by its central plateau –la Meseta–, with an average elevation of about 610 m (2,000 ft), broken and surrounded by several mountain ranges, reaching altitudes up to 3,478 m (11,411 ft). The variety of geographical features ensure pronounced regional climatic differences. The climate is humid and cool in the north-west and the north, Mediterranean in the east and south-east, Mediterranean-continental in the central plateau and quite dry and hot in the south. In Madrid area, daily mean temperature during June is 21ºC (70°F), with an average maximum of 27ºC (81°F) and an average minimum of 15ºC (59°F), and rains are occasional (typically 4 days in a month).

TRAVEL AND ACCOMMODATION

Spain is a member of the Schengen Treaty. Information about which nationalities need visa, where and how to apply (including forms) can be found using the links to the Foreign Affairs Ministry (for different languages) which appear in the symposium website.

The Local Organizing Committee has reserved **accommodation** at the following hotels, located in Madrid downtown (see figure below) but not far from the university area, all of them having a good link by underground and/or bus. All the listed prices are per room and per night w/breakfast, with single/double/triple occupancy. Taxes are included (rounded to the nearest integer).

Tryp Ambassador Hotel (****): 170/180 €

Husa Moncloa Garden Hotel (****): 143/143 €

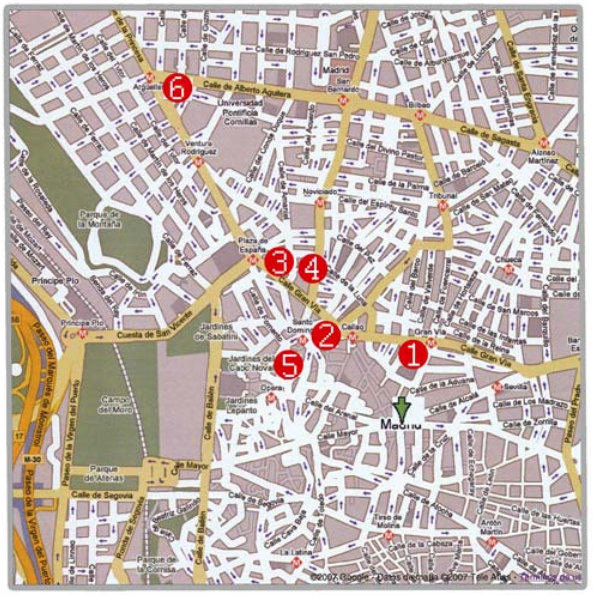
Tryp Gran Vía *OR* Tryp Rex *OR* Tryp Washington hotels (***): 119/143 €

Alexandra Hotel (**): 67/88/131 €

Further details about the individual hotels can be found on the travel agency website https://congresos.hostingtravel.com/registration/registration.asp?congress=30000000032&language=en&agency=ultramar_madrid where it is also possible to make the booking. For further information about booking of accommodation please contact Ultramar Express at

E-mail: SympRadar08@ultramarexpress.com
Phone: + 34 93 482 71 40
Fax: +34 93 482 71 58

It is possible to book into hostels (see e.g.: http://www.hostels.com/es/es.ma.html) at a cheaper rate, but this must be done by the individual participants themselves.



INTERNATIONAL SYMPOSIUM ON RADIOGLACIOLOGY AND ITS APPLICATION

PROGRAMME OF SESSIONS

Please note that the programme may change if authors do not attend the Symposium. Corrections will be posted outside the auditorium each day.

Numbers in the third column refer to abstract numbers

MONDAY, 9 June 2007

08:00 **Registration**
09:30 **Opening of Symposium**

Senior Council Member of the IGS
President of the Spanish Committee of SCAR
Director of School of Telecommunications Engineering, Universidad Politécnica de Madrid
Committee Chair, Local Organizers
Chief Editor

Session Chair: RCA Hindmarsh

	Session 1: Opening Lecture		
10:10	SP Gogineni	034	Advances in Radar Imaging and Sounding of Ice Sheets
10:50	**Coffee break**		

Session Chair: R Jacobel

	Session 2: Deep sounding		
11:20	E King	065	Moraines, drumlins and mega-scale glacial lineations beneath Rutford Ice Stream, West Antarctica, mapped using a ground-based radar
11:40	BC Welch and RW Jacobel	038	Indications of non-steady conditions in East Antarctica from US-ITASE radar surveys
12:00	F Parrenin and RCA Hindmarsh	040	Influence of a non-uniform velocity field on isochrone geometry along a steady flowline of an ice sheet
12:20	E Rignot, A Safaeinili and D Kirchner	090	Low frequency radar sounding in Alaska, Patagonia and Greenland
12:40	H Conway, P Vaswani, B Smith and K Matsuoka	028	Airborne radar sounding of Alaskan outlet glaciers
13:00	**Lunch**		

