

INTERNATIONAL SYMPOSIUM ON GLACIOLOGY IN THE INTERNATIONAL POLAR YEAR

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.

Author listed in the first column is the presenting author

Numbers in the third column refer to abstract numbers

MONDAY 27 JULY 2009

09:00 Opening of Symposium

Chair: Eric Brun

Session 1: IGY to IPY

| | | | |
|-------|---------------------|------|--|
| 09:20 | Charlie Bentley | K1 | KEYNOTE: Antarctic Glaciology - IGY to IPY |
| 10:00 | Andy Smith | A017 | Ice thickness, surface elevation and mean annual temperature measurements on Pine Island Glacier in IGY and IPY |
| 10:20 | Atsuhiko Muto | A052 | Multi-decadal scale surface temperature trends near the Ice Divide of East Antarctica, inferred from borehole temperature profiles |
| 10:40 | Refreshments | | |

Chair: Matt King

Session 2: Ice Shelves and Calving 1

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|-------|------------------|------|--|
| 11:10 | Alison Cook | A114 | Areal changes of the ice shelves on the Antarctic Peninsula over the past 50 years |
| 11:30 | Andrés Rivera | A098 | Recent ice elevation changes of Fleming Glacier in response to the removal of Wordie ice shelf, Antarctic Peninsula |
| 11:50 | Hamish Pritchard | A032 | After the collapse: sustained drawdown of ice shelf tributary glaciers on the Antarctic Peninsula |
| 12:10 | Andreas Vieli | A061 | Investigating dynamic response of marine tributary Crane Glacier to collapse of Larsen B ice shelf using numerical modelling |
| 12:30 | Lunch | | |

Chair: Andy Smith

Session 3: Ice Streams – Past and Present

| | | | |
|-------|------------------------|------|---|
| 13:40 | Sridhar Anandakrishnan | A093 | Geophysical surveys and numerical modelling of Thwaites Glacier, West Antarctica, the “weak underbelly” of West Antarctica |
| 14:00 | Leo Peters | A095 | Constraint on basal conditions in the onset region of Jakobshavn Isbrae, West Greenland, through seismic amplitude variation with offset (AVO) analysis |
| 14:20 | Chris Stokes | A042 | Evolution of ice streaming in the Laurentide Ice Sheet during deglaciation: A comparison between numerical modelling and geological evidence |
| 14:40 | Alastair Graham | A035 | Substrate geology as a control on the bed signature and flow characteristics of a West Antarctic palaeo-ice stream |
| 15:00 | James Smith | A086 | Deglaciation of the western Amundsen Sea shelf, West Antarctica |
| 15:20 | Refreshments | | |

Chair: Ted Scambos

Session 4: Change in the Cryosphere 1

| | | | |
|-------|----------------|------|---|
| 15:50 | Adrian Luckman | A072 | Surface velocity and ice-front behaviour of Kangerdluggsuaq and Helheim Glaciers during IPY |
| 16:10 | Regine Hock | A100 | Glacier Wastage in the Wrangell Mountains, Alaska, USA, using Airborne Laser Altimetry and Mass Balance Modelling |
| 16:30 | Katie Grant | A038 | Recent changes in glacier extent and climate on Novaya Zemlya, Russian Arctic |
| 16:50 | Doug Benn | A116 | Speleological investigations of englacial and subglacial drainage systems |

20:00

Meeting for members of IGS Council

Session 5: Ice Sheet Modelling 1

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|-------|---------------------|------|---|
| 09:00 | Kees van der Veen | K2 | KEYNOTE: Ice Sheet Mass Balance and Sea Level (ISMASS) |
| 09:40 | Ed Bueler | A050 | Modelled fast flow in the Greenland ice sheet: variability in a steady climate |
| 10:00 | Fuyuki Saito | A047 | Thermomechanical instability simulated by 2-D and 3-D ice sheet models and its dependence on various parameters |
| 10:20 | Patrick Heimbach | A020 | Some improvements in adjoint model generation, and application to ice sheet sensitivities to geothermal heat fluxes |
| 10:40 | Refreshments | | |

Chair: Regine Hock

Session 6: Change in the Cryosphere 2

| | | | |
|-------|------------------|------|---|
| 11:10 | Benoit Legresy | A048 | Comparison and synthesis of Antarctic and Greenland ice sheet changes seen by ENVISAT radar altimetry and GRACE |
| 11:30 | Leanne Wake | A067 | Interpreting high resolution proxy relative sea level records from West Greenland |
| 11:50 | Etienne Berthier | A026 | SPIRIT. Spot-5 stereoscopic survey of Polar Ice: Reference Images and Topographies during the fourth International Polar Year (2007-2009) |
| 12:10 | Martin Siegert | Inv | Scientific Committee on Antarctic Research (SCAR) |
| 12:30 | Lunch | | |

