INTERNATIONAL SYMPOSIUM CRYOSPHERIC INDICATORS ON GLOBAL CLIMATE CHANGE

REVISED PRELIMINARY 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, 21 AUGUST 2006	
08:30	**Opening of Symposium**
	Atsumu Ohmura, President of the IGS
	Barry Goodison, Chairman of CliC
	Georg Kaser, President of UCCS
	Tom Lachlan-Cope, Chairman, Local Organizing Committee
	Martin Sharp, Chief Editor of Annals 46

	Session 1: **CliC project area 2: Glaciers, ice caps and ice sheets, and their relation to sea level**		
			Chair: Konrad Steffen
09:15	Richard B. Alley, Matthew K. Spencer, and Sridhar Anandakrishnan	053	Ice-sheet mass balance: assessment, attribution and prognosis
09:30	H. Jay Zwally, Scott B. Luthcke, Donghui Yi, Jack L. Saba, Jun Li, Mario B. Giovinetto, Helen G. Cornejo and Anita C. Brenner	285	Mass balance of the Greenland and Antarctic ice sheets and ice shelves: an overview of recent results
09:45	Robert Bindschadler and Hyeungu Choi	253	Mapping the Total Antarctic Ice Sheet Discharge: an IPY Benchmark Data Set
10:00	Eric Rignot	290	Western Greenland glacier ice discharge since 1957 and its contribution to sea level change
10:15	**Refreshments**		

	Parallel Session 2a: **Actual records of climate in cryospheric regions, and their relation to changes in the cryosphere, including statistical/model interpretation**		
			Chair: NN
10:45	Edward Hanna, Konrad Steffen, Philippe Huybrechts, Russell Huff and John Cappelen Stephens	203	Record Greenland melt and runoff in 2005
11:00	Pedro Skvarca, Frank Rau, Ted Scambos, Hernán Sala Evgeniy and Jonathan Thom	070	Effects of ongoing climatic warming on the cryosphere of the Antarctic Peninsula
11:15	Helgard Anschuetz, Olaf Eisen, Hans Oerter, Daniel Steinhage and Mirko Scheinert	021	Investigating small-scale variations of the recent accumulation rate in Central Dronning Maud Land, East Antarctica
11.30	Konrad Steffen, Russell Huff and Nicolas Cullen	084	Accumulation, melt, and climate variability at the Western slope of the Greenland ice sheet at Swiss Camp: 1990 to 2005
11:45	Andrew P. Barrett and Mark C. Serreze	245	Glacier mass balance and runoff to the Arctic Ocean
12:00	Maria Shahgedanova, Viktor Popovnin, Alexander Alaynikov, Dmitry Petrakov and Christopher R Stokes	126	Long-term change and interannual and intraseasonal variability in climate and glacier mass balance in the Caucasus Mountains, Russia
12:15	**Lunch**		

	Parallel Session 2b: Observed historical changes in the cryosphere		
			Chair: NN
10:45	Hamish Pritchard and David G. Vaughan	097	Widespread acceleration of the Antarctic Peninsula's retreating tidewater glaciers
11:00	Richard Hodgkins, Adrian Fox and Anne-Marie Nuttall	113	Mass-balance change between 1990 and 2003 at Finsterwalderbreen, a Svalbard surge-type glacier, from GPS-profiling
11:15	Chris DeBeer and Martin Sharp	193	Recent glacier retreat within the southern Canadian Cordillera
11.30	Etienne Berthier, Yves Arnaud Sarfaraz Ahmad, Rajesh Kumar, Patrick Wagnon and Pierre Chevallier	117	Recent glacier thinning in the Spiti/Lahaul region of Indian Himalaya obtained by comparing SRTM and SPOT 5 DEM
11:45	Vuglinsky Valery	183	Changes in ice regimes of rivers in the European Russia
12:00	Shangguan Donghui, Liu Shiyin, Ding Yongjian, Li Jing, Zhang Yong, Ding Lianfu, Wang Xing, Xie Changwei and Li Gang	132	Glacier changes in the West Kunlun Mountains, China from 1970 to 2001 derived from Landsat TM/ETM+ and Chinese glacier inventory data
12:15	**Lunch**		

	Parallel Session 3a: Snow accumulation, snow stratigraphy, surface melt and runoff		
			Chair: NN
13:30	Heidi Escher-Vetter and Matthias Siebers	038	Sensitivity of glacier runoff to summer snowfall events
13:45	Allan Frei, Gavin Gong, David A. Robinson, Gwangyong Choi and Debjani Ghatak	224	North American snow extent as an indicator of climate change
14:00	Wang Feiteng, Li Zhongqin, R. Edwards and Li Huilin	090	Long term changes in the snow-firn pack stratigraphy on Glacier No. 1 in the Eastern Tianshan Mountains
14:15	Tetsuo Ohata	296	Cryosphere-Atmosphere-Biosphere Interaction and Changes in Northern Eurasia
14:30	Thomas H. Painter, Andrew P. Barrett, Chris Landry and Corey Lawrence	266	Radiative forcing of desert dust deposition in mountain snow cover
14:45	Vladimir N. Golubev, Marina N. Petrushina and Denis M. Frolov	215	Variability of temperature and precipitation regime as a factor of snow cover distribution and stratigraphy of snowpack
15:00	Chris Derksen, Ross Brown and Libo Wang	033	Spring snow cover over northern Canada from satellite and in situ data
15:15	Ross D. Brown and Gregory M. Flato	018	Snow cover variability and change over North America
15:30	**Refreshments**		

	Parallel Session 3b: Observed historical changes in the cryosphere, contd		
			Chair: NN
13:30	Frank Paul, Andreas Wipf, Max Maisch, Martin Hoelzle and Wilfried Haeberli	157	Long-term changes in alpine glacier volume obtained by six independent approaches
13:45	Tavi Murray and Tim James	116	Volume loss from a Svalbard catchment – contrasts between a surge-type and non-surge-type glacier
14:00	Isabella Velicogna and John WAhr	289	Monitoring the mass variations of ice sheets
14:15	Oddur Sigurðsson, Tómas Jóhannesson and Trausti Jónsson	210	Relation between glacier front variations and summer temperature in Iceland since 1930
14:30	Anton (Toni) Schenk, Yushin Ahn, Beata Csatho and Andrew Fountain	270	Precise reconstruction of cryospheric changes from aerial photography and airborne laser scanning
14:45	Keith Echelmeyer, Craig Lingle, Brent Richie, Sandra Zirnheld and Virginia Valentine	260	Continued volume changes of Alaska glaciers

15:00	C. D'Agata, M. Citterio, G. Diolaiuti, G. Stella, T. Carnielli and C. Smiraglia	256	Trends in glacial terminus fluctuations from the first complete data-base of Italian glaciers
15:15	Rajmund Przybylak	005	Recent air temperature changes in the Arctic
15:30	**Refreshments**		

