

EGU General Assembly 2012
Programme Group Programme
CR – Cryospheric Sciences

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Monday, 23 April

BG4.2 – Glacial retreat: implications for microbial ecology and biogeochemistry (co-listed) – Posters

Convener: T. J. Battin | Co-Conveners: A. Anesio, B. Sattler

Poster Area BG | Display Time 08:00–19:30

Author in Attendance: 17:30–19:00

Chairperson: n.n.

- BG70 EGU2012-9240
M. Meola, A. Lazzaro, and J. Zeyer
Microbial diversity and biogeochemistry in glacier forefields: assessment of ecological stability in high alpine environments
- BG71 EGU2012-4858
L. Wilhelm, K. Besemer, G. Singer, and T. J. Battin
Microbial biodiversity of the vanishing cryosphere in the Alps
- BG72 EGU2012-5156
C. Fasching, G. Singer, P. Steier, J. Niggemann, T. Dittmar, and T.J. Battin
Ancient soil organic carbon in glaciers supports downstream metabolism in the European Alps
- BG73 EGU2012-7479
A.M. Anesio, J. Telling, M. Tranter, A. Hodson, J. Cook, M. Stibal, M. Yallop, G. Barker, C. Bellas, and J. Wadham
Carbon and Nitrogen fixation at the surface of Glaciers and Ice Sheets
- BG74 EGU2012-11978
B. Frey
Microbial diversity and activity along the forefield of a receding glacier
- BG75 EGU2012-13075
E. Hood, D. Scott, A. Vermilyea, A. Stubbins, P. Raymond, and R. Spencer
Biogeochemistry of glacial runoff along the Gulf of Alaska
- BG76 EGU2012-13353
B. Sattler, M. Tilg, M. Storrie-Lombardi, D. Remias, and R. Psenner
Laser Induced Fluorescence Emission (L.I.F.E.): In Situ Non-Destructive Detection of Microbial Life on Supraglacial Environments
- BG77 EGU2012-13852
M. Laghdass, J. Deloffre, R. Lafite, C. Hänni, B. Gillet, S. Cecillon, P. Simonet, and F. Petit
Shift in prokaryotic diversity in Arctic sediment along a continuum Glacier -River - Fjord using massive 16S rRNA gene tag sequencing

CL1.15 – Temperature observations in the subsurface: contributions to climate sciences, soil sciences, permafrost, glaciology, hydrology, and heat flow studies (co-listed) – Orals

Convener: V. Rath | Co-Conveners: J. Noetzli, F. González-Rouco, J.S. Safanda

Room: 13

Chairperson: Jeanette Noetzli

- 08:30–08:45 EGU2012-9221
S. Gruber
Decreasing sensitivity of permafrost temperature to environmental change challenges monitoring and data interpretation
- 08:45–09:00 EGU2012-7686
D. Kitover, H. Renssen, R. van Balen, J. Vandenberghe, and D.M. Roche
Simulating permafrost evolution in Eurasia during the last deglaciation
- 09:00–09:15 EGU2012-3943
M. N. Gooseff, S. E. Godsey, J. E. Barrett, and A. Lewcowicz
The Influence of Snow, Water Bodies, and Permafrost Degradation on Shallow Soil Energy and Hydrology in the Arctic and Antarctic
- 09:15–09:30 EGU2012-6375
S.C. Steele-Dunne, N. van de Giesen, J.H.A.M. Jansen, C. Hatch, J. Selker, S. Tyler, T. Ochsner, and M.H. Cosh
Distributed Temperature Sensing as a tool for monitoring heat transfer processes in the shallow subsurface
- 09:30–09:45 EGU2012-795
A. Markert, S. Trinks, M Facklam, and G. Wessolek
A new method using evaporation for high-resolution measurements of soil thermal conductivity at changing water contents

- 09:45–10:00 EGU2012-1835
A. Rabinovich, G. Dagan, and T. Miloh
 Underground heat conduction near a spherical inhomogeneity: theory and applications

COFFEE BREAK

Chairperson: J.F. González Rouco

- 10:30–10:45 EGU2012-14423
V. Cermák
 Air - Ground - Bedrock Temperature Coupling, Its Monitoring at Borehole Climate Observatories
- 10:45–11:00 EGU2012-6252
J. Majorowicz, J. Šafanda, W. Gosnold, and M. Unsworth
 Subsurface temperature signature of a large Pleistocene - Holocene surface warming in the North Alberta, Canada
- 11:00–11:15 EGU2012-1423
F. Lucazeau and F. Rolandone
 Heat-Flow and Subsurface Temperature History in Eastern Senegal (West Africa)
- 11:15–11:30 EGU2012-13996
V. Bense
 Hydrogeological analysis using heat as a tracer in a variety of geological settings
- 11:30–11:45 EGU2012-12137
K. Zhu, P. Bayer, and P. Blum
 Urban heat fluxes in the subsurface of Cologne, Germany
- 11:45–12:00 EGU2012-13383
 M. Dłuzewski, **E. Zmudzka**, D. Woronko, and K. Biejat
 The influence of barchan shape on the moisture and temperature of the dune sand and the diversity of local climate

CL1.15 – Temperature observations in the subsurface: contributions to climate sciences, soil sciences, permafrost, glaciology, hydrology, and heat flow studies (co-listed) – Posters

Convener: V. Rath | Co-Conveners: J. Noetzli, F. González-Rouco, J.S. Safanda

Hall Z | Display Time 08:00–19:30

Author in Attendance: 15:30–17:00

Chairperson: Jan Safanda

- Z67 EGU2012-4470
S. Schneider, M. Hoelzle, and C. Hauck
 Influence of subsurface heterogeneity on observed borehole temperatures at a mountain permafrost site in the Upper Engadine, Swiss Alps
- Z68 EGU2012-2859
P. Džurdek, J. Šafanda, and D. Rajver
 Detection and Quantification of Local Anthropogenic and Regional Climatic Transient Signals in Temperature Logs from Czechia and Slovenia
- Z69 EGU2012-7382
V. Cermák, J. Safanda, P. Dedecek, and M. Kresl
 Round-Air Temperature Coupling: Results of Long-Term Temperature-Time Monitoring at the Experimental Borehole Site at Prague (The Czech Republic)
- Z70 EGU2012-6475
V. Rath
 GUMNET - A new subsurface observatory in the Guadarrama Mountains, Spain
- Z71 EGU2012-2754
V. Rath, J. E. Smerdon, J. F. González-Rouco, and H. Beltrami
 Which boreholes do we need to resolve the Common Era in borehole paleoclimatology?
- Z72 EGU2012-2870
G. Bouron, D. Mimoun, and D. Graillet
 Analysis of mechanisms and effects of snow-melting on the groundwater recharge downstream mountainous watershed in a climate-changing context. Example: the Lignon du Forez watershed, Massif Central, France.
- Z73 EGU2012-7609
 D. Demezko, A. Kotlovanova, and **Yu. Khachay**
 Geothermal evidences of pre-industrial ground temperature changes in the Urals and Eastern Europe

- Z74 EGU2012-3707
N. Andrés, D. Palacios, J.J. Zamorano, C.E. Mendoza-Margáin, and L. Vázquez-Selem
Ten years monitoring ground temperature at Iztaccíhuatl Volcano (México).
- Z75 EGU2012-3716
N. Andrés, D. Palacios, J.J. Zamorano, C.E. Mendoza-Margáin, and L. Vázquez-Selem
Deglaciation, ground temperature and volcanic activity in Popocatépetl (México).
- Z76 EGU2012-6493
L.M. Tamarro, D. Palacios, A. Gómez-Ortiz, and F. Salvador-Franch
Snow cover and ground surface temperature on a talus slope affected by mass movements. Veleta cirque, Sierra Nevada, Spain
- Z77 EGU2012-9346
A. Kellerer-Pirklbauer, G. Winkler, and M. Pauritsch
Widespread evidences of hoarfrost formation at a rock glacier in the Seckauer Tauern, Austria
- Z78 EGU2012-11953
E. Santolaria and V. Rath
Parametrizations of land-atmosphere energy and mass transfer: the role of the snow layer and the freeze/thaw cycle
- Z79 EGU2012-12336
M. B. Stevens, H. Beltrami, and J. F. Gonzalez-Rouco
New metrics for permafrost model validation
- Z80 EGU2012-11182
D. Mottaghy, **V. Rath**, and G. Schwamborn
The influence short and long term climate changes on the temperature field at the Lake El'gygytgyn site: results from borehole data and modelling
- Z81 EGU2012-3160
G. Matharoo, H. Beltrami, V. Rath, and L. Tarasov
Effects of long-term history on borehole paleoclimatology
- Z82 EGU2012-12874
V. Rath, J. Alvarez-Solas, M. Montoya, and C. Ritz
Can boreholes help to constrain the dynamics of the Laurentide ice sheet on the millennial time-scale during last glacial period?
- Z83 EGU2012-13109
J. Noetzli, P. Deline, M. Phillips, and A. von Poschinger
Characteristics of the thermal regime in steep bedrock permafrost in the European Alps described by borehole temperatures and heat conduction modeling
- Z84 EGU2012-12981
M. Keuschnig, I. Hartmeyer, A. Schmidjell, and L. Schrott
The adaptation of iButtons® for near-surface rock temperature and thermal offset measurements in a high alpine environment - Instrumentation and first results, Kitzsteinhorn (3203 m), Hohe Tauern, Austria

CR4.10 – Open Session on Permafrost – Orals

Convener: S. Gruber | Co-Conveners: J. Noetzli

Room: 9

Chairperson: n.n.

- 10:30–10:45 EGU2012-6532
D. Amitrano, S. Gruber, and L. Girard
Cryo-induced cracking in high-alpine rock-wall, evidences from acoustic emissions monitoring
- 10:45–11:00 EGU2012-11684
C. Lambiel and C. Scapozza
Discontinuity of mountain permafrost: examples from the western Swiss Alps
- 11:00–11:15 EGU2012-625
T. Rödder and C. Kneisel
Ground thermal conditions and active layer processes within two glacier forefields with heterogeneous permafrost occurrence
- 11:15–11:30 EGU2012-5712
N. Roux, **C. Grenier**, C. Marlin, E. Delangle, A. Saintenoy, J.-M. Friedt, and M. Griselin
Thermo-Mechanical Modeling of a Glacier-Permafrost System in Spitsbergen, Implications for Subglacial Hydrology
- 11:30–11:45 EGU2012-8110
K. Elger, B. Heim, A. Bartsch, Ch. Paulik, C. Duguay, S. Hachem, A. Soliman, J. Boike, M. Langer, and H. Lantuit
Using ground data of the Global Terrestrial Network of Permafrost (GTN-P) for the evaluation of ESA Data User Element (DUE) Permafrost remote sensing derived products

11:45–12:00 EGU2012-1158

C. Knoblauch, A. Sosnin, D. Wagner, and E.-M. Pfeiffer

Carbon mineralisation and trace gas production in Holocene and Late Pleistocene permafrost deposits and surface soils of northeast Siberia

CR4.10 – Open Session on Permafrost – Posters

Convener: S. Gruber | Co-Conveners: J. Noetzli

Hall Z | Display Time 08:00–19:30

Author in Attendance: 17:30–19:00

Chairperson: n.n.

Z139 EGU2012-1102

G. Burba, C. Sturtevant, P. Schreiber, O. Peltola, R. Zulueta, I. Mammarella, S. Haapanala, J. Rinne, T. Vesala, D. McDermitt, and W. Oechel
Methane Emissions from Permafrost Regions using Low-Power Eddy Covariance Stations

Z140 EGU2012-6156

A.H. MacDougall

The permafrost carbon-climate feedback simulated by a coupled global climate model: feedback strength and sensitivity

Z141 EGU2012-3230

C. Schädel, E. A. G. Schuur, A. D. McGuire, J. G. Canadell, J. Harden, P. Kuhry, V. E. Romanovsky, and M. R. Turetsky

Vulnerability of permafrost carbon research coordination network

Z142 EGU2012-8957

I. Antcibor, A. Eschenbach, L. Kutzbach, D. Bolshiyarov, and E.-M. Pfeiffer

Content and distribution of trace metals in pristine permafrost environments of Northeastern Siberia, Russia

Z143 EGU2012-6222

A. Kholodov, D. Gilichinsky, D. Shmelev, S. Davydov, and V. Romanovsky

Modern Dynamics of Permafrost Temperature at the Northern Yakutia.

Z144 EGU2012-11104

F. Mayer, T. Glade, J. Merz, and C.M. Sharma

Scenarios of permafrost changes in the Gokyo valley, Nepal

Z145 EGU2012-3395

S. Imbery, Q. Gao, Z. Sun, M. Duishonakunov, and **L. King**

Permafrost distribution and active layer thickness in the Aksu catchment, Central Tian Shan (P.R. China)

Z146 EGU2012-3654

I.I. Gritsuk, E.I. Debolskaya, O.Ja. Maslikova, and E.V. Zamjatina

The influence of rainfall on the coastal slope deformation of the rivers in permafrost conditions (laboratory simulation)

Z147 EGU2012-10278

F. Costard, E. Gautier, A. Fedorov, P. Konstantinov, and L. Dupeyrat

Fluvial thermal erosion during the ice break-up of the Lena river (Siberia)

Z148 EGU2012-11333

G. Schwamborn, A. Bartsch, B. Heim, F. Günther, and P. Overduin

ASCAT vs. borehole data for extracting seasonal freeze/thaw cycling in soil

Z149 EGU2012-5815

X. Pan, U. Wollschläger, Q. Yu, and K. Roth

Evaluation of Large-scale Permafrost Models at Three Sites on the Qinghai-Tibet Plateau

Z150 EGU2012-6139

Dr. Muskett

In-Situ, Model and Satellite-Derived Snow Water Equivalent Comparisons in Alaskan Permafrost

Biosequestration Regions

Z151 EGU2012-9767

S. Hachem, C. R. Duguay, and A. Soliman

Evaluation of a new 1-km MODIS land surface temperature product, Mackenzie River Basin, Canada

Z152 EGU2012-9780

S. Hoinkes, R. Sailer, M. Lehning, and W. Steinkogler

Large-scale modelling permafrost distribution in Ötztal, Pitztal and Kaunertal (Tyrol)

Z153 EGU2012-9943

S. Westermann, **K.S. Lilleøren**, T.V. Schuler, K. Gislås, and B. Etzelmüller

Towards operational permafrost modeling for Norway

Z154 EGU2012-9889

W. Steinkogler, M. Bavay, and M. Lehning

Permafrost simulations in the Dolomites using Alpine3D

- Z155 EGU2012-11290
N. Deluigi, **C. Lambiel**, and N. Micheletti
A machine learning approach for alpine permafrost distribution modeling
- Z156 EGU2012-10372
J. Abermann, A. Fischer, **L. Hartl**, K. Krainer, U. Nickus, H. Schneider, N. Span, and H Thies
Monitoring of Rock Glacier Äußeres Hochebenkar (Austria): an Overview
- Z157 EGU2012-9492
A. Kellerer-Pirklbauer, M. Avian, V. Kaufmann, E. Niesner, and B. Kühnast
Climate-induced spatio-temporal changes of rock glacier kinematics and temperature regime of permafrost in the Hohe Tauern Range, Austria: One work package within the permAfrost project
- Z158 EGU2012-11020
F. Magnin, P. Deline, L. Ravel, and J. Noetzi
Thermal regime in steep permafrost rockwalls (Aiguille du Midi, 3842 m a.s.l., Mont Blanc massif) based on borehole data and 2D numerical modelling
- Z159 EGU2012-12031
I. Hartmeyer, M. Keuschnig, and L. Schrott
Long-term monitoring of bedrock permafrost within the MOREXPART project - A scale-dependent approach for the investigation of ground thermal conditions in a high alpine environment, Kitzsteinhorn, Austria
- Z160 EGU2012-1840
D. Ottowitz, B. Jochum, R. Supper, M. Keuschnig, and I. Hartmeyer
Permanent geoelectrical and temperature monitoring in the permafrost region Magnetköpfl, Salzburg

CR5.30 – Ice shelves - dynamics, interactions, observations, modelling – Orals

Convener: A. Humbert | Co-Conveners: A. Jenkins, A. Vieli

Room: 20

Chairperson: n.n.

- 08:30–08:45 EGU2012-11056
R. Timmermann and H.H. Hellmer
Projections of ice shelf basal melting in a global finite element sea ice - ice shelf - ocean model
- 08:45–09:00 EGU2012-2855
T. Hattermann, O. A. Nøst, L. H. Smedsrud, and J. M. Lilly
Ocean circulation and basal melting below the Fimbul Ice Shelf, Antarctica
- 09:00–09:15 EGU2012-2885
G. Staub
Variations of northern George VI Ice Shelf Front Linked to Ocean and Atmosphere Variations (2008-2011)
- 09:15–09:30 EGU2012-11685
D. Jansen, A. Luckman, B. Kulessa, E. C. King, and P. Holland
Flow regime of the Joerg Peninsula suture zone, Larsen C Ice Shelf: the role of marine ice
- 09:30–09:45 EGU2012-437
T. Albrecht and A. Levermann
Fracture-induced softening for large-scale ice dynamics
- 09:45–10:00 EGU2012-12695
C. Borstad, E. Larour, M. Morlighem, H. Seroussi, and E. Rignot
Continuum damage modeling of ice shelves: inversion of surface velocities for a state damage variable

CR5.30 – Ice shelves - dynamics, interactions, observations, modelling – Posters

Convener: A. Humbert | Co-Conveners: A. Jenkins, A. Vieli

Hall Z | Display Time 08:00–19:30

Author in Attendance: 17:30–19:00

Chairperson: n.n.