Chair: Sridhar Anandakrishnan

Session 7: Subglacial Lakes and Ice Streams

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|-------|---------------------------|------|--|
| 13:40 | Helen Fricker | A094 | Progress in Antarctic subglacial hydrology during the IPY |
| 14:00 | Frank Pattyn | A085 | Subglacial Antarctic Lake Environments and their relation to basal temperature, hydrology and age of the ice sheet |
| 14:20 | Neil Ross | A037 | Ice flow and catchment morphology of Subglacial Lake Ellsworth as revealed by ice-penetrating radar |
| 14:40 | Gwendolyn Leysinger Vieli | A018 | Identifying cause of rapid transient mass loss episode from numerical modelling of englacial layers |
| 15:00 | Jake Walter | A096 | How do ice stream slips start? |
| 15:20 | Refreshments | | |

Chair: Ed Bueler

Session 8: Ice Sheet Modelling 2

| | | | |
|-------|--------------------|------|--|
| 15:50 | Hilmar Gudmundsson | A106 | Tides and ice streams |
| 16:10 | Emmanuel Le Meur | A091 | Better understanding of the specific dynamics of coastal outlet glaciers in east Antarctica from field data and numerical modelling : the DACOTA project |
| 16:30 | Ruth Mottram | A071 | Using RCM Output to Improve a Climate-Ice Sheet Modelling System for the Greenland Ice Sheet |

Session 9: Change in the Cryosphere 3

| | | | |
|-------|--|------|---|
| 09:00 | Helgard Anschütz | A003 | First accumulation results from the Norwegian-US Antarctic traverse and comparison with SPQMLT-records |
| 09:20 | John Moore | A077 | Dynamical evolution of Scharffenbergbotnen blue ice area since the Late Glacial Maximum |
| 09:40 | Jefferson Simões | A101 | First results of an ice core from Detroit Plateau, Antarctic Peninsula |
| 10:00 | Poster Session 1: Short presentations | | |
| 10:00 | Matt King | A108 | Tidal response of the Larsen C ice shelf from GPS observations and models |
| 10:02 | Angelika Humbert | A057 | Deformation of the ice bridge on Wilkins Ice Shelf, Antarctica |
| 10:04 | Martin Rückamp | A056 | Revealing the diverse nature of ice rises - implications for the understanding of ice and ocean dynamics |
| 10:06 | Martin Rückamp | A080 | Diagnostic and prognostic studies of the King George Island ice cap |
| 10:08 | Martin Rückamp | A070 | Geometry and status of the King George Island ice cap, Antarctica |
| 10:10 | Kelly Brunt | A044 | Using ICESat laser altimetry to map the grounding zones of the Ross and Filchner/Ronne ice shelves |
| 10:12 | Tom Holt | A007 | A structural and dynamic assessment of Bach Ice Shelf, Antarctic Peninsula, between 1973 and 2009 |
| 10:14 | Benoit Legresy | A074 | Precise GPS processing to investigate the Mertz glacier ice tongue oscillations at sub daily scales |
| 10:16 | Jennifer Hall | A011 | Iceberg flux through the Fram Strait, remote sensing detection of variability over 1 year |
| 10:18 | Robert Arthern | A087 | Strategies for identification and prediction of unstable marine ice sheet dynamics |
| 10:20 | Shuhei Takahashi | A105 | Glaciological activities in Suntar-Khayata Range, Eastern Siberia, in IPY period |
| 10:22 | Ian Evans | A089 | North-south asymmetry of local glaciers in Spitsbergen and other parts of the Arctic |
| 10:24 | Bernhard Hynek | A079 | Winter Accumulation and Mass Balance 07/08 of Freya Glacier, NE-Greenland |
| 10:26 | John Hulth | A064 | The direct glaciological mass- and energy balance of Sørbreen, Jan Mayen, for the ablation season 2008 |
| 10:28 | Etienne Berthier | A029 | Ice wastage on the Kerguelen Islands (49°S, 69°E) between 1963 and 2006 |
| 10:30 | Michael Bentley | A013 | Deglacial chronologies of the Antarctic Ice Sheet from geomorphology and cosmogenic surface exposure dating |
| 10:32 | Rebecca Rixon | A041 | Constraining past behaviour of the Antarctic Peninsula Ice Sheet: an important source of meltwater during deglaciation? |
| 10:34 | Katie Grant | A040 | Identification and characteristics of surging glaciers on Novaya Zemlya, Russian Arctic |
| 10:36 | Wieslaw Ziaja | A002 | Glaciated and unglaciated Sørkappland: landscape dynamics since 1899-1900 (Spitsbergen) |
| 10:38 | Jefferson Simões | A107 | Rock glaciers and rock-ice features in Patriot and Independence Hills, Ellsworth Mountains |