	Parallel Session 4a: Ice shelves and their interaction with the ocean & atmosphere		
			Chair: NN
16:00	Luke Copland and Laurie Weir	255	The 2005 calving of the Ayles Ice Shelf, Ellesmere Island, Canada
16:15	Mervyn P. Freeman, Martin E. W. O'Leary and Alison J. Cook	104	How long is the coastline of Antarctica? – a new method for understanding iceberg calving and a possible precursor of ice shelf collapse.
16:30	Faezeh Maghami Nick and Cornelis van der Veen	039	Controls on advance of tidewater glaciers: Results from numerical modeling applied to Columbia Glacier
16:45	Jeremy Lloyd, David Roberts, Antoon Kuijpers, Matthias Moros and Antony Long	022	Interaction between ocean circulation, climate and ice stream dynamics of Jakobshavn Isbrae, West Greenland
17:00	R.A. Massom, T. Scambos, J.C. Comiso, John Turner, Sharon Stammerjohn, Ian Simmonds, Mark Fahnestock and Neil Adams	054	The contribution of extreme events in the austral spring-summer of 2001/2 to the disintegration of the Larsen-B ice shelf

	Parallel Session 4b: Observed historical changes in the cryosphere, contd.		
			Chair: NN
16:00	Jon Ove Hagen, Trond Eiken, Even Loe, Jack Kohler, Kjetil Melvold, Thomas V. Schuler and Andrea Taurisano	278	Elevation changes on Austfonna Ice cap
16:15	Andrew G. Fountain, Hassan J. Basagic, M. Hoffman, Keith Jackson and Dan Fagre	281	Climate Change and Glacier Response in the American West
16:30	Beata Csatho, Anton (Toni) Schenk, Cornelis van der Veen and Robert Thomas	268	Intermittent thinning of Jakobshavn and Kangerlussuaq glaciers since the Little Ice Age, reconstructed from photogrammetry, remote sensing and glacial geologic evidence
16:45	Ninglian Wang, L. G. Thompson, M. E. Davis and Tandong Yao	091	Similarities and differences between the variations in accumulation rates over the past 500 Years recorded in ice cores from the Northern and Southern Tibetan Plateau
17:00	Wolfgang Schöner and Reinhard Böhm	240	A statistical mass balance model for reconstruction of LIA ice mass of glaciers of European Alps
17:15	Elisabeth Isaksson, Dmitry Divine, Harro Meijer, Roderik .S.W. van de Wal, Tonu Martma, Veijo Pohjola, John Moore and Makoto Igarashi	275	The ice core record of Svalbard climate during the past 800 years

	CliC information session	
		Chair: Victoria Lytle
18:30	Tatiana Khromova	CPA1: The terrestrial cryosphere and hydrometeorology of cold regions
18:45	Konrad Steffen	CPA2: Glaciers, ice caps and ice sheets, and their relation to sea level
19:00	Tony Worby	CPA3: The marine cryosphere and its interactions with high latitude oceans and atmosphere
19:15	John Turner	CPA4: Links between the cryosphere and global climate
19:30	Tetsuo Ohata	How Asian Region will be tackled under the CliC Program
19:45	Vladimir Ryabinin	The integrated global observing system for the Cryosphere; IGOS–cryo
20:00	**Refreshments in the foyer of the Scott Polar Research Institute**	

TUESDAY, 22 AUGUST 2006

	Session 5: Lakes and surface melt features		
			Chair: NN
08:30	Claude R. Duguay, Terry D Prowse, Barrie R. Bonsal and Martin P. Lacroix	237	Lake-ice freeze-up, growth, and break-up: a review of controlling factors, historical trends, and future predictions
08:45	Martin O. Jeffries and Kim Morris	013	Some aspects of ice phenology on ponds in Central Alaska
09:00	Roger J. Braithwaite	040	Calculation of sensible heat flux over a melting ice surface: the Greenland ice sheet revisited
09:15	Shelley MacDonell and Sean Fitzsimons	133	Melt initiation at the Wright Lower Glacier, Antarctica
09:30	Malcolm McMillan, Peter Nienow, Andrew Shepherd and Toby Benham	206	Supra-glacial lake evolution at the margins of the Greenland ice sheet
09:45	C.R. Stokes, V. Popovnin, A. Aleynikov, S.D. Gurney and M. Shahgedanova	048	Recent glacier retreat in the Caucasus Mts, Russia, and associated increases in supraglacial debris cover and supra/proglacial lake development
10:00	**Refreshments**		

	Parallel Session 6a: Observed historical changes in the cryosphere		
			Chair: NN
10:30	William B. Krabill and Robert H. Thomas	061	Recent ice sheet and glacier elevation changes in Greenland and Canada from aircraft laser altimetry
10:45	G Hilmar Gudmundsson, Ed C. King and Richard C A Hindmarsh	055	Shifting margins of the Talutis and Carlson Inlet ice streams, West Antarctica
11:00	Fiona Cawkwell, Martin Sharp and Luke Copland	227	Shrinkage of small ice masses in the Canadian High Arctic, 1960-2000
11:15	Andrew G Klein, Joni L Kincaid, Kevin E Merritt, Christopher P Graff, Jennifer N Morris, Alan J Poole, Alicia M Rutledge and Jared D Stukey	231	A synthesis of tropical glacier retreat: a remote sensing approach
11:30	Remko de Lange, Tavi Murray, Adrian Luckman and Edward Hanna	165	Current changes at the East Greenland Helheim glacier: unravelling the chronology of events
11:45	Andrew Shepherd	043	Antarctic glaciers set to raise sea levels this century
12:00	Etienne Berthier, Yves Arnaud, Christian Vincent and Frederique Remy	041	Biases of SRTM in high-mountain areas (Alps, Himalaya). Implications for the monitoring of glacier volume changes
12:15	**Lunch**		

	Parallel Session 6b: Processes that lead to changes in the cryosphere and how these make interpretation difficult, contd.		
			Chair: NN
10:30	Leigh Stearns and Gordon Hamilton	222	Rapid changes of Kangerdlugssuaq Glacier, East Greenland – which came first: acceleration, retreat, or thinning?
10:45	Adrian Luckman and Edward Hanna	105	Arctic ice sheet and ice cap melt extent from Envisat global mode synthetic aperture radar data
11:00	Frédérique Rémy and Benoit Legrésy	052	Random fluctuations of the ice sheets boundary conditions and their impact on sea level change
11:15	Gwendolyn J.M.C. Leysinger Vieli,, Richard C.A. Hindmarsh and Martin J. Siegert	162	Three-dimensional flow influences on radar layer stratigraphy
11:30	Ruth Mottram, Douglas I. Benn and Nicolas J. Hulton	191	The importance of glacier dynamics in the respopnse of glacier dynamics to climate change: a study at Breiðamerkurjökull, Iceland
11:45	Michael Kuhn	118	Response of rock glaciers to climate forcing
12:00	Sridhar Anandakrishnan,	200	Dispersive response of ice stream flow to tidal forcing

	Matt A King, Donald E Voigt, Richard B Alley, J Paul Winberry, Huw Horgan, Leo E Peters and Robert A Bindschadler		
12:15	**Lunch**		