- Z161 EGU2012-825
I. Koch, S. Fitzsimons, N. Cullen, M. Hambrey, D. Samyn, and J.-L. Tison
Composition and microstructure of marine ice in the Southern McMurdo ice Shelf, Antarctica
- Z162 EGU2012-2443
P. Kuipers Munneke, J. C. King, T. Gray, M. R. van den Broeke, and C. H. Reijmer
Surface energy budget of the Larsen C Ice Shelf, and its relation to atmospheric circulation
- Z163 EGU2012-8346
R. C. A. Hindmarsh
An Observationally-Validated Theory of Viscous Flow Dynamics at the Ice-Shelf Calving-Front

- Z164 EGU2012-8547
C. Plate, R. Müller, A. Humbert, N. Wilkens, and D. Gross
 Transformation of creep stresses in ice shelves for fracture mechanical analyses
- Z165 EGU2012-9807
J. Christmann, R. Müller, A. Humbert, and D. Gross
 Numerical Simulation of Calving Events at Antarctic Ice Shelves
- Z166 EGU2012-12332
A. Humbert, N. Wilkens, M. Braun, D. Floricioiu, C. Plate, and R. Müller
 Calving at Pine Island Glacier
- Z167 EGU2012-13422
X. S. Asay-Davis
 A method for simulating dynamic ice shelves in global ocean models

CR5.40 – Subglacial Environments of Ice Sheets and Glaciers – Orals

Convener: B. Hubbard | Co-Conveners: S. W. Vogel, R. Bingham

Room: 5

Chairperson: Bryn Hubbard

- 13:30–13:45 EGU2012-7069
M.P. Lüthi, C. Ryser, G. Catania, M. Hoffman, R. Hawley, M. Funk, T. Neumann, A. Bauder, L. Andrews, and B. Moriss
 Diurnal ice deformation variability driven by subglacial water pressure: Observations from boreholes at the margins of the Greenland Ice Sheet
- 13:45–14:00 EGU2012-1030
T. Cowton, P. Nienow, A. Sole, J. Wadham, G. Lis, D. Chandler, I. Bartholomew, and D. Mair
 Drainage system structure and evolution at a Greenland outlet glacier
- 14:00–14:15 EGU2012-9244
C.J.P.P. Smeets, W. Boot, A. Hubbard, R. Pettersson, F. Wilhelms, M.R. van den Broeke, and R.S.W. van de Wal
 Year round subglacial water pressure and ice velocity data from the West-Greenland ice sheet margin
- 14:15–14:30 EGU2012-245
K. D. Mankoff and J. Gulley
 Small scale high resolution LiDAR measurements of a subglacial conduit
- 14:30–14:45 EGU2012-12450
E Larour, E. Rignot, H. Seroussi, and M. Morlighem
 Constraining basal hydrology with model inversions of basal friction using new InSAR surface velocities.
- 14:45–15:00 EGU2012-2510
D. Dahl-Jensen, P. Gogineni, J. Paden, C. Leuschen, S. Kipfstuhl, M. Montagnat, and E. Waddington
 Deformation and folds of the basal ice under the Greenland ice sheet
- Chairperson: ANO
- 15:30–15:45 EGU2012-11814
E. Magnússon, M. J. Roberts, B. Einarsson, F. Pálsson, T. Jóhannesson, and H. Björnsson
 The effects of jökulhlaups on glacier motion. Several case studies from Vatnajökull ice cap.
- 15:45–16:00 EGU2012-695
N. Ross, M.J. Siegert, R.G. Bingham, H.F.J. Corr, F. Ferraccioli, T.A. Jordan, A. Le Brocq, and D. Rippin
 The Ellsworth Subglacial Highlands and the inception and retreat of the West Antarctic Ice Sheet
- 16:00–16:15 EGU2012-12778
A. Melanson, T. Bell, and L. Tarasov
 Numerical modeling of subglacial erosion and sediment transport beneath the Laurentide Ice Sheet
- 16:15–16:30 EGU2012-6662
P. Winberry, S. Anandakrishnan, D.A. Wiens, R.B. Alley, and M. Pratt
 The stick-spots of Whillans Ice Stream, Antarctica
- 16:30–16:45 EGU2012-77
H. J. Horgan, K. Christianson, R. W. Jacobel, S. Anandakrishnan, and R. B. Alley
 Subglacial Lake Whillans: A Shallow Active Reservoir Beneath a West Antarctic Ice Stream
- 16:45–17:00 EGU2012-1080
J.R. Carr, P.A. Penhale, A. Dahood, N. Biletnikoff, and C.M. Harris
 Blood Falls: A novel management approach for a subglacial feature of outstanding scientific importance

CR5.40 – Subglacial Environments of Ice Sheets and Glaciers – Posters

Convener: B. Hubbard | Co-Conveners: S. W. Vogel, R. Bingham

Hall Z | Display Time 08:00–19:30

Author in Attendance: 17:30–19:00

Chairperson: Bryn Hubbard

- Z168 EGU2012-143
M. Siegert, N. Ross, T. Jordan, F. Ferraccioli, H. Corr, R. Bingham, D. Rippin, A. Le Brocq, D. Young, and D. Blankenship
Basal topography of the Institute and Möller ice streams, West Antarctica: assessing the risk of grounding-line retreat
- Z169 EGU2012-758
J Kingslake and F Ng
Modelling the coupling of flood discharge and glacier flow during jökulhlaups
- Z170 EGU2012-92
Q. Liu and S. Liu
Seasonal evolution of subglacial drainage system in the lower tongue of Hailuogou glacier, China, deduced by repeated dye-tracing experiments
- Z171 EGU2012-882
N. B. Karlsson and D. Dahl-Jensen
Subglacial Drainage Pattern of the Northeast Greenland Ice Stream
- Z172 EGU2012-3402
N. Baker, P. Christoffersen, and M. Bougamont
The influence of subglacial hydrology on the flow of Kamb Ice Stream
- Z173 EGU2012-5225
S. Goeller, M. Thoma, K. Grosfeld, and H. Miller
Ice streams and subglacial lakes - the crucial impact of basal hydrology on ice sheet modeling
- Z174 EGU2012-6470
S.J. Livingstone, C.D. Clark, and L Tarasov
Subglacial lake and meltwater flow predictions of the last North American and European Ice Sheets
- Z175 EGU2012-8148
E. Bucchignani, **D. Mansutti**, F. J. Navarro, J. Otero, and P. Glowacki
Numerical modelling of Amundsenisen Icefield for compatibility check of a subglacial lake. Preliminary tests
- Z176 EGU2012-7995
E. Gudlaugsson, A. Humbert, M. Winsborrow, and K. Andreassen
Subglacial Roughness of the Former Barents Sea Ice Sheet
- Z177 EGU2012-13261
T. Kleiner and **A. Humbert**
Numerical simulations of major ice streams in western Dronning Maud Land, Antarctica, under wet and dry basal conditions
- Z178 EGU2012-13055
K. A. Hogan, J. A. Dowdeswell, I. C. Bartholomew, R. Noormets, M. Garcia, J. Evans, and C. Ó Cofaigh
Subglacial meltwater channels in Marguerite Bay: observations from ROV and ship-mounted instruments
- Z179 EGU2012-13216
MA Werder, IJ Hewitt, C Schoof, M Huss, and GE Flowers
Validation of a novel 2D glacier drainage system model with Gornergletscher's seasonal evolution and lake outbursts
- Z180 EGU2012-10041
G. Kletetschka, T. Fischer, and J. MIs
Temperature Fluctuations underneath the Ice in Diamond Lake, Minnesota
- Z181 EGU2012-10043
A. Keller and M. Funk
Measurement of strain rate components in a glacier with embedded inclinometers
- Z182 EGU2012-11134
I.C. Rutt, D.I. Benn, and N.R.J. Hulton
A simplified model of subglacial drainage
- Z183 EGU2012-12391
M. Kavanagh and L. Tarasov
A fast sub-glacial hydrology solver for continental scale modelling
- Z184 EGU2012-13434
T.T. Creyts
Response of ice motion to tidally influenced subglacial hydraulic systems

CR5.60 – Glacier Monitoring from In-situ and Remotely Sensed Observations – Orals

Convener: M. Zemp | Co-Conveners: L. M. Andreassen, R. Armstrong, F. Paul

Room: 9

Chairperson: n.n.

- 13:30–13:45 EGU2012-12691
B. Raup, R. Armstrong, F. Fetterer, I. Gartner-Roer, W. Haeberli, M. Hoelzle, S.J.S Khalsa, S. Nussbaumer, R. Weaver, and M. Zemp
 Global Terrestrial Network for Glaciers: Databases and Web interfaces
- 13:45–14:00 EGU2012-8304
L. Carturan, R. Filippi, R. Seppi, P. Gabrielli, C. Notarnicola, L. Bertoldi, F. Paul, P. Rastner, F. Cazorzi, and G. Dalla Fontana
 The current deglaciation of the Ortles-Cevedale massif (Eastern Italian Alps): impacts, controls and degree of imbalance
- 14:00–14:15 EGU2012-7698
 T. Khromova, **G. Nosenko**, M. Shahgedanova, and O. Rototaeva
 Deglaciation of the Central Caucasus Mountains, Russia / Georgia, in the 21st century observed with ASTER satellite imagery, based on a new glacier inventory.
- 14:15–14:30 EGU2012-3931
j. shroder, m. bishop, and a. burgett
 Glacier and climate change in Pakistan and Afghanistan
- 14:30–14:45 EGU2012-14033
A. Racoviteanu, M. Williams, and W. Manley
 Spatial patterns in glacier parameters and area changes in the eastern Himalaya (Kanghendzonga area) derived from remote sensing
- 14:45–15:00 EGU2012-2470
 T. Jacob, **J. Wahr**, W.T. Pfeffer, and S. Swenson
 GRACE estimates of 2003-2010 glacial mass loss across High Mountain Asia
 Chairperson: Liss Andreassen & Richard Armstrong
- 15:30–15:45 EGU2012-3002
R. Le Bris and F. Paul
 A semi-automatic method to create central glacier flow lines: A pilot study with Alaskan glaciers
- 15:45–16:00 EGU2012-5328
P. Wagnon, AL. Ramanathan, Y. Arnaud, F. Azam, and C. Vincent
 Long-term mass and energy balance monitoring of Himalayan glaciers (GLACIOCLIM project) : some results for Chhota Shigri Glacier (India), Mera and Changri Nup glaciers (Nepal)
- 16:00–16:15 EGU2012-8792
M. Nüsser and S. Schmidt
 Nanga Parbat Revisited: Glacier changes between the 1930s and 2010
- 16:15–16:30 EGU2012-6738
 L Li, **H Li**, and F Wang
 Observed changes in glaciers in China
- 16:30–16:45 EGU2012-958
V. Popovnin
 Changes in Djankuat Glacier budget and geometry since 1967/68
- 16:45–17:00 EGU2012-9025
B. Hynek, R. Unger, W. Schöner, D. Binder, and G. Weyss
 Comparison of direct and geodetic mass balances of three small glaciers in the Eastern Alps

CR5.60 – Glacier Monitoring from In-situ and Remotely Sensed Observations – Posters

Convener: M. Zemp | Co-Conveners: L. M. Andreassen, R. Armstrong, F. Paul

Hall Z | Display Time 08:00–19:30

Author in Attendance: 17:30–19:00

Chairperson: Richard Armstrong & Liss Andreassen

- Z185 EGU2012-268
S. Baumann, A. Menzel, and F. Seitz
 Estimating glacier mass changes by GRACE satellite gravimetry in the Pamir and Tien-Shan mountains
- Z186 EGU2012-2014
J. Gardelle, E. Berthier, and Y. Arnaud
 Impact of resolution and radar penetration on glacier elevation changes computed from DEM differencing
- Z187 EGU2012-3947
S. Dai, Y. Su, L. Zheng, J. Feng, C. Li, and G Fang
 Dual-channel GPR surveys of No.12 Glacier, Laohugou valley, Qilian Mountain, Western China: ice thickness and internal structure
- Z188 EGU2012-5301
P. W. Leclercq, A. Weidick, F. Paul, T. Bolch, M. Citterio, and J. Oerlemans
 Historical glacier length fluctuations in West Greenland

- Z189 EGU2012-6679
A. Rasmussen
Meteorological controls on glacier mass balance in Central Asia
- Z190 EGU2012-7115
M. Stocker-Waldhuber, H. Wiesenegger, and A. Fischer
New glacier inventory of Salzburg 2007/09
- Z191 EGU2012-8323
L. Rieg, S. Galos, and R. Sailer
Glacier Change in the Ortler-Cevedale Group, Autonomous Province of Bozen, Italy - Airborne Laserscanning and direct surface mass balance measurements
- Z192 EGU2012-8947
S. Schmidt and M. Nüsser
Changes in small glaciers of the Trans-Himalaya of Ladakh, India
- Z193 EGU2012-8984
M. Gardent, A. Rabatel, J.P. Dedieu, P. Deline, and P. Schoeneich
Analysis of the glacier retreat in the French Alps since the 1960s based on the new glacier inventory
- Z194 EGU2012-9525
F. Ponton, A. Walpersdorf, M. Gay, E. Trouvé, J.L. Mugnier, R. Fallourd, N. Cotte, L. Ott, and J. Serafini
GPS and TerraSAR-X time series measure temperate glacier flow in the Mont Blanc massif (France): the Argentière glacier test site.
- Z195 EGU2012-10206
M. Hoelzle, E. Azisov, M. Barandun, W. Hagg, M. Huss, D. Kriegel, H. Machguth, A. Mandychyev, A. Merkulshkin, B. Moldobekov, T. Schöne, H. Thoss, S. Vorogushyn, and M. Zemp
Re-establishment of long-term glacier monitoring in Kyrgyzstan and Uzbekistan, Central Asia
- Z196 EGU2012-10941
L. M. Andreassen, H. Elvehøy, and B. Kjølmoen
Laser scanning of Norwegian mass balance glaciers 2007-2011
- Z197 EGU2012-11220
R. Unger, B. Hynek, D. Binder, W. Schöner, and R. Böhm
Analysis of spatiotemporal volume changes of glaciers: An Example from Goldbergkees and Kleinfleisskees in Goldberggruppe (Hohe Tauern)
- Z198 EGU2012-11692
E Ramirez, R Ribeiro, A Machaca, R Fuertes, and J Simões
Glacier Inventory of the Cordillera Real - Bolivia using high resolution satellite images ALOS and CBERS-2B
- Z199 EGU2012-11913
S. H. Mernild, N. T. Knudsen, and J. C. Yde
Area and volume changes from Greenland's longest-observed local glacier, Mittivakkat Gletscher, and surrounding glaciers
- Z200 EGU2012-12256
L. Sold, M. Huss, M. Hoelzle, P. Joerg, N. Salzmann, and M. Zemp
Methodological approaches to inferring end-of-winter snow distribution on alpine glaciers
- Z201 EGU2012-12298
F. Paul and the Glaciers_cci Team
On the accuracy of glacier outlines derived from satellite data
- Z202 EGU2012-13582
L. Bonardi, L. La Barbera, R. Scotti, and F. Villa
The Regional Mass Balance of Lombardy Alps (Italy) during 2007-2011
- Z203 EGU2012-5585
S. Kutuzov, I.I. Lavrentiev, D.A. Petrakov, and Yu.Ya. Macheret
Recent area and volume changes of Marukh glacier in western Caucasus

GD2.3/GMPV6.8/SM3.6/TS9.8 – Heat flow and thermal regime of the lithosphere: Deep and surface processes (co-listed) – Orals

Convener: A. Vaughan | Co-Conveners: I.M. Artemieva, I. Rogozhina, I. T. Kukkonen, N. Kuszniir

Room: 22

Chairperson: n.n.

- 08:30–08:45 EGU2012-14378
JH Davies and DR Davies
Revised Estimate of Earth's Surface Heat Flow: 47 +- 2 TW
- 08:45–09:00 EGU2012-10762
T. A. Jordan, F. Ferraccioli, and R. C. Hindmarsh
Rifting, heat flux, and water availability beneath the catchment of Pine Island Glacier

- 09:00–09:15 EGU2012-7411
S. Umino and A. Okugawa
 A New Geothermometer Using Crystal Size Variations of the Sheeted Dikes: Insight Into the Thermal Structure of The Upper Oeanic Crust
- 09:15–09:30 EGU2012-9338
F. Schütz and A. Förster
 Surface heat flow of southern Israel based on new borehole data
- 09:30–09:45 EGU2012-6942
I. T. Kukkonen, V. Rath, L. Kivekäs, J. Šafanda, and V. ?ermak
 Geothermal Studies of the Outokumpu Deep Drill Hole, Finland: Vertical variation in heat flow and palaeoclimatic implications
- 09:45–10:00 EGU2012-13626
M. Purucker
 Heat flow inferred from satellite magnetic data over the Antarctic

GD2.3/GMPV6.8/SM3.6/TS9.8 – Heat flow and thermal regime of the lithosphere: Deep and surface processes (co-listed) – Posters

Convener: A. Vaughan | Co-Conveners: I.M. Artemieva, I. Rogozhina, I. T. Kukkonen, N. Kusznr

Hall XL | Display Time 08:00–19:30

Author in Attendance: 17:30–19:00

Chairperson: n.n.

- XL182 EGU2012-4499
M.T Tesauro, M.K Kaban, S.C Cloetingh, and W.M Mooney
 A New thermal and compositional model of the North American lithosphere
- XL183 EGU2012-8095
A.P.M. Vaughan, N. Kusznr, F. Ferraccioli, and T.A.R.M. Jordan
 Regional Heat-flow Prediction for Antarctica using Gravity Inversion Mapping of Crustal Thickness and Lithosphere Thinning
- XL184 EGU2012-7277
V. Spichak, O. Zakharova, and A. Goidina
 3D thermal structure of the Hengill geothermal area (Iceland) revealed from electromagnetic sounding data and temperature well logs
- XL185 EGU2012-9895
I. Rogozhina, J. M. Hagedoorn, Z. Martinec, K. Fleming, and M. Thomas
 Applicability and limitations of large-scale ice-sheet modeling for constraining subglacial geothermal heat flux
- XL186 EGU2012-13345
 R Klenner and **W Gosnold**
 Heat Flow and the Pleistocene Ice Margin
- XL187 EGU2012-9216
Y. Popov, R. Romushkevich, D. Gorobtsov, and D. Korobkov
 Vertical Variations In Heat Flow Inferred From Experiments In Deep Boreholes

HS2.5 – Mountain Hydrology: Monitoring and modeling of snow (merged with Sub-arctic hydrology) (co-listed) –

Orals

Convener: J. Parajka | Co-Conveners: M. Lehning, C. B. Ménard, H. Dahlke, S. McGrane

Room: 33

Chairperson: H. Dahlke

- 08:30–08:45 EGU2012-8543
H. Kooi, V. Watson, and V.F. Bense
 What controls inter-basin variation in cold-season river flow recession in permafrost basins in sub-Arctic Siberia?
- 08:45–09:00 EGU2012-2880
S. Lyon, M. Nathanson, A. Spans, T. Grabs, H. Laudon, J. Temnerud, K. Bishop, and S. Seibert
 Specific discharge variability in a boreal landscape
- 09:00–09:15 EGU2012-11699
N. Wever and M. Lehning
 Snow cover and soil moisture in mountains
- 09:15–09:30 EGU2012-5556
C. B. Ménard, R. Essery, and J. Pomeroy
 Modelling snow distribution and snowmelt energetics in shrub tundra

- 09:30–09:45 EGU2012-13690
M.K. MacDonald, R.L.H. Essery, and J.W. Pomeroy
 Effects of Chinook winds (foehn) on snow cover in western Canada
- 09:45–10:00 EGU2012-4011
D. Tetzlaff, C. Soulsby, J. Buttle, S. Carey, H. Laudon, J. McDonnell, K. McGuire, J. Seibert, and J. Shanley
 Northern Watershed Ecosystem Response to Climate Change (North-Watch) - Towards a comparative ecohydrology of northern catchments.