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|-------|------------------------------|------|---|
| 10:40 | Fuyuki Saito | A030 | Changes in position and elevation of Dome Fuji, east Dronning Maud Land, Antarctica, during the ice age cycle, simulated by a three-dimensional numerical ice sheet model |
| 10:42 | Gwendolyn Leysinger Vieli | A059 | Investigating controls of recent acceleration of Pine Island Glacier using inverse modelling |
| 10:44 | Marzena Kaczmarska | A118 | RiS – information and network tool for Svalbard research |
| 10:46 | Marzena Kaczmarska | A119 | Svalbard – a platform for international and interdisciplinary research in the European High-Arctic |

Chair: Helen Fricker

Session 10: Radio Echo Sounding

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|-------|--|------|---|
| 11:10 | Michael Studinger | A112 | AGAP: Exploring the Gamburtsev Subglacial Mountains with Aerogeophysical Surveys during the IPY |
| 11:30 | Hugh Corr | A111 | Dome A what lies beneath: The subglacial environment of the Gamburtsev Subglacial Mountains revealed by an IPY Aerogeophysical Survey |
| 11:50 | Duncan Young | A084 | Reconnaissance of the Aurora Subglacial Basin: The IPY Season of the ICECAP Project |
| 12:20 | Poster Session 2: Short presentations | | |
| 12:20 | Edward King | A076 | The correlation between bedform morphology and flow velocity beneath an Antarctic ice stream |
| 12:22 | Julian Scott | A006 | Exceptional melt layer and its control on crevassing on Pine Island Glacier |
| 12:24 | Robert Bingham | A088 | Combined use of radar and seismic techniques to elucidate basal conditions beneath Pine Island Glacier in IPY |
| 12:26 | Kathryn Rose | A110 | New aerogeophysical survey over the Gamburtsev Province targets boundary conditions for the initiation and palaeo-stability of the East Antarctic Ice Sheet |
| 12:28 | Daniel Steinhage | A073 | Internal structure of the ice sheet between between deep ice core drill sites in East Antarctica revealed by airborne RES |
| 12:30 | Achille Zirizzotti | A115 | Dry-wet bedrock map of the Dome C region |
| 12:32 | Anna Sinisalo | A034 | Accumulation rate variability on the East Antarctic Plateau derived by GPR and SAR backscatter |
| 12:34 | Andrés Rivera | A046 | Mapping hidden crevasses at Union Glacier, Ellsworth Mountains, West Antarctica |
| 12:36 | Daniel Binder | A113 | Ground penetrating radar investigations in the North East of Greenland |
| 12:38 | Kirsty Langley | A060 | Deep radar across East Antarctica, Norwegian-US IPY traverse |
| 12:40 | Malte Thoma | A033 | Modelling ice-lake interaction processes and their feedbacks on the flow of the Antarctic Ice Sheet |
| 12:42 | Jesmine Lim | A039 | Analysis of the prokaryotic community and geochemistry of a sediment core from Great Slave Lake Canada |
| 12:44 | John Woodward | A063 | Bathymetry and basal mass balance of Subglacial Lake Ellsworth, West Antarctica |

12:45 POSTER SESSION AND BARBEQUE

Session 11: Change in the Cryosphere 4

| | | | |
|-------|---------------------|------|---|
| 09:00 | Peter Barrett | K3 | KEYNOTE: Ice sheets - a view from the past |
| 09:40 | Bas de Boer | A010 | Cenozoic global ice volume and temperature simulations with 1-D ice-sheet models forced by marine $\delta^{18}\text{O}$ records |
| 10:00 | John Smellie | A090 | Seven million year history of the Antarctic Peninsula Ice Sheet revealed by coupled geological and climate modelling studies |
| 10:20 | Stewart Jamieson | A117 | Modelling the long-term glacial landscape evolution of Antarctica |
| 10:40 | Refreshments | | |