Session Chair: D Dahl-Jensen

	Session 3: Mars and Orbiters I		
14:30	A Safaeinili (invited)	091	Orbital Radar Sounders: Why Do We Need Them?
15:00	JW Holt, A Safaeinili, N Putzig, R Phillips and J Plaut	088	Insights into the Northern Polar Layered Deposits, Mars from SHARAD orbital radar sounding
15:20	JJ Plaut	093	Radar Sounding of Ice-rich Terrains of Mars
15:40	C Grima, W Kofman, J Mouginot, A Servain, P Beck, A Pommerol and A Herique	094	Unusual ice scarps on Mars: an origin highlighted by radar sounding, elevation data, and visible imagery
16:00	**Coffee break**		

Session Chair: E Rignot

	Session 4: Mars and Orbiters II		
16:30	M Cartacci, A Cicchetti, A Frigeri, S Giuppi, R Noschese, R Orosei and E Pettinelli	092	Surface and subsurface radar backscattering coefficient over the Martian south polar layered deposits from MARSIS data
16:50	DD Blankenship, DA Young and ME Peters	083	Orbital Radar Imaging of Europa?s Subsurface Properties and Processes: The View from Earth
17:10	FC Hélière, CC Lin, N Floury, P Fabry, R Scheiber, K Papathanassiou, H Corr	095	Advanced Concepts for a Future Ice Sounding Mission
17:30	J Dall, J Balling, CC Hernández, SS Kristensen, V Krozer, A Kusk and N Skou	089	ESA's polarimetric P-band ice sounder - First campaign results

18:15 **Lecture by David Drewry:**
"Antarctic Radio-Echo Sounding: the pioneering years"

19:30 **Ice breaker**

TUESDAY, 10 JUNE 2007

Session Chair: H Conway

	Session 5: Novel sounding and structures		
09:00	H Corr (invited) and A Jenkins	013	The pRES technique: advantages, applications and limitations
09:30	G Catania, T Neumann and L Koenig	036	Percolation at the equilibrium line of the Greenland Ice Sheet
09:50	N Reeh, EL Christensen, S Hanson, SS Kristensen and L Stenseng	059	Lens-shaped ice body (superimposed ice?) detected by radio echo-sounding of a West Greenland ice-margin sector
10:10	T Murray, B Barrett, J Woodward and M Hambrey	033	Investigating the causes of scattering within a surge-type glacier
10:30	S Fujita, H Enomoto, T Kameda, H Motoyama and S Sugiyama	057	Changes of surface snow density in a summer in the Antarctic Dome Fuji region: implication for formation of density strata and radar sounding
10:50	**Coffee break**		

Session Chair: D Drewry

	Session 6: Radar surveys		
11:20	S Popov	053	Project: Russian initiative to the international mapping of Antarctica
11:40	R Mottram, C Nielsen, A Ahlstrøm, N Reeh, SS Kristensen, EL Christensen and R Forsberg	073	A new regional high-resolution map of basal topography for the Greenland ice sheet margin at Paakitsoq, West Greenland and its application in an ice-dynamic model
12:00	D Steinhage	017	Revised and extended data sets of ice thickness distribution and subglacial relief in Dronning Maud Land, Antarctica
12:20	AF Glazovsky, II Lavrentiev, YuYa Macheret, FJ Navarro and EV Vasilenko	007	Geometry and internal structure changes of Fridtjovbreen, Spitsbergen, during 1936-2007
12:40	O Eisen, C Martin, N Blindow, D Steinhage and R Hindmarsh	024	Manifestation of ice properties and dynamics in radar stratigraphy: Berkner Island ice saddle as a case study
13:00	**Lunch**		

Session Chair: J Kohler

	Session 7: Shallow radar I		
14:30	SA Arcone (invited)	105	Genesis and deformation of firn stratigraphy in West and East Antarctica: evidence from the US ITASE subsurface radar profiles
15:00	S Fitzsimons	055	Subsurface evidence for glacier-permafrost interactions at active ice margins in Antarctica
15:20	B Barrett, T Murray, A Smith, K Nicholls and K Makinson	060	Spatial patterns of accumulation from GPR reflections in the Rutford Ice Stream firn layer
15:40	IA Brown and S Ingvander	074	Ground penetrating radar data in the analysis of synthetic aperture radar images
16:00	**Short break**		

