

EGU General Assembly 2011
Programme Group Programme
CR – Cryospheric Sciences

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Monday, 04 April

CR1.10 – Open Topics in Cryospheric Research – Orals

Convener: David Vaughan | Co-Conveners: Carmen de Jong

Room: 5

Chairperson: David Vaughan and Carmen de Jong

- 08:30–08:45 EGU2011-5654
Thomas Mölg and Georg Kaser
Unifying large-scale atmospheric dynamics and glacier scale mass balance without the need for scale bridging
- 08:45–09:00 EGU2011-10606
Markus Engelhardt, Thomas V. Schuler, and Bjarne Kjølmoen
Validation of gridded precipitation maps using mass balance measurements from glaciers in Norway
- 09:00–09:15 EGU2011-7563
Matteo Spagnolo, Adriano Ribolini, Paolo Roberto Federici, Darryl E Granger, Marta Pappalardo, and Andrew J Cyr
The expression of the Heinrich Event 1 in the Alps, evidence from the Maritime Alps
- 09:15–09:30 EGU2011-1955
Lionel Favier, Olivier Gagliardini, Gaël Durand, and Thomas Zwinger
Three-dimensional full-Stokes modelling of the grounding line dynamics
- 09:30–09:45 EGU2011-6065
Jerome Faillettaz, Didier Sornette, and Martin Funk
Climate warming and stability of cold hanging glaciers Lessons from the gigantic 1895 Altels break-off
- 09:45–10:00 EGU2011-10056
Paul Leclercq, Johannes Oerlemans, and Graham Cogley
Estimating the glacier contribution to sea-level rise over the past 200 years

CR1.10 – Open Topics in Cryospheric Research – Posters

Convener: David Vaughan | Co-Conveners: Carmen de Jong

Hall XL | Display Time 08:00–19:30

Author in Attendance: 17:30–19:00

Chairperson: David Vaughan and Carmen de Jong

- XL191 EGU2011-3337
Urs H. Fischer and **Wilfried Haeberli**
Ice-age effects on radioactive waste disposal in Switzerland
- XL192 EGU2011-6177
Jakob Abermann, Michael Kuhn, and Andrea Fischer
Glaciers in Austria - past and present
- XL193 EGU2011-6195
Andrea Fischer, Jakob Abermann, Anna Haberkorn, Heralt Schneider, and Rudolf Sailer
Vertical ice flow velocity and basal melt as important contributors to volume change on Alpine glaciers
- XL194 EGU2011-6812
Alastair Graham, Frank Nitsche, and Robert Larter
An improved bathymetric compilation for the Bellingshausen Sea, Antarctica, to inform ice-sheet and ocean models
- XL195 EGU2011-7026
Marco Tedesco, Christine Foreman, Nick Steiner, and Tristan Schwartzman
Preliminary results on the comparison between spectral, physical and chemical properties of West Greenland and Antarctica (Dry Valleys) cryoconites.
- XL196 EGU2011-7613
Astrid Lambrecht, Martin Juen, Anna Wirbel, Christoph Mayer, Ulrich Küppers, Lina Seybold, and Maria Shahgedanova
Ice melt underneath a supra-glacial debris cover: interactions between meteorology and debris properties based on field experiments
- XL197 EGU2011-11051
Christoph Mayer, Achim Heilig, Wilfried Hagg, and Elisabeth Mayr
Accumulation dependency of small alpine glaciers
- XL198 EGU2011-12450
Denis Samyn, Carmen Vega, Dmitri Divine, and Veijo Pohjola
Assessing nitrate dynamics in Svalbard from ice core multivariate analysis

- XL199 EGU2011-12673
Anna Haberkorn, Andrea Fischer, and Rudolf Sailer
 Special melt characteristics as an evidence for significant basal melt rates at the tongue of Hintereisferner, Ötztal, Austria
- XL200 EGU2011-12841
 Florian Karner, **Friedrich Obleitner**, and Jack Kohler
 Verification of re-analyses model output data in an Arctic glacier environment

CR1.30 – Ice and its microstructure: commonalities and differences – Orals

Convener: Martin Schneebeli | Co-Conveners: Maurine Montagnat, Martyn Drury, Thomas Loerting, Denis Samyn

Room: 25

Chairperson: n.n.

- 15:30–15:45 EGU2011-10206
Charles Fierz, Henning Loewe, and Martin Schneebeli
 Snow metamorphism - past, present, and future
- 15:45–16:00 EGU2011-9951
Thorsten Bartels-Rausch, Fabienne Riche, Sumi Wren, Sepp Schreiber, Jamie Donaldson, Martin Schneebeli, and Markus Ammann
 The Microstructure of Ice and effective Diffusion of VOCs in snow: A laboratory study
- 16:00–16:15 EGU2011-8856
Jane Blackford
 Is ice a good substance for educating engineers about materials?
- 16:15–16:30 EGU2011-6127
Fanny Grennerat, Sandra Piazzolo, Maurine Montagnat, Olivier Castelnaud, and Paul Duval
 Multi-scale characterization of strain heterogeneities and associated misorientations in laboratory deformed polycrystalline ice: Image Correlation techniques, EBSD observations and full-field modeling
- 16:30–16:45 EGU2011-3498
Ilka Weikusat, Atsushi Miyamoto, Gill M. Pennock, Sepp Kipfstuhl, Sérgio H. Faria, Nobuhiko Azuma, and Martyn R. Drury
 Cryogenic EBSD and X-ray Laue diffraction: Data on subgrain boundaries in Antarctic ice samples
- 16:45–17:00 EGU2011-2341
Alessio Gusmeroli, Erin Pettit, Catherine Ritz, Joseph Kennedy, Maurine Montagnat, Eric Lefebvre, Gael Durand, Sepp Kipfstuhl, and Simon Sheldon
 The relationship between climate and ice rheology at Dome C, East Antarctica: a comparison of fabric determined by borehole sonic logging and thin sections.

CR1.30 – Ice and its microstructure: commonalities and differences – Posters

Convener: Martin Schneebeli | Co-Conveners: Maurine Montagnat, Martyn Drury, Thomas Loerting, Denis Samyn

Hall XL | Display Time 08:00–19:30

Author in Attendance: 17:30–19:00

Chairperson: n.n.

- XL201 EGU2011-2211
Carlo Carmagnola, Samuel Morin, and Florent Dominé
 Towards a new representation of snow metamorphism in macroscopic snowpack models
- XL202 EGU2011-3125
Margret Matzl, Martin Schneebeli, Daniel Steinfeld, and Stephen Steiner
 Microtomography of layered snow samples and weak layers
- XL203 EGU2011-13263
Henning Loewe and Alec van Herwijnen
 A Poisson shot-noise model for snow penetration resistance
- XL204 EGU2011-3390
Johannes Freitag and Sepp Kipfstuhl
 The quantification of layering in polar firn: first results from core-scale microfocus X-ray-computer tomography
- XL205 EGU2011-7214
Sepp Kipfstuhl and Johannes Freitag
 Density, densification and the evolution of the microstructure in polar firn
- XL206 EGU2011-3949
Ruzica Dadic, Light Bonnie, and Stephen G. Warren
 Migration of air bubbles in ice under a temperature gradient, with application to "Snowball Earth"
- XL207 EGU2011-5970
Jens Roessiger, Paul Bons, Sergio H. Faria, and Ilka Weikusat
 Influence Of Air Bubbles In Ice On Grain Growth

- XL208 EGU2011-7178
Christian Weikusat, Johannes Freitag, and Sepp Kipfstuhl
Raman spectroscopy of bubbles and microbubbles in EDML antarctic ice core
- XL209 EGU2011-3374
Maurine Montagnat, Antonin Broquet, Pierre Schiltz, Daphné Buiron, Laurent Arnaud, and Sepp Kipfstuhl
Measurements and numerical simulation of fabric evolution along the Talos Dome ice core
- XL210 EGU2011-12029
Ilka Weikusat, Sepp Kipfstuhl, Denis Samyn, Anders Svensson, and Nobuhiko Azuma
Folds in the NEEM ice core (Greenland)
- XL211 EGU2011-12563
Denis Samyn, Ilka Weikusat, Anders Svensson, Nobuhiko Azuma, Maurine Montagnat, and Sepp Kipfstuhl
Micro-structure of the NEEM deep ice core: towards quantifying stratigraphic disturbances
- XL212 EGU2011-10949
Tobias Binder, Christoph Garbe, Dietmar Wagenbach, Johannes Freitag, and Sepp Kipfstuhl
Recrystallization dynamics derived from grain boundary networks
- XL213 EGU2011-6300
Paul Bons and Jens Roessiger
The effect of microstructure on static grain growth in ice
- XL214 EGU2011-3614
Ilka Weikusat, D. A. Matthijs De Winter, Gill M. Pennock, Mike Hayles, Chris T. W. M. Schneijdenberg, and Martyn R. Drury
Cryogenic EBSD: a technique to preserve a stable surface in a low pressure SEM to characterize ice microstructure
- XL215 EGU2011-10334
Sabrina Diebold, William B. Durham, Dave J. Prior, Rachel W. Obbard, Ian Baker, and Laura Stern
Deformation and microstructure of coarse- and fine-grained pure water ice
- XL216 EGU2011-11121
Erik Thomson, John S. Wettlaufer, and Larry A. Wilen
The contribution of grain boundary melting to the water budget of polycrystalline ice

CR3.10 – Remote Sensing of the Cryosphere – Orals

Convener: Marco Tedesco | Co-Conveners: Tommaso Parrinello, Andrew Shepherd, Thomas Painter

Room: 5

Chairperson: M. Tedesco, T. Parrinello, Andrew Shepherd

- 13:30–13:45 EGU2011-1417
Tommaso Parrinello, Richard Francis, and Duncan Wingham
Cryosat: mission status, achievements and data access
- 13:45–14:00 EGU2011-2308
Robert Bindshadler and the ASAIID Mapping Team
The Grounded Ice and Floating Ice Boundaries of Antarctica
- 14:00–14:15 EGU2011-3846
Marilyn Kaminski, Mary J. Brodzik, Jeffrey S. Deems, and Ted A. Scambos
Managing IceBridge airborne mission data at the National Snow and Ice Data Center
- 14:15–14:30 EGU2011-5945
Aleksey Sharov, Dmitry Nikolskiy, and Alexandra Tyukavina
Geodetic estimates of glacier mass balance in Severnaya Zemlya
- 14:30–14:45 EGU2011-8477
Todd Albert
A 35-year history of deglaciation on the Quelccaya Ice Cap, Peru from multispectral imagery
- 14:45–15:00 EGU2011-8497
Nicolas Picot and Francois Boy
LRM Processing over Ice Inland Bodies, first Analysis using Local DEM and a Comparison to ENVISAT Data.
- Chairperson: M. Tedesco, T. Parrinello, Andrew Shepherd
- 15:30–15:45 EGU2011-9245
Christopher Shuman, Etienne Berthier, and Ted Scambos
Tributary Glacier Elevation and Mass Loss in the Larsen A and B Ice Shelf Embayments, 2001-2010
- 15:45–16:00 EGU2011-10185
Juho Vehvilainen, Juha Lemmetyinen, Jouni Pulliainen, Thomas Nagler, Helmut Rott, Claude Duguay, Chris Derksen, Michael Kern, Giovanni Macelloni, and Marco Brogioni
Potential benefits of employing combined active and passive microwave observations in retrieval of snow water equivalent

- 16:00–16:15 EGU2011-10397
Matias Takala, Kari Luojus, Jouni Pulliainen, Chris Derksen, Juha Lemmetyinen, Juha-Petri Kärnä, Jarkko Koskinen, and Bojan Bojkov
 Snow water equivalent processing system for northern hemisphere
- 16:15–16:30 EGU2011-11526
C.k. Shum, Hyongki Lee, Jianbin Duan, Junyi Guo, Ian Howat, Xuanyu Hu, Chungyen Kuo, and Yuchan Yi
 Present-Day Antarctic Ice-Sheet Mass Balance
- 16:30–16:45 EGU2011-11899
 Malcolm Davidson, **Dirk Schüttemeyer**, Tania Casal, and Duncan Wingham
 ESA CryoSat Calibration and Validation Activities
- 16:45–17:00 EGU2011-13287
Richard Kelly, Josh King, Andrew Kasurak, and Claude Duguay
 Scatterometer observations of snow in a forest stand in the Hudson Bay lowlands during the CAN-CSI 2010-2011 experiment

CR3.10 – Remote Sensing of the Cryosphere – Posters

Convener: Marco Tedesco | Co-Conveners: Tommaso Parrinello, andrew shepherd, Thomas Painter

Hall XL | Display Time 08:00–19:30

Author in Attendance: 17:30–19:00

Chairperson: M. Tedesco, T. Parrinello, Andrew Shepherd

- XL217 EGU2011-515
Samantha Darling, Luke Copland, Laurence Gray, and Wesley Van Wychen
 Velocity Patterns Across the Kaskawulsh Glacier, Yukon Territory, Canada
- XL218 EGU2011-881
Elsa Rothschild, Gérard Beltrando, and Sylvain Bigot
 Analysis of snow cover variability over the Vercors mountains (French Prealps) using MODIS/Terra snow-cover products
- XL219 EGU2011-1438
Dirk Schüttemeyer, Malcolm Davidson, Remo Bianchi, Tania Casal, Catherine Bouzinac, and Michael Kern
 European Space Agency campaign activities in support of Earth Observation Projects: Examples for Snow and Ice
- XL220 EGU2011-2462
Steven Palmer, Andrew Shepherd, Noel Gourmelen, Malcolm McMillan, Jan Lenaerts, and Michiel van den Broeke
 Comparison of surface mass balance estimates of the Larsen-C ice shelf from near-surface density measurements and a regional climate model
- XL221 EGU2011-5088
Claude Duguay and Kyung-Kuk Kang
 Development of a 24-year time series of ice cover phenology and thickness from Great Bear Lake and Great Slave Lake derived from SSM/I brightness temperature measurements
- XL222 EGU2011-8203
 Nick Steiner and **Marco Tedesco**
 An enhanced resolution QuikSCAT derived Antarctic melt record (1999-2009): development and evaluation of wavelet-based methods
- XL223 EGU2011-9227
Xavier Fettweis, Marco Tedesco, and Michiel van den Broeke
 Assimilation of the 1979-2009 microwave satellite data into the regional climate MAR model for studying the Greenland ice sheet melt extent
- XL224 EGU2011-9631
Marco Tedesco
 Toward a new AMSR-E SWE operational algorithm
- XL225 EGU2011-9958
Ole Baltazar Andersen
 Cryosat-2 observations for mean sea surface and mean ocean circulation studies in the Arctic
- XL226 EGU2011-10724
Noel Gourmelen, Andrew Shepherd, Jeong-Won Park, and Robert Hawley
 Three-dimensional ice flow in the Greenland Ice Sheet and its evolution from past and present satellite and airborne missions
- XL227 EGU2011-13055
Sabine Baumann, Annette Menzel, Florian Seitz, Karin Hedman, Alka Singh, Sarah Abelen, and Susanne Schnitzer
 Estimating glacier mass changes by high resolution GRACE estimates and other remote sensing data

- XL228 EGU2011-671
Torborg Heid and Andreas Kääh
Evaluation of different image matching methods for deriving glacier surface displacements globally
- XL229 EGU2011-2623
Susanne Adams, Sascha Willmes, David Schröder, and Günther Heinemann
Monitoring of thin ice in the Laptev Sea Polynya
- XL230 EGU2011-3972
Bjoern Frommknecht, Tommaso Parrinello, and Pascal Gilles
The CRYOSAT-2 Payload Data Ground Segment and Data Processing
- XL231 EGU2011-5180
Joshua King, Andrew Kasurak, Richard Kelly, Claude Duguay, and Chris Derksen
Dual Frequency (17.2 and 9.6 GHz) Scatterometer Observations of Terrestrial Snow in a Canadian Sub-Arctic Tundra Environment
- XL232 EGU2011-6483
Yongcun Cheng and Ole Baltazar Andersen
Improvements in DTU10 global ocean tide model in Polar Regions from multi-mission altimetry
- XL233 EGU2011-12494
Robert Cullen, Duncan Wingham, and Richard Francis
CryoSat-2 post launch commissioning performance
- XL234 EGU2011-13584
Bryan Blair, Michelle Hofton, David Rabine, and Scott Luthcke
NASA's Wide-swath Mapping Laser Altimetry Capability and its Application to Cryospheric Sciences
- XL235 EGU2011-1422
Ruud Hurkmans and Jonathan Bamber
Time-evolving mass changes of Jakobshavn Isbrae, Greenland, derived from satellite altimetry
- XL236 EGU2011-2684
Dedieu Jean-Pierre, Allain-Bailhache Sophie, Pottier Eric, Durand Yves, Gottardi Frederic, and Bernier Monique
Radarsat-2 full polarimetry capabilities for dry and wet snow analysis at C-band in Alpine regions
- XL237 EGU2011-3954
Claude Duguay and the ESA STSE North Hydrology Team
North Hydrology: An ESA-Sponsored Initiative in Support of the Climate and Cryosphere (CliC) Project
- XL238 EGU2011-73
Tatiana Zhuravleva and **Alexander Kokhanovsky**
The effect of snow cover roughnesses on angular structure of reflected solar radiation
- XL239 EGU2011-4130
Simon Zwieback, Annett Bartsch, Thomas Melzer, and Wolfgang Wagner
Monitoring the Landscape Freeze/Thaw State by Fusion of Ku and C Band Scatterometer Data
- XL240 EGU2011-12288
Michelle Hofton, Bryan Blair, Scott Luthcke, and David Rabine
Ice Sheet Mapping Using Wide Swath Laser Altimetry
- XL241 EGU2011-8377
Fran Fabra, Estel Cardellach, Oleguer Nogués-Correig, Santi Oliveras, Serni Ribó, Antonio Rius, Giovanni Macelloni, Simone Pettinato, and Salvatore D'Addio
Remote sensing of dry snow masses with GNSS-R

CR3.20 – Creating glacier inventories from remote sensing data: Challenges and solutions – Orals

Convener: Frank Paul | Co-Conveners: Bruce Raup, Tatiana Khromova, Graham Cogley, Tobias Bolch

Room: 5

Chairperson: n.n.

- 10:30–10:45 EGU2011-5599
Liss M. Andreassen, Solveig H. Winsvold, and Frank Paul
Creating a new Norwegian glacier inventory using Landsat imagery - methods, challenges and results
- 10:45–11:00 EGU2011-7051
Holger Frey and Frank Paul
On the suitability of the SRTM DEM and ASTER GDEM for the compilation of topographic parameters in glacier inventories
- 11:00–11:15 **Short poster presentations**
- 11:15–11:30 EGU2011-10579
Manfred Buchroithner, Dmytro Shlezinger, Tobias Bolch, and Tino Pieczonka
Automated spaceborne mapping of debris-covered glaciers in high Asia
- 11:30–11:45 EGU2011-13373
Francisca Bown, Andrés Rivera, Claudio Bravo, Felipe Napoleoni, and Anja Wendt
Glacier inventories and recent changes on active ice-capped volcanoes of the Chilean Southern Andes

- 11:45–12:00 EGU2011-13578
Bruce Raup, Siri Jodha Khalsa, Adina Racoviteanu, and Richard Armstrong
 Recent improvements to the GLIMS Glacier Database and Future Directions

CR3.20 – Creating glacier inventories from remote sensing data: Challenges and solutions – Posters

Convener: Frank Paul | Co-Conveners: Bruce Raup, Tatiana Khromova, Graham Cogley, Tobias Bolch

Hall XL | Display Time 08:00–19:30

Author in Attendance: 17:30–19:00

Chairperson: n.n.