COFFEE BREAK

Chairperson: C. Ménard

- 10:30–10:45 EGU2012-780
A.A. Sorman, A. Sensoy, E. Yamankurt, and E. Gozel
 A comparison of SRM and HBV models for real time runoff forecasting in the Upper Euphrates Basin, Turkey
- 10:45–11:00 EGU2012-905
M. Girotto, S.A. Margulis, and M. Durand
 Exploration of long-term reanalysis of Sierra Nevada snowpack inferred from snow covered area information
- 11:00–11:15 EGU2012-7531
R. Mott, D. Scipion, A. Berne, N. Dawes, and M. Lehning
 Dynamics of small-scale precipitation enhancement in mountainous terrain
- 11:15–11:30 EGU2012-7849
T. Grünwald, M. Schirmer, and M. Lehning
 Statistical modeling of the small-scale spatial variability of snow depth
- 11:30–11:45 EGU2012-3250
A. Winstral, D. Marks, R. Gurney, and A. Kahl
 A computationally efficient tool for simulating wind-affected snow accumulations
- 11:45–12:00 EGU2012-7053
A. Nolin, K. Blauvelt, K. Gleason, H. Lintz, T. Roth, and E. Sproles
 Linkages between snowcover, fire, and vegetation in mountain watersheds of the Pacific Northwest, USA

HS2.5 – Mountain Hydrology: Monitoring and modeling of snow (merged with Sub-arctic hydrology) (co-listed) – Posters

Convener: J. Parajka | Co-Conveners: M. Lehning, C. B. Ménard, H. Dahlke, S. McGrane

Hall A | Display Time 08:00–19:30

Author in Attendance: 17:30–19:00

Chairperson: S. McGrane

- A102 EGU2012-1394
 T. Kerr, S. Singh, L. Kees, C. Webster, M. Clark, J. Hendrikx, and **R. Woods**
 J-SEx : The Jollie Snow Experiment, New Zealand
- A103 EGU2012-1451
 S. K. Singh, T. Kerr, C. Zammit, and **R. Woods**
 Representation of sub-grid snow variability in stream flow modelling in an Alpine catchment
- A104 EGU2012-1614
A. A. Beylich and K. Laute
 Controls and spatio-temporal variability of runoff, solute fluxes and chemical denudation in the fjord landscape of the inner Nordfjord, western Norway
- A105 EGU2012-1731
K. Förster and G. Meon
 Assessing the model performance of snow water resources simulated by a coupled mesoscale atmospheric and hydrologic model
- A106 EGU2012-2230
S. Morin, Y. Lejeune, B. Lesaffre, J.-M. Panel, D. Poncet, P. David, and M. Sudul
 18 years of quality-controlled snow and meteorological data from a mid-altitude mountain site (Col de Porte, France) for driving and evaluating the snowpack component of land-surface models
- A107 EGU2012-2612
K. Helfricht, M. Keuschnig, A. Heilig, C. Mayer, and M. Kuhn
 Airborne laser scan measurements of winter snow accumulation in high alpine catchments - hydrological implications and verification by ground penetrating radar at glacier surface

- A108 EGU2012-3444
M. Shrestha, L. Wang, T. Koike, H. Tsutsui, Y. Xue, and Y. Hirabayashi
 Inverse simulation of snowmelt runoff and snow cover area using the energy balance-based distributed snowmelt model (WEB-DHM-S) for the correction of basin-scale snowfall
- A109 EGU2012-3725
D. Vikhamar-Schuler, J. M. Edwards, G. Rooney, and J. Kristiansen
 Evaluation of JULES multi-layer snow scheme for Norwegian snow conditions
- A110 EGU2012-4304
T. Grabs, H. Laudon, J. Seibert, M. Wallin, and K. Bishop
 Links between topography and the architecture of near stream zones in the Swedish Krycklan study catchment: Implications for aqueous and gaseous fluxes of organic and inorganic carbon
- A111 EGU2012-4553
J. Mäkinen, M. Tammelin, and T. Kauppila
 Natural phosphorus and dry matter loading from clayey boreal catchments in Finland
- A112 EGU2012-5110
 B. Luks, **M. Osuch**, and R.J. Romanowicz
 A comparison of two approaches to modelling snow cover dynamics at the Polish Polar Station at Hornsund
- A113 EGU2012-5204
A. Frampton, S. L. Painter, and G. Destouni
 Effects of hydrological inputs on the dynamics of permafrost system formation and degradation
- A114 EGU2012-5279
K. Schneider, J. Schöber, and J. Stötter
 Comparing the spatial variability of snow depth on glacierized and non- glacierized surfaces using a geostatistical approach
- A115 EGU2012-5426
L. A. Boscarello, G. Ravazzani, D. Rabuffetti, and M. Mancini
 Raster based snow and glaciers models in large Alpine catchments hydrological balance: the Rhone case study
- A116 EGU2012-5671
M. Rogger, H. Hausmann, K. Krainer, E. Brueckl, and G. Bloeschl
 On the use of geophysical information for distributed hydrological modelling in a mountain catchment
- A117 EGU2012-5893
P. Vrežna, M. Brenčič, I. Sinjur, and S. Sokratov
 Detail isotopic stratigraphy of snowpack - case study from Julian Alps (Slovenia)
- A118 EGU2012-7233
 C. Tobin, **A. Rinaldo**, and B. Schaeffli
 Integrating snowfall limit forecasts to improve hydrological modeling
- A119 EGU2012-7272
S. Surer, K. Bolat, and Z. Akyurek
 A webgis supported snow information system with long time satellite data for Turkey
- A120 EGU2012-7333
S. Frey and H. Holzmann
 Snow cover modelling as an important tool in the rainfall runoff relationship
- A121 EGU2012-8226
Z. Akyurek, S. Surer, and K. Bolat
 Temporal Analysis of Snow Cover Depletion in the Eastern Part of Turkey Based on MODIS-Terra and Temperature Data
- A122 EGU2012-8316
V.F. Bense, H. Kooi, G. Ferguson, and T. Read
 Permafrost degradation as a control on hydrogeological regime shifts in a warming climate
- A123 EGU2012-8820
R. Pimentel, J. Herrero, and M.J. Polo
 Assimilation of multiscale terrestrial photography data into a physical model of snow processes
- A124 EGU2012-9205
U. Strasser, T. Marke, F. Hanzer, H. Ragg, H. Kleindienst, R. Wilcke, and A. Gobiet
 A1B scenario simulations of future natural snow conditions in Tyrol and Styria (Austrian Alps)
- A125 EGU2012-9371
A. Petrelli, B. Crouzy, and P. Perona
 Snow cover and End of Summer Snowline statistics from a simple stochastic model
- A126 EGU2012-9993
E. Mayr, W. Hagg, C. Mayer, and L. Braun
 Influence of snow accumulation and annual glacier mass balance on the calibration results of a spatially distributed conceptual hydrological model
- A127 EGU2012-10181
J. Garvelmann, S. Pohl, and M. Weiler
 The application of time-lapse photography for the observation of snow processes in mountainous catchments

- A128 EGU2012-10782
F. Martina, F. Caparrini, S. Gabellani, R. Rudari, F. Castelli, and G. Boni
Data assimilation in a multilayer dynamic model for soil moisture estimation in mountain regions
- A129 EGU2012-10881
A.-L. Dhomps, E.A. Zakharova, A.V. Kouraev, S. Biancamaria, and N.M. Mognard
Decadal dynamics of Arctic continental water cycle in the framework of MONARCH-A .
- A130 EGU2012-11050
J. Bellinger, S. Achleitner, J. Schöber, K. Schneider, F. Schöberl, and R. Kirnbauer
Sensing runoff sensitivity of snow covered area influenced by vertical discretisation of a hydrological model
- A131 EGU2012-11194
L. Kuksina, N. Alekseevsky, D. Aibulatov, and A. Chetverova
Substantial flows transformation processes in the Lena River delta
- A132 EGU2012-11477
M. Bavay, T. Egger, C. Fierz, and M. Lehning
MeteoIO: A Pre-Processing Library for Numerical Models
- A133 EGU2012-11622
K. Abdollahi and O. Batelaan
A snow extent time series assimilation using MODIS images and temperature data, case study Koohrang, Iran
- A134 EGU2012-11694
L. Hülsmann, T. Geyer, D. Karthe, J. Priess, and C. Schweitzer
Process-based hydrological modeling using SWAT: The effect of permafrost on water resources in the large-scale river catchment Kharaa / Mongolia
- A135 EGU2012-476
M. Dosa, L. Holko, and Z. Kostka
How long does the snow water stay in a catchment?
- A136 EGU2012-11769
I. Clemenzi, F. Pellicciotti, and P. Burlando
Understanding snow accumulation patterns in an highly glacierized alpine catchment
- A137 EGU2012-13716
R. Holden
Snow-vegetation interactions across the tundra-taiga interface: stabilising feedbacks or drivers of rapid environmental change?

Tuesday, 24 April

CR1.40/CL2.11 – State of the cryosphere: observations and modelling (co-organized) – Orals

Convener: J. L. Bamber | Co-Conveners: P. Lemke, F. Pattyn, S. Gruber, M. Van den Broeke, T. Payne, S. Nowicki

Room: 5

Chairperson: n.n.

- 08:30–08:45 EGU2012-5483
S. Kotlarski, C. Steger, T. Jonas, and C. Schär
 Alpine snow cover in a changing climate: A regional climate model perspective
- 08:45–09:00 EGU2012-5280
O. Anisimov, S. Reneva, and V. Kokorev
 Predictive modelling of terrestrial and sub-aquatic permafrost in Northern Eurasia: implications for the global carbon cycle and climate
- 09:00–09:15 EGU2012-11647
F. A. Haumann, D. Notz, H. Schmidt, and M. R. van den Broeke
 Response of Wind-Driven Antarctic Sea-Ice Transport to External Anthropogenic Forcings
- 09:15–09:30 EGU2012-2460
J. Wahr, T. Jacob, W.T. Pfeffer, and S. Swenson
 Recent contributions of all ice-covered regions, including mountain glaciers and ice caps, to sea level rise, as inferred from GRACE
- 09:30–09:45 EGU2012-6524
A. Fischer, J. Abermann, and M. Kuhn
 On the accuracy of estimating the potential sea level rise by scaling the area of mountain glaciers
- 09:45–10:00 EGU2012-10130
R. H. Giesen and J. Oerlemans
 Global glacier volume projections for the 21st century including the dynamical response to changes in climate

COFFEE BREAK

Chairperson: n.n.

- 10:30–10:45 EGU2012-12349
S. Lhermitte, W. Greuell, E. van Meijgaard, R. van Oss, M. R. van den Broeke, and W. J. van de Berg
 Greenland ice sheet surface albedo: trends in surface properties (2000-2011)
- 10:45–11:00 EGU2012-1481
F. Gillet-Chaulet, O. Gagliardini, M. Nodet, C. Ritz, G. Durand, and T. Zwinger
 Greenland Ice Sheet sensitivity to surface mass balance forcing using high resolution full-Stokes simulations
- 11:00–11:15 EGU2012-12304
R. Mottram, G. Aðalgeirsdóttir, F. Boberg, O. Bøssing Christensen, M. Stendel, and J. Hesselberg Christensen
 Regional Climate Projections for Greenland 1980 - 2099 using the HIRHAM5 Model
- 11:15–11:30 EGU2012-8312
I. Sasgen, J.L. Bamber, M. van den Broeke, L. Sandberg Sørensen, B. Wouters, Z. Martinec, M. Horwath, H. Konrad, E. Rignot, and I. Velicogna
 On regional ice sheet mass balance from GRACE, the mass budget method, and ICESat
- 11:30–11:45 EGU2012-11460
A. Jenkins
 A simple parameterisation of melting near the grounding lines of ice shelves and tidewater glaciers
- 11:45–12:00 EGU2012-12900
C. Ritz, G. Durand, T. Edwards, H. Hellmer, T. Payne, S. Shannon, and R. Timmermann
 Antarctic instability and possible associated contribution to sea-level rise

CR1.40/CL2.11 – State of the cryosphere: observations and modelling (co-organized) – Posters

Convener: J. L. Bamber | Co-Conveners: P. Lemke, F. Pattyn, S. Gruber, M. Van den Broeke, T. Payne, S. Nowicki

Hall XL | Display Time 08:00–19:30

Author in Attendance: 17:30–19:00

Chairperson: Jonathan Bamber

- XL63 EGU2012-5816
D. Micu
Shifts during the snow season in the Romanian Carpathians in response to winter temperature and precipitation change
- XL64 EGU2012-6495
G. Serquet, C. Marty, and M. Rebetz
Impact of increasing temperature on snowfall in Switzerland
- XL65 EGU2012-4948
S. Kivinen, E. Kaarlejärvi, K. Jylhä, and J. Räisänen
The impact of warming climate on late summer snow cover in northwestern Finland
- XL66 EGU2012-4714
M. Huss
Extrapolating glacier mass balance to the mountain range scale: The European Alps 1900-2100
- XL67 EGU2012-7748
A.N. Rudoy
Quaternary ledoyoms in the mountains of southern Siberia
- XL68 EGU2012-7322
C. Lang, X. Fettweis, and M. Erpicum
Evaluation of the regional climate model WRF over Svalbard
- XL69 EGU2012-1177
A. Sharov, D. Rieser, and D. Nikolskiy
Glacier mass balance in high-arctic areas with anomalous gravity
- XL70 EGU2012-146
J.R. Carr, C.R. Stokes, and A. Vieli
The role of climatic and oceanic forcing in Arctic tidewater outlet glacier behaviour
- XL71 EGU2012-11732
R Forsberg, L S Sørensen, A Khan, C Aas, D Evansberget, G Adalsteinsdottir, R Mottram, S B Andersen, A Ahlstrøm, J Dall, A Kusk, J Merryman, C Hvidberg, K Khvorostovsky, T Nagler, H Rott, M Scharrer, A Shepard, F Ticconi, and M Engdahl
Ice_Sheets_CCI: Essential Climate Variables for the Greenland Ice Sheet
- XL72 EGU2012-3555
M. Tedesco, M. Hoffman, I. Willis, P. Alexander, and A. Banwell
Multi-directional ice dynamic response to slow and fast supraglacial lake drainages in Greenland.
- XL73 EGU2012-11222
P. Rastner, T. Bolch, N. Mölg, R. Le Bris, and F. Paul
The first glacier inventory for entire Greenland
- XL74 EGU2012-2734
P. L. Svendsen, O. B. Andersen, and A. A. Nielsen
Acceleration of the GrIS mass loss as observed by GRACE
- XL75 EGU2012-12101
C. S. Hvidberg, L. B. Larsen, D. Dahl-Jensen, and S. L. Buchardt
Surface movement and elevation change at the NEEM deep drilling site, North Greenland, 2007-2011
- XL76 EGU2012-8011
R.T.W.L Hurkmans and **J.L. Bamber**
Time-varying mass changes of the Greenland and Antarctic ice sheets from radar and laser altimetry
- XL77 EGU2012-12769
M. Horwath
What do we mean by ice sheet mass trends?
- XL78 EGU2012-9230
K. Scharrer, T. Murray, A. Booth, T. D. James, A. J. Luckman, A. L. Hughes, S. L. Bevan, Y. Drocourt, L. Cordero Llana, N. Selmes, A. Goldsack, S. Cook, J. Bradley, and J. McGovern
Seasonal and inter-annual trends of Greenland tidewater glaciers
- XL79 EGU2012-8675
S. B. Simonsen, L. Stenseng, G. Adalgeirsdottir, and C. S. Hvidberg
Monte Carlo inversion of firn layers observed in firn cores and radar images - a validation of a dynamic firn compaction model
- XL80 EGU2012-1144
G. Picard, F. Domine, G. Krinner, L. Arnaud, E. Lefebvre, N. Champollion, and Q. Libois
Inhibition of the positive snow-albedo feedback by precipitation on the Antarctic plateau
- XL81 EGU2012-2868
J. Grieger, G.C. Leckebusch, and **U. Ulbrich**
Dynamical Impacts on Change of Net Precipitation over Antarctica in an A1B Scenario
- XL82 EGU2012-5760
R. Arthern, R.C.A. Hindmarsh, and C.R. Williams
Initialisation of a vertically-integrated, higher-order ice sheet model using observations of surface mass balance and elevation rate.