Session Chair: D Blankenship

	Poster Session 1. Short presentations		
16:10	FJ Navarro, YY Macheret, E Vasilenko, JJ Lapazaran, A Ahlstrøm and F Machío	004	Radioglaciological studies on Hurd Peninsula glaciers, Livingston Island, Antarctica
16:12	JJ Lapazaran, FJ Navarro, C Martín and MI Corcuera	006	On the proper use of Looyenga and related formulae for estimating physical properties of glacier ice from radio-wave velocity in ice
16:14	G Catania, H Conway and C Raymond	008	Basal and englacial reflectivity of inter-ice stream ridges in the Ross Sea, Antarctica
16:16	RCA Hindmarsh, GJMC Leysinger Vieli and F Parrenin	010	A large-scale numerical model for isochrone geometry
16:18	A Fischer and N Span	018	3D volume data of 53 of Austrian glaciers as a basis for a classification-based scaling algorithm
16:20	D Rippin and I Willis	020	Ground Penetrating Radar Reveals Rapid Changes in the Thermal Regime of a Polythermal Glacier in Response to a Changing Climate
16:22	R Drews, O Eisen, I Hamann, J Kipfstuhl, A Lambrecht, F Wilhelms and F Wilhelms	023	The origin of the echo-free zone
16:24	MJ Burke, J Woodward, AJ Russell and PJ Fleisher	030	Structural controls on an englacial esker: Skeiðarárjökull, Iceland
16:26	F Pattyn, C Delcourt, D Samyn, B de Smedt and M Nolan	031	Bed properties and hydrological conditions underneath McCall Glacier, Alaska, USA
16:28	M Mangialetti, A Forieri, AE Zirizzotti, C Bianchi and IE Tabacco	032	Physical properties of the ice-bottom interface in dome c area inferred from the analysis of bottom radar echoes
16:30	O Brandt, K Langley, A Giannopoulos, SE Hamran and J Kohler	041	Radar response of firn comprising a high fraction of ice layers, validation using cores and FDTD modeling
16:32	G Gacitúa, R Zamora, J Wendt, G Casassa, F Bown and A Rivera	045	Radar snow accumulation measurements along the transect from Patriot Hills (80°S) to South Pole
16:34	NB Karlsson, DM Rippin, DG Vaughan and HFJ Corr	047	The Internal Stratigraphy of the Pine Island Glacier from Radio Echo Sounding Data
16:36	B Barrett, T Murray, R Clark, B Hubbard and D Rippin	062	A vertical profile of radar velocity from Glacier de Tsanfleuron, Switzerland
16:38	E King	066	GPR surveys at 100 MHz of the margins of Kamb and Bindschadler Ice Streams, West Antarctica
16:40	S Ingvander and IA Brown	076	Digital image processing of Ground Penetrating Radar radargrams towards objective information extraction
16:42	SA Arcone and K Kreutz	087	GPR reflection profiles of glaciers in the dry valleys, Antarctica
16:44	Y Jiang, B Sun and C Ke	101	Features analyses of the shallow Antarctic ice sheet based on ice-penetrating radar method: a case-study along the Zhongshan-Dome A traverse
16:46	**POSTERS**		

19:45 **Participants' pick up at hotels for BANQUET**

WEDNESDAY, 11 JUNE 2007

Session Chair: T Murray

	Session 8: Modelling and palaeoclimate		
09:00	D Dahl-Jensen (invited)	099	Radio echo sounding? a leap forward in our understanding of ice flow and ice sheet response to climate change
09:30	F Parrenin, M Sacchettini, O Eisen and D Steinhage	079	Reconstruction of past accumulation rates from internal layers downstream of Kohnen station (Antarctica)
09:50	GJMC Leysinger Vieli, RCA Hindmarsh and MJ Siegert	009	Towards modelling Holocene accumulation rate trends in East Antarctica deduced from isochronic radar layers
10:10	HC Steen-Larsen, SJ Johnsen and D Dahl-Jensen	049	The change in surface accumulation-rate pattern along the ridge from GRIP to NEEM during the Holocene
10:30	M Rousselot, F Parrenin, O Gagliardini and RCA Hindmarsh	039	2D inverse modeling of isochrone layer geometry in a steady state ice sheet
10:50	**Coffee break**		