- XL242 EGU2011-1275
Vladimir Kononov
 Hydrological Regime of Continental Glaciers on the Earth
- XL243 EGU2011-3942
Shiyin Liu, Wanqin Guo, Junli Xu, and Donghui Shangguan
 Status of Glacier inventories in China
- XL244 EGU2011-7007
Holger Frey, Frank Paul, and Tazio Strozzi
 Compilation of a glacier inventory for the western Himalayas from satellite data: challenges and results
- XL245 EGU2011-8906
Frank Paul, Holger Frey, and Raymond Le Bris
 A new glacier inventory for the European Alps from Landsat TM scenes of 2003: Challenges and analysis
- XL246 EGU2011-9798
Marie Gardent and Philip Deline
 Stages of glacial retreat in the French Alps since the termination of the Little Ice Age
- XL247 EGU2011-12038
Alison Cook, Tavi Murray, David Vaughan, Adrian Luckman, Andrew Fleming, and Nick Barrand
 Changes in glacier extents on the Antarctic Peninsula, 2000-2010, mapped from a range of multispectral and radar imagery
- XL248 EGU2011-12670
Tobias Bolch
 Challenges with the compilation of multi-temporal glacier inventories from different sources
- XL249 EGU2011-13192
Philipp Rastner, Tobias Bolch, and Frank Paul
 2011 ... final steps towards the first complete glacier inventory for Greenland
- XL250 EGU2011-13223
Philipp Rastner, Steve Kass, Tobias Bolch, and Frank Paul
 Mapping Greenland's glaciers and icecaps with object based image analysis

SM1.7/CR11.10/GI-18 – Challenges of Polar Seismology: Logistics and technology, glacial and tectonic events (co-organized) – Orals

Convener: Trine Dahl-Jensen | Co-Conveners: Vera Schlindwein, Meredith Nettles

Room: 26

Chairperson: n.n.

- 15:30–15:45 EGU2011-13538
Douglas A. Wiens, David Heeszel, Xinlei Sun, Amanda Lough, Andrew Nyblade, Sridhar Anandakrishnan, Richard C. Aster, Audrey Huerta, and Paul Winberry
 Seismic structure and sources of the Antarctic continent determined from large-scale year around deployment of broadband seismographs
- 15:45–16:00 EGU2011-4112
Galina Antonovskaya and Felix Yudakhin
 About necessity of carrying out seismogeodynamic monitoring of the Russian Federation's Arctic zone
- 16:00–16:15 EGU2011-2493
Trine Dahl-Jensen and the GLISN Team
 The Greenland Ice Sheet monitoring Network (GLISN)
- 16:15–16:30 EGU2011-5505
 Morten Langer Andersen, **Tine B. Larsen**, and Meredith Nettles
 Detection and spectral characterization of calving related seismic signals, Helheim Glacier, South East Greenland
- 16:30–16:45 EGU2011-8322
Elena Kozlovskaya and the POLENET/LAPNET Working Group Team
 Analysis of glacial seismic events from Greenland recorded by the POLENET/LAPNET experiment during the IPY 2007-2009

16:45–17:00 EGU2011-10337

John Clinton, Marco Olivieri, Jason Amundson, and Fabian Walter
Counting Calving Events in Greenland using GLISN

SM1.7/CR11.10/GI-18 – Challenges of Polar Seismology: Logistics and technology, glacial and tectonic events (co-organized) – Posters

Convener: Trine Dahl-Jensen | Co-Conveners: Vera Schlindwein, Meredith Nettles

Halls X/Y | Display Time 08:00–19:30

Author in Attendance: 17:30–19:00

Chairperson: n.n.

XY680 EGU2011-12765

Elena Kozlovskaya, Alexander Kozlovsky and the POLENET/LAPNET Working Group Team
Problem of misinterpretation of geomagnetic pulsations recorded by broadband seismometers as seismic signals: possible solutions

XY681 EGU2011-1895

Bela Assinovskaya and Vladimir Karpinsky
Unusual Earthquake July 31, 2010 in Lake Ladoga

XY682 EGU2011-2458

Vera Schlindwein and Christine Läderach
Seismology on drifting ice floes

XY683 EGU2011-10457

Myrto Pirli, Johannes Schweitzer, **Tormod Kværna**, and the IPY Project Consortium
A year of seismic swarm activity on the Mohns - Knipovich Ridge Bend

XY684 EGU2011-6325

Andreas Köhler, Anne Chapuis, Christopher Nuth, and Christian Weidle
Searching for glacier-induced seismic events using a combined approach of STA/LTA triggering and unsupervised pattern recognition

XY685 EGU2011-8589

Stephan Husen, Fabian Walter, Martin Funk, Martin Lüthi, and John F. Clinton
Subglacial Controls on the Short Term Dynamics at the Margin of the Greenland Ice Sheet: Seismic Experiments

XY686 EGU2011-9206

Jason Amundson, John Clinton, Martin Luethi, Emile Okal, Doug MacAyeal, and Marco Olivieri
Long-period glaciogenic ocean waves revealed by coastal broadband seismometers near Jakobshavn Isbræ, Greenland

XY687 EGU2011-12191

Giuseppe Falcone, Giuditta Marinaro, Giovanni Battista Cimini, Paolo Favali, Francesco Frugoni, Stephen Monna, and Caterina Montuori
Seismological observations of the experiment in Antarctica with MABEL seafloor multidisciplinary observatory

XY688 EGU2011-6137

Fabian Walter, Debi Kilb, Nicolas Deichmann, Martin Funk, and Helen Amanda Fricker
Surface Seismicity on Gornergletscher, a Swiss Alpine Glacier

CR11.20 – Ice deposits in caves: formation, evolution and climate-environment assessment – Posters

Convener: Valter Maggi | Co-Conveners: Aurel Perşoiu, Christiane Grebe

Hall XL | Display Time 08:00–19:30

Author in Attendance: 17:30–19:00

Chairperson: Valter Maggi, Christiane Grebe, Aurel Persoiu

XL251 EGU2011-946

Christiane Grebe and Andreas Pflitsch
Historical data in the light of modern ice cave research

XL252 EGU2011-1423

Derek Ford
Ice in Canadian Caves

XL253 EGU2011-3104

Jure Kosutnik
Temperature Monitoring in Slovene Ice Caves - Can less tell more?

XL254 EGU2011-4056

Anchel Belmonte Ribas, Carlos Sancho Marcén, and Ana Moreno
Chronology of a Pyrenean subsurface ice deposit (A294 cave, Cotiella massif, Spain)

- XL255 EGU2011-5188
Bogdan P. Onac, Jonathan G. Wynn, and Michele Citterio
Ikaite in the ScȚȚriȚoara Ice Cave (Romania): origin and significance
- XL256 EGU2011-5577
Christiane Grebe and **Andreas Pflitsch**
Ice cave research in Germany - past, present and future?
- XL257 EGU2011-7556
Zoltán Kern, István Fórizs, László Palcsu, Michael Behm, Helmut Hausmann, and Rudolf Pavuza
Isotope hydrological and geophysical studies on the perennial cave ice deposit of Saarlhale (Mammuthöhle, Dachstein Mts, Austria)
- XL258 EGU2011-7839
Nenad Buzjak, Dalibor Paar, and Darko Bakšić
Snow and ice in speleological features of Dinaric Mountains in Croatia
- XL259 EGU2011-10177
Valter Maggi, Stefano Turri, Alfredo Bini, Barbara Stenni, and Roberto Udisti
Cave-ice interaction in Moncodeno ice cave (Italy)
- XL260 EGU2011-10142
Valter Maggi, Stefano Turri, Aurel PerȚoiu, Alfredo Bini, Bogdan Onac, Roberto Udisti, and Barbara Stenni
Two millennia of ice accumulation in Focul Viu ice cave, Romania
- XL261 EGU2011-12886
Friedrich Obleitner and Christoph Spötl
Temperature profiles in an Alpine ice cave (Eisriesenwelt, Austria)
- XL262 EGU2011-13892
Hi-Ryong Byun
Use of ice cave for the storage of water resources

HS2.12 – Mountain hydrology: Observations, processes and models (co-listed) – Orals

Convener: Daniel Viviroli | Co-Conveners: Carmen de Jong, Paola Allamano

Room: 36

Chairperson: Daniel Viviroli, Carmen de Jong

- 08:30–08:45 EGU2011-2618
Walter Immerzeel and Marc Bierkens
Quantifying the Water Tower of the Third Pole: State of the Art and Research Challenges
- 08:45–09:00 EGU2011-10325
Adina Racoviteanu, Guleid Artan, Mandira Shrestha, Samjwal Bajracharya, Pradeep Mool, Giriraj Amarnath, Molly Brown, Shahid Habib, Maria Tzortziou, and Hua Ouyang
HIMALAYA: Understanding the contribution of glacier and snowmelt in the Himalaya using a spatially-distributed energy balance model and remotely sensed data
- 09:00–09:15 EGU2011-4495
Hendrik Wulf, Bodo Bookhagen, and Dirk Scherler
Differentiating rainfall, snow and glacial melt in the Sutlej Valley (western Himalaya) by distributed hydrological modeling
- 09:15–09:30 EGU2011-3047
Bettina Schȃppi, Peter Molnar, and Paolo Burlando
Precipitation gradients along hillslopes estimated from rain gauge transects
- 09:30–09:45 EGU2011-7799
Matei DomniȚa, Augustin IonuȚ CrȚciun, Ionel Haidu, and Okke Batelaan
GIS Methodology for determination of the flash flood hydrograph in small scale mountainous catchments
- 09:45–10:00 EGU2011-5458
Iris Stewart, Darren Ficklin, and Edwin Maurer
How will projected climate change impact stream temperature and water quality in the Sierra Nevada (CA)?

COFFEE BREAK

Chairperson: Carmen de Jong, Paola Allamano

- 10:30–10:45 EGU2011-8601
Matthias Huss
Present and future contribution of glaciers to runoff from macroscale drainage basins in Europe

- 10:45–11:00 EGU2011-5838
Arnout van Soesbergen
Modelling climate change impacts on water resources of dams
- 11:00–11:15 EGU2011-13155
Alberto Pistocchi and Attilio Castellarin
An analysis of change in alpine annual maximum discharges: implications for the selection of design discharges
- 11:15–11:30 EGU2011-2959
Ulrich Strasser, Andreas Gobiet, Johann Stötter, Hannes Kleindienst, Friedrich Zimmermann, Karl Steininger, and Franz Pretenthaler
CC-Snow: an interdisciplinary project to investigate climate change effects on future snow conditions and winter tourism in Tyrol and Styria (Austria)
- 11:30–11:45 EGU2011-7054
Robert Steiger
The impact of climate change on water demand of snowmaking
- 11:45–12:00 EGU2011-11760
Cécile Picouet and Frédéric Gottardi
Snow accumulation submodel: how to estimate the phase of precipitations and the snow correction factor?

HS2.12 – Mountain hydrology: Observations, processes and models (co-listed) – Posters

Convener: Daniel Viviroli | Co-Conveners: Carmen de Jong, Paola Allamano

Hall A | Display Time 08:00–19:30

Author in Attendance: 17:30–19:00

Chairperson: Daniel Viviroli, Carmen de Jong, Paola Allamano

- A294 EGU2011-349
Svetlana Mazukhina, Vladimir Masloboev, Konstantin Chudnenko, Valerii Bychinsky, Anton Svetlov, and Sergey Muravyev
Interaction of surface and subsurface waters in the system “water-rock-atmosphere-carbon
- A295 EGU2011-1369
Roland Koeck and Eduard Hochbichler
Soil moisture dynamics in the montane beech-fir-spruce forest belt within karstic headwaters
- A296 EGU2011-2253
Chiang Wei, Ping-Shih Yang, and Pei-Ling Tian
Evaluating the ecohydrology of microhabitat in an experimental watershed of Central Taiwan
- A298 EGU2011-4131
Frank Herrmann, Georg Berthold, Johann-Gerhard Fritsche, Florian Jenn, Ralf Kunkel, Hans-Jürgen Voigt, and Frank Wendland
Large-scale conceptual modelling of groundwater piezometric surfaces in low mountain range landscapes of Central Europe
- A299 EGU2011-5574
Thierry Barth, Georges-Marie Saulnier, and Emmanuel Malet
Monitoring hydrometeorology in mountain catchment, the example of the Vorz (Belledonne, France)
- A300 EGU2011-6738
Abdallah Alaoui, Matthias Müller, Christine Alewell, Susanne Lagger, and Rolf Weingartner
Impact of land use changes on soil hydrology in the Ursern Valley, Switzerland
- A301 EGU2011-7247
Pablo Garcia-Estringana, Jérôme Latron, Pilar Llorens, and Francesc Gallart
Spatial and Temporal dynamics of soil moisture in a Mediterranean mountain area
- A302 EGU2011-7409
Jérôme Latron, **Pilar Llorens**, Pablo García-Estringana, and Francesc Gallart
Looking at hydrological variability in a Mediterranean mountain area to infer potential effects of climate change on water resources
- A303 EGU2011-7634
Giuseppe Formetta, Silvia Franceschi, Andrea Antonello, Ricardo Mantilla, and Riccardo Rigon
The JGrass-NewAge System for Forecasting and Managing the Hydrological Budgets at the Basin Scale
- A304 EGU2011-8592
Anna Kuentz, Thibault Mathevet, Christian Perret, and Vazken Andreassian
Uncertainty estimation of historical streamflow records of mountainous watersheds
- A305 EGU2011-9241
Gertraud Meißl, Clemens Geitner, Romed Ruggenthaler, Alexandra Mätzler, Markus Tusch, and Erwin Meyer
Influence of soil characteristics and earthworm activity on the hydrologic response of Alpine pasture sites to precipitation events

- A306 EGU2011-9813
Doris Duethmann, Janek Zimmer, Sergiy Vorogushyn, Andreas Güntner, and Abror Gafurov
Evaluation of the precipitation input for hydrological modeling of a mountainous catchment in Kyrgyzstan
- A307 EGU2011-9817
Michael Kuhn
Monthly mean vertical gradients of precipitation, temperature and glacier mass balance adjusted to measured runoff from high alpine basins
- A308 EGU2011-9911
Armando Molina, Gerard Govers, and Veerle Vanacker
Restoration of hydrological services through exotic plantations and natural revegetation on abandoned badlands
- A309 EGU2011-10100
Christina Delaney and Klaus Katzensteiner
Modelling leaf area carrying capacity for site adapted sustainable forest management in the Northern Limestone Alps
- A310 EGU2011-10117
Paul Dobesberger, Antonia Zeidler, and Georg Wohlfahrt
Calibration and Comparison of three SVAT (Surface-Vegetation-Atmosphere Transfer) models.
- A311 EGU2011-10154
Romed Ruggenthaler, Gertraud Meißl, Clemens Geitner, and Friedrich Schöberl
Determination of the influence of soil moisture on infiltration capacity
- A312 EGU2011-10847
Laura Anna Boscarello, Giovanni Ravazzani, and Marco Mancini
Assessing the impact of climate change on the flow regime of the Rhone river basin using a distributed hydrological model: first results
- A313 EGU2011-11430
Martina Kauzlaric, Bruno Schädler, and Rolf Weingartner
Distributed water balance modelling in a highly complex mountain catchment in the Swiss Alps: identifying the relevant parameter set
- A314 EGU2011-11751
Lukas Jacka, Jirka Pavlasek, and Pavel Pech
Estimated values of the saturated hydraulic conductivity of podzolic soils in the central part of the Šumava National Park - comparison of methods
- A315 EGU2011-11976
Florian Kobierska, Tobias Jonas, Jan Magnusson, Massimiliano Zappa, Mathias Bavay, Thomas Bosshard, and Stefano Bernasconi
Climate change effects on snow melt and discharge of a partly glacierized watershed in Central Switzerland
- A316 EGU2011-12368
Cara Tobin, Bettina Schaepli, Ludovico Nicotina, Marc B. Parlange, and Andrea Rinaldo
The impact of temperature distributions and snowmelt rates on runoff production; a case study in the Swiss Alps
- A317 EGU2011-13548
Rory Cowie and Mark Williams
Use of isotopic and geochemical tracers to identify source waters, flow paths, and residence times of headwater catchments in Boulder Creek Watershed, Colorado

HS2.13 – Mountain Hydrology: Monitoring and modeling of snow (co-listed) – Orals

Convener: Juraj Parajka | Co-Conveners: Michael Lehning, David Gustafsson

Room: 36

Chairperson: J. Parajka

- 13:30–13:45 EGU2011-4305
Martyn Clark
Representing Spatial Variability of Snow Water Equivalent in Hydrological and Land-surface Models: A Review
- 13:45–14:00 EGU2011-7806
Kari Luojus, Jouni Pulliainen, Matias Takala, Juha Lemmetyinen, Mwaba Kangwa, Tuomo Smolander, Juho Vehviläinen, Chris Derksen, Sari Metsämäki, and Bojan Bojkov
Investigating Snow Accumulation on Northern Hemisphere Using GLOBSNOW Snow Water Equivalent Data
- 14:00–14:15 EGU2011-11475
Mathias Bavay, Thomas Grünwald, Jan Magnusson, and Michael Lehning
Modeling the climate change impact on snow and runoff in the alpine space

- 14:15–14:30 EGU2011-1362
Thomas Nester and Robert Kirnbauer
Evaluating the snow component of a runoff forecasting model
- 14:30–14:45 EGU2011-823
Gokcen Uysal, Aynur Sensoy, Ali Arda Sorman, and Ali Unal Sorman
Forecasting Daily Discharge in the Upper Euphrates Basin Using Snowmelt Runoff Model with Estimated Snow Depletion Curves
- 14:45–15:00 EGU2011-13673
Noah Molotch, Ernesto Trujillo, and Keith Musselman
Vegetation-snowpack feedbacks from plot to regional scales
- Chairperson: M. Lehning
- 15:30–15:45 EGU2011-10169
Johannes Schöber, Stefan Achleitner, Katrin Schneider, Rudolf Sailer, Friedrich Schöberl, Johann Stötter, and Robert Kirnbauer
The potential of airborne laser scanning driven snow depth observations for modelling snow cover, snow water equivalent and runoff in high alpine catchments
- 15:45–16:00 EGU2011-5585
Thierry Barth, Georges-Marie Saulnier, and Emmanuel Malet
Modelling the snow from high spatial and temporal temperatures and snow cover maps
- 16:00–16:15 EGU2011-4045
Michael Warscher, Thomas Marke, Florian Hanzer, Ulrich Strasser, Harald Kunstmann, Bernhard Hynek, Marc Olefs, Wolfgang Schöner, Rudolf Sailer, and Johann Stötter
A terrain-based parameterization for the effect of wind-induced snow redistribution in Alpine terrain
- 16:15–16:30 EGU2011-12164
Hendrik Huwald, Chad W. Higgins, Holly J. Oldroyd, Steven A. Drake, Anne W. Nolin, and Marc B. Parlange
Turbulence-induced pressure fluctuations in snow and their effect on heat and moisture transport
- 16:30–16:45 EGU2011-5543
Rebecca Mott, Mathias Bavay, and Michael Lehning
Typical errors when calculating snow ablation in mountains
- 16:45–17:00 EGU2011-7846
Gro Lilbaek and John Pomeroy
Compositional Change of Meltwater Infiltrating Frozen Ground

HS2.13 – Mountain Hydrology: Monitoring and modeling of snow (co-listed) – Posters