Chair: Frank Pattyn

Session 12: Change in the Cryosphere 5

| | | | |
|-------|------------------|------|--|
| 11:10 | Daniel Lawson | A097 | Millennial Scale Glacial Cycles through the Holocene, Glacier Bay, Alaska, USA |
| 11:30 | Miriam Jackson | A008 | Glacier surface motion and subglacial pressure variations |
| 11:50 | Andrés Rivera | A099 | Ice dynamics of Union Glacier in the Ellsworth Mountains and interactions with Rutford Ice Stream, West Antarctica |
| 12:10 | Hiroyuki Enomoto | A014 | Microwave observation along the traverse route of the Japanese-Swedish Antarctic Expedition 2007-2008 |
| 12:30 | Angelika Humbert | A023 | The temperature regime of Fimbulisen, Antarctica |
| 12:50 | Lunch | | |

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|-------|-----------------------------------|--|--|
| | Session 13: | | |
| 13:40 | IGS Annual General Meeting | | |
| 15:00 | Refreshments | | |

Chair: Bernd Kulesa

Session 14: Ice Shelves and Calving 2

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|-------|---------------------|------|--|
| 15:30 | Robert Bindschadler | A062 | It's the Water: Further evidence that ocean heat is eroding the Pine Island Glacier ice shelf |
| 15:50 | Jamin Greenbaum | A102 | Toward Sub-Ice Shelf Bathymetry: 2D Inversion of Airborne Gravity |
| 16:10 | Benoit Legresy | A051 | Insights into the rifting and calving process of the Mertz glacier ice tongue. |
| 16:30 | Anne Chapuis | A016 | Calving processes of Kronebreen, Svalbard: calving rate variations and their possible controls |
| 16:50 | Natalie Robinson | A012 | Two giant icebergs and a two-way coupling between ice and ocean – from long-term observations |
| 18:00 | BANQUET | | |

Session 15: Ice Shelves and Calving 3

| | | | |
|-------|---------------------|------|--|
| 09:00 | Laurence Padman | A021 | Mapping ice shelf grounding zones using ICESat, MODIS and InSAR: Application to Amery Ice Shelf |
| 09:20 | Matt King | A109 | A four decade record of elevation change of the Amery Ice Shelf, East Antarctica |
| 09:40 | Daniela Jansen | A092 | Modelling ice flow velocity and crevasse formation on the Larsen C ice shelf – implications for ice shelf stability |
| 10:00 | Ted Scambos | A049 | Climate Change and Ice Sheet Response in the Antarctic Peninsula during IPY: The Past, The Present, and LARISSA (The Future) |
| 10:20 | Bernd Kulesa | A009 | Structure and mechanical properties of the southern Larsen C ice shelf from in-situ geophysical measurements |
| 10:40 | Refreshments | | |

Chair: Emmanuel Le Meur

Session 16: Change in the Cryosphere 6

| | | | |
|-------|----------------|------|---|
| 11:10 | Robert Arthern | A078 | In-situ observations of temporal changes in Antarctic snow compaction, and their effect upon surface elevation |
| 11:30 | Kotaro Fukui | A005 | Features of firn stratification detected from ground penetrating radar along the traverse route of Japanese-Swedish Antarctic Expedition 2007-2008, East Antarctica |
| 11:50 | Shin Sugiyama | A027 | Snow density and dielectric constant measurements along the traverse route of the Japanese-Swedish Antarctic Expedition 2007-2008 |
| 12:10 | Mary Albert | A043 | Firn Properties and Accumulation Rate: Overview and Early Results from the Norwegian-US Scientific Traverse of East Antarctica |
| 12:30 | Shuji Fujita | A066 | Changes of surface snow density in a summer in the Antarctic Dome Fuji region: along the traverse route of the Japanese-Swedish Antarctic Expedition 2007-2008 |
| 12:50 | Lunch | | |

Chair: David Vaughan

Session 17: Ice Shelves and Calving 4

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|-------|--------------------|------|---|
| 13:40 | Jason Amundson | A022 | Application of a simple ice-mélange force-balance model to the calving dynamics of Jakobshavn Isbrae, Greenland |
| 14:00 | Anne Chapuis | A015 | What can we see on a radar return signal from a calving front? |
| 14:20 | Damien Mansell | A082 | Controls on the calving flux of North West Svalbard glaciers |
| 14:40 | Robert Bindshadler | K4 | KEYNOTE: IPY: An Early Look Back |
| 15:20 | | | Closing comments |