- XL83 EGU2012-3595
G. Adalgeirsdottir, A. Aschwanden, R. Mottram, and J.H. Christensen
Projections of the contribution of the Greenland Ice Sheet to sea level rise for the next 100 years
- XL84 EGU2012-10281
H. Goelzer, J.J. Fürst, and P. Huybrechts
Ensemble projections of the Greenland ice sheet contribution to future sea-level rise
- XL85 EGU2012-11852
J.J. Fürst, H. Goelzer, and P. Huybrechts
Future projections of Greenland's ice loss accounting for changes in surface mass balance and dynamic discharge
- XL86 EGU2012-10229
M. Vizcaino, **W.H. Lipscomb**, and M. Van den Broeke
21st century changes in the surface mass balance of the Greenland ice sheet simulated with the global model CESM
- XL87 EGU2012-13457
T.L. Edwards, S.R. Shannon, A.J. Payne, G. Adalgeirsdottir, I.D. Bartholomew, A. Le Brocq, R. Mottram, P.W. Nienow, J. Rae, A. Shepherd, A. Sole, A. Sundal, R. van de Wal, and X. Fettweis
New parameterisations for the Greenland contribution to sea level rise
- XL88 EGU2012-7926
J. Krug, T. Flament, G. Durand, and F. Rémy
Surface curvature as a signature of dynamical thinning
- XL89 EGU2012-12403
W. Lipscomb, J. Johnson, S. Price, and W. Sacks
Modeling Land Ice in the Community Earth System Model
- XL90 EGU2012-7976
R. Winkelmann, A. Levermann, K. Frieler, and M.A. Martin
Uncertainty in Future Solid Ice Discharge from Antarctica
- XL91 EGU2012-6420
M. A. Martin, R. Winkelmann, and A. Levermann
Parameter sensitivity of dynamic ice loss from Antarctica: SeaRISE experiments with the Parallel Ice Sheet Model

GM9.1/CR1.70 – Cold Region Geomorphology (co-organized) – Orals

Convener: M. Spagnolo | Co-Conveners: I. Gärtner-Roer, S. Lukas

Room: 21

Chairperson: Matteo Spagnolo

- 08:30–09:00 EGU2012-3257
J. Shulmeister
Effects of tectonism on glacial and paraglacial processes- a New Zealand case study
- 09:00–09:15 EGU2012-1539
M. Brook and S. Lukas
Lithological and fluvial influences on clast shape measurements in a temperate alpine environment: a case study from Fox Glacier, New Zealand
- 09:15–09:30 EGU2012-10661
C. Godon, J-F. Buoncristiani, and J-L. Mugnier
Detrital flux in glacial and peri-glacial domain: the example of the Bossons glacier (Haute Savoie, Mont-Blanc Massif)
- 09:30–09:45 EGU2012-9900
K.S. Lilleøren, I. Gärtner-Roer, and B. Etzelmüller
A new assessment of distribution and activity of permafrost landforms in the Tröllaskagi peninsula, northern Iceland
- 09:45–10:00 EGU2012-9573
A. Kellerer-Pirklbauer and V. Kaufmann
On the relationship between surface flow velocity and climatic conditions at three rock glaciers in central Austria

COFFEE BREAK

Chairperson: Sven Lukas

- 10:30–11:00 EGU2012-4699
M. Krabbendam
Bedrock properties and glacial processes and landforms - some principles and examples
- 11:00–11:15 EGU2012-173
C. Lloyd, C. Clark, and D. Swift
Controls on the location and geometry of glacial overdeepening
- 11:15–11:30 EGU2012-446
A.J. Geiger, D. Fabel, and N.F. Glasser
Thickness constraints of the Patagonian Ice Sheet over the last glacial cycle using surface exposure dating
- 11:30–11:45 EGU2012-11541
T. Hoffmann and E.A. Johnson
Interglacial geomorphic dynamics during the Quaternary: Does glacial erosion dominates interglacial adjustment?
- 11:45–12:00 EGU2012-13086
S.-E. Lauritzen
Dissolution of calcite in glacial water; evidence of inhibition and consequences for subglacial speleogenesis.

GM9.1/CR1.70 – Cold Region Geomorphology (co-organized) – Posters

Convener: M. Spagnolo | Co-Conveners: I. Gärtner-Roer, S. Lukas

Hall XL | Display Time 08:00–19:30

Author in Attendance: 17:30–19:00

Chairperson: Isabel Roer

- XL250 EGU2012-14345
MS Spagnolo, IG-R Gärtner-Roer, and SL Lukas
Linking glacial, periglacial and paraglacial processes: the challenge of cold regions geomorphology
- XL251 EGU2012-712
I. Szuman, M. Ewertowski, L. Kasprzak, and J.A. Piotrowski
Ice sheet - permafrost interactions inferred from the sedimentary record of Weichselian glaciation in Poland
- XL252 EGU2012-1751
A. Amantov and M. Amantova
Giant glacial cirques of non-mountainous terrains
- XL253 EGU2012-11577
D. Pearce, B. Rea, and D McDougall
Lateglacial geomorphology in the Tweedsmuir Hills, Scotland - Implications for retreat patterns, glacier reconstruction and chronology.
- XL254 EGU2012-3901
X. Wang, **Y. Martin**, D. Sjogren, and E. Johnson
Analysis of Glacial Valley Morphology and Erosion Using DEM Data: Kananaskis, Canadian Rockies, Canada
- XL255 EGU2012-14273
S. Lukas
Processes of annual moraine formation at a temperate alpine valley glacier: glacier dynamics and climatic controls
- XL256 EGU2012-4630
M. Krabbendam, T. Bradwell, and J. Everest
Deep crescentic features caused by subglacial boulder point pressure on jointed rock; an example from Virkisjökull, SE Iceland
- XL257 EGU2012-5278
H. Häusler, A. Kopecny, and D. Leber
Are the stair case terraces in the Inylchek Valley (Central Tien Shan, Kyrgyzstan) of neotectonic or sedimentary origin?
- XL258 EGU2012-5327
H. Häusler, D. Leber, and A. Kopecny
Is Upper Lake Merzbacher (Central Tien Shan, Kyrgyzstan) the result of a fluctuating glacier?
- XL259 EGU2012-12333
H. Juliussen, E.N. Støren, I. Lecomte, G. Sauvin, S. Tissot, S.-E. Hamran, D. Petrakov, I. Lavrentiev, and S. Kutuzov
Coupling alpine lake sediments with slope deposits using a combined geophysical and sedimentological approach, Leirvatnet, Jotunheimen, southern Norway
- XL260 EGU2012-6805
J. Lea, D. Mair, B. Rea, F. Nick, and E. Schofield
Constraining millennial scale dynamics of a Greenland tidewater glacier for the verification of a calving criterion based numerical model

- XL261 EGU2012-14272
H. Lovell, E. Fleming, D.I. Benn, and S. Lukas
Debris-rich structures within a High-Arctic tidewater surging glacier: Tunabreen, Svalbard
- XL262 EGU2012-9833
M. Margold, K.N. Jansson, J. Kleman, and A.P. Stroeven
Late-glacial ice dynamics of the northeastern sector of the Cordilleran Ice Sheet reconstructed from the glacial landform record
- XL263 EGU2012-14270
C.M. Boston and **S. Lukas**
A Lateglacial plateau icefield in the Monadhliath Mountains, Scotland: reconstruction and palaeoclimatic implications
- XL264 EGU2012-1811
K. Laute and A.A. Beylich
Postglacial trends of hillslope development in two glacially formed mountain valleys in western Norway
- XL265 EGU2012-6803
S.P. Anderson, R.S. Anderson, P.J. Kelly, G.E. Tucker, and A. Wickert
Frost weathering: Climate control of regolith production and critical zone evolution
- XL266 EGU2012-11661
R. Scotti, F. Brardinoni, S. Alberti, P. Frattini, and G.B. Crosta
A new rock glacier inventory of the Lombardy, Central Alps, Italy
- XL267 EGU2012-213
R. Perrier, E. Cossart, C. Virmoux, M. Fort, M. Chenet, and J.F. Cuenot
Evolution of cryo-conditioned landforms since the Little Ice Age and implications on permafrost degradation: a case study from the Lac Rouge rockglacier (Clarée Valley, Southern French Alps)
- XL268 EGU2012-9674
S. Monnier and C. Kinnard
From 'true' glaciers to rock glaciers? The case of the Llanos la Liebre rock glacier, dry Andes of Chile.
- XL269 EGU2012-12173
E. Bollmann, J. Abermann, K. Krainer, R. Sailer, M. Spross, and J. Stötter
Influence of topographic and climatological characteristics on rock glacier creep rates in the Western Austrian Alps
- XL270 EGU2012-10818
J. Saraiva, **M. Lousada**, P. Pina, L. Bandeira, and G. Vieira
Geometric and Topologic Characterization of Periglacial Polygonal Networks in Adventdalen, Svalbard, Norway
- XL271 EGU2012-10655
M. Lousada, M. Jorge, J. Saraiva, P. Pina, and G. Vieira
Micro-relief and geometry of ice-wedge polygons in Adventdalen (Svalbard, Norway)
- XL272 EGU2012-9903
C. Klug, R. Sailer, M. Schümborg, and J. Stötter
Airborne laser scanning based quantification of dead-ice melting in recently deglaciated terrain
- XL273 EGU2012-10682
D.C. Tanner, J. Igel, T. Günther, C. Brandes, and C.M. Krawczyk
The Quaternary paleotopography in County Kerry, Ireland: Investigation using detailed 3D electrical resistivity tomography and ground-penetrating radar
- XL274 EGU2012-10025
N. Micheletti, S.N. Lane, and C. Lambiel
Geomorphic modulation of climate impacts on soil-sediment temperature distributions in Alpine mountain basins
- XL275 EGU2012-13586
B. Schreiner
Quantitative analysis of rock slopes in the Turtmantal (Central Swiss Alps) using HRSC data

G3.1/CR1.80/GD3.11 – Glacial Isostatic Adjustment, Mantle Viscosity and Ice Sheet Fluctuations (co-organized) –

Orals

Convener: M. Poutanen | Co-Conveners: W. Fjeldskaar, T. James, V. Klemann, H. Steffen, B. Vermeersen

Room: 17

Chairperson: Willy Fjeldskaar, Volker Klemann

15:30–15:45 EGU2012-3620

L.M. Cathles

Requirements for extracting mantle viscosity from glacial isostatic adjustment

- 15:45–16:00 EGU2012-9773
G. Spada, **V. R. Barletta**, V. Klemann, W. van der Wal, T.S. James, K. Simon, R.E.M. Riva, Z. Martinec, P. Gasperini, B. Lund, D. Wolf, L.L.A. Vermeersen, and M.A. King
Benchmarking and testing the “Sea Level Equation”
- 16:00–16:15 EGU2012-904
R. Steffen, P. Wu, D.W. Eaton, and H. Steffen
Effects of changes in frictional strength and mantle viscosity on the stress behaviour in northeastern Canada
- 16:15–16:30 EGU2012-8451
R. Dietrich, A. Groh, and H. Ewert
Geodetic observations to estimate ice mass changes and GIA in Antarctica
- 16:30–16:45 EGU2012-11356
S. Pagiatakis and M. El-Diasty
Improved g-dot signature in Canada by terrestrial gravity inversion
- 16:45–17:00 EGU2012-1431
W. Fjeldskaar and A. Amantov
Tilting of post-glacial Fennoscandian shorelines requires a low-viscosity asthenosphere

G3.1/CR1.80/GD3.11 – Glacial Isostatic Adjustment, Mantle Viscosity and Ice Sheet Fluctuations (co-organized) – Posters

Convener: M. Poutanen | Co-Conveners: W. Fjeldskaar, T. James, V. Klemann, H. Steffen, B. Vermeersen

Hall Z | Display Time 08:00–19:30

Author in Attendance: 17:30–19:00

Chairperson: Markku Poutanen, Holger Steffen

- Z186 EGU2012-2279
H. Konrad, I. Sasgen, V. Klemann, E. R. Ivins, and **Z. Martinec**
Re-assessing the influence of glacial-isostatic adjustment on Antarctic ice-mass balance estimated from GRACE
- Z187 EGU2012-7563
L. Metivier and M. Greff-Lefftz
The static contribution of Glacial Isostatic Adjustment on the Geoid
- Z188 EGU2012-8862
G. Ruggieri, R. Tenzer, G. Spada, and A. Fadil
Geophysical implications of present-day and late Pleistocene ice melting across New Zealand
- Z189 EGU2012-12605
N. Gomez, D. Pollard, J. X. Mitrovica, P. Huybers, and P. U. Clark
Evolution of a Coupled Marine Ice Sheet - Sea Level Model
- Z190 EGU2012-2559
S. Rasskazov and E. Chebykin
Glaciation control of melting rates in the mantle: U-Th systematics of young basalts from Southern Siberia and Central Mongolia
- Z191 EGU2012-7924
E. Kozlovskaya and the POLENET/LAPNET Working Group Team
Temporal and spatial distribution of glacial earthquakes in Greenland during the IPY 2007-2009
- Z192 EGU2012-6545
J. Mäkinen, J. Näränen, H. Koivula, and M. Poutanen
Gravity change and vertical motion in Dronning Maud Land: implications for models of Glacial Isostatic Adjustment
- Z193 EGU2012-2679
G. A. Nield, P. L. Whitehouse, M. A. King, P. J. Clarke, and M. J. Bentley
The effect of recent accumulation changes in the Antarctic Peninsula upon Glacial Isostatic Adjustment
- Z194 EGU2012-6877
J. Okuno, H. Miura, and Y. Nogi
Effect of glacial isostasy on the depth of Antarctic continental margin
- Z195 EGU2012-7012
H. Jürgenson, A. Liibus, and T. Kall
Height Connections and Land Uplift Rates in West-Estonian Archipelago
- Z196 EGU2012-9658
T. Klügel, R. Falk, G. Liebsch, E. Kühmstedt, C. Plötz, A. Reinhold, P. Steigenberger, R. Wojdzyk, and H. Wziontek
Vertical uplift rates measured by different geodetic techniques at GARS O'Higgins, Antarctic Peninsula

- Z197 EGU2012-2825
A. Barnhoorn, W. van der Wal, and M.R. Drury
 Upper mantle viscosity and lithospheric thickness under Iceland determined from a microphysical modelling approach of mantle rheology
- Z198 EGU2012-13638
W. Van der Wal, A. Barnhoorn, P. Stocchi, P. Wu, M. Drury, and L.L.A. Vermeersen
 Constraints on upper mantle rheology from a 3D GIA model for Fennoscandia
- Z199 EGU2012-12858
H. Steffen and P. Wu
 Determination of mantle viscosity in Fennoscandia from multiple datasets
- Z200 EGU2012-13078
P. Wu, H.S. Wang, and H. Steffen
 The role of thermal effect on mantle seismic anomalies from observations of GIA
- Z201 EGU2012-10781
A. Auriac, F. Sigmudsson, K. H. Spaans, A. J. Hooper, P. Schmidt, and B. Lund
 Rheology beneath Iceland: new insights from InSAR measurements and finite element modeling of uplift due to ice load changes around Vatnajökull ice cap

CR9.10 – Sea ice physical and biological processes and interactions with climate – Orals

Convener: D. L. Feltham | Co-Conveners: C. Postlethwaite, D. Flocco, M. Bayer-Giraldi, M. Ewert

Room: 9

Chairperson: Daniel Feltham

- 13:30–13:45 EGU2012-3704
L. H. Smedsrud
 Arctic sea ice loss: a tale of two seasons
- 13:45–14:00 EGU2012-3146
D. Schroeder, D. Flocco, and D. L. Feltham
 Impact of melt ponds on Arctic sea ice simulations from 1990 to 2007
- 14:00–14:15 EGU2012-2899
O. Lecomte, T. Fichet, M. Vancoppenolle, and F. Massonnet
 On the sensitivity of large scale sea-ice models to snow thermal conductivity
- 14:15–14:30 EGU2012-8934
K. S. Madsen, T. A. S. Rasmussen, J. Blüthgen, and M. H. Ribergaard
 High resolution modelling of the decreasing Arctic sea ice
- 14:30–14:45 EGU2012-13341
K. Giles, S Laxon, A Ridout, D Wingham, and S Bacon
 The wind driven spin-up of the Beaufort Gyre from satellite radar altimetry
- 14:45–15:00 EGU2012-4720
A. Herman and O. G?owacki
 Synoptic-scale variability of satellite-derived sea-ice deformation rates in the Arctic
- Chairperson: Maddalena Bayer-Giraldi
- 15:30–15:45 EGU2012-1203
A. Barthélemy, H. Goosse, P. Mathiot, and T. Fichet
 Inclusion of a katabatic wind parameterization in a coarse-resolution global coupled climate model
- 15:45–16:00 EGU2012-7011
VC Tsai and DE McNamara
 Quantifying the Influence of Sea Ice on Ocean Microseism in Alaska
- 16:00–16:15 EGU2012-6239
S. Thoms, B. Kutschan, K. Morawetz, and S. Gemming
 Thermodynamic treatment of morphogenesis of brine channels in sea ice
- 16:15–16:30 EGU2012-3167
D. Flocco, D. L. Feltham, and D. Shroeder
 A model of the refreezing of melt ponds
- 16:30–16:45 EGU2012-6245
K. M. Golden
 Fluid and electrical transport processes in sea ice
- 16:45–17:00 EGU2012-11390
J.-L. Tison, J. Zhou, D.N. Thomas, S. Rysgaard, H. Eicken, O. Crabeck, F. Deleu, and B. Delille
 Gas transport processes in sea ice: How convection and diffusion processes might affect biological imprints, a challenge for modellers

CR9.10 – Sea ice physical and biological processes and interactions with climate – Posters

Convener: D. L. Feltham | Co-Conveners: C. Postlethwaite, D. Flocco, M. Bayer-Giraldi, M. Ewert