Convener: Juraj Parajka | Co-Conveners: Michael Lehning, David Gustafsson

Hall A | Display Time 08:00–19:30

Author in Attendance: 17:30–19:00

Chairperson: D. Gustafsson

- A318 EGU2011-2156
Kay Helfricht, Bernd Seiser, Ulrich Strasser, Michael Kuhn, Rudolf Sailer, Johann Stötter, Eric Veulliet, and Helmut Schönlaub
Modelling of snow- and icemelt contribution to Alpine streamflow at different scales in the Ötztal Alps (Tirol, Austria): the alps MUSICALS project
- A319 EGU2011-2916
Florian Ortner, Philipp Schajer, Florian Hanzer, Thomas Marke, and Ulrich Strasser
Snow cover trends in Tyrol and Styria (Austria) over the last decades
- A320 EGU2011-2940
Florian Hanzer, Ulrich Strasser, Thomas Marke, Michael Warscher, Bernhard Hynek, Marc Olefs, and Wolfgang Schöner
Latest developments of the Alpine snow cover model AMUNDSEN: new modules, projects and perspectives
- A321 EGU2011-4900
Marilyn Xigaki
Mapping and Monitoring Snow cover and its changes over a 40 years period for the White Mountains of Crete, Greece
- A322 EGU2011-10273
Stefan Pohl, Leo Stoeckl, Jakob Garvelmann, and Markus Weiler
Detailed Spatial and Temporal Observations of Snow Covers in Mountainous Watersheds Using Numerous Low-Cost Standalone Sensors
- A323 EGU2011-11653
Mathias Bavay and Thomas Egger
MeteoIO: A Meteorological Data Pre-Processing Library for Numerical Models

- A324 EGU2011-12048
Matthias Rieckh, Andreas Kellerer-Pirklbauer, and Michael Avian
Evaluation of spatial variability of snow cover duration in a small alpine catchment using automatic photography and terrain-based modeling
- A325 EGU2011-12097
Raphael Mutzner, Hendrik Huwald, Sian R. Williams, Anne W. Nolin, and Marc B. Parlange
Fiber-optic distributed temperature sensing of alpine snow packs
- A326 EGU2011-7887
Ali Arda Sorman and Egemen Yamankurt
Modified Satellite Products on Snow Covered Area in Upper Euphrates Basin, Turkey
- A327 EGU2011-7951
Antonio Reppucci, Xavier Banque, Laura Moreno, Maria Jose Escorihuela, Miquel Aran, David Velasco, and F. Javier Busto
Characterization of Snow Pack Over Pyrenees Using Remote Sensed Data for Runoff Modeling
- A328 EGU2011-11818
Frederic Gottardi and Cécile Picouet
Using MODIS snow cover data to detect the best model hypotheses for snow-dominated watershed
- A329 EGU2011-12396
Miriam Carpintero García, Vanessa Piña Bueno, Javier Herrero Lantarón, Cristina Aguilar Porro, and María José Polo Gómez
Estimation of the snow cover by application of a two-layered model of accumulation and snowmelt in the Sierra Nevada Natural Park (Spain)
- A330 EGU2011-13648
Jannes Stolte, Geoffrie Kramer, and Helen French
Snowmelt driven spring discharge: measuring and modeling results for a small catchment in Norway

Tuesday, 05 April

CR1.40 – Projections of the cryospheric contribution to sea-level rise over the next century: progress in modelling and related observations – Orals

Convener: Tony Payne | Co-Conveners: Sophie Nowicki

Room: 5

Chairperson: AJ PAYNE & S NOWICKI

- 08:30–08:45 EGU2011-8989
Robert Bindschadler
SeaRISE: Final Course Set
- 08:45–09:00 EGU2011-3136
Johannes Oerlemans
The GlacMod2010-project: estimating the glacier contribution to sea-level change with dynamic glacier models
- 09:00–09:15 EGU2011-8399
Fabien Gillet-Chaulet, **Olivier Gagliardini**, Maelle Nodet, Catherine Ritz, Gael Durand, Thomas Zwinger, Hakime Seddik, and Ralph Greve
Full-Stokes finite element modelling of the Greenland ice-sheet using inverse methods
- 09:15–09:30 EGU2011-5961
Michiel van den Broeke and Jan van Angelen
The changing melt regime of the Greenland ice sheet
- 09:30–09:45 EGU2011-811
Cécile Agosta, Vincent Favier, Christophe Genthon, Hubert Gallée, and Gerhard Krinner
21st century high-resolution downscaling of the Antarctic surface mass balance from global circulation models
- 09:45–10:00 EGU2011-10555
Aimée Slangen, Caroline Katsman, Roderik van de Wal, Bert Vermeersen, and Riccardo Riva
Towards regional projections of twenty-first century sea-level change using IPCC SRES scenarios

CR1.40 – Projections of the cryospheric contribution to sea-level rise over the next century: progress in modelling and related observations – Posters

Convener: Tony Payne | Co-Conveners: Sophie Nowicki

Hall XL | Display Time 08:00–19:30

Author in Attendance: 17:30–19:00

Chairperson: AJ PAYNE & S NOWICKI

- XL57 EGU2011-4685
Johannes Fürst, Heiko Goelzer, Oleg Rybak, and Philippe Huybrechts
Effect of fast dynamics on the centennial mass loss of the Greenland Ice Sheet
- XL58 EGU2011-12584
Tobias Bolch, Philipp Rastner, and Frank Paul
Where is the boundary of the Greenland Icesheet?
- XL59 EGU2011-12021
Jamie Rae, Gudfinna Adalgeirsdottir, Xavier Fettweis, Jonathan Gregory, Helene Hewitt, Jason Lowe, Philippe Lucas-Picher, Jeff Ridley, Willem Jan van de Berg, and Michiel van den Broeke
Intercomparison and validation of Greenland ice sheet surface mass balance calculated with three regional climate models
- XL60 EGU2011-10207
Ralph Timmermann, Hartmut H. Hellmer, and Frank Kauker
Simulated Southern Ocean response to forcing with climate model output
- XL61 EGU2011-10958
Sarah Shannon, Tamsin Edwards, and Anthony J. Payne
A method for obtaining initial conditions for the Antarctic ice sheet
- XL62 EGU2011-5648
Fjo De Ridder, Oleg Rybak, Johannes Fürst, and Philippe Huybrechts
An improved implementation of grounding-zone dynamics in a 3D coupled ice-sheet ice-shelf model
- XL63 EGU2011-3119
Miren Vizcaíno, William H. Lipscomb, and Michiel Van den Broeke
21st century changes in surface mass balance of the Greenland ice sheet as simulated by the Community Earth System Model

- XL64 EGU2011-6824
Aud Sundal, Andrew Shepherd, Peter Nienow, Edward Hanna, Steven Palmer, and Philippe Huybrechts
Melt-induced speed-up of Greenland ice-sheet offset by efficient subglacial drainage
- XL65 EGU2011-13258
Douglas Mair, Andrew Sole, Peter Nienow, Ian Bartholomew, Tom Cowton, Matthew King, and Matthew Burke
Acceleration of land- and marine-terminating catchments of the Greenland Ice Sheet in contrasting melt-seasons
- XL66 EGU2011-12379
Marius Schaefer, Gino Casassa, and Thomas Loriaux
Simulating the retreat of the freshwater calving Glacier O'Higgins using a flow line model
- XL67 EGU2011-9934
Bruno Franco, Xavier Fettweis, Alexandre Belleflamme, and Michel Erpicum
Impact of the spatial resolution of the Greenland ice sheet surface mass balance modelling using the regional climate model MAR with the aim to force an ice sheet model.
- XL68 EGU2011-9249
Xavier Fettweis, Michiel van den Broeke, Willem Jan van de Berg, Alexandre Belleflamme, Bruno Franco, and Michel Erpicum
Evaluation of the Greenland ice sheet surface mass balance simulated by a regional climate model forced by some selected IPCC AR5/CMIP5 AOGCMs over the current climate.
- XL69 EGU2011-10570
Roderik van de Wal and **Aimée Slangen**
An assessment of the uncertainties in computing the glacier contribution to sea-level change by volume-area modelling
- XL70 EGU2011-4437
Rianne H. Giesen and Johannes Oerlemans
Can gridded climate data be used to calculate equilibrium-line altitudes on a global scale?
- XL71 EGU2011-7196
Alexandre Belleflamme, Xavier Fettweis, and Michel Erpicum
Evaluation of the present and future general circulation over Greenland simulated by the IPCC AR5/CMIP5 GCMs with the help of a circulation type classification
- XL72 EGU2011-3976
Gudfinna Adalgeirsdóttir, Ruth Mottram, Philippe Lucas-Picher, Martin Stendel, Jens Hesselbjerg Christensen, and Fredrik Boberg
Towards a reliable projection of the contribution of the Greenland Ice Sheet to sea level rise during the next 100 years

CR1.60 – State of the cryosphere: observations and modelling – Orals

Convener: Jonathan L. Bamber | Co-Conveners: Peter Lemke, Frank Pattyn, Stephan Gruber, Michiel Van den Broeke

Room: 5

Chairperson: Jonathan Bamber

- 10:30–10:45 EGU2011-6892
Michael Zemp, Kari Austnes, Hans-Martin Füssel, Isabelle Gärtner-Roer, Christian Huggel, Christoph Marty, Jakob Rhyner, and Thomas Voigt
Impacts of climate change on snow, ice, and permafrost in Europe: a review on observed trends, future projections, and socio-economic relevance
- 10:45–11:00 EGU2011-6885
Gudfinna Adalgeirsdóttir, Sverrir Gudmundsson, Helgi Björnsson, Finnur Pálsson, Tómas Jóhannesson, Hrafnhildur Hannesdóttir, Sven P. Sigurdsson, and Etienne Berthier
Modeling of the 20th and 21st century evolution of Hoffellsjökull, a southeast outlet glacier of Vatnajökull ice cap, Iceland
- 11:00–11:15 EGU2011-9258
Xavier Fettweis, Michiel van den Broeke, Willem Jan van de Berg, Marco Tedesco, Alexandre Belleflamme, Bruno Franco, and Michel Erpicum
Explanation of the extreme low surface mass balance over the Greenland ice sheet in 2010 with the help of a regional climate model and a circulation type classification.
- 11:15–11:30 EGU2011-10857
Adrian Luckman and Dana Floricioiu
Petermann Glacier dynamics before and after the 2010 calving event
- 11:30–11:45 EGU2011-12454
Eric Larour, Eric Rignot, Dimitris Menemenlis, Michael Schodlok, Helene Seroussi, and Mathieu Morlighem
Sensitivity studies of ice flow acceleration in response to increased ice shelf melting in the region of Pine Island Glacier.

11:45–12:00 EGU2011-13613

Eric Rignot, Jeremie Mougnot, and Bernd Scheuchl

Ice motion, grounding-line position, and ice discharge of the entire Antarctic continent from InSAR data

CR1.60 – State of the cryosphere: observations and modelling – Posters

Convener: Jonathan L. Bamber | Co-Conveners: Peter Lemke, Frank Pattyn, Stephan Gruber, Michiel Van den Broeke

Hall XL | Display Time 08:00–19:30

Author in Attendance: 17:30–19:00

Chairperson: Frank Pattyn

XL73 EGU2011-1919

Andreas Preußner, Günther Heinemann, and **Clemens Drüe**

Investigation of the dynamics of the North Water polynya for 1996-2010 using satellite data

XL74 EGU2011-1723

Sascha Willmes, Susanne Adams, David Schröder, and Günther Heinemann

Spatiotemporal variability of polynya dynamics and ice production in the Laptev Sea between the winters of 1979/80 and 2007/08

XL75 EGU2011-11807

Martin Scherler, Christian Hauck, and Martin Hoelzle

Projection of permafrost and snow cover evolution under climate change scenarios

XL76 EGU2011-11799

Matthias Huss, Daniel Farinotti, and Martin Funk

Ice thickness distribution of all mountain glaciers around the globe using the GLIMS database and SRTM/ASTER DEMs

XL77 EGU2011-8679

Etienne Cossart

Glacier variation in the Massif des Ecrins during the 20th century : spatial and temporal patterns

XL78 EGU2011-12027

Rune Strand Oedegaard, Atle Nesje, Ketil Isaksen, and Trond Eiken

Perennial ice patch studies - preliminary results from a case study in Jotunheimen, southern Norway

XL79 EGU2011-3246

Marco Möller

Spatiotemporal analysis of recent surface-elevation changes at Gran Campo Nevado ice cap (Patagonia): 1984-2000-2007

XL80 EGU2011-12167

Anja Wendt, Francisca Bown, Andres Rivera, Rodrigo Zamora, Gino Casassa, Claudio Bravo, Mathias Fritsche, and Reinhard Dietrich

Ice velocity and ice elevation changes at Fleming Glacier, Antarctic Peninsula

XL81 EGU2011-7415

Charlotte Lang, Xavier Fettweis, and Michel Erpicum

Modelling of the surface mass balance in Svalbard with the regional climate MAR model over 1958-2010.

XL82 EGU2011-11853

Cameron Rye, Ian Willis, Neil Arnold, and Jack Kohler

Regional modelling of Svalbard glacier mass balance

XL83 EGU2011-10808

Matti Leppäranta, Elina Jaatinen, Yu Yang, Lauri Arvola, and Anniina Kiiltomäki

Investigations in ice-covered Lake Vanajavesi

XL84 EGU2011-10613

A. Malin Johansson, Peter Jansson, and Ian A. Brown

Birth and demise of lakes on the Greenland Ice Sheet

XL85 EGU2011-7651

Marco Tedesco, Xavier Fettweis, Michiel van den Broeke, Roderik van de Wal, Paul Smeets, Willem Jan van de Berg, Mark Serreze, and Jason Box

The role of albedo and accumulation in the 2010 melting record in Greenland.

XL86 EGU2011-7801

Ingo Sasgen, Zdeněk Martinec, Bert Wouters, Michiel van den Broeke, Jonathan Bamber, and Louise Sandberg-Sørensen

Greenland ice-mass balance from satellite gravimetry: re-assessing the influence of glacial-isostatic adjustment

XL87 EGU2011-5844

Valentina R. Barletta, Andrea Bordoni, and Riccardo E.M. Riva

Seasonal variability over Antarctica in GRACE data: what is the main driver and is there a fast response to climate changes?

- XL88 EGU2011-7870
Martin Horwath, Benoît Legrésy, Frédérique Rémy, Fabien Blarel, and Jean-Michel Lemoine
 Antarctic interannual accumulation signals consistently monitored by GRACE satellite gravimetry and ENVISAT radar altimetry

CR10.10 – Climate change impacts on glaciers, permafrost and related hazards – Orals

Convener: Christoph Schneider | Co-Conveners: Andreas Kääb, Bruce Raup, Christian Huggel, Bruce Molnia, John Reynolds

Room: 5

Chairperson: n.n.

- 13:30–14:00 EGU2011-4926
Jon Ove Hagen, Jack Kohler, Geir Moholdt, Christopher Nuth, and Thomas Vikhamar Schuler
 Svalbard glacier changes
- 14:00–14:15 EGU2011-3858
Inga Bergmann, Guillaume Ramillien, and Frédéric Frappart
 Climate impact on the ice mass balance in Greenland for the recent period
- 14:15–14:30 EGU2011-11343
Andres Rivera, Felipe Napoleoni, Rodrigo Zamora, and Jorge Clavero
 Thermal anomalies at Volcan Villarrica and their possible effects on glacier behaviour
- 14:30–14:45 EGU2011-7893
Andreas Linsbauer, Matthias Künzler, Frank Paul, Holger Frey, and Wilfried Haerberli
 Future glacier lakes in the Swiss Alps: Modelling of overdeepenings in current glacier beds
- 14:45–15:00 EGU2011-10595
Sina Schneider, Martin Hoelzle, and Christian Hauck
 Mountain Permafrost - a useful indicator for climate change?
- Chairperson: n.n.
- 15:30–15:45 EGU2011-5201
John Clague, Christian Huggel, Bill McGuire, and Xuebin Zhang
 Impacts of climate change on hazardous processes in high mountains
- 15:45–16:00 EGU2011-2812
Koji Fujita and Takayuki Nuimura
 Inhomogeneous wastage distribution of Himalayan glaciers
- 16:00–16:15 EGU2011-609
Felix Pithan
 Glacier regime and climate sensitivity of Chhota Shigri glacier in western Himalaya explored by energy-balance modelling
- 16:15–16:30 EGU2011-6460
Alejandro Dussaillant
 Cachet 2 Glacial-Lake Outburst Floods in the Colonia valley, Patagonia
- 16:30–16:45 EGU2011-5646
Wilfried Haerberli, Huggel Christian, and Portocarrero Cesar
 Impact waves from rock/ice avalanches into new glacial lakes: lessons learned from the Nevado Hualcán/Laguna 513 event of 11 April 2010
- 16:45–17:00 EGU2011-9864
wang xin, shiyin liu, xiaojun yao, and wanqin guo
 An approach for estimating the breach probabilities of glacial lakes in the Chinese Himalayas using remote-sensing data

CR10.10 – Climate change impacts on glaciers, permafrost and related hazards – Posters

Convener: Christoph Schneider | Co-Conveners: Andreas Kääb, Bruce Raup, Christian Huggel, Bruce Molnia, John Reynolds

Hall XL | Display Time 08:00–19:30

Author in Attendance: 17:30–19:00

Chairperson: n.n.