Session Chair: O Eisen

	Session 9: Shallow radar II		
11:20	S Fujita, P Holmlund, H Enomoto, K Fukui, S Ingvander, S Sugiyama and S Surdyk	061	Radio-glaciology studies in the Japanese-Swedish Antarctic Expedition (JASE) 2007-2008
11:40	J Woodward, EC King and L Gray	100	Radar surveys of the Rutford Ice Stream onset zone, West Antarctica: Indications of flow stability and intermittent storminess
12:00	K Langley, A Doulgeris and T Eltoft	071	Analysis and classification of glacier facies with SAR and GPR data
12:20	K Müller, M Albert, S Tronstad, SE Hamran and JO Hagen	014	Radar scattering zones across Dronning Maud Land, East Antarctica
12:40	J Sharma, I Hajnsek and K Papathanassiou	016	Sub-surface glacial structure over Nordaustlandet using multi-frequency Pol-InSAR
13:00	**Lunch**		

13:45 **EXCURSION to Toledo**

THURSDAY, 12 JUNE 2007

Session Chair: F Parrenin

	Session 10: Ice flow inferences & Analysis Techniques I		
09:00	C Hulbe (invited), G Catania and M Fahnestock	048	Stagnation of Kamb Ice Stream investigated using flow features within the ice and numerical models
09:30	DA Young, DD Blankenship, SD Kempf and JW Holt	063	Airborne radar reveals restrictions on ice streaming at Thwaites Glacier, Antarctica
09:50	E King	064	Flow convergence of Rutford Ice Stream, West Antarctica from radio-stratigraphy
10:10	JM Brown JT Harper and JH Bradford	011	Radar Scattering and Transparent Layers in a Temperate Valley Glacier: Bench Glacier, Alaska
10:30	A Booth and B Kulessa	043	Monitoring subglacial hydrological processes with ground-penetrating radar (GPR): scope and potential pitfalls
10:50	**Coffee break**		

Session Chair: G Catania

	Session 11: Analysis Techniques II		
11:20	S Fujita and S Mae	058	Effect of temperature on the dielectric properties of hexagonal ice at 30-40 GHz measured using an open resonator
11:40	J de Juan, P Elosegui, JL Davis, M Nettles and TB Larsen	070	Ionospheric correction techniques in high-rate GPS glaciology
12:00	JH Bradford, JD Nichols, D Mikesell and JT Harper	026	Continuous multi-fold acquisition and analysis of ground-penetrating radar data for improved characterization of glacier structure and water content
12:20	A Heilig, M Schneebeli and W Fellin	098	Electromagnetic response of layered and disturbed snow to a Ground Penetrating Radar (GPR)
12:40	SP Carter, DD Blankenship, DA Young and JW Holt	085	Paleo-thickness of the central East Antarctic Ice Sheet over the last glacial cycle: An independent verification of models and isotope proxies from internal layers in airborne radar sounding data.
13:00	**Lunch**		
13:45	**International Glaciological Society AGM**		

Session Chair: B Kulessa

	Session 12: Fabric		
14:50	K Matsuoka (invited)	027	Detection of in-situ ice-crystal alignments using ice-penetrating radar
15:20	C Martín, GH Gudmundsson, H Pritchard and O Gagliardini	035	Ice flow and crystal fabric near ice divides
15:40	O Eisen, I Hamann, J Kipfstuhl, D Steinhage and F Wilhelms	022	Determining fabric orientations from the dependence of reflected energy on polarisation azimuth for a continuous internal reflector in Antarctica
16:00	**Short break**		