	Parallel Session 7a: **Extension of climate records back in time, using observations of cryospheric changes**		
			Chair: NN
13:30	Daniel E. Lawson, Richard B. Alley and David C. Finnegan	243	Holocene glacier fluctuations in relations to climatic and non-climatic controls, Glacier Bay, Alaska
13:45	Michiel Helsen, Roderik van de Wal and Michiel van den Broeke	006	The present-day isotope-temperature relationship over Antarctica
14:00	Lide Tian, Tandong Yao, Wei Yang, Penglin Wang and Zhongfang Liu	024	Recent variation of isotopic record in Dasuopu ice core, middle of Himalayas
14:15	Philip D. Hughes, Jamie Woodward and Philip Gibbard	001	Pleistocene glaciers and climates in the Balkans
14:30	Øyvind Nordli, Elin Lundstad and A.E.J. Ogilvie	141	A late winter-early spring temperature reconstruction for Southeastern Norway from 1758 to 2006
14:45	R Bintanja and R S W van de Wal	124	A three million-year history of Northern Hemisphere glaciation and climate
15:00	**Refreshments**		

	Parallel Session 7b: **Croysphere surface processes, radiation and mass balance**		
			Chair: NN
13:30	Atsumu Ohmura, Andreas Bauder, Hans Müller and Giovanni Kappenberger	109	The role of radiation in mass balance change of glaciers
13:45	Jing Zhang, Uma S. Bhatt, Wendell V. Tangborn, Craig S. Lingle and Keith A. Echelmeyer	262	Response of Glaciers in Northwestern North America to Global Warming: an Atmospheric / Glacier Mass Balance Modeling Approach
14:00	P. Kuipers Munneke, C.H. Tijm-Reijmer, J. Oerlemans and P. Stammes	106	A model for studying Antarctic snow surface albedo under clear and cloudy conditions
14:15	Carleen Reijmer and Regine Hock	144	Modeling the mass balance of Storglaciär en, Sweden, using a distributed energy and mass balance model including a multi layer snow model
14:30	Douglas Benn and Nicholas Hulton	158	The impact of global change on low-altitude blue ice areas in Antarctica; a thermodynamic-hydrodynamic modelling study
14:45	Jason E. Box and David H. Bromwich	230	Response of Greenland ice sheet basin-scale surface mass balance to regional climate variability
15:00	**Refreshments**		

	Poster Session 1:		
			Chair: T.H. Jacka
15:30	Vladyslav Tymofeyev and Vladimir Grischenko	190	Glaciation of Antarctic Peninsula under recent climate and tropospheric circulation change
15:31	Olaf Eisen, Andreas Bauder, Patrick Riesen and Martin Funk	035	Deducing temperature distribution in the tongue of Gornergletscher from radar surveys
15:32	Gunnar Spreen, Stefan Kern and Detlef Stammer	248	New satellite multi-sensor approach to estimate sea ice volume flux
15:33	Donghui Yi and H. Jay Zwally	241	Antarctic Surface Slope from ICESat Repeat Ground Tracks
15:34	Inka Koch, Martin Sharp, Lindsey Nicholson and Dorthe Dahl-Jensen	238	Comparison of climate proxies in short ice core records from the Canadian Arctic with observed climate records
15:35	Keguang Wang, Jari Uusikivi,	098	Seasonal evolution of heat fluxes through snow and ice in Santala Bay, Baltic Sea

	Matti Leppäranta and Mats Granskog		
15:36	Kristiina Virkkunen, John C. Moore, Anna Sinisalo and Aslak Grinsted	180	Early and middle Holocene ice core records from Scharffenbergbotnen blue ice field, Antarctica
15:37	Anna Sinisalo, Kristiina Virkkunen, John Moore, Aslak Grinsted, Harro A.J. Meijer and Tonu Martma	181	Oxygen isotope records in a traditional (vertical) and horizontal ice cores from an Antarctic blue ice area
15:38	Chiyuki Narama, K. Fujita, T. Kajiura, C. Ormukov and K. Abdrakhmatov	299	Recent changes in glacial meltwater due to glacial shrinkage in the Terskey-Alatoo Range, Kyrgyz Republic
15:39	Wusheng Yu, Tandong Yao, Lide Tian, Naoyuki Kurita, Yu Wang and Weizhen Sun	034	Stable isotope variations in precipitation and the Monsoon activities on the Tibetan Plateau
15:40	Peter Jansson, Hans Linderholm, Rickard Pettersson, Torbjörn Karlin and Carl Magbus Mörth	188	Assessing the possibility to couple chemical signal in winter snow on Storglaciären to atmospheric climatology
15:41	Bogdan Gadek and Leszek Kolondra	239	Response of glacierets in Polish and Slovakian Tatra Mts. to climate variability and change
15:42	Michele Koppes, Bernard Hallet and John Anderson	069	Glacier erosion and response to climate change in Chilean Patagonia
15:43	Thomas Vikhamar Schuler, Even Loe, Andrea Taurisano, Trond Eiken, Jon Ove Hagen and Jack Kohler	075	A calibrated surface mass balance model for the Austfonna ice cap, Svalbard
15:44	David Collins and Mauri S. Pelto	300	Consequences of current climate-glacier disequilibrium for streamflow in the North Cascades, Washington, USA and Pennine Alps, Switzerland
15:45	Xie Changwei, Ding Yongjian, Zhao Lin, We Tonghu, Han Haidong	092	The influences of debris cover on the melting process and the shrinkage of Keqikaer Glacier, south slope of Mt.Tuomuer, Western China
15:46	Adam Booth, Tavi Murray and Roger Clark	101	Limitations of common-midpoint surveys for estimation of ice water content
15:47	David B. Reusch and Richard B. Alley	123	Antarctic sea ice: a self-organizing map-based perspective
15:48	Ian Willis, Martin Sharp, Bryn Hubbard, Peter Nienow, Douglas Mair, Neil Arnold, Urs Fischer and Javier Corripio	292	Past and future mass balance of Haut Glacier d'Arolla, Switzerland derived from glaciological and geodetic measurements and numerical modelling
15:49	Hongxi Pang, Yuanqing He, Wilfred H. Theakstone and David D. Zhang	031	Soluble ionic and oxygen isotopic compositions of a shallow firn profile, Baishui Glacier No. 1, southeastern Tibetan Plateau
15:50	Li Jing and Liu Shiying	170	Increasing of Glacial Runoff in Response to Climate Warming in Glacier No.1 at the Headwaters of the Urumqi River, Tianshan Mountains
15:51	Meixue Yang, Tandong Yao and Xiaohua Gou	007	Permafrost monitoring on Tibetan Plateau of the GAME-Tibet and CEOP/CAMP-Tibet
15:52	Maria Ananicheva and Alexander Krenke	011	Contemporary and future change of glacier systems characteristics in North-eastern Asia
15:53	Andrew Shepherd, Zhijun Du, Toby J. Benham, Julian A. Dowdeswell and Elizabeth M. Morris	288	Mass balance of the Devon ice cap, Canadian Arctic
15:54	Guðfinna Aðalgeirsdóttir, Helgi Björnsson, Sverrir Guðmundsson, Tómas Jóhannesson, Oddur Sigurðsson and Finnur Pálsson	298	Climate change response of Vatnajökull, Hofsjökull and Langjökull ice caps, Iceland
15:55	Masaaki Ishizaka, Satoru Yamaguchi and Atsushi Sato	151	Relationships in climatic monthly values of Japanese snowy areas between maximum snow depth, mean air temperature and precipitation
15:56	Ricardo Jana, Jorge Arigony, Steffen Vogt and Hermann Gossmann	267	Delineation of glacial catchments in the Antarctic Peninsula from ASTER derived digital elevation models
15:57	Hongxi Pang, Yuanqing He, Aigang Lu, Jingdong Zhao, Baoying Ning, Lingling Yuan, Bo Song and Ningning Zhang	032	Response of hydrological cycle system over the monsoonal temperate glacier area in Mt. Yulong to global warming
15:58	Stefan Kern, Gunnar Spreen, Lars Kaleschke, Sara de la Rosa Höhn and Georg Heygster	160	Polynya Signature Simulation Method polynya area in comparison to AMSR-E 89 GHz sea-ice concentrations in the Ross Sea and off Adelie Coast, Antarctica, for 2002-2005: first results
15:59	YANG Jianping, DING	030	Variations of snow cover and its response to climatic change in the source regions of the