- XL89 EGU2011-4843
Marco Möller, Roman Finkelnburg, Matthias Braun, Dieter Scherer, and Christoph Schneider
 Climate sensitivity of the surface mass balance of Vestfonna, northern Svalbard
- XL90 EGU2011-2896
Thomas Marke, Gernot Weys, Bernhard Hynek, Ulrich Strasser, and Wolfgang Schöner
 The 2010 summer expedition to Freya glacier (Clavering Island, NE-Greenland)

- XL91 EGU2011-4858
Kamil Láška, Daniel Nývlt, Zbyněk Engel, and Veronika Kopařková
Meteorological data and mass balance measurements on Davies Dome and Whisky Glacier in 2006-2010, James Ross Island, Antarctica
- XL92 EGU2011-724
Antoine Marmy, Gonçalo Vieira, Miguel Ramos, and Christian Hauck
Modelling volcano, climate and permafrost interactions on Deception Island, Maritime Antarctic
- XL93 EGU2011-2508
Dirk Scherler and Manfred Strecker
Large velocity fluctuations of Biafo Glacier, central Karakoram, between 2000 and 2009, at high spatial and temporal resolution from optical satellite images
- XL94 EGU2011-8824
Carlo Baroni, Maria Cristina Salvatore, Andrea Tamburini, and Alberto Carton
The Adamello Glacier (Central Alps): areal and volumetric variation since the Little Ice Age
- XL95 EGU2011-8385
Rainer Prinz, Andrea Fischer, Lindsey Nicholson, Stefanie Gruber, and Georg Kaser
Rapid decline of the ice volume of tropical Lewis Glacier, Mount Kenya, during the last half-century
- XL96 EGU2011-11705
Matthias Huss, Mazzal Stokvis, and Martin Hoelzle
Oblique photography for short-term monitoring of glacier mass balance
- XL97 EGU2011-7389
Sebastian Mutz, Heiko Paeth, and Stefan Winkler
Statistical modelling of climate related future mass balance changes of maritime mountain glaciers in Norway
- XL98 EGU2011-8366
Luzia Fischer, Christian Huggel, Andreas Käab, and Wilfried Haeberli
Rapid topographic changes in a glacierised and permafrost-affected high-mountain flank caused by large slope failures
- XL99 EGU2011-5316
Christian Huggel, Brian McArdeell, Thomas Scheuner, Wilfried Haeberli, and Markus Stoffel
Remobilization of Alpine Holocene debris fans: do climate change impacts increase debris flow hazards?
- XL100 EGU2011-10942
Ketil Isaksen, Lars Harald Blikra, and Trond Eiken
The existence of warm permafrost in unstable rock slopes in western and northern Norway
- XL101 EGU2011-8251
Jean F. Schneider and **Martin Mergili**
A procedure for analyzing lake outburst hazard and its application to the South-Western Pamir, Tajikistan
- XL102 EGU2011-4203
Marta Chiarle, Stefania Bertotto, Gianfranco Fioraso, Marco Giardino, Giovanni Mortara, Guido Nigrelli, and Luigi Perotti
Integration of geomorphological field surveys and geomatics methodologies for natural hazards assessment in glacial and periglacial areas of the Piemonte Region (NW-Italy)
- XL103 EGU2011-11329
Helen Dahlke, Steve Lyon, Jery Stedinger, Gunhild Rosqvist, and Peter Jansson
Impact of climate change on flood frequency in glaciated versus non-glaciated sub-arctic catchments
- XL104 EGU2011-12183
Franco Salerno, Sudeep Thakury, Carlo D'Agata, Claudio Smiraglia, and Gianni Tartari
How Central Himalayan water towers respond to climate change? A particular emphasis on glacial lakes as useful impact index
- XL105 EGU2011-11319
Andrea Soncini, Claudia Mihalcea, Carlo D'Agata, Cristoph Mayer, Astrid Lambrecht, Guglielmina Diolaiuti, Daniele Bocchiola, Claudio Smiraglia, and Renzo Rosso
Future hydrological regimes of the upper Indus basin: a preliminary assessment
- XL106 EGU2011-12280
Adina Racoviteanu, Mark Williams, and Noah Molotch
Spatial distribution of glacier area changes in the Himalaya using remote sensing and regression trees: a case study from Sikkim
- XL107 EGU2011-1513
Hiroto Nagai, Koji Fujita, and Takayuki Nuimura
Formation condition of debris-covered glaciers in the Bhutan Himalaya derived by satellite data
- XL108 EGU2011-2814
Koji Fujita, Akiko Sakai, Arzhan B. Surazakov, Tsutomu Yamanokuchi, and Shuhei Takenaka
Re-evaluation of potential risk of glacial lake outburst flood in the Himalayas
- XL109 EGU2011-8374
Martin Mergili, Christian Kopf, Bernhard Müllebner, and Jean F. Schneider
Recent changes and fluctuations in the glacial and periglacial environment of Tajikistan

- XL110 EGU2011-11276
Bohumir Jansky, Michal ?erný, Miroslav Šobr, Zbyn?k Engel, Jan Kocum, John M. Reynolds, and Serguei Yerokhin
 Impact of the climate change on the Petrov Lake evolution (Tien Shan mountains, Kyrgyzstan)
- XL111 EGU2011-9756
Yao Xiaojun, shiyin liu, junfeng wei, and wanqin guo
 Reservoir Capacity Calculation and Variation of Moraine-dammed Lakes in the North Himalayas: A Case Study of Longbasaba Lake
- XL112 EGU2011-11790
Petteri Alho, Victor Baker, and Larry Smith
 Computational fluid dynamics of paleoglacial lake: reconstruction of Glacial Lake Missoula
- XL113 EGU2011-1929
Olivier Gagliardini, Fabien Gillet-Chaulet, Gaël Durand, Christian Vincent, and Paul Duval
 Operational ice-flow modelling at Tête Rouse glacier, French Alps

ESS17 – Earth System Modeling: Strategies and Software (co-listed) – Posters

Convener: Reinhard Budich | Co-Conveners: Dan Lunt

Hall XL | Display Time 08:00–19:30

Author in Attendance: 15:30–17:00

Chairperson: n.n.

- XL159 EGU2011-3358
Sven Kralisch, Peter Krause, and Christian Fischer
 JAMS - a Software Framework for Integrated Environmental Modelling
- XL160 EGU2011-5803
Paolo Mazzetti, Stefano Nativi, Mattia Santoro, and Gary Geller
 The GEO Model Web Initiative for Environmental Model Access Interoperability
- XL161 EGU2011-9753
Oliver Schmitz, Derek Karssenber, Kor de Jong, and Jean-Luc de Kok
 Constructing integrated models: a scheduler to execute coupled components
- XL162 EGU2011-8459
Sarah Callaghan, Mark Morgan, Eric Guilyardi, Sophie Valcke, Charlotte Pascoe, Bryan Lawrence and the METAFOR Project Team
 Supporting the climate community by providing common metadata for climate modelling digital repositories: the METAFOR project.
- XL163 EGU2011-10324
Alessandro Spinuso, Luca Trani, Malcolm Atkinson, and Michelle Galea
 Infrastructure for Data-Intensive Seismology: Cross-correlation of distributed seismic traces through the ADMIRE framework
- XL164 EGU2011-11152
Raffaele Guarino and Mirko Albani
 LTDP/FIRST Earth Science User Requirements
- XL165 EGU2011-8307
Lars Hoffmann, Paul Gibbon, Ole Kirner, and Stefan Versick
 Simulation Laboratories for Climate Sciences and Environmental Research
- XL166 EGU2011-9128
Arnaud Caubel, Yann Meurdesoif, Alexis Canevet, Marie-Alice Foujols, Olivier Marti, Sebastien Masson, and Sophie Valcke
 Parallel optimization of IPSL climate model
- XL167 EGU2011-12320
Claudio Schifani, Rudy Rossetto, and Iacopo Borsi
 Open Source GIS tools for Water Resources Management
- XL168 EGU2011-6341
Thomas Jung, Sergey Danilov, Kerstin Fieg, Wolfgang Hiller, Jens Schroeter, Dmitry Sidorenko, and Qiang Wang
 Towards a coupled climate model with a finite-element sea ice-ocean representation
- XL169 EGU2011-7726
Jon Hill and the Applied Modelling and Computation Group Team
 Fluidity - an open-source, next-generation, fluid dynamics framework

GM7.4 – River and slope responses to climate change in steep landscapes (co-listed) – Orals

Convener: John Jansen | Co-Conveners: Etienne Cossart, Pierre Valla, Monique Fort, Romain Delunel

Room: 22

Chairperson: John Jansen

- 13:30–13:45 EGU2011-3620
Kevin Norton, Fabien van den Berg, Sara Savi, Mirjam Dürst Stucki, and Fritz Schlunegger
 After the ice: Geomorphic processes and rates in Alpine settings following deglaciation
- 13:45–14:00 EGU2011-11826
Dirk Scherler
 Climate variability and glacial dynamics in the Himalaya and potential impacts on rivers
- 14:00–14:15 EGU2011-7865
Christophe Corona, Lopez Saez Jérôme, Edouard Jean-Louis, Rovéra Georges, and Berger Frédéric
 Impact of climate change on snow avalanche activity: contribution of a continuous 1338-2010 dendrogeomorphic reconstruction (Queyras massif, French Alps)
- 14:15–14:30 EGU2011-7276
Florian Kober, Kristina Hippe, Bernhard Salcher, Susan Ivy-Ochs, Peter W. Kubik, and Sean D. Willett
 On the influence of debris flows and river restoration on cosmogenically derived catchment wide denudation rates
- 14:30–14:45 EGU2011-8472
Ludovic Ravanel and Philip Deline
 Rockfalls and climate in the permafrost-affected rockwalls of the Mont Blanc massif
- 14:45–15:00 EGU2011-11543
Calligaris Chiara, Ceccone Giulio, Dini Michela, Liuzzi Franco, Poretti Giorgio, and Zini Luca
 Can climate changes influence the triggering of a DGSD? A possible example in northern Italy.

GM7.4 – River and slope responses to climate change in steep landscapes (co-listed) – Posters

Convener: John Jansen | Co-Conveners: Etienne Cossart, Pierre Valla, Monique Fort, Romain Delunel

Hall A | Display Time 08:00–19:30

Author in Attendance: 17:30–19:00

Chairperson: Pierre Valla

- A126 EGU2011-181
Katja Laute, Achim A. Beylich, and Louise Hansen
 Late Holocene hillslope dynamics in two paraglacial valley systems, Western Norway
- A127 EGU2011-1613
Diethard Sanders and Marc Ostermann
 From Late-Glacial aggradation to Holocene incision of talus: Examples from the Northern Calcareous Alps (Austria).
- A128 EGU2011-2593
Chenet Marie and Roussel Erwan
 Evaluation of a paraglacial crisis on slopes deglaciated since the Little Ice Age in South-east Iceland
- A129 EGU2011-7157
Benoît Bovy, Alain Demoulin, and Jean Braun
 A new numerical model to study the influence of climate on hillslope sediment supply: first results
- A130 EGU2011-12969
Marco Giardino, Sara Ratto, Mauro Palomba, and Walter Alberto
 Static and dynamic controls on slope instabilities: the interplay of litho-structural conditions and climate change in the Aosta Valley Region (Western Alps, Italy)
- A131 EGU2011-12682
Stephan Gruber
 Thermal regime and permafrost conditions within bedrock slopes
- A132 EGU2011-12825
Kerry Leith, Jeff Moore, Florian Amann, and Simon Loew
 Effect of glacial ice cover on fracturing in critically stressed bedrock
- A133 EGU2011-8268
Bernhard Salcher, Florian Kober, and Sean Willett
 Contemporary erosion rates above and below the Alpine LGM ELA
- A134 EGU2011-8100
Esperanza Muñoz-Salinas, Paul Bishop, David Palacios, Miguel Castillo, David Sanderson, Tim Kinnaird, and Javier Marcos
 Unravelling fluvio-glacial and post-glacial debris flows on Gredos mountain range, Central Spain, using OSL
- A135 EGU2011-12604
Veronica Ochoa-Tejeda, Victor Hugo Garduño, Jean-François Parrot, and Monique Fort
 Devastation caused by mud flow in a narrow valley. Simulation of the event that affected in 2010 the town of Anganguero, Michoacan State, Mexico.

GM9.1 – Cold regions geomorphology (co-listed) – Orals

Convener: Isabelle Gärtner-Roer | Co-Conveners: Sven Lukas, Matteo Spagnolo

Room: 21

Chairperson: Isabelle Gärtner-Roer, Sven Lukas

- 08:30–08:45 EGU2011-1619
Bernd Etzelmüller and Ivar Berthling
Cryo-conditioning of landform and landscape development - suggestions and examples from northern Europe
- 08:45–09:00 EGU2011-5997
Karianne S. Lilleøren, Bernd Etzelmüller, Kjersti Gisnås, and Thomas V. Schuler
Estimating depth and spatial distribution of Holocene permafrost in Norway
- 09:00–09:15 EGU2011-13327
Alexander Bast and Christof Kneisel
The surface in the subsurface? - Towards small-scale permafrost distribution and quasi-3D resistivity imaging
- 09:15–09:30 EGU2011-10874
Martin Kirkbride
What do glacial moraine chronologies really tell us about climate?
- 09:30–09:45 EGU2011-189
Clare Boston, Sven Lukas, and Simon Carr
Patterns of ice retreat and plateau icefield dynamics in the Monadhliath Mountains, Scotland
- 09:45–10:00 EGU2011-87
Matt Strzelecki
Paraglacial processes operating on High Arctic coastal margins - recent advances from Svalbard.

GM9.1 – Cold regions geomorphology (co-listed) – Posters

Convener: Isabelle Gärtner-Roer | Co-Conveners: Sven Lukas, Matteo Spagnolo

Hall A | Display Time 08:00–19:30

Author in Attendance: 17:30–19:00

Chairperson: Matteo Spagnolo

- A145 EGU2011-1779
Michael Dietze, Manfred Buchroithner, and Arno Kleber
The Valle de Barrancas Blancas: landscape evolution of a hyper arid, high-altitude basin in the Atacama Andes
- A146 EGU2011-11465
Adrien Moulin, Lucilla Benedetti, Jérôme Van der Woerd, Ata Elias, Pierre-Henri Blard, Robert Finkel, Regis Braucher, Jérôme Lavé, Didier Bourles, Mathieu Daeron and the Paul Tapponnier Team
LGM glaciers on Mount Lebanon? New insights from 36Cl exposure dating of moraine boulders
- A147 EGU2011-11416
Matteo Spagnolo, Isabelle Gärtner-Roer, and Sven Lukas
Linking glacial, periglacial and paraglacial processes: the challenge of cold regions geomorphology
- A148 EGU2011-13040
Sven Lukas, Sandro Coray, and Andreas Graf
The influence of using mixed lithologies in clast shape measurements on its discriminatory power - a case study from a temperate Alpine glacier
- A149 EGU2011-2537
Maarten Krabbendam and Neil Glasser
Bedrock properties and glacial erosion: hardness and joint spacing, abrasion and plucking
- A150 EGU2011-6069
Karianne S. Lilleøren, Isabelle Gärtner-Roer, Bernd Etzelmüller, and Àgúst Guðmundsson
A new assessment of rock glacier distribution in Tröllaskagi peninsula, northern Iceland
- A151 EGU2011-9741
Lorenzo Rieg, Erik Bollmann, Tobias Huber, Karl Krainer, Volkmar Mair, Rudolf Sailer, Maximilian Sproß, and Johann Stötter
Multivariate statistical analyses of the south-tyrolean rockglacier inventory
- A152 EGU2011-9758
Lorenzo Rieg, Erik Bollmann, Rudolf Sailer, Maximilian Sproß, and Johann Stötter
Vegetation on alpine rockglaciers in relation to surface velocity and surface structure
- A153 EGU2011-13037
Andreas Kellerer-Pirklbauer
Potential and limitations of the Schmidt-hammer as a relative age dating tool for rock glacier surfaces
- A154 EGU2011-11173
Michèle Curtaz, Marco Vagliasindi, Stéphanie Letey, Umberto Morra di Cella, and Paolo Pogliotti
A new rock glaciers inventory in the North-Western Alps

- A155 EGU2011-11643
Riccardo Scotti, Francesco Brardinoni, Giovanni Battista Crosta, Paolo Frattini, and Elena Valbuzzi
 Rock glacier inventory in the Orobic Alps and the Livigno Valley, central Italian Alps

GM9.2 – Glacial landforms and palaeoclimatic interpretation (co-listed) – Orals

Convener: Stefan Winkler | Co-Conveners: Tim Davies, Lasafam Iturrizaga, Martin Kirkbride

Room: 21

Chairperson: Stefan Winkler

- 10:30–10:45 EGU2011-9961
Philip Deline
 Influences of rock avalanches on glacier behaviour and moraine formation in the Western European Alps
- 10:45–11:00 EGU2011-1808
Rosa M. Carrasco, Javier de Pedraza, and David Dominguez-Villar
 The supraglacial debris supply in Cuerpo de Hombre paleoglacier (Spanish Central System).
 Reconstruction and interpretation of a rock avalanche event
- 11:00–11:15 EGU2011-202
Natalya V. Reznichenko
 A criterion for recognising rock avalanche sediments in glacial moraines
- 11:15–11:30 EGU2011-8669
Lasafam Iturrizaga
 End moraine systems in the context of catastrophic and gradual processes in the Central Andes
 (33°-34°S)
- 11:30–11:45 EGU2011-5327
Martin Brook, Vince Neall, Bob Stewart, Rob Dykes, and Derek Birks
 Recognition and paleoclimatic implications of Late Holocene glaciation on Mt Taranaki, North Island, New Zealand
- 11:45–12:00 EGU2011-4084
Anna Agatova, Andrei Nazarov, Roman Nepop, and Ljubov' Orlova
 The late Holocene climatic variations in Russian Altai (Central Asia) on the basis of glaciations
 radiocarbon chronology

GM9.2 – Glacial landforms and palaeoclimatic interpretation (co-listed) – Posters

Convener: Stefan Winkler | Co-Conveners: Tim Davies, Lasafam Iturrizaga, Martin Kirkbride

Hall A | Display Time 08:00–19:30

Author in Attendance: 17:30–19:00

Chairperson: Lasafam Iturrizaga

- A156 EGU2011-13828
Stuart Dunning, John Woodward, Andrew Turner, and Tim Davies
 Landslides onto glaciers - absence of evidence is not evidence of absence
- A157 EGU2011-13830
 James Shulmeister, Daniel Santamaria-Tovar, Natalya Reznichenko, and **Tim Davies**
 Classical Moraine, Non-classical Cause: The Waiho Loop, New Zealand
- A158 EGU2011-2770
 Samuel McColl and **Timothy Davies**
 Rock avalanche demolishes paleoclimatic evidence in New Zealand: 'The Hillocks'
- A159 EGU2011-13833
Martin Brook and Stefan Winkler
 Moraine formation at advancing temperate maritime glaciers: Fox and Franz Josef Glaciers, Southern Alps,
 New Zealand
- A160 EGU2011-13831
 John A. Matthews and **Stefan Winkler**
 Recent terminal moraine formation at Jostedalbreen, South Norway, and its palaeoclimatic implication
- A161 EGU2011-13832
 Daniel Jäger and **Stefan Winkler**
 The potential of lateral moraines on alpine glacier forelands for reconstructing Holocene glacier chronologies -
 some examples
- A162 EGU2011-13852
Jianwei Lin, Shihjieng Chyi, Lide Ho, Shanshan Chang, Chen Chu, Huayu Lu, and Shuangwen Yi
 Late Pleistocene to early Holocene glacial landforms of Yushan area, Taiwan
- A163 EGU2011-9340
Regina Reber, Naki Akçar, Susan Ivy-Ochs, Peter W. Kubik, and Christian Schlüchter
 New exposure ages from Erratic-boulders in the lower Reuss-valley (Switzerland)

- A164 EGU2011-10853
Martin Kirkbride and Andrew Dugmore
 Tephrochronology and the status of the Little Ice Age glacial maximum in Iceland.
- A165 EGU2011-1106
Stefan Winkler
 Application of Schmidt-hammer exposure-age dating (SHD) to improve numerical age dating of Holocene moraines
- A166 EGU2011-13829
Martin Brook and Jacob Williams
 Recognition of a pronival ("protalus") rampart in the Tararua Range, North Island, New Zealand

HS6.7 – SMOS Data Exploitation: Beyond soil moisture and ocean salinity (co-listed) – Posters

Convener: Susanne Mecklenburg | Co-Conveners: Lars Kaleschke, Jouni Pulliainen, Matthias Drusch

Hall A | Display Time 08:00–19:30

Author in Attendance: 17:30–19:00

Chairperson: n.n.