Hall XL | Display Time 08:00–19:30

Author in Attendance: 17:30–19:00

Chairperson: Daniela Flocco

- XL92 EGU2012-3042
A. V. Wilchinsky and **D. L. Feltham**
Modelling discrete failure regimes of anisotropic sea ice
- XL93 EGU2012-5379
Dr Tsamados
Impact of a new anisotropic rheology on the Arctic sea ice
- XL94 EGU2012-5417
H. Heorton, D Feltham, and A Keen
Jet Formation at the Sea Ice Edge
- XL95 EGU2012-4792
A. Petty, D. L. Feltham, and P. R. Holland
The mixed layer over the Antarctic continental shelf
- XL96 EGU2012-10179
M. Wiese, P. Griewank, and D. Notz
Results from a lab study of melting sea ice
- XL97 EGU2012-13880
B. Hwang, J. Wilkinson, H.K Ha, T.W Kim, K. Jackson, and K.H. Chung
Differential sea ice bottom melt rate during late summer in the Chukchi Borderland region
- XL98 EGU2012-1368
S. Hudson, **M. A. Granskog**, B.C. Elder, D.K. Perovich, C. Petrich, and M. Nicolaus
The Radiation Budget of Sea Ice during the Springtime Melt
- XL99 EGU2012-3174
D. Flocco, S. W. Laxon, D. L. Feltham, and C. Haas
Validation and Interpretation of a new sea ice GlobIce dataset using buoys and the CICE sea ice model
- XL100 EGU2012-5091
N. Merz, J. Sedlacek, and C.C. Raible
Impact of the SH sea-ice cover and ocean surface on the Southern Ocean atmospheric variability
- XL101 EGU2012-13660
R. Azzolini, P. Campus, and J. Weber
The Polar Ocean in a Warming Planet: Understanding for managing a unique resource of the Humankind
- XL102 EGU2012-3468
Q. Wu and X. Zhang
Observed forcing?feedback processes between Annular-like atmospheric circulation and sea ice -a Maximum Covariance Analysis
- XL103 EGU2012-9083
C. Postlethwaite and M. Luneva
Brine rejection and cascades in the Arctic
- XL104 EGU2012-5178
D. Salas y Melia, M. Chevallier, and S. Senesi
The impact of the implementation of new physical processes in the sea ice component of CNRM-CM5 ESM
- XL105 EGU2012-1957
F. Massonnet, T. Fichefet, G. Philippon-Berthier, C. Bitz, M. Holland, H. Goosse, and P. -Y. Barriat
The 21st century changes in the Arctic sea ice cover as a function of its present state : what can we learn from CMIP5 models ?
- XL106 EGU2012-4058
L. Bobylev, S. Kuzmina, O. M. Johannessen, and G. Alekseev
Temperature dependence of the Northern Hemisphere sea ice extent derived from observations and AR4 models
- XL107 EGU2012-6503
K. Castro-Morales, R. Gerdes, K. Riemann-Campe, C. Köberle, and M. Losch
Arctic sea-ice variability and its implication to the path of pollutants under a changing climate
- XL108 EGU2012-7423
K. Riemann-Campe, R. Gerdes, K. Castro-Morales, M. Karcher, F. Kauker, C. Köberle, and M. Losch
Changes in Arctic sea ice distribution and variability during the next decades
- XL109 EGU2012-8399
L. Behrens, T. Martin, V. Semenov, and M. Latif
The Arctic sea ice in climate models - variability and anthropogenic climate change
- XL110 EGU2012-10650
V.A. Semenov, L. Behrens, T. Martin, M. Latif, and W. Park
The difference between summer and winter Arctic sea ice change as a fingerprint of anthropogenic climate change

- XL111 EGU2012-10452
Y. Hu, G. Nehrke, G. Dieckmann, C. Völker, and D. Wolf-Gladrow
The study of ikaite formation in sea ice
- XL112 EGU2012-12141
I. Weikusat and M. Bayer-Giraldi
The influence of an antifreeze protein from a polar diatom on ice crystal orientation and growth
- XL113 EGU2012-13585
M. Ewert and **M. Bayer-Giraldi**
Extracellular macromolecules in sea-ice: Effects on sea-ice structure and their implications
- XL114 EGU2012-6559
M. Fernández-Méndez, I. Peeken, E.M. Nöthig, F. Wenzhöfer, and A. Boetius
Sea ice primary productivity in the central Arctic during summer 2011
- XL115 EGU2012-12122
E. Weatherhead, U. Herzfeld, and J. Maslanik
Circum-Arctic Efforts to understand sea and seal populations from images

CR10.10 – Ice-sheet and climate interactions – Orals

Convener: P. Huybrechts | Co-Conveners: A. Ganopolski, T. Fichefet

Room: 5

Chairperson: Philippe Huybrechts

- 13:30–13:45 EGU2012-2514
D. Dahl-Jensen
The role of the Greenland ice sheet in future sea level - based on palaeorecords from ice cores and present observations.
- 13:45–14:00 EGU2012-10049
W. J. van de Berg, M. M. Helsen, R. S. W. van de Wal, M. R. van den Broeke, and J. Oerlemans
Greenland Ice Sheet retreat during the Eemian
- 14:00–14:15 EGU2012-4426
A. Born and K.H. Nisancioglu
Melting of Northern Greenland during the last interglaciation
- 14:15–14:30 EGU2012-6978
U. Mikolajewicz, M. Vizcaíno, C. Rodehacke, and F. Ziemer
Anthropogenic climate change and the Greenland ice sheet
- 14:30–14:45 EGU2012-5482
A. Robinson, M. Perrette, R. Calov, and A. Ganopolski
Irreversible melting of the Greenland Ice Sheet
- 14:45–15:00 EGU2012-6262
P. L. Langen, A. M. Solgaard, and C. S. Hvidberg
Self-inhibiting growth of the Greenland Ice Sheet
- Chairperson: Andrey Ganopolski
- 15:30–15:45 EGU2012-6651
L.M. Wake, G. A. Milne, A. J. Long, and S. A. Woodroffe
The Medieval Warm Period-Little Ice Age Relative Sea Level Slowdown in Western Greenland: A response of the Greenland Ice Sheet to a phase shift of the North Atlantic Oscillation?
- 15:45–16:00 EGU2012-2829
J. L. Bamber, E. Behrens, C. Boening, M. van den Broeke, J. Lenaerts, J. Ettema, and E. Rignot
Enhanced melting of the Greenland ice sheet and its impact on the Subpolar North Atlantic and AMOC
- 16:00–16:15 EGU2012-4286
M.E. Weber, P.U. Clark, W. Ricken, J.X. Mitrovica, S.W. Hostetler, and G. Kuhn
Interhemispheric ice-sheet synchronicity during the Last Glacial Maximum
- 16:15–16:30 EGU2012-13667
R. DeConto, D. Pollard, and D. Kowalewski
Antarctic ice sheet response to combined surface and oceanic sub-ice shelf melt during past interglacials and in the future
- 16:30–16:45 EGU2012-12573
J. Alvarez-Solas, M. Montoya, A. J. Robinson, R. Banderas-Carreño, C. Ritz, and A. Ganopolski
Northern Hemisphere millennial-scale ice discharges as a response to oceanic forcing simulated with a hybrid ice-sheet/ice-shelf model
- 16:45–17:00 EGU2012-12551
N. Zeng
The role of climate-icesheet-carbon interaction in glacial-interglacial cycles

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

Convener: S. Winkler | Co-Conveners: T. Davies, M.P. Kirkbride, L. Iturrizaga

Room: 21

Chairperson: Stefan Winkler

- 13:30–13:45 EGU2012-5435
S. Lukas, A. Graf, S. Coray, and C. Schlüchter
 Genesis, stability and preservation potential of large lateral moraines of Alpine valley glaciers - towards a unifying theory
- 13:45–14:00 EGU2012-3745
N. Andrés and D. Palacios
 Interpretation of the past glacial landforms from the present processes: the hypothesis of the secondary moraine
- 14:00–14:15 EGU2012-910
 L. Kasprzak, **M. Ewertowski**, I. Szuman, and A.M. Tomczyk
 Depositional efficiency of the weichselian ice sheet. Central-West Poland.
- 14:15–14:30 EGU2012-10154
B. Mächtle, A.S. Hein, T. Dunai, and B. Eitel
 Geomorphological evidence of warm-humid and cold-dry glaciations in the dry western Cordillera of the tropical Peruvian Andes
- 14:30–14:45 EGU2012-6256
D. McDougall
 Glaciation Style, Paraglacial Reworking and the Geomorphological Record: The Challenges of Reconstructing Younger Dryas Glaciers
- 14:45–15:00 EGU2012-6316
G. Roe
 The Natural Variability of Glaciers

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

Convener: S. Winkler | Co-Conveners: T. Davies, M.P. Kirkbride, L. Iturrizaga

Hall XL | Display Time 08:00–19:30

Author in Attendance: 17:30–19:00

Chairperson: Stefan Winkler

- XL276 EGU2012-12364
P. Fu, J. Harbor, A.P. Stroeven, C. Hättestrand, M.W. Caffee, J. Heyman, and L.P. Zhou
 Paleo-glaciations of the Shaluli Shan, southeastern Tibetan Plateau
- XL277 EGU2012-5911
D.H. Roberts, B. Rea, T. Lane, C. Schnabel, and A. Rodes
 The Uummannaq Ice Stream System, West Greenland
- XL278 EGU2012-2459
E. Ravier, J.F. Buoncristiani, S. Clerc, M. Guiraud, and E. Portier
 Sedimentological and deformational evidence for a terrestrial deglaciation: Ballyhorsey, eastern Ireland
- XL279 EGU2012-2966
K. Leith, J. Moore, P. Sternai, S. Ivy-Ochs, F. Hermann, and S. Loew
 Reconstruction of an extensive Younger Dryas glacial stadial in Canton Valais, Switzerland
- XL280 EGU2012-3573
L.L. Siame, H.-T. Chu, D.L. Boulès, F. Derrieux, L. Léanni, R.-F. Chen, and C.-C. Kang
 Preservation of glacial landforms in the high mountains of Taiwan: Insights from in situ cosmogenic ¹⁰Be
- XL281 EGU2012-6570
E. Šink?n? and P. Šink?nas
 Sedimentary structures from different proglacial glaciofluvial settings in Lithuania
- XL282 EGU2012-8762
P. Šink?nas, B. Karmaza, D. Karmazien?, V. Kazakauskas, and R. Waller
 Architecture and sedimentation pattern of Skeidarárjökull end moraine at Gigjukvisl gap, Iceland
- XL283 EGU2012-7838
A. Rudoy
 Study diluvium: general provisions.
- XL284 EGU2012-3664
J. Alcalá, D. Palacios, and L. Vázquez-Selém
³⁶Cl Exposures Ages and Equilibrium Line Altitude (ELA) of the Ampato Volcanic Complex (Southern Peru).
- XL285 EGU2012-3683
J. Úbeda, D. Palacios, and L. Vázquez-Selém
 Glacial and volcanic evolution on Nevado Coropuna (Tropical Andes) based on cosmogenic ³⁶Cl surface exposure dating

- XL286 EGU2012-3686
L. García-Sancho, **D. Palacios**, J.J. Zamorano, A. Green, M. Vivas, and A. Pintado
Recent Deglaciation of Darwin Mountains (Tierra de Fuego) after Little Ice Age: monitoring by photogrammetry, lichenometry, dendrochronology and field studies.
- XL287 EGU2012-3702
J. Úbeda, C. Giráldez, and D. Palacios
Equilibrium Line Altitudes and paleotemperature reconstructions from Nevado Hualcán (9°S) and Nevado Coropuna (15°S), Tropical Andes (Peru).
- XL288 EGU2012-3738
D. Palacios, N. Andrés, G. Vieira, J. Marcos, and L. Vázquez-Selem
Last Glacial Maximum and deglaciation of the Iberian Central System.
- XL289 EGU2012-3751
A. Gómez-Ortiz, **D. Palacios**, B. Palade, L. Vázquez-Selem, F. Salvador-Franch, and L.M. Tanarro
The deglaciation of the Sierra Nevada (southern Spain) and derived landforms
- XL290 EGU2012-3755
D. Palacios, L. García-Sancho, J.J. Zamorano, N. Andrés, and A. Pintado
The deglaciation of Iztaccíhuatl volcano (Mexico) from the Little Ice Age maximum to the present, determined by photogrammetry and lichenometry
- XL291 EGU2012-3759
D. Palacios, N. Andrés, J. Úbeda, J. Alcalá, J. Marcos, and L. Vázquez-Selem
The importance of polygenic moraines in the paleoclimatic interpretation from cosmogenic dating
- XL292 EGU2012-4446
A. Perret, E. Reynard, and J.-J. Delannoy
Glacial history of a mid-altitude mountain massif: cartography and dating in the Chablais area (France, Switzerland)
- XL293 EGU2012-5070
M. Bichler, M. Reindl, H. Häusler, and J. M. Reitner
Chronology of glacial and periglacial deposits in front of the 1850 moraine of the Goldberg-Glacier, Sonnblick area (Salzburg/Austria)
- XL294 EGU2012-9576
R.A. Shakesby and J.A. Matthews
Pronival ramparts, moraines, rockglaciers or slope failures? Distinctions and palaeoclimatic pitfalls of misidentification.
- XL295 EGU2012-8258
M. Brook, D. Quincey, and S. Winkler
Moraine formation during an advance/retreat cycle at a temperate alpine glacier
- XL296 EGU2012-6451
N. Reznichenko, T.R.H. Davies, J. Shulmeister, and S. Winkler
The rock avalanche sediment in moraines and its implication for palaeoclimate reconstruction
- XL297 EGU2012-13653
L. Iturrizaga
Glacial landform assemblages in the catchment area of the upper Quitarasca valley (Cordillera Blanca, Perú)
- XL298 EGU2012-6508
I. W. Wolff and N. F. Glasser
The Reconstruction and Climatic Implication of an Independent Palaeo Ice Cap in the Vicinity of the Lago Buenos Aires/Lago Pueyrredón Palaeo Ice Streams, Patagonia.

HS5.9 – Hydrological, ecological, geomorphic and economic implications of Mountain Resort Development (co-listed) – Orals

Convener: C. de Jong | Co-Conveners: B. Wemple

Room: 39

Chairperson: C. de Jong, B. Wemple

- 10:30–10:45 EGU2012-12589
B. McGlynn, K. Gardner, and L. Marshall
Quantifying watershed sensitivity to spatially variable N loading from mountain resort development
- 10:45–11:00 EGU2012-14025
S. Gaucherand and I. Mauz
Winter Tourism and mountain wetland management and restoration
- 11:00–11:15 EGU2012-13938
G. David
Effects of mountain resort development on stream geomorphic function in the White River National Forest, Colorado, USA

- 11:15–11:30 EGU2012-9417
R Ristic, B Radic, N Vasiljevic, Z Nikic, and I Malusevic
 Erosion Processes, Sediment Transport and Hydrological Responses Due to Land Use Changes in Serbian Ski Resorts
- 11:30–11:45 EGU2012-14085
 A.L. Shnyarkov, Y.G. Seliverstov, **S.A. Sokratov**, and K.P. Koltermann
 Change in snow avalanche and debris flow hazards in the region of Krasnaya Polyana as the result of anthropogenic activity
- 11:45–12:00 EGU2012-11398
C. Gonseth
 The economic aspects of artificial snow production in the perspective of climate change

HS5.9 – Hydrological, ecological, geomorphic and economic implications of Mountain Resort Development (co-listed) – Posters

Convener: C. de Jong | Co-Conveners: B. Wemple

Hall A | Display Time 08:00–19:30

Author in Attendance: 17:30–19:00

Chairperson: B. Wemple, C. de Jong

- A306 EGU2012-12889
P. Allamano, P. Claps, and D. Poggi
 Reproducing snow making strategies with deterministic modeling and image-based validation
- A307 EGU2012-3754
M. Bonriposi and E. Reynard
 Water use demand in the Crans-Montana-Sierre region (Switzerland)
- A308 EGU2012-3761
E. Magnier and E. Reynard
 Artificial snowmaking and potential water conflicts in mountain resorts. The case of Avoriaz (Haute-Savoie, France)
- A309 EGU2012-14027
M. Breiling and S Sokratov
 Water demand for ski resort development in the Austrian Alps: an Overview
- A310 EGU2012-12979
T. Covino, B. McGlynn, R. McNamarra, and K. Gardner
 In-stream nutrient uptake kinetics along stream size and development gradients in a rapidly developing mountain resort watershed
- A311 EGU2012-13485
 J. Shanley and **B. Wemple**
 Effects of mountain resort development - a case study in Vermont USA
- A312 EGU2012-13763
A. del Peral and B. Wemple
 Evaluating the effects of mountain resort development on snowmelt and runoff production: a case study from northern New England, USA
- A313 EGU2012-14024
B Radi?, R Risti?, N Vasiljevi?, Z Niki?, J Beloica, and I Maluševi?
 Multi-level landscape degradation due to tourist-oriented land use changes in Serbian mountainous regions
- A314 EGU2012-655
I. Blinova and A. Bredikhin
 Assessment of geomorphic risks and attractiveness to recreational systems: a case of Nalychevo Nature Park (Kamchatka, Russia).
- A315 EGU2012-12937
C. de Jong
 Natural hazards in the Alps triggered by ski slope engineering and artificial snow production
- A316 EGU2012-14186
H.P. Rauch, S. Schuler, and M. Oberhammer
 Monitoring of performance of greening techniques on skiing runs at the skiing region of Montafon/Vorarlberg
- A317 EGU2012-14424
R Imhof
 Tourism and Water: Themes of the Alpine Convention
- A318 EGU2012-2694
 S. Piccione, **E. Comino**, M. Rosso, and I. Chouquet
 Hydrological, geomorphological and ecological river characterization: PELLIDRAC (Alcotra Project)

Wednesday, 25 April

CR1.10 – Open Topics in Cryospheric Research – Orals

Convener: D. G. Vaughan | Co-Conveners: C. de Jong

Room: 5

Chairperson: David Vaughan / Carmen de Jong

- 15:30–15:45 EGU2012-990
J.M. Scheidegger and **V.F. Bense**
Potential inflow of sub-glacial groundwater to proglacial lakes along the western margin of the Greenland Ice Sheet
- 15:45–16:00 EGU2012-4697
M. Huss and D. Farinotti
A new approach for estimating ice thickness distribution of 90'000 mountain glaciers around the globe
- 16:00–16:15 EGU2012-9677
A.S. Drouet, **G. Durand**, F. Gillet-Chaulet, L. Favier, E. Le Meur, J. Braun, M. Sacchetti, D.A. Young, D.D. Blankenship, J.S. Greenbaum, E. Rignot, J.W. Holt, M. Siegert, D. Kirchner, J. Mouginot, Y. Gim, and B. Scheuchl
A New Design for Digital Elevation Models of Bedrock Underlying Ice Sheets
- 16:15–16:30 EGU2012-6149
Dr. Muskett
Multi-Satellite and Sensor Derived Trends and Variation of Snow Water Equivalent on the High-Latitudes of the Northern Hemisphere: Implications for Permafrost Biosequestration Stability
- 16:30–16:45 EGU2012-11481
B. Rea, D.J.A. Evans, D.I. Benn, and A.J. Brennan
Top-down or bottom-up? Assessing crevassing directions on surging glaciers and developments for physically testing glacier crevassing models.
- 16:45–17:00 EGU2012-12197
I. Rogozhina, J. M. Hagedoorn, Z. Martinec, K. Fleming, O. Soucek, R. Greve, and M. Thomas
The effects of the uncertainties in geothermal heat flux distribution on the present-day Greenland Ice Sheet

CR1.10 – Open Topics in Cryospheric Research – Posters

Convener: D. G. Vaughan | Co-Conveners: C. de Jong

Hall Z | Display Time 08:00–19:30

Author in Attendance: 17:30–19:00

Chairperson: David Vaughan / Carmen de Jong

- Z165 EGU2012-1033
J.A. MacGregor, M.A. Fahnestock, G.A. Catania, S.F. Price, and J. Paden
The gap between ice-penetrating radar observations and the boundary conditions used in ice-sheet models
- Z166 EGU2012-2449
J. Abermann, C. Kinnard, and S. MacDonell
Variations of surface albedo of glaciers in the semi-arid Andes of Chile
- Z167 EGU2012-11324
B. Seiser, K. Helfricht, M. Huss, A. Fischer, E. Veulliet, H. Schönlaub, M. Kuhn, and U. Strasser
MUSICALS - (MULTIscale Snow/ICemelt Discharge Simulation into ALpine ReservoirS): Validation of a method to estimate ice volume and ice thickness distribution in the Ötztal Alps, Tyrol, Austria
- Z168 EGU2012-11605
A. Haberkorn, A. Fischer, and R. Sailer
Internal melt as an important contributor to the total mass balance of Alpine glaciers
- Z169 EGU2012-3005
V.O. Ivchenko, R. Marsh, S. Alderson, G. Bigg, G. Madec, and Ye. Aksenov
Modelling iceberg trajectories and melting in the NEMO Global Ocean Model
- Z170 EGU2012-117
A. Nesterenok
Cosmogenic ¹⁴C in situ formation by cosmic ray nucleons in polar ice
- Z171 EGU2012-654
Dr. Buchroithner and Dr. Trombotto
Cryophenomena in the Cold Desert of Atacama
- Z172 EGU2012-1707
T. Y. Gan and R. Barry
Global Cryosphere - Past, Present and Future

- Z173 EGU2012-6154
Dr. Muskett
 Land-Surface Temperature Changes on the High-Latitudes of the Northern Hemisphere and Permafrost Biosequestration Stability
- Z174 EGU2012-7921
P. J. Blaen, D. M. Hannah, L. E. Brown, and A. M. Milner
 Water Temperature Dynamics in High Arctic River Basins
- Z175 EGU2012-10666
M. Spagnolo, C.R. Stokes, C.D. Clark, and R.B. Dunstone
 Mega-scale glacial lineations and drumlins: a morphological continuum?