	Yongjian, LIU Shiyin and LIU Jun feng		Yangtze and Yellow Rivers on the Tibetan Plateau
16:00	Björn O. W. SJÖGREN, Ola BRANDT, Chris Nuth, Elisabeth ISAKSSON, Veijo A. POHJOLA, Jack KOHLER and Roderik S.W. VAN DE WAL	145	Determination of the density in an ice core using digital photos
16:01	Sebastian Gerland and Angelika H.H. Renner	172	Sea ice mass balance monitoring in an Arctic fjord
16:02	Meixue Yang and Tandong Yao	014	Analysis of the ground temperature at site D110 in the northern Tibetan Plateau
16:03	Shangguan Donghui, Liu Shiyin and Ding Yongjian	169	Analysis of thickness change in ablation area of Keqikar Glacier in Tienshan Mountains using aerial topography, field work, ASTER image and GPS data during 1970-2005
16:04	Philip Hughes and Roger Braithwaite	066	Application of a degree-day model to reconstruct Pleistocene glacial climates in Greece
16:05	Zhongqin Li, Ross Edwards, Feiteng Wang and Huilin Li,	087	Chemical composition of resent snow/ice on glaciers in eastern Tianshan
16:06	Rune Solberg,	182	A New System and Service for Climate Monitoring in the Cryosphere
16:07	Hans Linderholm and Peter Jansso	168	Proxy data reconstructions of the Storglaciären mass balance record back to AD 1500 on annual to decadal timescales
16:08	Federica Marino, Valter Maggi, Daniele Ceccato, Barbara Delmonte, Grazia Ghermandi, Patrick De Deckker and JeanRobert Petit,	276	Geochemical (major elements) composition of dust in the EPICA-Dome C ice core: implications for compositional variability and geographic provenance, in the last 220 kyr
16:09	Sergey A. Sokratov and Vladimir N. Golubev	152	Isotopic change in snow by sublimation
16:10	Toshimitsu Sakurai, Hiroshi Ohno, Yoshinori Iizuka and Takeo Hondoh,	080	Formation mechanisms of methanesulfonate salts found in Dome Fuji ice core
16:11	Youqing Wang and Tandong YAO	045	Relationship between the d18O recorded in the Malan ice core and the ENSO events
16:12	Elisabeth Isaksson and 16 others	274	Holtedahlfonna -- a new Svalbard ice core record
16:13	Kumiko Goto-Azuma, Takayuki Shiraiwa, Sumito Matoba, Takahiro Segawa, Syosaku Kanamori, Yoshiyuki Fujii and David A. Fisher	060	An ice core study of climate and environmental variability during the last 100 years in the North Pacific region
16:14	Tom Carrieres	279	Trends in Canadian Arctic Archipelago sea ice conditions based on ice charts and thickness measurements
16:15	Peter M. Abbott, Siwan M. Davies, Jørgen Peder Steffensen, Sigfus, J. Johnsen and Matthias Bigler	214	Tephrochronological investigations of the marine isotope stage 4 sections of the Greenland ice cores
16:16	Magand, Picard, Genthon, Fily, Krinner, Frezzotti and Ekaykin	047	Surface mass balance of the East Wilkes and Victoria Land region (90-180°E), East Antarctica, from 1950 to 2005
16:17	Andrea Fischer and Norbert Span	120	GPR measurements for a volume inventory of Austrian glaciers
16:18	Saito Fuyuki, Ayako Abe-Ouchi and Heinz Blatter	079	Improvement in the numerical scheme to compute horizontal gradients at the ice-sheet margin and its effect on the simulated ice sheet topography
16:19	Wang Xin, Liu Shiyin, Shangguan Donghu, Xie Zichu, Zhang Yingsong, Zhang Yong and Li Jin	046	Simulation and mitigation for glacier lake Outburst flood of Longbasaba and Pida Lake in Pumqu Basin, Himalaya
16:20	Jonathan G. Fairman, Jr, Bryan G. Mark and Mitchell A. Plummer	242	Modeling the climatic controls and topographic form of modern and Late Pleistocene tropical Andean glaciers
16:21	Narelle Baker	042	Analysing the evolution of the Antarctic ice sheet
16:22	L. A. Rasmussen, L. M. Andreassen and H. Conway	028	Reconstruction of mass balance of glaciers in southern Norway back to 1948
16:23	Xie Changwei, Ding Yongjian, Zhao Lin, Wu Tonghua and Li Ren	088	The use of artificial neural networks (ANNs) to simulate melt-water runoff on Keqikaer Glacier, south slope of Mt.Tuomuer, western China
16:24	Yong Zhang, Shiyin Liu, Yongjian Ding, Donghui Shangguan, Jing Li and Xin Wang	082	Mass-balance modelling of Keqicar Glacier in the Tarim River basin, northwestern China
16:25	Catherine Ritz and Vincent Peyaud	229	Large scale response of the Antarctic ice sheet to changes in the dynamics of outlet glaciers.