- A384 EGU2011-4975
Lars Kaleschke, Xiangshan Tian-Kunze, and Nina Maaß
 Sea ice thickness temporal evolution during the Arctic freeze-up as seen by SMOS
- A385 EGU2011-8409
 Alok Sahoo, **Eric Wood**, Justin Sheffield, Ming Pan, Ahmad Albitar, Delphine Leroux, and Yann Kerr
 A strategy for global drought monitoring using SMOS soil moisture observations
- A386 EGU2011-6102
Nina Maass, Lars Kaleschke, Xiangshan Tian-Kunze, and Marko Mäkynen
 Sea ice thickness retrieval in the Baltic Sea using SMOS
- A387 EGU2011-10248
Joaquin Muñoz-Sabater, Patricia de Rosnay, Mohamed Dahoui, and Matthias Drusch
 Monitoring SMOS data at ECMWF
- A388 EGU2011-12623
Kimmo Rautiainen, Jouni Pulliainen, Juha Lemmetyinen, Juho Vehviläinen, and Anna Kontu
 Boreal Soil Measurements Using L-band Radiometers, SMOS and ELBARA-II
- A389 EGU2011-14099
Roger Oliva, Rita Castro, Jose Barbosa, Yann Kerr, Manuel Martin-Neira, and Elena Daganzo
 Dealing with Radio Frequency Interference in SMOS Data

Wednesday, 06 April

CR4.10 – Open Session on Permafrost – Orals

Convener: Stephan Gruber | Co-Conveners: Jeannette Noetzli

Room: 5

Chairperson: S. Gruber, J. Noetzli

- 08:30–09:00 EGU2011-11021
Philippe Schoeneich, Thomas Echelard Jean-Michel Krysiecki, Lionel Lorier Ludovic Maingrat, Christian Darricau, Patrick Jugnet, Thomas Cotoni, Lionel Mellan, Hendrik Huwald, Flore Kergomard, and Fabien Berton
 The borehole 2Alpes-3065 - a pilot installation for fiber optic DTS measurements in permafrost
- 09:00–09:15 EGU2011-13101
Hugues Lantuit, Hans-Wolfgang Hubberten, and Hanne Christiansen
 The Global Terrestrial Network for Permafrost (GTN-P): Where do we go from there?
- 09:15–09:30 EGU2011-5636
Thomas Grunewald, Erick Mendez, Urs Roos, Carlo Danioth, and Marcia Phillips
 Monitoring infrastructure stability in alpine permafrost
- 09:30–09:45 EGU2011-3537
Yuko Yamamoto and Sarah M. Springman
 Triaxial tests on artificial frozen soil samples at temperatures close to 0°C
- 09:45–10:00 EGU2011-4165
Sébastien Monnier, Christophe Kinnard, Rodrigo Saéz, Roberto Garrido, Christian Camerlynck, and Fayçal Rejiba
 The internal structure and the cryologic importance of the rock glaciers of the Los Pelambres mine (Upper Choapa Valley, Semi-arid Andes of Chile)

COFFEE BREAK

Chairperson: S. Gruber, J. Noetzli

- 10:30–10:45 EGU2011-1028
Erika Grechishcheva and Rimma Motenko
 Experimental research of joint influence of salinization and petroleum pollution on thermal properties of frozen kaolinitic clay
- 10:45–11:00 EGU2011-11410
Poul Christoffersen, Toby Benham, and Julian Dowdeswell
 Lake-change trends and permafrost thaw on the Arctic coastal plain of Alaska
- 11:00–11:15 EGU2011-5353
Paolo Pogliotti, Stephan Gruber, Marco Giardino, Matteo Dall'Amico, Edoardo Cremonese, and Umberto Morra di Cella
 Influence of snow cover on MAGST over complex morphologies
- 11:15–11:30 EGU2011-5589
Herman Farbrot, Ketil Isaksen, Bernd Etzelmüller, Karianne Lilleøren, Christian Hauck, Christin Hilbich, Antoni Lewkowicz, and Jan Steinar Rønning
 Two-dimensional distribution of ground temperatures at Iskoras, northern Norway
- 11:30–11:45 EGU2011-10885
Tanja Blome and Stefan Hagemann
 Simulations of Siberian climate using REMO with changed soil parameterizations: Influence of permafrost-relevant processes
- 11:45–12:00 EGU2011-601
Guillaume Levavasseur, Mathieu Vrac, Didier Roche, Didier Paillard, Armel Martin, and Jeff Vandenberghe
 Present and LGM permafrost from climate simulations : contribution of statistical downscaling

CR4.10 – Open Session on Permafrost – Posters

Convener: Stephan Gruber | Co-Conveners: Jeannette Noetzli

Hall XL | Display Time 08:00–19:30

Author in Attendance: 17:30–19:00

Chairperson: S. Gruber, J. Noetzli

- XL106 EGU2011-1937
Jan-Christoph Otto, Magdalena Rupprechter, Joachim Götz, Matthias Marbach, Felix Keller, and Lothar Schrott
 Changing permafrost distribution in the Glatzbach catchment, Austrian Alps - A response to 20 years of climate change?
- XL107 EGU2011-1670
Jacopo Gabrieli, Andrea Crepaz, Anselmo Cagnati, Anna Galuppo, and Carlo Barbante
 Geochemistry and isotopic composition of a rock glacier outflow in the Dolomites, Eastern Italian Alps
- XL108 EGU2011-2449
Julien Fouché, Michel Allard, Jean Paul Ambrosi, and Catherine Keller
 Global Warming Impacts on the Biogeochemical Functioning of the Arctic Cryosols in the Salluit region, Nunavik (Québec, CANADA).
- XL109 EGU2011-279
Maria Cherbunina and Lev Khrustalev
 Choosing optimal decisions on laying pipelines in permafrost in terms of the reliability theory.
- XL110 EGU2011-340
Elena Kuznetsova and Rimma Motenko
 The influence of ice and unfrozen water content on the thermal conductivity of frozen volcanic ashes (Kamchatka)
- XL111 EGU2011-527
Pavel Kotov
 The study of deformation characteristics of thawing soils of Vankor oilfield
- XL112 EGU2011-11903
Georg Schwamborn
 Sediment move into the 3.6 Mya old El'gygytgyn Crater Lake, NE Russian Arctic, as recorded by frozen alluvial fan deposits
- XL113 EGU2011-13270
Michaela Ferbar and Leif Sørbel
 Palsa monitoring in Dovrefjell, Southern Norway
- XL114 EGU2011-3760
Ute Wollschläger, Xicai Pan, Jens Weismüller, Qihao Yu, and Kurt Roth
 Weather and active layer dynamics of a high-altitude, arid permafrost site, Tianshuihai Lake region, W-Tibetan Plateau
- XL115 EGU2011-7670
Paulo Maciel Amaral, António Correia, Gonçalo Vieira, Miguel Ramos, and Alexandre Trindade
 Physical properties of rocks from a 15 m deep borehole in Reina Sofia Mountain, Livingston Island, Maritime Antarctica
- XL116 EGU2011-8433
Ludovic Ravanel, Philip Deline, Florence Magnin, Emmanuel Malet, and Jeannette Noetzi
 The first year of borehole measurements in the rock permafrost at Aiguille du Midi (3842 m a.s.l., Mont Blanc massif)
- XL117 EGU2011-12999
Andreas Kellerer-Pirklbauer
 Thermal regime of ground surfaces in different alpine areas of Central and Eastern Austria between 2006 and 2010
- XL118 EGU2011-1459
Andrea Crepaz, Anselmo Cagnati, Anna Galuppo, Laura Magnabosco, and Valentina Defendi
 The borehole of Piz Boè (Dolomites, Eastern Italian Alps): first results
- XL119 EGU2011-1484
Andrea Crepaz, Anselmo Cagnati, Anna Galuppo, Federico Carollo, Francesco Marinoni, Laura Magnabosco, and Valentina Defendi
 Geophysical measurements on Piz Boè rock glacier (Dolomites, Eastern Italian Alps)
- XL120 EGU2011-11174
Julie Kaestli and Christof Kneisel
 Permafrost dynamics within the Muragl glacier forefield (Swiss Alps) - Characterization by a geophysical and photogrammetrical approach
- XL121 EGU2011-8667
Robert Supper, Axl Römer, and Birgit Jochum
 Permanent geoelectrical monitoring in a permafrost region (Mölltaler Glacier)
- XL122 EGU2011-12140
Sarah Verleysdonk and Michael Krautblatter
 Rock permafrost at the Piz Corvatsch - A multi-method instability analysis
- XL123 EGU2011-3269
Jeffrey Moore, Valentin Gischig, Maren Katterbach, and Simon Loew
 Convective air venting from deep fractures and the temperature field of an alpine rock slope (Randa, VS)

- XL124 EGU2011-8450
Thomas Buchli, Sarah M. Springman, and Hansruedi Maurer
Instabilities in alpine Permafrost: Characterisation, Monitoring and Modelling of Active Rock Glaciers
- XL125 EGU2011-12209
Ingo Hartmeyer, Markus Keuschnig, Jan-Christoph Otto, and Lothar Schrott
Developing a monitoring expert system for hazardous rock walls in high mountain areas - concept and preliminary results, Kitzsteinhorn (3203 m), Hohe Tauern, Austria
- XL126 EGU2011-9890
Matteo Mantovani, Alessandro Pasuto, Sebastiano Trevisani, Valentina Defendi, Anna Galuppo, and Laura Magnabosco
The PermaNET project: a multi-disciplinary approach to map permafrost and assess related mass-movements.
- XL127 EGU2011-7814
Romain Perrier, Etienne Cossart, and Monique Fort
Spatial extent of Permafrost in the Southern Alps: Modeling from spring water temperature sources and topoclimatic factors.
- XL128 EGU2011-11850
Martin Scherler, Martin Hoelzle, and Christian Hauck
Quantification of air driven heat transfer within the active layer of rock glacier Murtèl-Corvatsch
- XL129 EGU2011-12980
Thomas Ingeman-Nielsen
Variability of active layer thickness prediction from a climate model forced permafrost model

CR4.20 – Modeling the Spatial Dynamics of Permafrost and Seasonally Frozen Ground at Diverse Scales – Orals

Convener: Stephan Gruber | Co-Conveners: Riccardo Rigon, christophe grenier

Room: 5

Chairperson: Grenier/Gruber

- 13:30–13:45 EGU2011-1301
Kjersti Gislås, Herman Farbrot, Bernd Etzelmüller, and Thomas Vikhamar Schuler
Regional scale distribution of permafrost in Norway based on two equilibrium models.
- 13:45–14:00 EGU2011-1640
Qian Li, Shufen Sun, and Yongkang Xue
Analyses of a hierarchy of frozen soil models for cold region study—The justification, ability, and uncertainty
- 14:00–14:15 EGU2011-8916
Andrew Frampton, Scott Painter, Steve W. Lyon, and Georgia Destouni
Non-isothermal, three-phase simulations of near-surface flows in a model permafrost system under seasonal variability and climate change
- 14:15–14:30 EGU2011-6208
Damien Régnier, **Christophe Grenier**, Philippe Davy, and Hakim Benabderrahmane
Impact of permafrost development on underground flow patterns: results from a numerical study considering freezing cycles on a 2D vertical cut through a river-plain system
- 14:30–14:45 EGU2011-6493
Martin Stendel, Jens Hesselbjerg Christensen, Sergei Marchenko, Vladimir Romanovsky, Ronald Daanen, Annette Rinke, Heidrun Matthes, Peter Kuhry, Felix Rivkin, and Dmitri Kaverin
Size matters - very high resolution permafrost simulations on the 4 km scale in Northeast European Russia
- 14:45–15:00 EGU2011-11318
Joel Fiddes and **Stephan Gruber**
CRYOSUB: a concept for continental modelling of cryospheric processes at sub-grid scales in high mountain regions

CR4.20 – Modeling the Spatial Dynamics of Permafrost and Seasonally Frozen Ground at Diverse Scales – Posters

Convener: Stephan Gruber | Co-Conveners: Riccardo Rigon, christophe grenier

Hall XL | Display Time 08:00–19:30

Author in Attendance: 17:30–19:00

Chairperson: Grenier/Gruber

- XL130 EGU2011-9917
Edoardo Cremonese, Stephan Gruber, Marcia Phillips, Paolo Pogliotti, Lorenz Boeckli, Jeanette Noetzli, and Christoph Suter
An inventory of permafrost evidences for the European Alps

- XL131 EGU2011-9720
Lorenz Boeckli, Stephan Gruber, Jeannette Noetzli, and Alexander Brenning
An alpine-wide permafrost distribution map
- XL132 EGU2011-12313
Bruce Stevens, Hugo Beltrami, J. Fidel Gonzalez-Rouco, Juan Jose Gomez Navarro, and Juan Pedro Montavez
Validation of ERA40/ECHO-G-dynamically downscaled MM5 with applications in permafrost modelling
- XL133 EGU2011-11399
Ruth Mugford, Poul Christoffersen, Julian Dowdeswell, and Toby Benham
Validation of the GEOTop Model for a Continuous Permafrost Basin in the Arctic
- XL134 EGU2011-13620
Stefano Endrizzi, Stephan Gruber, Matteo Dall'Amico, and Riccardo Rigon
The GEOTop model as a tool to describe the energy and water balance in permafrost or seasonally-frozen soils
- XL135 EGU2011-11801
Jeannette Noetzli, Edoardo Cremonese, Philip Deline, Stefano Endrizzi, Stephan Gruber, Stefanie Gubler, Florence Magnin, Umberto Morra di Cella, Paolo Pogliotti, and Ludovic Ravanel
Towards the simulation of a transient 3-dimensional temperature field of the Aiguille du Midi (Mont Blanc massif)
- XL136 EGU2011-11466
Matthias Huss, Martin Scherler, Sina Schneider, Martin Hoelzle, and Christian Hauck
Future water yield from melting mountain permafrost: A fully distributed modelling approach
- XL137 EGU2011-550
Alex Matveev, Laxmi Sushama, Rene Laprise, Hugo Beltrami, and Andrey Martynov
Development of a Thermokarst Lake Model for the Canadian RCM to study coupled interactions (Thermokarst Lake-Permafrost-Climate) in the Arctic
- XL138 EGU2011-8741
Altug Ekici, Christian Beer, Stefan Hagemann, Tanja Blome, and Christian Hauck
Effects of soil thermal dynamics on the carbon balance in high-latitude permafrost regions: a modeling study with Jsbach

CR4.30 – High-Elevation & high-Latitude Permafrost (HELP): Measuring, Modeling and Remote Sensing – Orals

Convener: Reginald Muskett | Co-Conveners: Claude Duguay, Julia Boike

Room: 5

Chairperson: Reginald R. Muskett

- 15:30–15:45 EGU2011-3821
Ko van Huissteden, Cinzia Berrittella, Yanjiao Mi, Frans-Jan Parmentier, Han Dolman, and Trofim C. Maximov
A landscape scale model of thaw lake development and its implications for Arctic methane emission.
- 15:45–16:00 EGU2011-3879
Reginald Muskett and Vladimir Romanovsky
ICESat-Derived Surface Changes Across the Permafrost Zones of Eurasia and North America
- 16:00–16:15 EGU2011-3990
Lyudmila Lebedeva and Olga Semenova
Active layer depth as a key factor of runoff formation in permafrost: process analysis and modelling using the data of long-term observations
- 16:15–16:30 EGU2011-10342
Birgit Heim, Annett Bartsch, Julia Boike, Claude Duguay, Kirsten Elger, Moritz Langer, Hugues Lantuit, and Sina Muster
ESA DUE PERMAFROST: Evaluation of geophysical remote sensing products for permafrost applications
- 16:30–16:45 EGU2011-11773
Aiman Soliman, Claude Duguay, Sonia Hachem, William Saunders, and Kyung-Kuk Kang
Estimating thermal offset between land surface and screen height air temperature over the pan-Arctic region using operational satellite images
- 16:45–17:00 EGU2011-12162
Christian Hauck, Martin Hoelzle, Martin Scherler, Sina Schneider, and Christin Hilbich
On the use of water content monitoring to study the evolution of mountain permafrost

CR4.30 – High-Elevation & high-Latitude Permafrost (HELP): Measuring, Modeling and Remote Sensing – Posters

Convener: Reginald Muskett | Co-Conveners: Claude Duguay, Julia Boike

Hall XL | Display Time 08:00–19:30

Author in Attendance: 17:30–19:00

Chairperson: Reginald R. Muskett

- XL139 EGU2011-745
Cécile Pellet, Bernd Etzelmüller, Herman Farbrot, Ketil Isaksen, Christin Hilbich, and Christian Hauck
Assessment of the sensitivity of mountain permafrost to climate change: A comparison between southern Norway and the Swiss Alps
- XL140 EGU2011-1314
Anna Maria Trofaier, William Gareth Rees, Annett Bartsch, Daniel Sabel, and Stefan Schlaffer
Thermokarst lake dynamics on the Yamal Peninsula, Siberia
- XL141 EGU2011-3830
Angela Gallagher and Ko van Huissteden
Increased greenhouse gas emission from thaw ponds in Siberian arctic tundra on continuous permafrost.
- XL142 EGU2011-3833
Yanjiao Mi and Ko van Huissteden
Future methane emission from arctic thaw lakes modelled for different climate scenarios.
- XL143 EGU2011-6496
Thomas Echelard, Jean-Michel Krysiecki, Chloé Barboux, Michel Gay, and Philippe Schoeneich
Movement detection by InSAR in permafrost area, Queyras Natural Regional Park, Hautes-Alpes, France.
- XL144 EGU2011-8306
Xicai Pan, Ute Wollschläger, Qihao Yu, and Kurt Roth
Thermal characterization of two contrasting active layers in the warm permafrost region on the Qinghai-Tibet Plateau
- XL145 EGU2011-12063
Erik Bollmann, **Christoph Klug**, Karl Krainer, Lorenzo Rieg, Rudolf Sailer, Maximilian Spross, and Johann Stötter
Combination of photogrammetry and airborne laser scanning to derive horizontal flow velocities and volume changes of rockglaciers

CR10.20 – Ice-sheet and climate interactions – Orals

Convener: Philippe Huybrechts | Co-Conveners: Thierry Fichefet, Andrey Ganopolski, Gilles Ramstein

Room: 7

Chairperson: Philippe Huybrechts

- 13:30–13:45 EGU2011-12925
Dorthe Dahl-Jensen
Greenland ice cores tell tales on the extent of the Greenland Ice Sheet during the warm climate Eemian period 120.000 years BP.
- 13:45–14:00 EGU2011-5758
Michiel Helsen, Roderik Van de Wal, Michiel Van den Broeke, Johannes Oerlemans, and Willem Jan Van de Berg
Greenland ice sheet retreat during the Eemian
- 14:00–14:15 EGU2011-3747
Didier Roche, Christophe Dumas, Catherine Ritz, and Sylvie Charbit
Coupled climate - ice-sheet simulations of the "Great Ice Sheets" of the Last Glacial Maximum: progress, pitfalls and lessons using the LOVECLIM-GRISLI coupled model
- 14:15–14:30 EGU2011-234
Alexander Robinson, Reinhard Calov, and Andrey Ganopolski
A new indicator of Greenland Ice Sheet stability
- 14:30–14:45 EGU2011-3543
Marianne Sloth Madsen, Shuting Yang, and Gudfinna Adalgeirsdottir
Sensitivity of the Greenland Ice Sheet in the climate model EC-Earth
- 14:45–15:00 EGU2011-9988
Heiko Goelzer, Philippe Huybrechts, Sarah Raper, Marie-France Loutre, Hugues Goosse, and Thierry Fichefet
Ensemble ice and sea-level change projections with the Earth system model of intermediate complexity LOVECLIM

CR10.20 – Ice-sheet and climate interactions – Posters

Convener: Philippe Huybrechts | Co-Conveners: Thierry Fichefet, Andrey Ganopolski, Gilles Ramstein

Hall XL | Display Time 08:00–19:30

Author in Attendance: 17:30–19:00

Chairperson: Andrey Ganopolski

- XL146 EGU2011-5898
Malou Maris and Hans Oerlemans
The effect of different climate states on the Antarctic Ice Sheet
- XL147 EGU2011-12717
Jorge Alvarez-Solas, Marisa Montoya, Catherine Ritz, Sylvie Charbit, Gilles Ramstein, and Christophe Dumas
Simulating the effects of oceanic variability on millennial-scale iceberg discharges: focus on Heinrich events
- XL148 EGU2011-9919
Dirk Barbi, Gerrit Lohmann, Malte Thoma, and Klaus Grosfeld
The impact of ice sheet dynamics on ocean circulation in a coupled Earth system model
- XL149 EGU2011-10022
Heiko Goelzer, Ives Janssens, Johanna Nemeč, and Philippe Huybrechts
A dynamic continental runoff routing model applied to the last Northern Hemisphere deglaciation
- XL150 EGU2011-2448
Maria Hakuba, Doris Folini, Martin Wild, and Christoph Schär
Greenland in a changing climate: topographic feedback on snow accumulation
- XL151 EGU2011-10726
Florian Ziemer, Christian Rodehacke, Andreas Chlond, and Uwe Mikolajewicz
Simulating Heinrich Events in a Complex Climate Model
- XL152 EGU2011-7035
Sylvie Charbit, Christophe Dumas, Masa Kageyama, Catherine Ritz, and Didier Roche
Investigating the impact of the ablation parameterization on simulated ice sheets over the last glacial cycle
- XL153 EGU2011-3410
Suchithra Sundaram, Qiuzhen Yin, Andre Berger, and Helene Muri
Ice sheet induced North Atlantic Oscillation mode during an interglacial 500,000 years ago and its impact on East Asian Summer Monsoon
- XL154 EGU2011-7858
Aurélien Quiquet, Ralf Greve, and Catherine Ritz
Modelling the Greenland Ice Sheet through the last glacial-interglacial cycle: climatic constraints and climatic uncertainties
- XL155 EGU2011-10873
Martin Stendel, Sebastian Mernild, Jens Hesselbjerg Christensen, Glen E. Liston, Christopher A. Hiemstra, Bent Hasholt, Gudfinna Adalgeirsdottir, Philippe Lucas-Picher, and Ruth Mottram
High resolution modelling of surface mass balance in Western Greenland
- XL156 EGU2011-484
David Naafs, Jens Hefter, Patrizia Ferretti, Ruediger Stein, and Gerald Haug
What controlled the onset of Hudson Strait Heinrich(-like) events in the Mid-Pleistocene (~640 ka)?
- XL157 EGU2011-13818
Oleg Rybak and Philippe Huybrechts
Ensemble simulations of the minimum configuration of the Greenland ice sheet during the Last Interglacial constrained by ice-core data

Thursday, 07 April

BG5.1 – Integration of Environmental, Socio-Economic and Climatic Change Studies in Northern Eurasia (co-listed) – Orals

Convener: Pavel Groisman | Co-Conveners: Amber Soja, Alexey V. Eliseev, Chaba Mátyás

Room: 23

Chairperson: n.n.