CR1.20 – Applied Geophysics in Cryosphere Sciences – Orals

Convener: O. Eisen | Co-Conveners: RD Drews, B. Kulesa

Room: 9

Chairperson: n.n.

- 13:30–13:45 EGU2012-9099
A. Nuber, L. Rabenstein, J. A. Lehmann-Horn, H. Eicken, A. Mahoney, and S. Hendricks
 Surface Nuclear Magnetic Resonance Tomography on a First-Year Sea Ice Pressure Ridge
- 13:45–14:00 EGU2012-5902
S.S Hubbard, C. Gangodagamage, B. Dafflon, H. Wainwright, C. Ulrich, A. Gusmeroli, Y. Wu, J. Doetsch, J.E. Peterson, C. Wilson, C. Tweedie, and S.D. Wullschlegler
 Quantifying and Relating Subsurface and Land-surface Variability in Permafrost Environments using Surface Geophysical and LIDAR Datasets.
- 14:00–14:15 EGU2012-5339
R. S. Fausto, D. van As, and A. P. Ahlstrøm
 Assessing the accuracy of Greenland ice sheet ice ablation measurements by pressure transducer
- 14:15–14:30 EGU2012-12430
M. Krautblatter and A. Kemna
 Quantitative electrical imaging in permafrost rock walls
- 14:30–14:45 EGU2012-7465
F. Walter, S. Husen, M. Meier, K. Plenkers, S. Hiemer, C. Ryser, M. Lüthi, M. Funk, G. Catania, and J. Clinton
 Seismology on the Greenland ice sheet: results from the deployment of a high-density campaign seismic network in 2011
- 14:45–15:00 EGU2012-2107
K.J. Merz, HR. Maurer, L. Rabenstein, T. Buchli, and S.M. Springman
 Geophysical Characterization of unstable Permafrost in the Turtmann Valley, Switzerland.

CR1.20 – Applied Geophysics in Cryosphere Sciences – Posters

Convener: O. Eisen | Co-Conveners: RD Drews, B. Kulesa

Hall Z | Display Time 08:00–19:30

Author in Attendance: 17:30–19:00

Chairperson: n.n.

- Z176 EGU2012-4559
AD Booth, RA Clark, B Kulesa, T Murray, and A Hubbard
 Seismic interpretation of subglacial till units: thin layer effects in amplitude-versus-angle (AVA) analysis.
- Z177 EGU2012-2850
D. Farinotti, H. Corr, E. King, and G.H. Gudmundsson
 Ice thickness distribution of Flask Glacier, Antarctic Peninsula, as measured by airborne radio-echo sounding
- Z178 EGU2012-2851
P. Ott, M. Mössinger, R. Sailer, and O. Sass
 Comparison of applied Geophysical Methods for detecting high alpine ground ice
- Z179 EGU2012-5835
A. Godio, L.V. Socco, F. Garofalo, A. Arato, and A. Théodule
 P-wave and surface wave survey for permafrost analysis in alpine regions
- Z180 EGU2012-4447
S. Schneider, C. Hauck, and M. Hoelzle
 Characterization of high mountain periglacial material by geophysical measurements within the Murtèl-Corvatsch Area, Swiss Alps
- Z181 EGU2012-10628
N. B. Karlsson, D. Dahl-Jensen, S. P. Gogineni, J. Paden, and C. S. Hvidberg
 Automatic Detection of the Holocene Transition in Radio-Echo Sounding Data from the Greenland Ice Sheet

- Z182 EGU2012-1383
O. Eisen, A. Diez, C. Hofstede, A. Lambrecht, C. Mayer, and H. Miller
Performance of light vibroseis sources on polar firn
- Z183 EGU2012-760
A. Diez, O. Eisen, C. Hofstede, T. Bohlen, I. Weikusat, and S. Kipfstuhl
Determination of crystal orientation fabric from seismic wideangle data
- Z184 EGU2012-8693
H. Juliussen, A. Oswald, T. Watanabe, H.H. Christiansen, and N. Matsuoka
Monitoring active layer thaw and freeze-back in four different periglacial landforms in Svalbard using Electrical Resistivity Tomography (ERT)
- Z185 EGU2012-317
D. Dräbing and M. Krautblatter
The influence of ice-pressure on p-wave velocity in alpine low-porosity rocks: a modified time-average model
- Z186 EGU2012-8633
P. Dalban Canassy, H. Maurer, and S. Husen
Icequake sources location on Triftgletscher (Switzerland) using different velocity models.

CR1.90 – Modeling, measurements and applications of snow stratigraphy and microstructure – Posters

Convener: S. Morin | Co-Conveners: H. Loewe

Hall Z | Display Time 08:00–19:30

Author in Attendance: 17:30–19:00

Chairperson: n.n.

- Z187 EGU2012-150
M. Schneebeli
Hysteresis in snow metamorphism
- Z188 EGU2012-2882
M. Dumont, C. M. Carmagnola, F. Domine, P. Wright, M. Bergin, J. Dibb, L. Arnaud, G. Picard, N. Champollion, and S. Morin
Modeled and measured spectral albedo of surface snow over central Greenland
- Z189 EGU2012-4345
K. Anttila, T. Manninen, T. Karjalainen, and P. Lahtinen
The temporal variation of snow surface roughness in Sodankylä Finnish Lapland in 2009-2010
- Z190 EGU2012-7127
C. M. Carmagnola, **S. Morin**, L. Arnaud, G. Picard, Y. Lejeune, B. Lesaffre, and E. Lefebvre
Co-located high-resolution specific surface area and snow-micropenetrometry profiling in a mid-altitude alpine snowpack
- Z191 EGU2012-9362
Q. Libois, G. Picard, L. Arnaud, M. Dumont, and S. Morin
Influence of snow grain shape on the penetration depth of light within a snowpack
- Z192 EGU2012-9933
C. Fierz, H. Löwe, and S. Schleefer
Comparing snow settlement at field and laboratory scales
- Z193 EGU2012-13832
F. Bilgeri, F. Karner, W. Steinkogler, R. Fromm, **F. Obleitner**, and J. Kohler
Snow micro-structure at Kongsvegen glacier, Svalbard
- Z194 EGU2012-14125
M. Proksch, H. Loewe, and M. Schneebeli
Statistical model for the correlation length of snow derived from Snow-Micro-Pen measurements.

CR5.10 – Glaciers and ice caps under climate change – Orals

Convener: J. O. Hagen | Co-Conveners: G. Kaser, M. Huss, W. Lipscomb

Room: 9

Chairperson: Jon Ove Hagen

- 08:30–08:45 EGU2012-2404
T. Mölg, F. Maussion, and D. Scherer
Signature of Asian Monsoon dynamics in the mass and energy balance of a Tibetan glacier
- 08:45–09:00 EGU2012-2749
J. Gardelle, E. Berthier, and Y. Arnaud
Karakoram glaciers slightly gained mass in the early 21st century
- 09:00–09:15 EGU2012-11906
C. Schoof and I.J. Hewitt
Hydraulic controls on glacier and ice cap flow

- 09:15–09:30 EGU2012-11851
S. H. Mernild and W. H. Lipscomb
 Imbalance and accelerated melting of glaciers and ice caps
- 09:30–09:45 EGU2012-4868
M. Zemp and the WGMS Swiss Office & National Correspondents Team
 Unprecedented 21st century glacier changes?
- 09:45–10:00 EGU2012-5268
P. W. Leclercq, P. Pitte, R. H. Giesen, M. H. Masiokas, and J. Oerlemans
 Climatic interpretation of the length fluctuations of Glaciar Frías, North Patagonia, Argentina

CR5.10 – Glaciers and ice caps under climate change – Posters

Convener: J. O. Hagen | Co-Conveners: G. Kaser, M. Huss, W. Lipscomb

Hall Z | Display Time 08:00–19:30

Author in Attendance: 17:30–19:00

Chairperson: Georg Kaser

- Z195 EGU2012-12916
A. Linsbauer, F. Paul, and W. Haeberli
 Comparing different methods to model scenarios of future glacier change for the entire Swiss Alps
- Z196 EGU2012-14199
M. Huss, R. Hock, A. Bauder, and M. Funk
 Conventional versus reference-surface mass balance
- Z197 EGU2012-5545
K. Láska, D. Nývlt, Z. Engel, and L. Budík
 Seasonal variation of meteorological variables and recent surface ablation / accumulation rates on Davies Dome and Whisky Glacier, James Ross Island, Antarctica
- Z198 EGU2012-12175
H. Zekollari, J.J. Fürst, O. Rybak, and P. Huybrechts
 3-D Higher-Order modelling of Vadret da Morteratsch (Switzerland): past extent, present-day dynamics and future evolution
- Z199 EGU2012-6884
 R.C. Dykes, G Lube, and **M.S. Brook**
 Coseismic-initiated calving at a freshwater-terminating glacier: Tasman Glacier, New Zealand
- Z200 EGU2012-12118
R. Kilian, F. Lamy, H. Arz, O. Baeza, S. Breuer, M. Caniupan, M. Möller, and C. Schneider
 Forcing and timing of Holocene glacier advances in the hyperhumid southernmost Andes (50-53°S): an evaluation based on continuous glacial clay and paleoclimate records as well as modelling
- Z201 EGU2012-6085
J. O. Hagen, T. Dunse, T. Eiken, J. Kohler, G. Moholdt, C. Nuth, T.V. Schuler, and T. Østby
 The mass balance of the Austfonna Ice Cap, Svalbard, 2004-2010

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

Convener: W. J. van de Berg | Co-Conveners: T. Mölg

Room: 9

Chairperson: W. J. van de Berg and T. Mölg

- 10:30–10:45 EGU2012-429
R. Dadic, R. Mott, M. Lehning, M. Carenzo, B. Anderson, and A. Mackintosh
 Sensitivity of Turbulent Fluxes to Wind Speed over Snow Surfaces in Different Climatic Settings
- 10:45–11:00 EGU2012-10708
R. Mott, C. Gromke, T. Grünewald, and M. Lehning
 Advective heat transport and boundary layer decoupling controlling the melt dynamics of a patchy snow cover
- 11:00–11:15 EGU2012-14422
L. M. Cathles, D. S. Abbot, and D. R. MacAyeal
 Latitudinal variations in modeled insolation driven snow surface ablation
- 11:15–11:30 EGU2012-3435
Y. Zhang, Y. Hirabayashi, and S. Liu
 Catchment-scale reconstruction of glacier mass balance using observations and global climate data: case study of the Hailuogou catchment, south-eastern Tibetan Plateau
- 11:30–11:45 EGU2012-5724
T. Zwinger, T. Malm, M. Schäfer, J.C. Moore, and R. Stenberg
 Influence of local wind distributions on Blue Ice Area at Scharffenberbottnen, East Antarctica

11:45–12:00 EGU2012-2440

P. Kuipers Munneke, G. Picard, M. R. van den Broeke, J. T. M. Lenaerts, and E. van Meijgaard
 Insignificant change in Antarctic snowmelt volume since 1979: but what about the increase in ice-shelf
 breakup?

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

Convener: W. J. van de Berg | Co-Conveners: T. Mölg

Hall Z | Display Time 08:00–19:30

Author in Attendance: 17:30–19:00

Chairperson: T. Mölg

Z202 EGU2012-189

J. Ming, Z. Du, and S. Zhao

Environmental Effects of Black Carbon on the Tibetan Plateau: View from the Observations

Z203 EGU2012-681

O. Järvinen and M. Leppäranta

An automatic snow station experiment in Western Dronning Maud Land, Antarctica

Z204 EGU2012-2639

S. Galos, T. Mölg, S. MacDonell, M. Großhauser, and B. Marzeion

The energy balance of tropical Glaciar Artesonraju, Cordillera Blanca, Perú - AWS-measurements and numerical modeling

Z205 EGU2012-6468

L. M. Wake, S. J. Marshall, B. Lecavalier, G. A. Milne, P. Huybrechts, M. J. R. Simpson, and N. Bayou

Linking surface energy balance calculations and Temperature Index models of surface melt: Revision of the Positive Degree-Day (PDD) methodology for the Greenland Ice Sheet

Z206 EGU2012-9711

S. Pohl, J. Garvelmann, and M. Weiler

Observation of the Difference in Snow Cover Evolution Between Open and Forested Areas

Z207 EGU2012-10259

W. J. van de Berg, M. R. van den Broeke, J. Ettema, E. van Meijgaard, and F. Kaspar

Significant contribution of insolation to Eemian melting of the Greenland ice sheet

Z208 EGU2012-10527

T. Marke, A. Plach, F. Hanzer, **U. Strasser**, B. Hynek, G. Weyss, and W. Schöner

Simulating the mass- and energy balance of Freya Glacier (NE-Greenland) using the physically based snow model AMUNDSEN

Z209 EGU2012-10954

F. Hanzer, T. Marke, R. Steiger, and U. Strasser

Modelling technical snow production for skiing areas in the Austrian Alps with the physically based snow model AMUNDSEN

Z210 EGU2012-12369

G. Resch, G. Weyss, B. Hynek, W. Schöner, and T. Glade

Quantifying the influence of refreezing melt water on the mass balance and runoff of Freya Glacier in Northeast-Greenland

Z211 EGU2012-12698

U Falk, M Braun, H Sala, and G Menz

Surface energy balance measurements and modeling on the ice cap of King George Island, West Antarctica

Z212 EGU2012-12743

S. Gudmundsson, F. Pálsson, H. Björnsson, E. Magnússon, Th. Thorsteinsson, and H.H. Haraldsson

The impact of volcanic tephra aerosols on the mass- and energy balance of Langjökull ice cap, SW-Iceland

Z213 EGU2012-13115

S.E. Collier, T. Mölg, and A.B.G Bush

Recent trends in the surface mass balance of Karakoram glaciers assessed from high-resolution WRF simulations

Z214 EGU2012-13380

S. Reinartz, T. Sauter, and C. Schneider

Impact of two conceptual precipitation modeling schemes on the mass balance of the Gran Campo Nevado Ice Cap, Patagonia

CR8.20 – Debris-covered glaciers – Orals

Convener: L. I. Nicholson | Co-Conveners: D. Benn, M.P. Kirkbride

Room: 9

Chairperson: n.n.

- 15:30–15:45 EGU2012-920
A. Rezepkin and V. Popovnin
Debris cover, its changes and influence on sub-debris ablation: Djankuat Glacier, Northern Caucasus
- 15:45–16:00 EGU2012-2111
Y. Lejeune, J.M. Bertrand, **P. Wagnon**, and S. Morin
A physically-based model for the energy and mass fluxes across the ice/debris/snow/atmosphere continuum, with potential for year-round simulations of the mass balance of debris-covered glaciers
- 16:00–16:15 EGU2012-939
P.-M. Lefeuve and F.S.L. Ng
Uncovering glacier dynamics beneath a debris mantle
- 16:15–16:30 EGU2012-11711
D. Vacco, R. Alley, and D. Pollard
Modeling of supraglacial debris and glacial stagnation
- 16:30–16:45 EGU2012-297
C. L. Fyffe, B. W. Brock, M.P. Kirkbride, and D. W. F. Mair
The influence of supraglacial debris cover on glacier hydrology: Miage Glacier, Italy.
- 16:45–17:00 EGU2012-10866
P. Deline, M. Gardent, M.P. Kirkbride, M. Le Roy, and B. Martin
Geomorphology and dynamics of supraglacial debris covers in the Western Alps

CR8.20 – Debris-covered glaciers – Posters

Convener: L. I. Nicholson | Co-Conveners: D. Benn, M.P. Kirkbride

Hall Z | Display Time 08:00–19:30

Author in Attendance: 17:30–19:00

Chairperson: n.n.