16:26	Feng Ying	056	Modeling the surface energy fluxes and ground thermal regime at Lhasa, Tibet
16:27	Carlos Martin, Richard C. A. Hindmarsh and Francisco Navarro	221	Signal of ice divide motion on radar layer geometry
16:28	Marion Bougamont, Elizabeth C. Hunke and Slawek Tulaczyk	059	Sensitivity of ocean circulation to loss of West Antarctic ice shelves and ice sheet
16:29	Rianne H. Giesen and Johannes Oerlemans	067	Modelling the influence of 20th century climate on the surface mass balance of Hardangerjøkulen, southern Norway
16:30	Byron R. Parizek, Richard B. Alley and Todd K. Dupont	220	A mechanism for inland migration of surface meltwater access to the bed
16:31	Frank Pattyn	213	Marine ice sheet stability and grounding line dynamics
16:32	Xieyao Ma, Hironori Yabuki, Tetsuo Ohata and Tetsuzo Yasunari	155	Seasonal and interannual variations of the active layer in Eastern Siberia
16:33	Ryan Woodard and Mervyn P. Freeman	102	An Antarctic ice sheet model inspired by self-organized criticality
16:34	Philippe Huybrechts, Ives Janssens, Sarah Raper, Emmannuelle Driesschaert, Thierry Fichefet, Hugues Goosse, Anne Mouchet and Guy Munhoven	232	Projections of ice sheet and sea level changes over the next millennia with the LOVECLIM Earth System Model
16:35	Saito Fuyuki, Ayako Abe-Ouchi and Segawa Tomonori	135	Response of Greenland ice sheet to the global warming simulated by a high resolution atmosphere-ocean GCM coupled by an ice sheet model
16:36	Trudy Wohlleben	204	Total area concentration and total sea ice severity in the Gulf of St. Lawrence, Canada: experimental linear predictions for 2007-08 to 2017-18.
16:37	Matthias Huss, Shin Sugiyama, Andreas Bauder and Martin Funk,	171	Retreat scenarios of Unteraargletscher, Switzerland, using a coupled ice-flow mass-balance model
16:38	Liss M. Andreassen and Johannes Oerlemans	146	Modelling the long term mass balance series of Storbreen, Norway, using a simplified energy balance approach.
16:39	Todd K. Dupont, Richard B. Alley and Byron R. Parizek	192	Subglacial-lake formation by ice-shelf grounding: implications for outburst flooding.
16:40	Trudy Wohlleben, Martin Sharp and Andrew Bush	198	John Evans Glacier, Nunavut, Canada: a case for modelling surface ice velocities using a linearly viscous Shallow Ice Equation model
16:41	Thorsteinn Thorsteinsson and Bergur Einarsson	195	Timescale calculations for potential ice core drilling sites on the temperate ice caps in Iceland
16:42	Friedrich Obleitner, Nicolas Cullen and Konrad Steffen	150	Simulation of turbulent fluxes at Summit, Greenland
16:43	**POSTERS**		

17:15	**First meeting of IGS Council – SPRI seminar room (top floor)**

20:00 **Richard Alley Seligman Crystal Award Ceremony and a talk by Dr. Alley**

WEDNESDAY, 23 AUGUST 2006

Session 8: CliC project area 3: The marine cryosphere and its interactions with high latitude oceans and atmosphere			
			Chair: Tony Worby
08:30	William D. Hibler III,, S. Vavrus, J. Hutchings and A. Roberts	295	The Effect of Sea-Ice Mechanics on Climate Warming Induced Sea Ice Change
08:45	Ellsworth LeDrew	294	Temporal Change and Forcing Processes for Regional Sea Ice Concentration in the Arctic
09:00	Angelika Renner and Victoria Lytle	049	Sea ice thickness in the Weddell Sea: a comparison of model and upward looking sonar data
09:15	Anthony Worby, Robert Massom, Victoria Lytle and Thorsten Markus	077	Validation of AMSR-E derived snow thickness over East Antarctic sea ice
09:30	Helen Amanda Fricker and Laurence Padman	258	Investigating the Antarctic ice shelf grounding zones with ICESat
09:45	Donghui Yi and H. Jay Zwally	247	Seasonal variation of Antarctic sea-ice freeboard height and thickness from ICESat
10:00	**Refreshments**		

	Session 9: Modelling of all of the above. How well do models capture the observed changes? Contd.		
			Chair: NN
10:30	Craig S. Lingle,, Jed A. Kallen-Brown and Ed Bueler	272	Multi-modal flow in a thermocoupled model of the Antarctic ice sheet: verification and sensitivity
10:45	Shin Sugiyama, Andreas Bauder, Conradin Zahno and Martin Funk	078	Evolution of Rhonegletscher in Switzerland over the past 125 years and in the future: application of an improved flowline model
11:00	Olaf Eisen	026	Extracting velocity information from kinematic inversion of firn layers
11:15	Jun Li,, H. Jay Zwally and Josefino C. Comiso	264	Ice sheet elevation changes caused by variations in firn compaction rates induced by satellite-observed temperature variations (1982-2003)
11:30	Ros Death, A.J. Payne, A.P. Wright and J.M. Gregory	163	A Statistical Approach to Estimating the Contribution of Glaciers to Future Sea-level Rise.
11:45	Helgi Björnsson, Guðfinna Aðalgeirsdóttir, Finnur Pálsson and Sven Þ. Sigurðsson	189	20th century evolution and response of Hoffellsjökull, southeast Iceland, to climate change
12:00	Weili Wang, Jun Li and Jay Zwally	277	Modeling investigation of ice sheet flow enhanced by the surface melt-induced basal sliding
12:15	**Lunch**		

13:30 **EXCURSION**

19:30 **BANQUET at St Johns College**

THURSDAY, 24 AUGUST 2006

Session 10: CliC project area 1: The terrestrial cryosphere and hydrometeorology of cold regions			
			Chair: Tatiana Khromova
08:30	Terry D. Prowse, Barrie R. Bonsal, Claude R Duguay and Martin P. Lacroix	223	River-ice break-up/freeze-up: a review of climatic drivers, historical trends and future predictions
08:45	Xiao Cunde, Liu Shiyin, Zhao Lin, Wu Qingbai, Li Peiji, Liu Chunzhen, Zhang Qiwen, Ding Yongjian, Yao Tandong, Li Zhongqin and Pu Jiancheng	008	Observed changes of cryosphere in China over the second half of the 20th century: an overview
09:00	M. Tamil Selvan and Sarfaraz Ahmad	037	An investigation of climate change impact on snow/ice melts runoff in Himalayas

09:15	Rune S. Ødegård, Ketil Isaksen, Trond Eiken and Johan Ludvig Sollid	235	Permafrost in mountain terrain? A hybrid modelling approach with examples from Southern Norway
09:30	Andreas Kääb	009	Satellite-derived glacier changes 1990-2002 along a transect over the Bhutan Himlayas
09:45	Alexander Krenke and Maria Ananicheva	012	Mountain glacier systems and their relation to 'hyonosphere': methodology and use in glacio-climatology
10:00	**Refreshments**		

Session 11: **Synthesis of records by geographical region, and ultimately globally**			
	Chair: NN		
10:30	Roger J. Braithwaite and Sarah C. B. Raper	065	Glaciological conditions in seven contrasting regions estimated with the degree-day model
10:45	Georg Kaser	212	Tropical glaciers: recent history, present state, and climate forcing
11:00	Muriel Llubes, Soazig Parouty, Benoit Legrésy and Frédérique Rémy	058	Ice mass variations estimated from GRACE and altimetric data in Antarctica, at the seasonal scale
11:15	IGS Annual General Meeting		
12:15	**Lunch**		