Session Chair: F Pattyn

	Poster Session 2. Short presentations		
16:10	EV Vasilenko, F Machío, FJ Navarro, R Rodriguez-Cielos	005	VIRL7: A new radar system for glaciological applications
16:12	D Rippin	021	Methods for Assessing Basal Roughness from Antarctic Radio Echo Sounding Data, and Implications for Ice Dynamics
16:14	K Matsuoka, T Gades, H Conway, G Catania and CF Raymond	029	Radar signatures beneath a surface topographic lineation near the outlet of Kamb Ice Stream and Engelhardt Ice Ridge, West Antarctica
16:16	P Huybrechts, O Rybak, D Steinhage and F Pattyn	037	Past and present accumulation rate reconstruction along the Dome Fuji? Kohnen radio echo sounding profile, Dronning Maud Land, East Antarctica
16:18	JA MacGregor, K Matusoka, MR Koutnik, ED Waddington, M Studinger and DP Winebrenner	044	Mapping millennially averaged accumulation rates for the Lake Vostok region using deep internal layers and inverse methods
16:20	H Anschütz, E Isaksson, K Langley and K Müller	051	Dielectric properties and accumulation rates from ice cores along a traverse line through East Antarctica
16:22	S Popov	054	Ice sheet structure and bed relief of the Vostok Subglacial Lake area
16:24	T Murray, A Booth and LE Clarke	056	Visualising glacial sediment inclusions using 3-D ground-penetrating radar at Kongsvegen, Svalbard
16:26	R Zamora, D Ulloa, G García, R Mella, J Wendt, G Casassa and A Rivera	067	A low frequency airborne radar sounder for temperate ice
16:28	E King, RCA Hindmarsh, HFJ Corr and R Bingham	068	DELORES Mark 1: Construction and operation of the British Antarctic Survey Deep Look Radio Echo Sounder
16:30	D Ulloa, JA Uribe, G García, R Zamora, G Casassa and A Rivera	069	A low cost VHF radar for ice thickness measurements
16:32	B Daniel, B Ewald, R Karl-Heinz, B Michael, S Wolfgang	072	Determination of glacier volumes in the Hohen Tauern (Eastern Alps) by ground penetrating radar (GPR)
16:34	M Ericsson and IA Brown	075	Radiometric correction of SAR images over glaciers and icesheets
16:36	M Grabiec, W Dobinski, J Gadek and D Puczko	077	Relationships between glaciers and permafrost in the light of GPR surveys on Wedel Jarlsberg Land (Svalbard), Kebnekaise Range (Scandinavian Mts.) and Tatras, (the Carpathians)
16:38	JJ Lapazaran, F Machío, FJ Navarro, M Grabiec, D Puczko and M Petlicki	078	Radio-echo sounding of Ariebreen, Hornsund, Spitsbergen
16:40	YuYa Macheret, J Otero, FJ Navarro, EV Vasilenko, ML Cuadrado and A Glazovsky	080	Ice thickness, internal structure and subglacial topography of Bowles Plateau ice cap, Livingston Island, Antarctica
16:42	H Pritchard, RCA Hindmarsh and C Martín	081	An ice-cap thinning history from the Antarctic Peninsula
16:44	ME Peters, DD Blankenship, SD Kempf, DA Young, SP Carter and JW Holt	084	Focused SAR Processing of Airborne Radar Sounding Data from West Antarctica
16:46	T Xueyuan, B Sun, Z Zhanhai and W Bangbing	102	Radioglaciological and numerical model studies on Dome A, East Antarctica
16:48	**POSTERS**		

FRIDAY, 13 JUNE 2007

Session Chair: C Hulbe

	Session 13: Deep and wet I		
09:00	S Anandakrishnan (invited), R Jacobel and LE Peters	050	Combining seismic and radar methods to characterize subglacial properties
09:30	RG Bingham, JBT Scott, RCA Hindmarsh and AM Smith	025	Deep radio-echo sounding on Pine Island Glacier, West Antarctica
09:50	JS Greenbaum, GA Catania, T Neumann, N Bangs and T Hess	042	Seismic processing applied to radar data to investigate melt-water drainage structures in the southern Greenland Ice Sheet
10:10	H Corr, F Ferraccioli, T Jordan and E Armadillo	012	Newly identified subglacial lakes along the eastern margin of the Wilkes Subglacial Basin, East Antarctica.
10:30	DD Blankenship, DA Young, SP Carter, HWA Danque, TM Diehl, ME Peters and JW Holt	082	Airborne radar sounding to evaluate volcanism as a control on coupled ice-water systems beneath the West Antarctic ice sheet.
10:50	**Coffee break**		

Session Chair: F Navarro

	Session 14: Deep and wet II		
11:20	RW Jacobel, BC Welch, DJ Osterhouse, R Pettersson and JA MacGregor	001	Spatial Variation of Basal Conditions on Kamb Ice Stream
11:40	N Ross, A Smith, J Woodward, M Siegert, RCA Hindmarsh, H Corr and E King	097	Radio-Echo Sounding exploration of Subglacial Lake Ellsworth , West Antarctica
12:00	G Catania and C Hulbe	015	Relict ice-shelf rifting as an indication of grounding line retreat on Kamb Ice Stream, Antarctica
12:20	SP Carter, DD Blankenship, DA Young and JW Holt	086	Subglacial hydraulic connections, basal meltwater sources, and water budget at the headwaters of the Lake Concordia and Lake Vincennes from airborne radar sounding.
12:40	A Rivera, R Zamora and J Wendt	046	The ice divide between Pine island and Institute ice stream by means of 150 MHz ice penetrating radar
13:00	**Closing words and Lunch**		

NOTES

NOTES