- 08:30–08:45 EGU2011-5341
Evgeny Gordov, Vasily Bogomolov, Elena Genina, Igor Okladnikov, Tamara Shulgina, and Alexander Titov
 Characteristics of on-going changes of Siberia climate
- 08:45–09:00 EGU2011-12740
Eric Wood, Tara Troy, Ming Pan, Michael Rawlins, and Xiaogang Shi
 Documenting the uncertainty of the terrestrial water cycle across NESSPI and its effect on trend and attribution studies
- 09:00–09:15 EGU2011-4422
Olga Zolina, Clemens Simmer, and Sergey Gulev
 Extreme precipitation characteristics over Eurasian continent: uncertainties of estimation and climate variability
- 09:15–09:30 EGU2011-12523
Terry Callaghan, Stef Bokhorst, Ross Brown, Pavel Y. Groisman, Cecilia Johansson, Margareta Johansson, Niklas Labba, Vladimir Radionov, and Jan Åge Riseth
 Winter snow melt events in the Eurasian Arctic: consequences analysed from scientific and indigenous knowledge
- 09:30–09:45 EGU2011-3882
Reginald Muskett and Vladimir Romanovsky
 Permafrost Ecosystem Changes Across Eurasia and North America Using Multi-Satellite Measurements
- 09:45–10:00 EGU2011-9665
Vladimir Alexeev
 Tundra fires and sea ice in the Arctic

COFFEE BREAK

Chairperson: Csaba Mátyás, Alexey Eliseev

- 10:30–10:45 EGU2011-9564
Dennis Lettenmaier, Ted Bohn, Shamil Maksyutov, and Qianlai Zhuang
 Understanding the interaction of carbon and water budgets in the Eurasian Arctic
- 10:45–11:00 EGU2011-1515
Alexey V. Eliseev
 Uncertainty of climate and carbon cycle changes in North Eurasia due to uncertainty in values of terrestrial biota governing parameters
- 11:00–11:15 EGU2011-13014
Qianlai Zhuang, Jerry Melillo, David Kicklighter, John Reilly, Sergey Paltsev, Andrei Sokolov, Yongxia Cai, Anatoly Shvidenko, Nadejda Tchebakova, Andrey Sirin and the ,Anna Peregon and Guangsheng Zhou Team
 Changes of land use and land cover, biogeochemistry, and their feedbacks to climate in northern Eurasia
- 11:15–11:30 EGU2011-11686
Anatoly Shvidenko, Dmitry Schepaschenko, and Ian McCallum
 Productivity of Russian forests during recent decades (1960-2010s)
- 11:30–11:45 EGU2011-9646
Nadja Tchebakova, Elena Parfenova, Galina Lysanova, Evgeni Shvetsov, and Amber Soja
 An agroclimatic potential in southern Siberia in a changing climate during the XXI century
- 11:45–12:00 EGU2011-5582
Mikhail Yu. Arshinov and Boris D. Belan
 New particle formation events in the Siberian boreal zone

CR1.20 – Applied Geophysics in Cryosphere Sciences – Posters

Convener: Christian Hauck | Co-Conveners: Olaf Eisen, Christof Kneisel, Bernd Kulesa

Halls X/Y | Display Time 08:00–19:30

Author in Attendance: 17:30–19:00

Chairperson: C. Hauck, O. Eisen

- XY226 EGU2011-1946
Valenti Turu i Michels
NMR Magnetic Resonance Sounding, a New Approach to Assess Englacial and Subglacial water content: A Pilot Study on Hansbreen Polythermal Glacier (SW Spitsbergen, Norway)
- XY227 EGU2011-2671
Herman Farbrot, Christian Hauck, Christin Hilbich, Bernd Etzelmüller, Tobias Hipp, Ketil Isaksen, and Michael Krautblatter
Repeated electrical resistivity tomography measurements of permafrost in the mountains of southern Norway
- XY228 EGU2011-8020
Kaspar Merz, Marian Hertrich, Hansruedi Maurer, and Sarah Springman
Geophysical Characterization of a Rock Glacier in the Turtmann Valley, Switzerland
- XY229 EGU2011-8549
Oliver Kuras, Paul Wilkinson, Phil Meldrum, Michael Krautblatter, Julian Murton, and Richard Ogilvy
Monitoring the thermal state of permafrost by automated time-lapse capacitive resistivity imaging
- XY230 EGU2011-10674
Roberto Rege and Alberto Godio
Geophysical investigation for mechanical properties of a glacier
- XY231 EGU2011-12302
Michael Krautblatter
Laboratory methods for quantitative geophysics in permafrost bedrock
- XY232 EGU2011-13995
Christin Hilbich and Christian Hauck
Estimated ice and water contents from geophysical measurements, and their relationships to resistivity, seismic velocity and temperature in permafrost regions
- XY233 EGU2011-12785
Daniel Draebing and Michael Krautblatter
Raw data analysis and sensitivity to initial model velocities of 2.5D - seismic refraction tomographies of permafrost in steep bedrock
- XY234 EGU2011-7754
Louise Sime, Richard Hindmarsh, Hugh Corr, and Gisela Hiess
Automated Processing to derive Dip Angles of Englacial Radar Reflectors in Ice Sheets
- XY235 EGU2011-10986
Gisela Hiess, Richard C. A. Hindmarsh, Louise C. Sime, Hugh F. J. Corr, Edward C. King, Oliver J. Marsh, Hamish D. Pritchard, and Neil Ross
Deriving the internal ice layer architecture from Radio-Echo Sounding data of Rutford Ice Stream, Subglacial Lake Ellsworth and Fletcher Promontory
- XY236 EGU2011-13220
José Uribe, Rodrigo Zamora, and **Andrés Rivera**
Ice thickness and snow accumulation radar measurements at Union Glacier, West Antarctica
- XY237 EGU2011-12436
Christin Hilbich, Marcia Phillips, Frank Raphael, and Christian Hauck
Monitoring of rapid ground ice degradation in an alpine talus slope at Flüela Pass, Swiss Alps with geophysical surveys and borehole temperature measurements
- XY238 EGU2011-4682
Adam Booth, Bernd Kulesa, Alessio Gusmeroli, Sam Doyle, Christine Dow, Glenn Jones, Tavi Murray, Roger Clark, and Alun Hubbard
Seismic characterisation of subglacial media around a supraglacial meltwater lake, Russell Glacier, West Greenland

CR5.10 – Modeling ice sheets and glaciers – Orals

Convener: Frank Pattyn | Co-Conveners: Eric Larour, Gudfinna Adalgeirsdottir, Olivier Gagliardini

Room: 5

Chairperson: Frank Pattyn

- 08:30–08:45 EGU2011-1786
Jeremy Bassis
New approximations for large-scale ice sheet flow: Towards a happy marriage between the shallow-ice and shelfy-stream approximations

- 08:45–09:00 EGU2011-3149
Anne-Sophie Drouet, Gael Durand, Lionel Favier, Vincent Peyaud, Olivier Gagliardini, Catherine Ritz, Thomas Zwinger, and Emmanuel Le Meur
 Testing the validity of the boundary layer flux-thickness relationship at the grounding line
- 09:00–09:15 EGU2011-12477
Alexander Jarosch
 A numerical meltwater-channel evolution model for glaciers
- 09:15–09:30 EGU2011-11073
Olga Sergienko and Douglas MacAyeal
 Basal control of supraglacial lakes
- 09:30–09:45 EGU2011-12959
Marco Tedesco, Nicholas Steiner, Konrad Steffen, Xavier Fettweis, Balazs Fekete, Jason Gulley, and Nicholas Bayou
 Hydrofracture analysis and spatio-temporal evolution of a supraglacial lake in West Greenland from observational and modeling tools.
- 09:45–10:00 EGU2011-9882
Martin O'Leary, Poul Christoffersen, Alun Hubbard, and Richard Bates
 Modelling frontal melt rates on West Greenlandic tidewater glaciers

COFFEE BREAK

Chairperson: Eric Larour

- 10:30–10:45 EGU2011-4986
Andreas Vieli, Stewart Jamieson, Stephen Livingstone, Colm O'Cofaigh, Chris Stokes, and Claus-Dieter Hillenbrand
 Understanding long-term grounding line retreat and stability from combining numerical modelling with the palaeo record of a marine ice stream
- 10:45–11:00 EGU2011-9058
Jessica Lundin, Ed Waddington, Howard Conway, and Edward Brook
 Interpolating an ice core depth-age relationship from sparse data using an inverse approach
- 11:00–11:15 EGU2011-10262
Carlos Martin and Hilmar Gudmundsson
 Effects of nonlinear rheology and anisotropy on the relationship between age and depth at ice divides
- 11:15–11:30 EGU2011-907
Rob Briggs, Dave Pollard, and Lev Tarasov
 Bayesian calibration of a 3D Glacial Systems Model for the past evolution of the Antarctic Ice Sheet
- 11:30–11:45 EGU2011-5168
Patrick Applegate and Nina Kirchner
 The effects of parametric uncertainty on modeled Greenland Ice Sheet behavior
- 11:45–12:00 EGU2011-8102
Nathan Martin, Jérôme Monnier, Jitendra Singh, Ronan Madec, and Olivier Gagliardini
 Sensitivity analysis using the variational data assimilation software DassFlow-Ice

CR5.10 – Modeling ice sheets and glaciers – Posters

Convener: Frank Pattyn | Co-Conveners: Eric Larour, Gudfinna Adalgeirsdottir, Olivier Gagliardini

Halls X/Y | Display Time 08:00–19:30

Author in Attendance: 17:30–19:00

Chairperson: Olivier Gagliardini

- XY239 EGU2011-4413
Andy Aschwanden
 On the importance of accurate initial conditions for ice sheet modeling
- XY240 EGU2011-7211
 Melanie Raymond Pralong and **G. Hilmar Gudmundsson**
 Bayesian estimation of basal conditions on Rutford Ice Stream, West Antarctica, from surface data
- XY241 EGU2011-7423
G. Hilmar Gudmundsson
 Ice-stream response to ocean tides and the form of the basal sliding law
- XY242 EGU2011-427
Bertrand Bonan, Maelle Nodet, and Catherine Ritz
 To which extent can global ice volume records provide information on past ice sheets evolution and the climate that drove them?

- XY243 EGU2011-3915
David Pollard and Robert DeConto
Numerical improvements and extensions in a hybrid ice sheet-shelf model
- XY244 EGU2011-4997
Andreas Vieli, Antony Payne, Anne LeBrocq, and Gwendolyn Leysinger Vieli
Towards a model of rheological weakening in lateral margins of ice streams and ice shelves: the case of Pine Island Glacier, West Antarctica.
- XY245 EGU2011-5977
Martin Rückamp, Norbert Blindow, and Angelika Humbert
Flow dynamics and temperature regime of the main King George Island ice cap, Antarctica.
- XY246 EGU2011-6257
Jaime Otero, Francisco J. Navarro, Javier J. Lapazaran, Evgeny Vasilenko, and **Piotr Glowacki**
A three-dimensional dynamical model of Amundsenisen icefield, Svalbard
- XY247 EGU2011-7383
Robert Fausto, **Andreas Ahlström**, and Dirk van As
Using improved surface boundary conditions for mass balance modelling in large-scale ice sheet models of Greenland
- XY248 EGU2011-7430
Marco Tedesco, Hans-Peter Marshall, Xavier Fettweis, Nicholas Steiner, and Patrick Alexander
Assessment of modeled surface mass balance estimates over the Greenland ice sheet using in-situ observations and remote sensing data
- XY249 EGU2011-7855
Duoying Ji and Yongjiu Dai
A Mountain Glacier Scheme for Regional Climate Model and Its Preliminary Results
- XY250 EGU2011-4159
Michelle Koutnik, Edwin Waddington, Thomas Neumann, Stephen Price, Howard Conway, and Kenichi Matsuoka
Using radar layers to infer ice temperature and to interpret basal conditions across the West Antarctic Ice Sheet Divide
- XY251 EGU2011-10599
Denis Callens, Kenichi Matsuoka, Howard Conway, and Frank Pattyn
Modelling the spatial variability of accumulation across ice rises in Dronning Maud Land, Antarctica
- XY252 EGU2011-11040
Andreas Vieli, Antony J. Payne, Tad Pfeffer, Shad O'Neel, and Ian Howat
Modelling tidewater glacier dynamics: the case of Columbia Glacier, Alaska
- XY253 EGU2011-11241
Robert Arthern
Application of a wavelet-based, adaptive-grid, multigrid solver to simulate the migration of an ice sheet grounding line.
- XY254 EGU2011-12229
Yuri Konovalov
Ice shelf flexures due to ocean swells obtained by 2D flowline models
- XY255 EGU2011-12884
Yuri Konovalov and Oleg Nagornov
Basal friction coefficient reconstruction for fast flowing ice streams in the Academy of Sciences Ice Cap
- XY256 EGU2011-12800
Rupert Gladstone, Stephen Cornford, Tamsin Edwards, Victoria Lee, Anthony Payne, and Sarah Shannon
Calibrated prediction of future Pine Island Glacier behaviour
- XY257 EGU2011-13553
Sophie Nowicki and Olga Sergienko
The effect of ice rheology on contact problems
- XY258 EGU2011-2343
Joseph Kennedy, Erin Pettit, Carlos Di Prinzio, Ed Waddington, Paul Jacobson, and Larry Wilen
Modeling the evolution of crystal fabric and its link to climate and ice sheet history
- XY259 EGU2011-3840
Sebastian H. Mernild and Glen E. Liston
Melt and runoff simulations from the Greenland Ice Sheet and glaciers peripheral to the Ice Sheet
- XY260 EGU2011-8584
Guillaume Jovuet, Matthias Huss, Heinz Blatter, and Martin Funk
Modelling the retreat of Great Aletschgletscher in a changing climate
- XY261 EGU2011-11028
Rosie Williams, Richard C. A. Hindmarsh, and Robert J. Arthern
Incorporating horizontal membrane stresses into calculations of balance velocities
- XY262 EGU2011-11714
Gordan Stuhne and Richard Peltier
Unstructured Grid Discontinuous Galerkin Methods for Glacial Modeling at Large Space and Time Scales

CR5.20 – Ice shelves - dynamics, interactions, observations, modelling – Orals

Convener: Angelika Humbert | Co-Conveners: Adrian Jenkins, Andreas Vieli

Room: 5

Chairperson: n.n.

- 13:30–13:45 EGU2011-3820
Fiamma Straneo, David Sutherland, Ruth Curry, Gordon Hamilton, Claudia Cenedese, Kjetil Vaage, and Leigh Stearns
 Impact of ocean stratification and glacial run-off on submarine melting of Greenland's glaciers
- 13:45–14:00 EGU2011-12836
Finlo Cottier, Tavi Murray, Mark Inall and the Swansea-SAMS Ocean-Glacier Team
 Oceanography of SE Greenland fjords: observations of interannual warming, circulation, mixing and the response of the calving front
- 14:00–14:15 EGU2011-5038
Frank Pattyn, Kenichi Matsuoka, Denis Callens, Howard Conway, David Docquier, Mathieu Depoorter, Bryn Hubbard, Denis Samyn, and Jean-Louis Tison
 A multidisciplinary approach to identify thermohaline circulation under an East-Antarctic ice shelf
- 14:15–14:30 EGU2011-12487
Richard C.A. Hindmarsh
 Force Balance of Narrow Ice Shelves
- 14:30–14:45 EGU2011-3639
Sam Pegler and Grae Worster
 The dynamics of viscous grounding lines
- 14:45–15:00 EGU2011-1289
Carolyn Plate, Dietmar Gross, Angelika Humbert, and Ralf Müller
 Fracture Mechanical Analysis and Finite Element Simulations of different Crack Scenarios in Ice Shelves

CR5.20 – Ice shelves - dynamics, interactions, observations, modelling – Posters

Convener: Angelika Humbert | Co-Conveners: Adrian Jenkins, Andreas Vieli

Halls X/Y | Display Time 08:00–19:30

Author in Attendance: 17:30–19:00

Chairperson: n.n.