Session 12: **CliC project area 1: The terrestrial cryosphere and hydrometeorology of cold regions**			
	Chair: Tatiana Khromova		
13:30	Valentina Radić, Regine Hock and Johannes Oerlemans	063	Volume-area scaling approach vs. flowline model in glacier volume projections
13:45	Florence Fetterer and Matt Savoie	263	Observations for SEARCH: data integration for change detection
14:00	Jessie Cherry, Bruno Tremblay, Marc Stieglitz, Gavin Gong and Stephen	003	New estimates of land-based Arctic solid precipitation, 1940-1999
14:15	Richard L. Armstrong, Mary J. Brodzik, Matthew H. Savoie and Kenneth Knowles	027	Northern Hemisphere snow extent trends derived from passive microwave and optical satellite data
14:30	Discussion		
15:00	**Refreshments**		

Poster Session 2. Short presentations			
	Chair: NN		
15:30	Walter N. Meier, Julienne Stroeve and Florence Fetterer	251	The declining Arctic sea ice: how much of an indicator of change is it?
15:31	Yuanqing He, Jingdong Zhao, Hongxi Pang, Aigang Lu, Bo Song and Ningning Zhang	029	A review of variation features of the Monsoonal temperate glaciers in China since Late Pleistocene
15:32	Zhang Yong and Liu Shiyin	173	Hydrochemical characteristics of Keqikar Glacier, southwestern Tien Shan
15:33	Frédéric Parrenin, Richard Hindmarsh and Frédérique Rémy	250	Analytical solutions for the effect of topography, accumulation rate and lateral flow divergence on isochrone layer geometry in ice sheets
15:34	Jacob Clement Yde and Niels Tvis Knudsen	036	20th century glacier fluctuations on Disko Island, Greenland
15:35	Toshitaka Suzuki, Takeshi Itoh, Yoshiyuki Fujii	020	Variations in total concentrations of metallic elements in Dome Fuji ice core representing the last 320 kyr
15:36	Kyung In Huh, Bea M. Csatho and Cornelis van der Veen	249	Reconstructing Holocene glacier changes in West Greenland from multispectral aster imagery
15:37	Michel Sacchettini, Frédéric Parrenin, Olaf Eisen and Daniel Steinhage	246	Reconstruction of past accumulation rates from internal layers around Kohnen station (Antarctica)
15:38	Gonzalo Barcaza, Masamu Aniya, Tatsuto Aoki and Takane Matsumoto	137	Satellite monitoring of equilibrium lines in Northern Patagonia icefield: 1979-2003

15:39	Ted A. Scambos, Walter N. Meier and Jim McNeill	175	Comparison of ICESat freeboard measurements of high Arctic sea ice with in situ measurements from the Ice Warrior Project
15:40	Jack Kohler, Ola Brandt, Chris Nuth, Tavi Murray, Tim James and Nick Barrand	176	Long-term high arctic mass balance: comparison of specific balances and volume changes.
15:41	Pu Jianchen, Yao Tandong, Yang Meixue, Tian Lide, Wang Ninglian, Yutaka AGETA and Koji FUJITA	177	Mass balance and Its change of the Xiao Dongkemadi Glacier in the central part of the Qinghai-Tibetan Plateau
15:42	Shavawn Donoghue, Ian Allison and Mark Curran	140	Improving the mass balance estimates of Brown Glacier, Heard Island
15:43	Marco Möller, Christoph Schneider and Rolf Kilian	010	Glacier change and climate forcing in recent decades at Gran Campo Nevado, southernmost Patagonia
15:44	Shiyin Liu, Yongjian Ding, Yong Zhang, Changwei Xie, Jian Wang and Anxin Lu	016	An assessment of the impact of climate change on the Yellow River source region
15:45	Andreas Bauder, Martin Funk and Matthias Huss	159	Ice volume changes of selected glaciers in the Swiss Alps since the end of the 19th century
15:46	Seymour Laxon, Katharine Giles, Andy Ridout and Duncan Wingham	293	Satellite altimeter estimates of sea ice thickness for climate change
15:47	Liu Shiyin, Shangguan Donghui, Ding Yongjian, Zhang Yong, Li Jing, Zhang Yingsong, Ding Liangfu and Li Gang	015	Reassessment of changes of the Xinqingfeng and Malan ice caps in the Northern Qinghai-Tibetan Plateau, China
15:48	Ian Willis, Ian Owens, Wendy Lawson and Penny Clendon	291	Mass balance of Brewster Glacier, New Zealand revealed by geodetic methods
15:49	Addy Pope, Tavi Murray and Adrian Luckman	156	DEM quality assessment for quantification of glacier surface change
15:50	Edward G. Josberger, William R. Bidlake, Rod S. March and Ben W. Kennedy	261	Glacier mass-balance fluctuations in the Pacific Northwest and Alaska, USA
15:51	Douglas W.F. Mair, David O. Burgess, Martin J. Sharp, Shawn J. Marshall and Fiona G.L. Cawkwell	280	Surface mass balance and area change of the northern glacial catchments of Prince of Wales Ice-field, Ellesmere Island, Nunavut, Canada
15:52	Keith A. Brugger	254	The non-sunchronous response of Rabots Glaciär and Storglaciären to recent climate change: a comparative study
15:53	KADOTA Tsutomu and Davaa Gombo	148	Recent glacier variations in Mongolia
15:54	Carlo D'Agata, Guglielmina Diolaiuti, Teresa Carnielli, Antonio Zanutta, Yuri Pusceddu and Claudio Smiraglia	017	Recent changes of glaciers in the Italian Alps: differences between debris-coverered and debris-free glaciers
15:55	J. Paul Winberry, Sridhar Anandakrishnan and Andy M. Smith	269	Changes in velocity near the onset of Bindschadler ice stream
15:56	Martin Jeffries, David Carlson, Lars Kullerud and Mark McCaffrey	265	The Cryosphere Research Community Has A Role To Play In Education And Outreach For The International Polar Year
15:57	Christopher A. Shuman, Dorothy K. Hall and Richard S. Williams, Jr.	127	Detection of surface-elevation change on Drangajökull, Iceland
15:58	Yao Tandong, Duand Kequin, L.G. Thompson, Wang Ninglian, Tian Lide, Xu Baiqing, Wang Youqing and Yu Wusheng	023	Temperature reconstruction over past millennium on the Tibetan Plateau using four ice cores
15:59	Xiaohua Gou, Fahu Chen and Meixue Yang	004	The response of the forest on the global warming in the northeastern Tibetan Plateau
16:00	Cecilie Rolstad and Johannes Oerlemans	083	Updating North Atlantic glaciers length records from optical satellite images
16:01	Diolaiuti G., Smiraglia C., Mihalcea C., D'Agata C. and Zanutta A.	114	Surface and volume changes of Lys Glacier (Monte Rosa, Italian Alps) during the last thirty years (1975-2005) byindirect analysis and ablation measurements
16:02	Paulina Lopez, Yves Arnaud, Pierre Chevallier, Bernard Pouyaud and Johannes Oerlemans	068	An update of glacier length changes in Patagonia and Darwin Cordillera
16:03	Rafael R. Ribeiro, Jorge	216	Evaluation and use of CBERS-2 digital data for glacier inventories