- Z215 EGU2012-246
K. D. Mankoff
LiDAR measurements of ablation variability due to surface debris heterogeneity
- Z216 EGU2012-1224
A. Sakai and **T. Nuimura**
Evidence of surface lowering at supraglacial lakes on debris-covered glaciers in the Himalayas
- Z217 EGU2012-1488
T. Fickert, D. Friend, F. Grüniger, B. Molnia, and M. Richter
Plant growth on debris covered glacier surfaces - ecology, vegetation patterns and implications for debris mantled glaciers serving as cold and warm stage plant refugia in the past
- Z218 EGU2012-5558
J.-B. Bosson and C. Lambiel
Internal structure and evolution of a small debris-covered glacier: Les Diablerets, Switzerland
- Z219 EGU2012-6082
L. Iturrizaga
Reinterpretation of the formation of the "crooked moraine" of the debris-covered Hatunraju Glacier (Cordillera Blanca, Perú)
- Z220 EGU2012-6471
N. Reznichenko, T.R.H. Davies, J. Shulmeister, and S. Winkler
Supraglacial rock avalanches and their effect on glacial deposition
- Z221 EGU2012-6749
A. D. Barker, B. Hallet, T. Brugh, **L. A. Rasmussen**, and H. Conway
Budgets of ice and rock debris, erosion rates, and climate change at Khumbu Glacier, Nepal
- Z222 EGU2012-7217
T. Nuimura, K. Fujita, S. Okamoto, S. Takenaka, Y. Hoshina, and H. Nagai
Glacier surface elevation change by field surveys 1996-2008 in Langtang Himal, Nepal Himalaya
- Z223 EGU2012-7687
S. Tsutaki, K. Fujita, S. Yamaguchi, A. Sakai, T. Nuimura, J. Komori, S. Takenaka, and P. Tshering
Dynamic interactions between glacier and glacial lake in the Bhutan Himalaya
- Z224 EGU2012-9017
M. Gardent, M. Le Roy, P. Deline, and P. Schoeneich
Present extension of the debris-covered glaciers at the regional scale of the French Alps
- Z225 EGU2012-9654
L. I. Nicholson
Impacts of debris cover on glaciers: research priorities and relation to glacier-climate interactions on clean-ice glaciers.
- Z226 EGU2012-12997
M. Brook
Debris emergence at Fox Glacier, New Zealand and formation of an ablation-dominant medial moraine

- Z227 EGU2012-14279
A Racoviteanu, Y Arneaud, and M Williams
Combining thermal data, topography and texture analysis to analyze debris-covered glaciers: a case study from Kangchendzonga area, eastern Himalaya
- Z228 EGU2012-2046
F. Salerno, S. Thakuri, C. D'Agata, C. Smiraglia, E.C. Manfredi, G. Viviano, and G. Tartari
Conditions of formation of glacial lakes in Mt Everest region
- Z229 EGU2012-4086
M. Juen, C. Mayer, A. Lambrecht, A. Wirbel, and U. Kueppers
Field experiments to assess the effect of lithology and grain size on the ablation of debris covered glaciers

ML27 – Louis Agassiz Medal Lecture by Ian R. Joughin (co-listed) – Orals

Convener: G. H. Gudmundsson

Room: 5

Chairperson: n.n.

- 19:00–20:00 EGU2012-14466
I. R. Joughin
Ice Sheets from Space: The Big Picture View (Louis Agassiz Medal Lecture)

Thursday, 26 April

BG1.7 – Terrestrial organic matter dynamics during land-ocean transport in the Arctic. (co-listed) – Orals

Convener: J. E. Vonk | Co-Conveners: V. Alling, P. J. Mann

Room: 24

Chairperson: P. J. Mann & J. E. Vonk

- 15:30–15:45 EGU2012-3206
D.A. Hansell and R.T. Letscher
The surface Arctic Ocean: A dynamic reservoir of terrigenous dissolved organic carbon
- 15:45–16:00 EGU2012-4237
V.V. Gordeev
Seasonal and multi-annual variations of the North Dvina river input into the White Sea (Russia)
- 16:00–16:15 EGU2012-10122
L. Sánchez-García, J.E. Vonk, V. Alling, B. Van Dongen, A. Charkin, D. Kosmach, O. Dudarev, I. Semiletov, and Ö. Gustafsson
Molecular, isotopic and gas-flux investigations of thaw-eroding reliefs of the Arctic Coastal-Ice complex in three different systems of the East Siberian Arctic Shelf
- 16:15–16:30 EGU2012-3212
R. Striegl, G. Aiken, D. Butman, M. Dornblaser, P. Raymond, P. Schuster, R. Spencer, A. Stubbins, and K. Wickland
Seasonal Variability and Chemical Composition of Carbon Export by the Yukon River, Alaska
- 16:30–16:45 EGU2012-13072
C. W. Mueller, S. Loepmann, C. Hoeschen, J. Kao-Kniffin, and J. Bockheim
Organic matter stabilization in Cryosols of Northern Alaska - a combined NMR and NanoSIMS study
- 16:45–17:00 EGU2012-6924
A. V. Vähätalo, H Aarnos, E. M. Paolucci, D. E. Musibono, S. R. Khan, Y. Gelin, A. Shantz, Q. Huang, W. Schneider, C. E. Rezende, E. Petrescu, and H. E. Reader
Photochemical and microbial transformation of terrestrial dissolved organic matter - Lena River vs. rivers in mid and low latitudes

BG1.7 – Terrestrial organic matter dynamics during land-ocean transport in the Arctic. (co-listed) – Posters

Convener: J. E. Vonk | Co-Conveners: V. Alling, P. J. Mann

Poster Area BG | Display Time 08:00–19:30

Author in Attendance: 17:30–19:00

Chairperson: P. J. Mann & J. E. Vonk

- BG1 EGU2012-5972
E. Karlsson, A. Charkin, O. Dudarev, I. Semiletov, J.E. Vonk, L. Sánchez-García, A. Andersson, and Ö. Gustafsson
Carbon isotopes and lipid biomarker investigation of sources, transport and degradation of terrestrial organic matter in the Buor-Khaya Bay, SE Laptev Sea
- BG2 EGU2012-11054
E. Karlsson, V. Brüchert, A. Charkin, O. Dudarev, I. Semiletov, and Ö. Gustafsson
Combined molecular biomarker - microbial incubation approach to investigate organic matter mineralization in the East Siberian Shelf Sea sediments
- BG3 EGU2012-6587
K.M. Schreiner, T.S. Bianchi, M.A. Allison, A.J. Miller, and F. Marcantonio
Changes in Terrestrial Organic Carbon Delivery to the Colville River Delta and Adjacent Simpson's Lagoon Over the Late Holocene
- BG4 EGU2012-10536
M.R. Oosterwoud, **S.E.A.T.M. van der Zee**, J.C.L. Meeussen, and E.J.M. Temminghoff
Master function for the solid:solution equilibrium of DOC in taiga and tundra soils of N. Russia: experimental and modeling results
- BG5 EGU2012-9551
P J Mann, R M Spencer, P J Hernes, S E Tank, R Striegl, R Y Dyda, B J Peterson, J W McClelland, and R M Holmes
Dissolved Organic Matter Land-Ocean Linkages in the Arctic
- BG6 EGU2012-9444
P J Mann, W Sobczak, J E Vonk, A Davydova, J Schade, E Bulygina, S Davydov, N Zimov, and R M Holmes
Enzymatic regulation of organic matter metabolism in Siberia's Kolyma River Watershed

- BG7 EGU2012-8971
V. Alling, **L. Sanchez-García**, S. Pugach, D. Porcelli, C. Humborg, C.-M. Mörrh, B. van Dongen, O. Dudarev, I. Semiletov, and Ö. Gustafsson
Extensive degradation of terrestrial POC and DOC over the Eastern Arctic Siberian Shelf
- BG8 EGU2012-7268
Ö. Gustafsson and G. Destouni
On the use of Arctic rivers as integrators of water and carbon release from permafrost thawing
- BG9 EGU2012-1370
M.A. Granskog, C.A. Stedmon, P.A. Dodd, R.M.W. Amon, A. K. Pavlov, L. de Steur, and E. Hansen
Fate of terrestrial colored dissolved organic matter (CDOM) in the Arctic Ocean: exported or removed?
- BG10 EGU2012-8533
J. E. Vonk, P. J. Mann, S. Davydov, A. Davydova, W. V. Sobczak, J. Schade, E. Bulygina, S. Zimov, R. G. M. Spencer, T. I. Eglinton, and R. M. Holmes
High reactivity of ancient permafrost carbon upon hydrological release
- BG11 EGU2012-11878
C. G. Griffin, J. W. McClelland, **J. E. Vonk**, R. M. Holmes, and K. E. Frey
Chromophoric dissolved organic matter during the Mackenzie River spring freshet: Observations and freeze-thaw experiments
- BG12 EGU2012-8375
J. E. Vonk, L. Sánchez-García, B. E. van Dongen, V. Alling, D. Kosmach, A. Charkin, I. P. Semiletov, O. V. Dudarev, N. Shakhova, P. Roos, T. I. Eglinton, A. Andersson, and Ö. Gustafsson
Remobilization of old carbon from coastal and subsea permafrost in the Siberian Arctic
- BG13 EGU2012-8610
V. Alling, D. Porcelli, C.-M. Mörrh, L. G. Anderson, L. Sanchez-Garcia, Ö. Gustafsson, P. S. Andersson, and C. Humborg
Degradation of terrestrial organic carbon, primary production and out-gassing of CO₂ along the Laptev and East Siberian Seas as inferred from $\delta^{13}C$ values of DIC
- BG14 EGU2012-6376
G. Mollenhauer, S. Kusch, and J. Rethemeyer
Characterizing the export of fossil carbon from permafrost soils of Spitsbergen using compound-specific radiocarbon dating
- BG15 EGU2012-2114
M. Manecki, D. Herlemann, F. Pollehne, M. Labrenz, R. Zimmermann, T. Dittmar, D. Schulz-Bull, and K. Jürgens
Microbial decomposition of terrigenous organic matter discharged into the Baltic Sea
- BG16 EGU2012-12287
M. Winterfeld, R. Flerus, B. Koch, and G. Mollenhauer
Age distribution of permafrost soil & surface water particulate organic carbon in the Lena Delta, Siberia
- BG17 EGU2012-12248
M. Winterfeld, M. Goni, and G. Mollenhauer
Terrestrial organic matter sources and distribution along a land-ocean transect in Siberia derived from lignin phenol composition

CR3.10 – Remote Sensing of the Cryosphere – Orals

Convener: M. Tedesco | Co-Conveners: T. Parrinello, a. shepherd, T. Painter, C. Duguay, Dr. Fernández Prieto

Room: 5

Chairperson: n.n.

- 13:30–13:45 EGU2012-9602
K. Luojus, J. Pulliainen, J. Lemmetyinen, M. Takala, T. Smolander, and C. Derksen
Enhancing the retrieval methodology for GlobSnow long-term snow water equivalent record
- 13:45–14:00 EGU2012-7743
E. Malnes, H. Hindberg, **Ø. Rudjord**, and R. Solberg
Simultaneous Envisat ASAR and MERIS monitoring of lake ice on lake Ladoga
- 14:00–14:15 EGU2012-10403
M. Horwath, M. R. van den Broeke, B. Legrésy, I. Sasgen, J. Bamber, and F. Blarel
Antarctic surface mass balance variations reflected by regional atmospheric modeling, satellite altimetry, and GRACE
- 14:15–14:30 EGU2012-4153
D. Schüttemeyer, M. Davidson, T. Casal, A. Perrera, R. Bianchi, M. Kern, and K. Scipal
European Space Agency Campaign Activities in Support of Earth Observation Projects: Examples for Snow and Ice
- 14:30–14:45 EGU2012-2136
E. Morris and D. J. Wingham
Direct measurement of densification rates in polar snow and the implications for altimetry

- 14:45–15:00 EGU2012-12065
T. Nagler, H. Rott, E. Magnússon, D. Floricioiu, F. Mueller, and K. Scharrer
 Ice flow dynamics and mass balance of Vatnajökull outlet glaciers observed by X-band SAR Data
 Chairperson: n.n.
- 15:30–15:45 EGU2012-1842
T. Flament, E. Berthier, and F. Rémy
 Antarctic elevation changes and variability from Envisat and ICESat altimeters
- 15:45–16:00 EGU2012-13071
W. Rack, W. Dierking, and S. Linow
 Satellite retrieval of snow accumulation over the Antarctic ice sheet: a new approach based on SAR imagery and scatter-regime bridging
- 16:00–16:15 EGU2012-12505
D. Fernández-Prieto, C. Duguay, Y. Gauthier, D. Gustafsson, E. Malnes, O.-P. Mattila, L. Rontu, H. Rott, P. Samuelsson, and R. Solberg
 ESA STSE North Hydrology: Development of multi-mission satellite data products in support of atmospheric and hydrological modeling of cold regions
- 16:15–16:30 EGU2012-12340
Y. Gauthier, M. Bernier, J. Poulin, J. Uusikivi, and C. Duguay
 New tools for basin scale river ice characterization from radar data
- 16:30–16:45 EGU2012-11775
D. Gustafsson, G. Lindström, and C. Pers
 Assimilation of lake surface temperature and ice cover data in a semi-distributed hydrological model - implications for water balance and water quality predictions in Sweden
- 16:45–17:00 EGU2012-5306
Ø. Rudjord, Ø. Due Trier, and R. Solberg
 Automatic estimation of lake ice cover and lake surface temperature using ENVISAT MERIS and AATSR

CR3.10 – Remote Sensing of the Cryosphere – Posters

Convener: M. Tedesco | Co-Conveners: T. Parrinello, a. shepherd, T. Painter, C. Duguay, Dr. Fernández Prieto

Hall X/Y | Display Time 08:00–19:30

Author in Attendance: 17:30–19:00

Chairperson: n.n.

- XY332 EGU2012-251
 D. Nikolskiy, V. Malinnikov, **A. Sharov**, and M. Ukolova
 Dual-sensor mapping of mass balance on Russia's northernmost ice caps
- XY333 EGU2012-1148
J-P. Dedieu, V. Doutréleau, A. Lessard-Fontaine, and G. Shalpykova
 Snow cover monitoring in the Kyrgyz Republic through MODIS time series (2000-2010)
- XY334 EGU2012-1442
A. Kokhanovsky and H. Negi
 Retrieval of snow parameters using simultaneous light reflection and transmission measurements
- XY335 EGU2012-1852
S. A. Khan, K. H. Kjær, J. M. Wahr, M. Bevis, N Korsgaard, A. A. Bjørk, K. K. Kjeldsen, L. H. Timm, and T. v. Dam
 Marginal thinning in Northwest Greenland during 2002-2011
- XY336 EGU2012-2849
J. Kropacek and N. Neckel
 Towards a robust method for estimation of volume changes of Mountain glaciers from ICESat data
- XY337 EGU2012-2871
M. Dumont, J. Gardelle, Y. Arnaud, A. Guillot, P. Sirguey, and D. Six
 Linking glacier annual mass balance and glacier albedo from MODIS data
- XY338 EGU2012-3463
F. Maussion, J. Kropacek, R. Finkelnburg, and D. Scherer
 Climate of a high altitude lake basin and lake-atmosphere interactions - observations and atmospheric modelling
- XY339 EGU2012-3478
T. Parrinello, N. Mardle, B. H. Ortega, C. Bouzinac, S. Badessi, B. Frommknecht, M Davidson, R. Cullen, and D. Wingham
 CryoSat: ESA's ice explorer mission. One year in operations: status and achievements
- XY340 EGU2012-3480
C. Bouzinac, P. Femenias, T. Parrinello, M. Fornari, and R. Mannan
 CryoSat Data Quality Overview

- XY341 EGU2012-9052
D. De Seve, L. Perreault, F. Vachon, F. Guay, and Y. choquette
Assessment of dynamic probabilistic methods for mapping snow cover in Québec Canada
- XY342 EGU2012-6302
K.-K. Kang and **C. R. Duguay**
Response of ice cover on large northern lakes, as observed through the synergy of spaceborne microwave and optical measurements
- XY343 EGU2012-3483
T. Parrinello, **M. Fornari**, C. Bouzinac, M. Scagliola, and N. Tagliani
CryoSat-2 SIRAL Calibration: Strategy, Application and Results
- XY344 EGU2012-5099
S. Badessi, B. Frommknecht, T. Parrinello, and L. Mizzi
CryoSat-2 Payload Data Ground Segment and Data Processing Status
- XY345 EGU2012-9578
N. Gourmelen, A. Shepherd, and J.W. Park
The parallel flow assumption in Greenland outlet glaciers
- XY346 EGU2012-3559
M. Tedesco
A new physically-based operational SWE algorithm for AMSR-E and AMSR2
- XY347 EGU2012-11608
A. M. Johansson, P. Jansson, and I.A. Brown
Supra-glacial lake evolution and variations on the Greenland Ice Sheet
- XY348 EGU2012-2752
M. Jain, O. B. Andersen, and L. Stenseng
Evaluation of empirical retracking of Cryosat2 sea surface data in the Arctic Ocean
- XY349 EGU2012-6813
J. Hoffmann and P. Tregoning
The effect of different forms of interpolation on estimates of Antarctic ice height change
- XY350 EGU2012-12129
T. Nagler, M. Heidingen, H. Rott, G. Bippus, M. Hetzenecker, and K. Scharrer
Snow and glacier monitoring service using Earth Observation data
- XY351 EGU2012-7003
T. Sakai, T. Hiyama, J. Fujiwara, S. Gotovtsev, and L. Gagarin
Monitoring ground subsidence and spring water by permafrost degradation in Siberia
- XY352 EGU2012-13878
B. Hwang, D.J. Kim, K.H. Chung, S.H. Lee, H.S. Jung, and W.M. Moon
Retrieval of the floe size and melt pond statistics of Arctic sea ice using high-resolution SAR
- XY353 EGU2012-9862
M. Depoorter and J.L. Bamber
Resolving grounding line ambiguities around Antarctica from inter-comparison and driving stress mapping
- XY354 EGU2012-13282
L. Sandberg Sørensen, **V. R. Barletta**, and R. Forsberg
Monthly solutions of ice sheet mass balance at basin scale - and their associated uncertainties.
- XY355 EGU2012-12188
H. Kheyrollah Pour, C.R. Duguay, L. Rontu, O. Mattila, H. Alasalmi, and J. Uusikivi
Evaluation of Remotely Sensed Lake Water Surface Temperature over Finnish Lakes
- XY356 EGU2012-9339
Z. Akyurek, S. Surer, O. Beser, K. Bolat, and A. G. Erturk
The assessment of EUMETSAT HSAF Snow Products for mountainous areas in the eastern part of Turkey
- XY357 EGU2012-12388
S. Lhermitte, W. Greuell, E. van Meijgaard, R. van Oss, and M. R. van den Broeke
Quantitative analysis of error sources in MODIS and AVHRR albedo products over the Greenland ice sheet
- XY358 EGU2012-7111
N. Svacina and C. Duguay
Integrating MODIS albedo and LST products within a lake ice model
- XY359 EGU2012-13548
C. Duguay, C. Surdu, L. Brown, and P. Samuelsson
Response of ice cover on shallow Arctic lakes to contemporary climate conditions: Numerical modeling and remote sensing data analysis
- XY360 EGU2012-1007
O. J. Marsh, W. Rack, N. R. Golledge, and W. Lawson
Satellite and GNSS identification of tidal flexure and velocity fluctuation in the grounding zone of outlet glaciers in the Transantarctic Mountains, Antarctica
- XY361 EGU2012-3243
A. Fitzpatrick, D. Quincey, I. Joughin, A. Luckman, D. Van As, and A. Hubbard
Seasonal acceleration of Russell Glacier, Western Greenland during 2009 & 2010