- XY263 EGU2011-113
Peter Kuipers Munneke, Michiel Van den Broeke, and Ghislain Picard
 Using a regional climate model to derive melt extent and volume at the surface of Antarctic ice shelves
- XY264 EGU2011-1917
Torsten Albrecht and Anders Levermann
 Fracture field for large-scale ice dynamics
- XY265 EGU2011-2698
Erin Pettit, Ted Scambos, Martin Truffer, Robert Bauer, Ellen Mosley-Thompson, Victor Zagorodnov, Terry Haran, Ronald Ross, Bryan Blaire, and Ian Joughin
 The Bruce Plateau Ice Cap: Upstream Dynamics of the Southern Larsen B Ice Shelf
- XY266 EGU2011-6078
Shfaqat Abbas Khan, Kurt H Kjær, Niels J Korsgaard, Bea M Csatho, Ian R Joughin, Jonathan L Bamber, Lars Hjortborg Timm, and John M Wahr
 Rapid dynamic thinning on Upernavik Icestream, West Greenland
- XY267 EGU2011-6169
Shfaqat Abbas Khan, John Wahr, Lin Liu, Ian Howat, Ian Joughin, Karina Nielsen, and T van Dam
 Vertical and horizontal bedrock displacements near Jakobshavn Isbræ due to glacial ice mass loss.
- XY268 EGU2011-6776
Helgard Anschütz, Anna Sinisalo, Kirsty Langley, Elisabeth Isaksson, Jon-Ove Hagen, Svein-Erik Hamran, Mats-Jørgen Øyan, Tonu Martma, Jack Kohler, and Ole-Anders Nøst
 Spatial and temporal accumulation variability on Fimbulisen, East Antarctica
- XY269 EGU2011-8341
Malcolm McMillan, Andrew Shepherd, and Peter Nienow
 Ice Shelf Tidal Motion in the Amundsen Sea - an Assessment of Tide Model Predictions using Radar Interferometry
- XY270 EGU2011-8342
Thomas Kleiner, Angelika Humbert, and Manfred A. Lange
 The effect of sea-level rise on the stress regime of the Brunt and Riiser-Larsen ice shelves
- XY271 EGU2011-9248
Xylar Asay-Davis
 Simulations of Ocean Circulation under Static and Dynamic Ice Shelves

- XY272 EGU2011-10029
Kirsty Langley, Anna Sinisalo, Jack Kohler, Svein-Erik Hamran, Mats-Jørgen Øyan, Lars-Henrik Smedsrud, Helgard Anschutz, Angelika Humbert, Elisabeth Isaksson, and Ole-Anders Nøst
 A look at the basal mass balance of the Fimbul Ice shelf using ice penetrating radar and oceanographic borehole data
- XY273 EGU2011-10047
 Matt King, **G. Hilmar Gudmundsson**, and Keith Makinson
 Nonlinear interaction between ocean tides and the Larsen C Ice Shelf system
- XY274 EGU2011-10087
Angelika Humbert, Anna Sinisalo, Kirsty Langley, Helgard Anschutz, Elisabeth Isaksson, Svein-Erik Hamran, Ole Anders Nøst, Jon Ove Hagen, Gudmund Melland, and Jack Kohler
 Vertical and horizontal structure of Fimbulisen, Antarctica. A synthesis of TerraSAR-X imagery and ground-based radar data
- XY275 EGU2011-11091
 Keith Makinson, Matt King, Keith Nicholls, and **Hilmar Gudmundsson**
 Tide induced lateral movement of Ronne Ice Shelf, Antarctica
- XY276 EGU2011-11207
Paul Holland, Hugh Corr, Hamish Pritchard, David Vaughan, Adrian Jenkins, Robert Arthern, Marco Tedesco, and Josefino Comiso
 The firn air content of Larsen Ice Shelf
- XY277 EGU2011-12184
Camille Peers, Wencke Verreydt, Dubrava Kirievskaya, Christina Sanchez Cervera, Patricia Povea de Castro, Sun Mi Jeong, J. Sue Gao, Andrew Christ, Alexandra Kirshner, Eugene Domack and the LARISSA undergraduate Team
 Ice shelves along the Western Antarctic Peninsula during the Little Ice Age: observations from the LARISSA project in Barilari Bay, Graham Land
- XY278 EGU2011-12917
Daniela Jansen, Adrian Luckman, Bernd Kulesa, Edward King, Peter Sammonds, and Doug Benn
 Basal crevasses in Larsen C Ice Shelf

CR5.30 – Subglacial Environments of Ice Sheets and Glaciers – Orals

Convener: Robert Bingham | Co-Conveners: Stefan W. Vogel, Helen Fricker, Bryn Hubbard

Room: 5

Chairperson: n.n.

- 15:30–15:45 EGU2011-10901
Richard Gravelle, Richard Hodgkins, Stephen Rice, and Peter Jansson
 An investigation of the influence of subglacial drainage system evolution on fluvial sediment availability, Storglaciären, northern Sweden
- 15:45–16:00 EGU2011-7917
Shin Sugiyama, Pedro Skvarca, Nozomu Naito, Hiroyuki Enomoto, Kenta Tone, Shun Tsutaki, Sebastian Marinsek, and Masamu Aniya
 Calving glacier dynamics controlled by subglacial water pressure close to ice overburden pressure in Glaciar Perito Moreno, Patagonia
- 16:00–16:15 EGU2011-9024
Caroline Clason, Douglas Mair, and Peter Nienow
 A spatially distributed model for routing meltwater to the ice bed through moulins and during lake drainage events
- 16:15–16:30 EGU2011-7652
Hermann Engelhardt
 Kamb Ice Stream Surge History
- 16:30–16:45 EGU2011-6004
Martin Siegert and the ICECAP Team
 Evidence for basal water generation and transport in the Aurora Subglacial Basin, East Antarctica
- 16:45–17:00 EGU2011-4576
Alberto Behar
 Development of a Micro Subglacial Lake Exploration Device

CR5.30 – Subglacial Environments of Ice Sheets and Glaciers – Posters

Convener: Robert Bingham | Co-Conveners: Stefan W. Vogel, Helen Fricker, Bryn Hubbard

Halls X/Y | Display Time 08:00–19:30

Author in Attendance: 17:30–19:00

Chairperson: n.n.

- XY279 EGU2011-167
Lucas Zoet, Sridhar Anandakrishnan, Richard B. Alley, and Chris Marone
Field and Laboratory Observations Displaying Regularly Repeating Ruptures Beneath Glaciers
- XY280 EGU2011-6179
Marion Bougamont, Steve Price, Poul Christoffersen, and Tony Payne
Ice stream modelling results from a higher-order ice sheet model with plastic bed and simplified hydrology
- XY281 EGU2011-7829
Anders Damsgaard Christensen, David Lundbek Egholm, and Jan A. Piotrowski
Numerical modelling of subglacial sediment deformation
- XY282 EGU2011-9259
Christopher Shuman, David Harding, Helen Cornejo, and Vijay Suchdeo
Assessment of Range Bias in the ICESat (2003-2009) Elevation Time Series and Elevation Changes at Large Subglacial Lake Sites, Antarctica
- XY283 EGU2011-9371
Paul van der Vegt, Philip Gibbard, and Andrea Moscardiello
Reconstructing the sedimentary processes within Pleistocene tunnel valleys from case studies
- XY284 EGU2011-4882
Kenny Matsuoka, Ian Howat, Julie Markus, Matt King, Jessica Lundin, Ellyn McFadden, Bjorn Oddson, and Helgi Bjornsson
Bare-rock bed behaving softer than till-covered bed: field evidence from Breidamerkurjokull, Iceland
- XY285 EGU2011-10956
Sebastian Goller, Malte Thoma, Klaus Grosfeld, and Heinrich Miller
An alternative approach to identify Antarctic subglacial lakes
- XY286 EGU2011-11223
Daniel Binder, Wolfgang Schoener, Bernhard Hynek, Marc Olefs, Gernot Weyss, and Jakob Abermann
Modelling Ground Penetrating Radar data gathered in the vicinity of the vestige of a glacier-dammed lake
- XY287 EGU2011-12282
Eyjólfur Magnússon, Helgi Björnsson, Páll Einarsson, Dana Floricioiu, Florian Mueller, Thomas Nagler, Finnur Pálson, Matthew Roberts, Helmut Rott, and Gunnar Sigurdsson
The 2010 jökulhlaup from Grímsvötn subglacial lake, Iceland and its effects on glacier motion
- XY288 EGU2011-13098
Rodrigo Zamora, **Andrés Rivera**, and José Uribe
Preliminary results obtained by the most recent field campaign to the Subglacial Lake Ellsworth Area in West Antarctica
- XY289 EGU2011-13346
Lukasz Stachnik
Comparison of chemical weathering in the subglacial and sub-moraine conditions of two High Arctic glaciers (Svalbard)

Friday, 08 April

BG5.1 – Integration of Environmental, Socio-Economic and Climatic Change Studies in Northern Eurasia (co-listed) – Posters

Convener: Pavel Groisman | Co-Conveners: Amber Soja, Alexey V. Eliseev, Chaba Mátyás

Poster Area BG | Display Time 08:00–17:00

Author in Attendance: 10:30–12:00

Chairperson: n.n.

- BG89 EGU2011-12559
Pavel Groisman, Vladimir Kattsov, and Richard Lawford
Northern Eurasia Earth Science Partnership Initiative (NEESPI) in 2010: An Overview of the Current Status
- BG90 EGU2011-12855
David McCabe, **Pavel Groisman** and the "Open Burning and the Arctic" conference (St. Petersburg, Russia, Nov. 2010) Source Apportionment Team
Open Burning and the Arctic: Current Knowledge and Priorities for Future Research
- BG91 EGU2011-2233
Irena Borzenkova, Pavel Groisman, Anna Mescherskaya, Olga Bulygina, and Vyacheslav Razuvaev
Extraordinary Heat Wave over European Russia in Summer 2010: What do the Data say?
- BG92 EGU2011-960
Margarita Syromyatina, Igor Moskalenko, and Kirill Chistyakov
Space-time features of climate changes in the Altai Mountains and alpine landscapes response
- BG93 EGU2011-1586
Alexey V. Eliseev, Maxim M. Arzhanov, and Igor I. Mokhov
Bayesian climate projection for the northern subpolar land based on ensemble of global climate models forced by SRES A1B scenario
- BG94 EGU2011-170
Julia Palamarchuk and Sergiy Ivanov
Regional and local variability of precipitation in Europe
- BG95 EGU2011-1601
Alexander V. Chernokulsky, Mirseid G. Akperov, Olga N. Bulygina, and Igor I. Mokhov
Changes in cloudiness and cyclonic/anticyclonic activity over Russia during last decades from observations and reanalyses data
- BG96 EGU2011-4794
Yury Gurfinkel
Solar activity and cardiovascular pathology
- BG97 EGU2011-11524
Dmitry Schepaschenko, Anatoly Shvidenko, and Lyudmila Mukhortova
Organic carbon in Russian soils: A specified spatially explicit assessment
- BG98 EGU2011-1898
Leonid L. Golubyatnikov
Model estimation of carbon flux from the soil: Russia case study
- BG99 EGU2011-2796
Galina Ivanova, Susan Conard, Anna Bogorodskaja, Valery Ivanov, Natalia Kovaleva, Eugenia Krasnoshekova, Elena Kukavskaya, Pavel Tarasov, and Sergey Zhila
Estimating and Monitoring Effects of Fire Severity on Ecosystem Components of Siberian Scots pine forests
- BG100 EGU2011-13171
Amber Soja, David Westberg, Paul Stackhouse, Jr, Douglas McRae, Ji-Zhong Jin, Anatoly Sukhinin, and Nadezda Tchebakova
Analysis of the Ability of Large-scale Reanalysis Data to Define Siberian Fire Danger in Preparation for Future Fire Weather
- BG101 EGU2011-5161
Brian Stocks and Donald Cahoon Jr.
Reconstructing Post-1979 Forest Fire Activity and Area Burned in Russia: NOAA AVHRR Analysis
- BG102 EGU2011-10479
Nadja Tchebakova, Almuth Armeth, Luca Beilelli, Chiara Corradi, Julia Kurbatova, Elena Parfenova, Natalia Vygodskaya, Ernst-Detlef Schulze, and Riccardo Valentini
Energy and water exchange in various ecosystems in central Siberia (from eddy covariance measurements)
- BG103 EGU2011-6931
Mihaela Laurenta Alexandrov, **Razvan Doru Mateescu**, Daniel Pertenatu, and Alina Spinu
The Romanian littoral - coastal geomorphologic changes during the last half of Century (1961-2011); its impact on the coastal development and solutions for protection and rehabilitation

- BG104 EGU2011-11542
Csaba Mátyás
Situation and Needs Regarding Forests and Climate Change Adaptation in Eastern Europe and Central Asia
- BG105 EGU2011-13934
Éva Konkoly-Gyuró, Csaba Mátyás, Géza Kiraly, **Pál Balázs**, and Áron Drüsler
Drivers and effects of long-term land use changes on climate, environment and socioeconomy in Central Europe
- BG106 EGU2011-6740
Maria Artamonova, Alexander Babyakin, **Natalia Efimenko**, Nina Povolotskaya, Igor Polozkov, David Topuriya, Elena Chalaya, Georgii Golitsyn, and Irina Senik
New approaches to the assessment of pathogenicity of weather conditions and aerosol pollution of the atmosphere for resorts
- BG107 EGU2011-4148
Vladimir P. Shevchenko, Oleg S. Pokrovsky, Dina P. Starodymova, Liudmila S. Shirokova, Rinat M. Manassypov, and Natalia S. Zamber
Terricolous lichens as biomonitor of environmental pollution in the Northern Eurasia
- BG108 EGU2011-12179
Irina N. Sokolik, Viatcheslav Tatarskii, Xin Xi, and Igor Shkolnik
Examining interactions between climate, droughts and dust events in Central Asia
- BG109 EGU2011-9653
Boris D. Belan, Pavel N. Antokhin, Viktoriya Arshinova, Sergey B. Belan, Aleksandr V. Fofonov, Georgii A. Ivlev, Tatyana M. Rasskazchikova, and Mikhail Yu. Arshinov
Blocking effect of Ural Mountains on transboundary transport of pollutants from Europe to Northern Asia
- BG110 EGU2011-6067
Mikhail Yu. Arshinov, Denis V. Simonenkov, Boris D. Belan, and Gennadii N. Tolmachev
Spatio-temporal variations of chemical composition of atmospheric aerosols over background region of southern part of Western Siberia
- BG111 EGU2011-5935
Mikhail Yu. Arshinov, Denis V. Simonenkov, Boris D. Belan, Gennadii N Tolmachev, Tatyana M Rasskazchikova, Tatyana K Sklyadneva, and Nina V. Uzhegova
Chemical composition of background aerosols sampled in Siberia

CR1.20 – Applied Geophysics in Cryosphere Sciences – Orals

Convener: Christian Hauck | Co-Conveners: Olaf Eisen, Christof Kneisel, Bernd Kulesa

Room: 5

Chairperson: O. Eisen, C. Hauck

- 13:30–13:45 EGU2011-14160
Erin Pettit, Edwin Waddington, Throstur Thorsteinsson, Alessio Gusmeroli, Joseph Kennedy, Catherine Ritz, and Regina Carns
Using Borehole Sonic Logging to Infer Ice Microstructure and Climate History
- 13:45–14:00 EGU2011-5967
Michael Behm and Helmut Hausmann
Imaging the structure of cave ice by ground-penetrating radar
- 14:00–14:15 EGU2011-149
Huw Horgan, Sridhar Anandakrishnan, and Richard Alley
Engacial Seismic Reflectivity - Imaging Crystal Orientation Fabric in West Antarctica
- 14:15–14:30 EGU2011-11111
Robert Arthern, Hugh Corr, Fabien Gillet-Chaulet, and Robert Hawley
Inversion for firn density-depth profile using phase-sensitive radar.
- 14:30–14:45 EGU2011-2137
Olaf Eisen, Coen Hofstede, Yngve Kristoffersen, Ulrich Polom, Anja Diezl, Christoph Mayer, and Astrid Lambrecht
Vibroseismics in glaciology
- 14:45–15:00 EGU2011-2751
Gilles Bellefleur, Junwei Huang, Michael Riedel, and Scott Dallimore
Imaging of thick permafrost and gas hydrate using seismic methods: a case study from Richards Island, Mackenzie Delta, Canada.

EG2/CR1.70 – Future Perspectives for European Polar Research (co-organized) – Posters

Convener: Lester Lembke-Jene | Co-Conveners: Wolff-Boenisch Bonnie, Roberto Azzolini

Hall A | Display Time 08:00–17:00

Author in Attendance: 15:30–17:00

Chairperson: Bonnie Wolff-Boenisch, Lester Lembke-Jene

- A1 EGU2011-4204
Wolf-Christian Dullo, Boris Baranov, and Christel van den Bogaard
KALMAR: "Kurile-Kamchatka and Aleutian Marginal Sea-Island Arc Systems: Geodynamic and Climate Interaction in Space and Time" an Integrated Polar Science Approach between Russia and Germany
- A2 EGU2011-4235
Carolyn Wegner, Alexandre Forest, **Matthias Forwick**, Karen Frey, Jeremy T. Mathis, Christine Michel, Anna Nikolopoulos, Matt O'Regan, and Marit Reigstad
The Arctic in Rapid Transition (ART) Initiative: Integrating priorities for Arctic Marine Science over the next decade
- A3 EGU2011-6247
Veronica Willmott Puig, Lester Lembke-Jene, Roberto Azzolini, Bonnie Wolff-Boenisch, Nicole Biebow, and Jörn Thiede
Towards a 15+ years Multidisciplinary Polar Research Strategy: the ERICON - Aurora Borealis Science Plan
- A4 EGU2011-10552
Annett Bartsch and the ESA DUE Permafrost Team
Implementation of a satellite data based information system for permafrost monitoring - The ESA DUE Permafrost Project
- A5 EGU2011-11312
Ingo Sasgen, Gerald Jurasinski, Jan Cermak, Annette Hey, Klaus-Holger Knorr, Phillip Kegler, Sonja Phillip, Jens Hartmann, Andres Rüggeberg, and Birte Nienaber (geb. Sprenger)
The German Young Geoscientists Group - promoting exchange and information among the next generation of geoscientists
- A6 EGU2011-11334
Sepp Kipfstuhl
Need for an European ice core storage and processing facility

CR6.10 – Mass and energy balance of snow and ice – Orals

Convener: Xavier Fettweis | Co-Conveners: Michiel Van den Broeke

Room: 5

Chairperson: n.n.

- 08:30–08:45 EGU2011-12322
Shelley MacDonell, Christophe Kinnard, and Stefaan Lhermitte
Environmental forcings that enable penitente development on glaciers in the high, arid Andes of Chile
- 08:45–09:00 EGU2011-6450
Sverrir Gudmundsson, Finnur Pálsson, Helgi Björnsson, Thröstur Thorsteinsson, and Hannes H. Haraldsson
Tephra, mass- and energy balance: the influence of the Eyjafjallajökull eruption 2010 on Icelandic ice caps
- 09:00–09:15 EGU2011-11633
Cameron Rye, Ian Willis, Neil Arnold, and Jack Kohler
Quantifying the predictive uncertainty of numerical mass balance models
- 09:15–09:30 EGU2011-2174
Jan Lenaerts, Michiel van den Broeke, Willem Jan van de Berg, Erik van Meijgaard, and Peter Kuipers Munneke
A new, high-resolution surface mass balance map of Antarctica (1989-2009) based on regional atmospheric climate modeling
- 09:30–09:45 EGU2011-2259
Eric Brun, Delphine Six, Ghislain Picard, and Vincent Vionnet
Snow-atmosphere coupled simulation at Dome C, Antarctica
- 09:45–10:00 EGU2011-5117
Ted Scambos, Massimo Frezzotti, Terry Haran, Jennifer Bohlander, David Long, Ken Jezek, Katy Farness, Jan Lenaerts, Michiel van den Broeke, and Mary Albert
Antarctic 'Wind Glaze' Extent: Multi-sensor mapping indicates large mass over-estimate for East Antarctic accumulation

COFFEE BREAK

Chairperson: n.n.

- 10:30–10:45 EGU2011-2152
Jonathan L. Bamber, Jason Box, Michiel van den Broeke, Xavier Fettweis, Edward Hanna, Philippe Huybrechts, and Chris Vernon
 Spatial and temporal uncertainties in the surface mass balance of the Greenland ice sheet from a model intercomparison
- 10:45–11:00 EGU2011-6703
Bernard Sacré, Xavier Fettweis, Sebastien Doutreloup, Bruno Franco, Keith Hines, Michiel Van den Broeke, and Michel Erpicum
 Comparison between different Regional Climate Models applied to the present climate (1995-2005) of Greenland
- 11:00–11:15 EGU2011-11878
Richard Morris, Douglas Mair, Peter Nienow, Victoria Parry, Christina Bell, and Andrew Wright
 Melt, refreezing and runoff at the surface of the Greenland ice sheet
- 11:15–11:30 EGU2011-3664
Heinz Jürgen Punge, Masa Kageyama, Gerhard Krinner, Hubert Gallée, and Aurélien Quiquet
 Modelling surface mass balance on Greenland in Eemian, glacial inception and modern climate
- 11:30–11:45 EGU2011-4060
Amber Leeson, Andrew Shepherd, Steven Palmer, Aud Sundal, and Xavier Fettweis
 Supra-glacial Lake Evolution in the Russell Glacier Catchment of the Greenland Ice Sheet
- 11:45–12:00 EGU2011-7945
Linling Chen and Ola M. Johannessen
 Cyclone activities and associated elevation changes of the Greenland Ice Sheet

CR6.10 – Mass and energy balance of snow and ice – Posters

Convener: Xavier Fettweis | Co-Conveners: Michiel Van den Broeke

Hall XL | Display Time 08:00–17:00

Author in Attendance: 13:30–15:00

Chairperson: n.n.