	Arigony-Neto, Jefferson Cardia Simões and Edson Ramirez		
16:04	Nicholas E. Barrand, Tavi Murray, Timothy D. James, Stuart L. Barr and Jack Kohler	184	A comparison of remotely-sensed volume change and specific balances at Austre Brøggerbreen, Svalbard, 1966 – 2005
16:05	Evans, Ian S.	074	Glacier change in the southern coast mountains of British Columbia: the role of size, gradient and aspect.
16:06	Tatiana Khromova, Gennady Nosenko, Richard Armstrong, Roger Barry, Bruce Raup and Siri Jodha Singh Khalsa	110	Results of GLIMS database population for glacier regions of the former Soviet Union
16:07	Astrid Lambrecht and Michael Kuhn	115	Glacier changes in the Austrian Alps during the last three decades, derived from the new Austrian glacier inventory
16:08	Andreas Bauder, Giovanni Kappenberger, Hans Müller-Lemans, Matthias Huss and Atsumu Ohmura	164	90 years of seasonal mass balance observations on Claridenfirn, Switzerland
16:09	Gennady Nosenko, Andrey Glazovsky, Dmitry Tzhvetkov and Galina Osipova	112	Glacier changes in the Polar Urals during XX century - causes, contemporary tendencies and perspectives
16:10	Carmen Molina, Francisco Navarro, Jaume Calvet, David García-Sellés and Javier Lapazaran	107	Hurd Peninsula glaciers, Livingston Island, Antarctica, as indicators of regional warming: ice volume changes during the period 1956-2000
16:11	Zhongqin Li, Ross Edwards, Bo Sun, Feiteng Wang and Huilin Li	086	Change in centerline ice thickness longitudinal profile on Glacier No.1 at headwaters of Urumqi River in eastern Tianshan, China
16:12	Andreas P. Ahlstrøm, Niels Reeh, Lars Stenseng, Rene Forsberg, Robert S. Fausto and Regine Hock	199	Elevation change of a 50 km wide sector of the Greenland ice-sheet margin 2000-2003
16:13	Luke Copland, Wendy Lawson and Becky Goodsell	202	A century of change at the McMurdo Ice Shelf, Antarctica
16:14	Jorge Arigony-Neto, Frank Rau, Helmut Saurer, Ricardo Jaña, Jefferson Cardia Simões and Steffen Vogt	211	A time series of SAR data for monitoring changes in boundaries of glacier zones on the Antarctic Peninsula
16:15	Junxia Wang, Tandong Yao, Lide Tian, Baiqing Xu and Guangjian Wu	093	Formate and acetate investigation of a shallow ice core from Muztag Ata Glacier, Northwest Tibetan Plateau
16:16	Matthew Beedle, Mark Dyurgerov, Siri Jodha Singh Khalsa, Bruce Raup, Christopher Helm, Richard Armstrong and Roger G. Barry	208	Bering Glacier, Alaska: Uncertainty in estimation of mass turnover in response to climate
16:17	Kunio Rikiishi, Risa Obama and Daisuke Hatsuzuka	147	The trend of earlier melting of seasonal snow in the Northern Hemisphere
16:18	Bruce H. Raup, Siri Jodha Singh Khalsa, Matthew Beedle, Christopher Helm, Richard Armstrong and Roger G. Barry	218	Change detection of the Klinaklini Glacier, British Columbia, in the context of the GLIMS GLACE 2 experiment
16:19	Robert S. Fausto, Christoph Mayer and Andreas P. Ahlstrøm	219	Surface type and melt area study of the Greenland Ice Sheet using MODIS data from 2000-2005
16:20	Massimo Pecci and Claudio Smiraglia	111	Ten years of mass balance of the ghiacciaio del Calderone (Gran Sasso d'Italia, central Apennines) and related issues of a reducing glacier in a changing central-Mediterranean cryosphere
16:21	Jane G. Ferrigno, Alison J. Cook, Richard S. Williams, Jr., Charles Swithinbank, Adrian J. Fox and Janet W. Thomson	062	Analysis of coastal changes mapped in the Larsen ice shelf area, Antarctica: 1940-2005
16:22	Masahiro Hori, Teruo Aok, Knut Stamnes and Wei Li	057	Spatial and temporal variations of satellite-derived snow physical parameters in the Arctic regions during the spring-fall seasons in 2003
16:23	C. Nuth, J. Kohler, H.F. Aas, O. Brandt and J.O. Hagen	186	Glacier geometry and elevation changes on Svalbard: a baseline dataset
16:24	Timothy D. James, Tavi Murray, Adrian J. Luckman, Nicholas E. Barrand and Trine Abrahamsen	121	Change in the geometry and extent of Slakbreen, Svalbard since 1961 using lidar-controlled aerial photography and photogrammetry
16:25	Leo E Peters, Sridhar Anandakrishnan and Donald E Voigt	226	Temporal variations in the subglacial regime of Bindschadler ice stream, West Antarctica