- XL101 EGU2011-114
Peter Kuipers Munneke, Michiel Van den Broeke, Jan Lenaerts, Mark Flanner, Alex Gardner, and Willem Jan Van de Berg
 A new albedo parameterization for the use in climate models over ice sheets
- XL102 EGU2011-3482
Emmanuel Thibert, Nicolas Eckert, and Christian Vincent
 Mass and energy balance over 6 decades at a glacier surface: relation to local and synoptic variables
- XL103 EGU2011-4451
Rianne H. Giesen, Liss M. Andreassen, Johannes Oerlemans, and Michiel R. van den Broeke
 Surface energy balance and meteorology (2007-2010) in the ablation zone of Langfjordjøkelen, an ice cap in northern Norway
- XL104 EGU2011-4614
Keiko Konya, Tsutomu Kadota, Fumio Nakazawa, Hironori Yabuki, Gombo Davaa, Khalzan Purevdagva, and Tetsuo Ohata
 Mass balance of Potanin glacier, Mongolian Altai
- XL105 EGU2011-5808
Stephan Galos and Thomas Mölg
 Distributed modelling of the energy and mass balance at the surface of Langenferner, Italy using off-glacier meteorological data
- XL106 EGU2011-6415
Timo Vihma, Olli-Pekka Mattila, Roberta Pirazzini, and Milla Johansson
 Spatial and temporal variability in summer snow pack in Dronning Maud Land, Antarctica
- XL107 EGU2011-6944
Bernhard Hynek, Rainer Unger, Wolfgang Schöner, Daniel Binder, and Gernot Weyss
 Comparison of volumetric and glaciological mass balances of Goldbergkees, Kleinfleißkees (1998-2009) and Wurtenkees (1998-2006), Austria
- XL108 EGU2011-6986
Bernhard Hynek, Wolfgang Schöner, Marc Olefs, Gernot Weyss, Ulrich Strasser, Florian Hanzer, Michael Warscher, and Thomas Marke
 Modelling glacier mass balance and runoff in the Austrian Alps
- XL109 EGU2011-7103
Miren Vizcaino, William H. Lipscomb, Janneke Ettema, and Michiel Van den Broeke
 Climate and surface mass balance of the Greenland ice sheet during 1850-2005 as simulated by the Community Earth System Model: model validation, trends, and physical mechanisms

- XL110 EGU2011-7250
Anwasha Bhattacharya, Tobias Sauter, and Christoph Schneider
 Development and evaluation of a 1-D snowpack model for estimating energy fluxes and mass balance changes of polythermal glaciers on the Tibetan Plateau
- XL111 EGU2011-7692
Holly Oldroyd, Hendrik Huwald, Chad Higgins, and Marc Parlange
 Determining thermal diffusivity of snow from highly resolved temperature measurements
- XL112 EGU2011-7898
Martin Juen, Christoph Mayr, Elisabeth Mayer, Astrid Lambrecht, Wilfried Hagg, Han Haidong, and Liu Shiyin
 Ablation and runoff generation on debris covered Keqikar glacier in the upper Aksu catchment, China.
- XL113 EGU2011-11078
Christoph Mayer, Astrid Lambrecht, Konrad Eder, Martin Juen, and Qiao Liu
 Ice cliff ablation derived from high resolution surface models, based on close-range photogrammetry
- XL114 EGU2011-13152
Michal Petlicki, Carleen Reijmer, Regine Hock, and Adam Nawrot
 Monte Carlo simulations of a snow model coupled to a distributed energy and mass balance model
- XL115 EGU2011-13275
Michal Petlicki, Regine Hock, Piotr Glowacki, and Adam Nawrot
 Reconstruction of mass balance of Ariebeen, Hornsund, in 1983-2008
- XL116 EGU2011-12927
Federica Martina, Giorgio Boni, Fabio Castelli, Roberto Rudari, and Simone Gabellani
 Surface energy and water balance for snow covered areas: formulation and validation of a four-layer model.

CR9.10 – Sea Ice and Sea Ice-Climate Interactions – Orals

Convener: Daniel Feltham | Co-Conveners: Clare Postlethwaite

Room: 7

Chairperson: Clare Postlethwaite

- 08:30–08:45 EGU2011-2264
Göran Björk, Christian Stranne, and Karin Borenäs
 On the Response of the Arctic Ocean Ice Thickness to External Forcing Perturbations
- 08:45–09:00 EGU2011-899
Julienne Stroeve, Allan Frei, and Debjani Ghatak
 Arctic Sea Ice Influences on Northern Hemisphere Precipitation
- 09:00–09:15 EGU2011-1674
Daniel Pollak, Marika Holland, and David Bailey
 Understanding Changes in the Arctic Basin Sea Ice Mass Budget as Simulated by CCSM4- Implications from Melt Season Characteristics and the Surface Albedo Feedback
- 09:15–09:30 EGU2011-2622
Daniela Flocco and Daniel Feltham
 Incorporation of a new melt pond scheme into a GCM sea ice model component
- 09:30–09:45 EGU2011-11487
Martin Vancoppenolle, Cecilia Bitz, Thierry Fichefet, Hugues Goosse, Christiane Lancelot, and Jean-Louis Tison
 Sensitivity of a one-dimensional, multi-layer, sea ice-microalgae model
- 09:45–10:00 EGU2011-66
Jiayun Zhou, Jean-Louis Tison, Hajo Eicken, Chris Petrich, Nicolas-Xavier Geilfus, Frédéric Brabant, Gauthier Carnat, Tim Papakyriakou, Bernard Heinesch, and Bruno Delille
 O₂/Ar and CH₄ measurements in sea ice : clues for the key status of sea ice in the climate system

COFFEE BREAK

Chairperson: Daniel Feltham

- 10:30–10:45 EGU2011-2879
Francois Massonnet, Thierry Fichefet, Hugues Goosse, Martin Vancoppenolle, Pierre Mathiot, and Christof König Beatty
 Importance of physics in global hindcast simulations of sea ice with NEMO-LIM
- 10:45–11:00 EGU2011-3471
Jan van Angelen, Michiel van den Broeke, and Ron Kwok
 Analysis of wind driven sea ice export through Fram Strait using a high resolution climate model

- 11:00–11:15 EGU2011-10915
Aleksey Marchenko and Dmitry Brazhnikov
 Characteristics of ice cover drift and structure in axially symmetric solutions of sea ice dynamics models with elastic-plastic rheology
- 11:15–11:30 EGU2011-9658
Peter Sammonds, Ben Lishman, and Daniel Feltham
 Sea ice dynamics: the role of friction
- 11:30–11:45 EGU2011-3456
Michel Tsamados, Daniel Feltham, and Alexander Wilchinsky
 Implementation of a new anisotropic rheology into a GCM sea ice component
- 11:45–12:00 EGU2011-10228
Laurent Bertino, Tim Williams, Dany Dumont, and Alison Kohout
 A model for waves-in-ice and sea ice dynamics in the marginal ice zone

CR9.10 – Sea Ice and Sea Ice-Climate Interactions – Posters

Convener: Daniel Feltham | Co-Conveners: Clare Postlethwaite

Hall XL | Display Time 08:00–17:00

Author in Attendance: 13:30–15:00

Chairperson: Clare Postlethwaite

- XL117 EGU2011-6970
 Lars H. Smedsrud, **Torge Martin**, and Jens Debernard
 Grease ice parameterisation in sea-ice ocean models
- XL118 EGU2011-2277
Nikhil Radia, Daniel Feltham, and Miguel Angel Morales Maqueda
 Formation of frazil ice in leads and polynyas
- XL119 EGU2011-2272
Harry Heorton, Daniel Feltham, and Ann Keen
 The role of atmospheric jets in ice edge dynamics
- XL120 EGU2011-10158
 Alexander Wilchinsky and **Daniel Feltham**
 Modelling Coulombic failure of sea ice with leads
- XL121 EGU2011-4095
Philipp Griewank and Dirk Notz
 Modelling Sea-ice Desalination
- XL122 EGU2011-14193
Adrian Turner, Elizabeth Hunke, and Cecilia Bitz
 Modeling microphysics and salinity evolution of sea ice
- XL123 EGU2011-11756
 Olivier Lecomte, **Thierry Fichefet**, and Martin Vancoppenolle
 Inclusion of a multi-layer thermodynamic snow scheme in a large scale sea-ice model
- XL124 EGU2011-10976
Sergey Muzylev, Aleksey Marchenko, and Eugene Morozov
 Seiche Motions in Ice-Covered Lakes: Theory and Observations
- XL125 EGU2011-7025
Nuala Carson, Miguel Angel Morales Maqueda, Clare Postlethwaite, and Harry Leach
 Fast Ice
- XL126 EGU2011-12747
Kay Huebner, Dirk Notz, and Karl-Hermann Wieners
 Impact of Snow on Sea Ice Growth
- XL127 EGU2011-12763
Kay Huebner, Davide Zanchettin, and Johann Jungclaus
 Multi-decadal Variability of simulated Sea Ice Cover
- XL128 EGU2011-5246
Pierre Rampal, Jérôme Weiss, Clotilde Dubois, Jean-Michel Campin, and Gaël Forget
 IPCC climate models do not capture Arctic sea ice drift acceleration: Consequences in terms of sea ice thinning and decline
- XL129 EGU2011-10948
Jan-Peter Schulz
 Introducing a sea ice scheme in the mesoscale NWP model COSMO-EU of the German Weather Service
- XL130 EGU2011-1923
Matthieu Chevallier, David Salas y Melia, Vincent Vionnet, Gilles Garric, Sophie Belamari, and Eric Brun
 Sea ice-Ocean modeling at CNRM-GAME for global climate studies: recent improvements of the sea-ice component

- XL131 EGU2011-9894
Andreas Born, Kerim H. Nisancioglu, Christoph C. Raible, and Thomas F. Stocker
Dynamical Impact of Changes in Arctic Sea Ice
- XL132 EGU2011-4897
Svenja Kohnemann, Günther Heinemann, David Schröder, **Sascha Willmes**, and Cornelia Koeberle
Investigation of regional sea ice budgets in the Arctic using the sea ice/ocean model NAOSIM
- XL133 EGU2011-146
Sandra Barreira
Differences between temporal (S-Mode) and spatial (T-Mode) principal component analysis of Antarctic sea ice monthly concentration anomalies: relationship with climate variables.
- XL134 EGU2011-5472
Jan Sedlacek, Olivia Maritus, and Reto Knutti
Influence of the Barents Sea on the summer temperature in Europe and Asia
- XL135 EGU2011-6766
Anna Luomaranta, Jari Haapala, Hilppa Gregow, Kimmo Ruosteenoja, Kirsti Jylhä, and Ari Laaksonen
The changes in the Baltic Sea ice cover by 2050
- XL136 EGU2011-8061
Maddalena Bayer-Giraldi, Ilka Weikusat, and Gerhard Dieckmann
A novel antifreeze protein from sea ice diatoms and its influence on ice microstructure
- XL137 EGU2011-12768
Elizabeth Weatherhead, Jim Maslanik, Peter Boveng, Michael Cameron, Robyn Angliss, Erin Moreland, and Robert Gray
New methods for analyzing sea ice and its influence on biological life

NH6.1/CR11.30 – Snow cover and avalanches (co-organized) – Orals

Convener: Florence Naaim-Bouvet | Co-Conveners: Mohamed NAAIM, Emma Surinach Cornet, Alec van Herwijnen, Jürg Schweizer, David McClung

Room: 11

Chairperson: Charles Fierz

- 08:30–08:45 EGU2011-1978
David McClung and Chris Borstad
Probability distribution of energetic-statistical strength size effect in alpine snow
- 08:45–09:00 EGU2011-14072
Ingrid Reiweger, Stephan Simioni, and Jürg Schweizer
Failure of weak snow layers
- 09:00–09:15 EGU2011-3190
Johan Gaume, Guillaume Chambon, Mohamed Naaim, and Nicolas Eckert
Influence of weak layer heterogeneity on slab avalanche release. Finite Element Modeling.
- 09:15–09:30 EGU2011-9027
Elena Klimenko
Modeling snowpack on avalanche terrain for its stability estimation
- 09:30–09:45 EGU2011-13916
Christoph Mitterer, Achim Heilig, Lino Schmid, Jürg Schweizer, and Olaf Eisen
Measuring wet-snow properties with ground-penetrating radar technology
- 09:45–10:00 EGU2011-5674
Hélène Castebrunet, Nicolas Eckert, and Gérald Giraud
Climatological study of natural avalanche activity of the past 50 years in the French Alps

COFFEE BREAK

Chairperson: Emma Suriñach

- 10:30–10:45 EGU2011-10414
Andrea Soncini and Daniele Bocchiola
Future snow avalanche regime under climate scenarios in the Italian Alps
- 10:45–11:00 EGU2011-1440
Helmut Schreiber, Klaus Lorentsich, Walter L. Randeu, Markus Mayerl, Alexander Podesser, and Arnold Studeregger
Avalanche measurements by the radar-based monitoring system Grimming-Multereck
- 11:00–11:15 EGU2011-8177
Alvaro Soruco, **Emmanuel Thibert**, Christian Vincent, Renaud Blanc, and Raphaële Héno
Measurement of avalanche front velocity from high-speed terrestrial digital photogrammetry

- 11:15–11:30 EGU2011-8448
Magni Hreinn Jónsson, Eiríkur Gíslason, Harpa Grímsdóttir, and Tómas Jóhannesson
 Two-dimensional modeling of snow avalanches in Iceland - applications for hazard mapping and avalanche forecasting
- 11:30–11:45 EGU2011-9857
Margarita E. Eglit
 Effect of the slope curvature on an avalanche dynamics
- 11:45–12:00 EGU2011-2604
Paolo Caccamo, Thierry Faug, Hervé Bellot, Frederic Ousset, and Florence Naaim-Bouvet
 Small-scale tests on granular avalanches against various types of flat obstacles

NH6.1/CR11.30 – Snow cover and avalanches (co-organized) – Posters

Convener: Florence Naaim-Bouvet | Co-Conveners: Mohamed NAAIM, Emma Surinach Cornet, Alec van Herwijnen, Jürg Schweizer, David McClung

Halls X/Y | Display Time 08:00–17:00

Author in Attendance: 15:30–17:00

Chairperson: Thierry Faug

- XY290 EGU2011-7707
Reinhard Fromm and Peter Höller
 Ski pole test: A comparison with traditional observation techniques
- XY291 EGU2011-13927
Klemens Mayer, Ingrid Reiweger, Stephan Simioni, and Jürg Schweizer
 Localisation of acoustic emission events during loading of snow samples
- XY292 EGU2011-10070
Charles Fierz and Michael Lehning
 Revisiting snow settlement simulations performed with SNOWPACK
- XY293 EGU2011-13929
Benjamin Reuter and Jürg Schweizer
 The effect of surface warming on snow slab stiffness and fracture propagation propensity in avalanche snowpacks
- XY294 EGU2011-13923
Sebastian Feick, Stefan Brunner, Christoph Mitterer, and Jürg Schweizer
 Automated detection and analysis of gliding snow
- XY295 EGU2011-13920
Ingrid Reiweger, Christoph Mitterer, and Jürg Schweizer
 2-D modelling of water flow in snow
- XY296 EGU2011-10124
Charles Fierz, Pascal Haegeli, Roger Atkins, Matthias Gerber, Johannes Hörtnagl, John Kelly, Samuel Morin, Patrick Nairz, and Ian Tomm
 An International Standard for the Exchange of Snow Profile Information
- XY297 EGU2011-14073
David McClung
 The strength and weight of evidence in backcountry avalanche forecasting
- XY298 EGU2011-11863
Igor Chiambretti, Mauro Valt, and Stefano Pivot
 Winter season 2009-2010 - avalanche accidents in Italy
- XY299 EGU2011-6477
Mauro Valt and Paola Cianfarra
 Recent snow cover and temperature variability in the Italian Alps and relations to avalanche activity
- XY300 EGU2011-5717
Cristina Pérez, Emma Surinach, Ignasi Vilajosana, Arnold Kogelnig, Martin Hiller, and François Dufour
 Snow avalanche characterization by quantitative study of the generated seismic signals
- XY301 EGU2011-9895
Florence Naaim-Bouvet, Hervé Bellot, Mohamed Naaim, Nishimura Kouichi, and Romain Gaucher
 Measurements of blowing snow : size distribution of snow particles at Lac blanc pass, French Alps.
- XY302 EGU2011-8967
Alexander Prokop and Josef Pichler
 A high resolution approach to define extreme spatial snow heights in avalanche release zones
- XY303 EGU2011-13703
DynAval Team
 A comparison between three avalanche test sites in northwestern Alps as developed in the DYNAVAL-Alcotra project.

- XY304 EGU2011-11116
Monica Barbero, Fabrizio Barpi, Leandro Bornaz, Mauro Borri-Brunetto, Eloïse Bovet, Enrico Bruno, Elisabetta Ceaglio, Bernardino Chiaia, **Valerio De Biagi**, Daniele Fassin, Michele Freppaz, Barbara Frigo, Danilo Godone, Margherita Maggioni, Oronzo Pallara, Luca Pitet, Valerio Segor, Franco Torretta, Davide Viglietti, Arnoldo Welf, and Ermanno Zanini
Preliminary measurements and surveys at the Italian avalanche test site Punta Seehore.
- XY305 EGU2011-2712
Arnold Kogelnig, Cristina Pérez, Emma Suriñach, Johannes Hübl, Ignasi Vilajosana, Lambert Rammer, Martin Hiller, and Francois Dufour
On the use of infrasonic and seismic sensors to determine acoustic emissions of snow avalanches
- XY306 EGU2011-3534
Djebbar Baroudi, Betty Sovilla, and **Emmanuel Thibert**
Effects of flow regime and sensor geometry on snow avalanche impact pressure
- XY307 EGU2011-10840
Monica Barbero, Fabrizio Barpi, Mauro Borri-Brunetto, Eloise Bovet, Enrico Bruno, Elisabetta Ceaglio, Bernardino Chiaia, Valerio De Biagi, **Michele Freppaz**, Barbara Frigo, Oronzo Pallara, Luca Pitet, Valerio Segor, Claudio Vicari, Ermanno Zanini, and Margherita Maggioni
A new test site in Aosta Valley (northwestern Italian Alps) for measuring the effects of snow-gliding on avalanche defence structures
- XY308 EGU2011-5900
Valerio De Biagi, Bernardino Chiaia, Barbara Frigo, and Francesca Del Din
New design guidelines for buildings in hazardous avalanche areas.
- XY309 EGU2011-2107
Benoit Chanut, **Thierry Faug**, and Mohamed Naaim
Force from granular flows on a wall-like obstacle: contribution to snow avalanche dam design
- XY310 EGU2011-12108
Engelbert Gleirscher, Anna Maschek, Jan-Thomas Fischer, Martin Kern, and Markus Aufleger
Granular Experiments on the avalanche mitigation structure 'Muehlauer Klamm', Innsbruck, Tyrol.
- XY311 EGU2011-3737
Philomène Favier, Nicolas Eckert, David Bertrand, and Mohamed Naaim
Optimal design of snow avalanche passive defense structure using extreme value run-out models
- XY312 EGU2011-12360
Philipp Jörg, Matthias Granig, and Peter Sampl
Case studies with SamosAT based on several avalanche events in February and March 2009