16:26	Shiqiao Zhou, Masayoshi Nakawo, Shigemasa Hashimoto and Akiko Sakai	081	Preferential exchange rate effect of isotopic fractionation in melting snowpack
16:27	Matthew J. Hoffman, Andrew G. Fountain and Jonathan M. Achuff	282	Twentieth-century variations in area of small glaciers and icefields, Rocky Mountain National Park, Rocky Mountains, Colorado, USA
16:28	Samyn Denis	225	On the basal thermal regime of lower Taylor Glacier, Antarctica
16:29	Keith M. Jackson and Andrew G. Fountain	283	Spatial and morphological change on Eliot Glacier, Mount Hood, Oregon, USA
16:30	Tazio Strozzi, Miriam Jackson and Andrew Shepherd	287	A comparison of seasonal velocity variations on Unteraagletscher and Svartisen
16:31	David M. Rippin, Jared West, Tavi Murray and Anthony L. Endres	099	Implications of time domain reflectometry (TDR) studies of dielectric permittivity for interpretation of water content from radio echo sounding (RES) experiments
16:32	Robert G. Bingham, Martin J. Siegert and Bryn P. Hubbard	179	Radio-echo sounding determination of ice stream stability: Institute ice stream, West Antarctica
16:33	Ketil Isaksen, Rune Strand Ødegård, Trond Eiken and Johan Ludvig Sollid	233	Calculation of mean annual ground surface temperature (MAGST) in mountain permafrost
16:34	Mavlyudov and Solovyanova I.Yu.	161	Glaciers drainage systems as a climate change indicator
16:35	Helen Freeman, Bernd Kulessa and Bryn Hubbard	205	Application of ultrasonic velocity anisotropy to the characterisation of
16:36	Jefferson C. Simões, Jorge Arigony-Neto, Siclério Ahlert, Rafael Ribeiro, Helmut Saurer, Cláudia D. Beck and Norberto Dani	209	Criospheric changes in islands off the northern most part of the Antarctic Peninsula
16:37	Huilin Li, Zhongqin Li and Feiteng Wang	089	Spatial variation of precipitation chemistry at the headwaters of Urumqi River, east Tianshan: source determination of deposits in snow-ice
16:38	William A. Sneed and Gordon Hamilton	108	Determining surface meltwater pond volume using satellite imagery
16:39	Audrey D. Huerta	217	Coupled evolution of mountains and ice sheets; faults, fjords, and fluvial systems
16:40	Teruo Aoki, Hiroki Motoyoshi, Yuji Kodama, Teppei J. Yasunari and Konosuke Sugiura	138	Variations of snow physical parameters and their effects on albedo in Sapporo
16:41	Gernot Koboltschnig, Hubert Holzmann, Wolfgang Schoener and Massimiliano Zappa	196	Contribution of glacier melt to stream runoff: if the climatically extreme summer of 2003 had happened in 1979…
16:42	Linke Wen, Yong He, Tandong Yao, Donghui Shangguan and Weiqiang Ma	139	An Indian Monsoon index representing the precipitation over the Eastern Tibetan Plateau
16:43	Robert G. Bingham, Peter W. Nienow, Alun L. Hubbard, David M. Chandler and Martin J. Sharp	194	Influence of meltwater on the dynamic response of Arctic glaciers to climate change: field evidence and modelling simulations
16:44	Evgeniy Ermolin, Adrián Silva Busso and Pedro Skvarca	071	Surface water and groundwater in permafrost zone of Marambio (Seymour) Island,
16:45	Victoria Parry, Peter Nienow, Douglas Mair, Julian Scott, Bryn Hubbard and Elizabeth Morris	252	Investigations of meltwater refreezing and density variations in the snowpack and firn within the percolation zone of the Greenland ice sheet
16:46	Bernd Kulessa and Gerald Müller	174	Numerical modelling of the propagation of pressure pulses as modified acoustic waves through glacial melt water systems
16:47	Suzanne Bevan, Adrian Luckman, Tavi Murray, Helena Sykes and Jack Kohler	153	Positive mass balance during the late 20th century on Austfonna, Svalbard revealed using satellite radar interferometry
16:48	**POSTERS**		

19:00		**Second meeting of IGS Council –The Maitland Room, Downing College**

FRIDAY, 25 AUGUST 2006

	Session 13: **CliC project area 4: Links between the cryosphere and global climate**		
	Chair: John Turner		
08:30	Nicolas J. Cullen, Thomas Mölg, Georg Kaser, Douglas R. Hardy, Konrad Steffen and Georg Kaser	154	Energy balance model validation on the top of Kilimanjaro using eddy correlation data
08:45	Caixin Wang and Aike Beckmann	094	Investigation of the impact of Antarctic ice shelf melting in a global ice-ocean model (ORCA2-LIM)
09:00	Kai Rasmus and Aike Beckmann	167	The impact of global change on low-altitude blue ice areas in Antarctica; a thermodynamic-hydrodynamic modelling study
09:15	Takao Kameda, Vladimir Ya. Lipenkov and Takeo Hondoh	128	Total air content of Dome Fuji ice core during the last 30,000 years, and a new interpretation of total air content from the Last Glacial Maximum to present in Antarctic ice cores.
09:30	Andrew Mackintosh and Brian Anderson	134	The response of New Zealand glaciers to climatic change
09:45	Regine Hock, Valentina Radic and Mattias de Woul	064	Climate sensitivity of Storglaciären - an intercomparison of mass balance models using ERA-40 reanalysis and regional climate model data
10:00	**Refreshments**		

	Session 14: **CliC project area 4: Links between the cryosphere and global climate**		
	Chair: John Turner		
10:30	C.I. van Tuyll, R.S.W. van de Wal and J. Oerlemans	166	The response of a simple Antarctic ice flow model to temperature and sea level fluctuations over the Cenozoic era
10:45	Willem Jan van de Berg, Michiel van den Broeke and Erik van Meijgaard	019	The modelled Antarctic atmospheric energy and moisture budget
11:00	Jeff Ridley, Alison McLaren, Ann Keen, Chris Durman and Doug Smith	197	Changes in contemporary polar climate in the Hadley Centre climate model, HadGEM1
11:15	Ed Bueler, Craig Lingle and Jed Kallen-Brown	130	Fast computation of a viscoelastic deformable earth model for ice sheet simulations
11:30	Jennifer Griggs and Jonathan Bamber	207	Uncertainty in observed and modelled cloud fraction over Greenland and its impact on the ice sheet energy balance
11:45	Discussion		
12:15	**Lunch**		

	Session 15: **CliC project area 3: The marine cryosphere and its interactions with high latitude oceans and atmosphere**		
	Chair: Tony Worby		
13:30	Neal W. Young and John A.E. Gibson	136	A century of change in the Shackleton and West ice shelves, East Antarctica
13:45	Mark Drinkwater, Carolin Schmitt and Christoph Kottmeier	187	Relationships between Southern Annular Mode and Antarctic Sea Ice Drift
14:00	Peter Wadhams and Nicholas Hughes	103	Recent sea ice thickness data from submarines and their implications
14:15	Nerilie Abram, Robert Mulvaney and Eric Wolff	228	Methane sulphonic acid in near-coastal ice cores as a proxy for Antarctic sea ice variations
14:30	Julienne C Stroeve, Thorsten Markus, Walt Meier and MaryJo Brodzik	122	Arctic climate connections between sea ice, the Greenland ice sheet, and the adjacent land
14:45	Ted Maksym and Thorsten Markus	236	Snowfall and snow depth over Antarctic sea ice
15:00	Discussion		
15:30	**Refreshments**		

	Session 16: **CliC project area 2: Glaciers, ice caps and ice sheets, and their relation to sea level**		
	Chair: Konrad Steffen		
16:00	Libo Wang and Martin Sharp	259	Melt season duration over ice caps in the eastern high Arctic, 2000-2004
16:15	Xin Li, Lizong Wu, Rui Jin, Tao Che, Pradeep Mool and Samjwal Bajracharya	142	Glacier change in the Himalayas: an overview
16:30	G. Picard, M. Fily and H. Gallee	002	Surface melting derived from microwave radiometers as a climatic indicator in Antarctica
16:45	Frédérique Rémy, Fabien Blarel and Benoit Legrésy	051	Ice sheets surface height surveyed by satellite radar altimetry
17:00	Wilfried Haeberli, Martin Hoelzle, Frank Paul and Michael Zemp	119	Integrated monitoring of mountain glaciers as key indicators of global climate change: the example of the European Alps
17:15	Discussion		
17:45	**CLOSING**		