- XY362 EGU2012-10693
K. Chokmani, S. Roberge, and D. De Sève
 Time-dependent snow-cover mapping algorithm adapted to regional conditions over Eastern Canada using NOAA-AVHRR data
- XY363 EGU2012-10805
L. Rabenstein, T. Krumpfen, S. Hendricks, and J. Hoelemann
 Age and thickness distribution of polynya sea ice in the Laptev Sea determined by satellite SAR imagery and airborne EM
- XY364 EGU2012-12372
S. Roberge, K. Chokmani, and D. De Sève
 A new strategy for snow-cover mapping using remote sensing data and ensemble based systems techniques

CR5.20 – Modeling ice sheets and glaciers – Orals

Convener: F. Pattyn | Co-Conveners: O. Gagliardini, G. Adalgeirsdottir, E Larour, O. Eisen

Room: 5

Chairperson: Frank Pattyn

- 08:30–08:45 EGU2012-8331
S L Cornford, D F Martin, D F Ranken, A M Le Brocq, R M Gladstone, A J Payne, E G Ng, and W H Lipscomb
 Adaptive mesh modelling of grounding line migration
- 08:45–09:00 EGU2012-11090
G. H. Gudmundsson
 The stability of grounding lines on retrograde slopes
- 09:00–09:15 EGU2012-11172
L. Favier, T. Zwinger, F. Gillet-Chaulet, G. Durand, and O. Gagliardini
 Prognostic simulations of Pine Island Glacier using a 3D full-Stokes model and an inverse method to infer basal drag
- 09:15–09:30 EGU2012-574
M. Habermann, D.A. Maxwell, and M. Truffer
 Reconstructing basal boundary conditions in a regional ice sheet model: Application to Jakobshavn Isbræ
- 09:30–09:45 EGU2012-819
M. Nodet, C. Ritz, and B. Bonan
 Data assimilation methods for ice-sheet model initialisation.
- 09:45–10:00 EGU2012-4221
G. Durand
 Improving database design for ice sheet modeling

COFFEE BREAK

Chairperson: Gudfinna Adalgeirsdottir

- 10:30–10:45 EGU2012-12056
C. Schoof and M. Haseloff
 Thermal migration of ice stream shear margins
- 10:45–11:00 EGU2012-5725
R. Williams, R. C. A. Hindmarsh, and R. J. Arthern
 Frequency response of ice-streams
- 11:00–11:15 EGU2012-13453
MA Werder, IJ Hewitt, C Schoof, and GE Flowers
 Toward more accurate basal boundary conditions: a new 2-D model of distributed and channelised subglacial drainage
- 11:15–11:30 EGU2012-9557
G. J.-M. C. Leysinger Vieli, R.C.A. Hindmarsh, and C. Martin
 A modelling approach to understand ice sheet isochrone architecture from basal ice accretion
- 11:30–11:45 EGU2012-1480
F. Gillet-Chaulet, R. C. A. Hindmarsh, H. F. J. Corr, E. C. King, and A. Jenkins
 In-situ quantification of ice rheology and direct measurement of the Raymond Effect at Summit, Greenland using a phase-sensitive radar
- 11:45–12:00 EGU2012-1228
H. Conway, N. Bertler, D. Dahl-Jensen, R.C.A. Hindmarsh, A. Pyne, E. Brook, E. Waddington, S Kipfstuhl, R. Hawley, J. Fitzpatrick and the RICE Team
 Roosevelt Island - a good place for an ice core

CR5.20 – Modeling ice sheets and glaciers – Posters

Convener: F. Pattyn | Co-Conveners: O. Gagliardini, G. Adalgeirsdottir, E Larour, O. Eisen

Hall X/Y | Display Time 08:00–19:30

Author in Attendance: 17:30–19:00

Chairperson: Olaf Eisen / Olivier Gagliardini

- XY365 EGU2012-2877
R. Drews, O. Eisen, D. Steinhage, C. Martín, and F. Pattyn
Characterizing ice domes in Dronning Maud Land (Antarctica) using geophysical methods and ice-flow models
- XY366 EGU2012-10042
C. Martin and G. H. Gudmundsson
Effects of nonlinear rheology and anisotropy on the relationship between age and depth at ice divides
- XY367 EGU2012-14384
D. J. Halkides, E. Larour, M. Morlighem, and H. Seroussi
Development of improved basal friction parameterizations using ISSM: Preliminary results for Greenland's Jakobshavn Ice Stream
- XY368 EGU2012-13284
J. Sutter, G. Lohmann, M. Thoma, D. Barbi, and M. Werner
Tracing isotopes through ice: Integration of passive tracers in a three-dimensional ice sheet model
- XY369 EGU2012-11399
G. H. Gudmundsson
Constrained inversion for basal and englacial properties
- XY370 EGU2012-10792
B. Van Liefveringe and F. Pattyn
Antarctic subglacial conditions inferred from combined interferometric velocity data and ice sheet modeling
- XY371 EGU2012-205
A. Fitzner and D. Dahl-Jensen
Modelling the outlet glaciers terminating in Godthåb fjord
- XY372 EGU2012-2932
C. F. Brædstrup and D. L. Egholm
CUDA GPU based full-Stokes finite difference modelling of glaciers
- XY373 EGU2012-6219
D. Pollard and R.M. DeConto
Sensitivity of last deglacial and modern Antarctic Ice Sheet to the distribution of basal roughness
- XY374 EGU2012-988
J. Ahlkrona, N. Kirchner, and P. Lötstedt
Second-order Shallow Ice Approximation with Non-linear Rheology: Exploring Validity by Performing Numerical Experiments
- XY375 EGU2012-3071
D. Docquier, A.S. Drouet, R. Hindmarsh, G. Durand, and F. Pattyn
Grounding line migration captured by flowline ice sheet models
- XY376 EGU2012-1217
L. Zhao, L. Tian, T. Zwinger, R. Ding, J. Zong, Q. Ye, and J. C. Moore
Numerical simulations of Gurenhekou Glacier on the Tibetan Plateau using a full-Stokes ice dynamical model
- XY377 EGU2012-3437
M. Koutnik, E. Waddington, T.J. Fudge, T. Neumann, S. Rasmussen, and D. Dahl-Jensen
Effect of climate and ice-flow transients on ice-divide position and ice-core records
- XY378 EGU2012-8657
F. Pattyn, D. Docquier, G. Durand, L. Favier, O. Gagliardini, R. Hindmarsh, T. Zwinger, and MISIMIP3d participants
Effect of rapid grounding line migration investigated with 3D ice sheet-ice shelf models (MISIMIP3d)
- XY379 EGU2012-10596
M. Thoma, K. Grosfeld, J. Determann, D. Barbi, S. Göller, F. Pattyn, and C. Mayer
Rimbay -- A multi-physics 3D ice-sheet model for comprehensive applications: Model-description & examples
- XY380 EGU2012-9151
F. Baratelli, G. Castellani, C. Vassena, and M. Giudici
A sensitivity analysis for a thermomechanical model of the Antarctic ice sheet and ice shelves
- XY381 EGU2012-8667
R. C. A. Hindmarsh and O.V. Sergienko
Error Estimates for Raymond Effect Dating Using Adjoint Sensitivities
- XY382 EGU2012-8873
G Hiess and **R. C. A. Hindmarsh**
Thermal initialisation of ice-sheet models

- XY383 EGU2012-13241
M.G.P. Cavitte, D.D Blankenship, D.A. Young, M.J. Siegert, E. Le Meur, and J.A. Chappellaz
 Interior flow re-organization along the great Byrd-Totten ice divide of East Antarctica: evidence from radar layer disruptions
- XY384 EGU2012-361
D. Partridge, N.K. Nichols, and M.J. Baines
 A conservation-based moving mesh approach together with data assimilation for solving the shallow ice equation
- XY385 EGU2012-12926
L. Tarasov
 Glacial systems model calibration: Quantifying uncertainty in glaciological reconstructions of past ice-sheets
- XY386 EGU2012-13207
D.F. Martin, S.L. Cornford, D. F. Ranken, A.M. Le Brocq, R.M. Gladstone, A.J. Payne, E.G. Ng, and W.H. Lipscomb
 BISICLES - A Scalable Finite-Volume Adaptive Mesh Refinement Ice Sheet Model
- XY387 EGU2012-13367
 P. Alexander, **M. Tedesco**, N. Steiner, X. Fettweis, S. Luthcke, S. Margulis, and M. Navari
 Assessment of modeled accumulation and albedo for development of a data-assimilation framework over the Greenland ice sheet
- XY388 EGU2012-7243
J. Faillietaz, M. Funk, and D. Sornette
 Prediction of alpine glacier sliding instabilities: a new hope

CR10.10 – Ice-sheet and climate interactions – Posters

Convener: P. Huybrechts | Co-Conveners: A. Ganopolski, T. Fichefet

Hall X/Y | Display Time 08:00–19:30

Author in Attendance: 17:30–19:00

Chairperson: Thierry Fichefet

- XY389 EGU2012-9527
P. Cianfarra and M. Valt
 Recent snow cover and temperature variability in the Italian Alps
- XY390 EGU2012-3988
H. Motoyama, K. Suzuki, T. Yamanouchi, and K. Kawamura
 Spatial and temporal variability of snow accumulation rate at East Antarctic ice sheet in 1993-2010
- XY391 EGU2012-13066
A. Rhines and P. Huybers
 Feedbacks Between Sea Ice Cover and Precipitation Sources: Physical Basis for a Time-Dependent ?180-T Relationship
- XY392 EGU2012-4262
M. Bugelmayer, D.M. Roche, and H. Renssen
 The impact of ice shelf - iceberg coupling on the North Atlantic Ocean in a global climate model of intermediate complexity
- XY393 EGU2012-5708
R. Calov, A. Robinson, and A. Ganopolski
 Improved representation of ice discharge from the Greenland ice sheet into the surrounding ocean
- XY394 EGU2012-7436
M. Z. Hakuba, D. Folini, M. Wild, and C. Schär
 Impact of Greenland's topographic height on precipitation and snow accumulation
- XY395 EGU2012-8592
M. S. Madsen, S. H. Svendsen, S. Yang, G. Adalgeirsdottir, and R. Mottram
 Assessing Surface Mass Balance Schemes relevant for coupling of the PISM ice sheet model for Greenland to climate models
- XY396 EGU2012-5044
P. Beghin, S. Charbit, C. Dumas, M. Kageyama, D.M. Roche, and C. Ritz
 Impact of planetary waves on ice-sheet evolution throughout the last glacial - interglacial cycle
- XY397 EGU2012-11560
A.C. Fowler, R.E.M. Rickaby, and E.W. Wolff
 An explanation of the 100 kyr ice age cycle using a simple box model
- XY398 EGU2012-315
F. Colleoni, S. Masina, A. Cherchi, J. Liakka, M. Jochum, B. Otto-Bliesner, N. Roseblum, C. Ritz, C. Dumas, W. Lipscomb, and I. Rutt
 MIS 7 and MIS 5 glacial inception: investigating the asynchronous build-up of Laurentide and Eurasian ice sheets

- XY399 EGU2012-6277
F. Ziemen, C. Rodehacke, and U. Mikolajewicz
LGM ice sheets simulated with a complex fully coupled ice sheet - climate model
- XY400 EGU2012-7475
W.H.G Roberts, A.J. Payne, and P.J. Valdes
Simulations of Heinrich Events using a fully coupled full complexity icesheet/global climate model (Glimmer/FAMOUS)
- XY401 EGU2012-10148
C. Rodehacke, U Mikolajewicz, and M Vizcaino
Fully coupled ice sheet-earth system model: How does the Greenlandic ice sheet interact in a changing climate
- XY402 EGU2012-12194
O. Rybak, J. Fürst, and P. Huybrechts
Simulation of the dynamical history of the northwestern Greenland ice sheet with a nested model for interpretation of the NEEM ice core record

Friday, 27 April

CR8.10 – Mountain snow cover and avalanche formation – Orals

Convener: J. Schweizer | Co-Conveners: A. van Herwijnen, D. McClung, K. Kronholm

Room: 9

Chairperson: Alec van Herwijnen

- 08:30–08:45 EGU2012-2238
D. Vikhamar-Schuler and K. Müller
Snow modeling using SURFEX with the CROCUS snow scheme for Norway
- 08:45–09:00 EGU2012-2247
J. Gaume, G. Chambon, N. Eckert, and M. Naaim
Relative influence of mechanical and meteorological factors on avalanche release depth distributions. Application to French Alps.
- 09:00–09:15 EGU2012-11793
C. Mitterer and J. Schweizer
Analysis of the atmosphere-snow energy balance during wet-snow instabilities
- 09:15–09:30 EGU2012-7583
M. Teich, C. Marty, C. Gollut, A. Grêt-Regamey, and P. Bebi
Snow and weather conditions fostering avalanche releases in forests: Rare situations with decreasing trends during the last 41 years
- 09:30–09:45 EGU2012-11317
J. Veitinger, B. Sovilla, and R. Purves
Influence of snow cover on location and extension of avalanche release areas
- 09:45–10:00 EGU2012-8455
K. Nishimura, Y. Ito, C. Yokoyama, and F. Naaim
Snow particle speeds in the blowing snow

CR8.10 – Mountain snow cover and avalanche formation – Posters

Convener: J. Schweizer | Co-Conveners: A. van Herwijnen, D. McClung, K. Kronholm

Hall Z | Display Time 08:00–17:00

Author in Attendance: 13:30–15:00

Chairperson: Jürg Schweizer

- Z117 EGU2012-12215
N. Helbig and **A. van Herwijnen**
Investigating surface hoar spatial distributions in complex topography
- Z118 EGU2012-6231
A. van Herwijnen
SMP cone penetration in homogeneous snow layers
- Z119 EGU2012-4031
P. Hagenmuller, T. Theile, and M. Schneebeli
Microstructure-based simulations of the tensile strength of snow
- Z120 EGU2012-10746
D. Gauthier and D.J. Hutchinson
Limits on the critical length of damage in weak snowpack layers from en-echelon slab fracture spacing observed during avalanche release
- Z121 EGU2012-2251
J. Gaume, G. Chambon, N. Eckert, and M. Naaim
Influence of weak layer heterogeneity on slab avalanche release. Application to the evaluation of avalanche release depths.
- Z122 EGU2012-14138
B. Reuter and J. Schweizer
Variations of snow depth and snowpack stability at the basin scale
- Z123 EGU2012-11960
F. Monti and J. Schweizer
Deriving snow hardness from density and its application to the 1-D snow cover model SNOWPACK
- Z124 EGU2012-12471
M. Valt, F. Monti, P. Cianfarra, and D. Moro
Physical properties of snow cover in Alps: insight from the Davos area (Switzerland) and Veneto-Friuli Venezia Giulia regions (Italy)

- Z125 EGU2012-12297
E.H. Bair
A field study on failure of storm snow slab avalanches
- Z126 EGU2012-1976
K. Müller, T. Humstad, R. V. Engeset, and J. Andersen
Gridded snow maps supporting avalanche forecasting in Norway
- Z127 EGU2012-10621
A. Singh, D. Chand, S. Kumar, and A. Ganju
On the Snowpack Variability in Maritime Climate
- Z128 EGU2012-11083
E. Marchetti, **G. Ulivieri**, M. Ripepe, I. Chiambretti, and V. Segor
Infrasonic monitoring of snow avalanches in the Alps
- Z129 EGU2012-12663
P. Perona, E. Daly, and A. Porporato
Prediction reliability and return times of natural snow avalanche occurrence

CR10.20 – Climate change impacts on glaciers, permafrost and related hazards – Orals

Convener: C. Huggel | Co-Conveners: A. Kääb, B. Raup, C. Schneider

Room: 4

Chairperson: Christian Huggel

- 08:30–09:00 EGU2012-1644
J. Oerlemans
Attribution of glacier fluctuations to climate change
- 09:00–09:15 EGU2012-9314
O. Korup, T. Görüm, and Y. Hayakawa
Know the limit - Landslide inventories and climate-change attribution
- 09:15–09:30 EGU2012-10706
P. Deline, M. Gardent, F. Magnin, and L. Ravanel
Morphodynamics of the Mont Blanc massif (European Alps) in a changing cryosphere
- 09:30–09:45 EGU2012-815
T. Heid and A. Kääb
Widespread decadal-scale decrease of glacier speed revealed using repeat optical satellite images
- 09:45–10:00 EGU2012-12001
S. H. Mernild, E. Hanna, N.T. Knudsen, J.C. Yde, and M.-S. Seidenkrantz
The climate impact on land-terminating glaciers and ice caps in the northern North Atlantic region

CR10.20 – Climate change impacts on glaciers, permafrost and related hazards – Posters

Convener: C. Huggel | Co-Conveners: A. Kääb, B. Raup, C. Schneider

Hall Z | Display Time 08:00–17:00

Author in Attendance: 10:30–12:00

Chairperson: Bruce Raup

- Z130 EGU2012-61
A. Gilbert, C. Vincent, P. Wagnon, E. Thibert, and A. Rabatel
The influence of snow cover thickness on the thermal regime of Tête Rousse Glacier (Mont Blanc range, 3200 m a.s.l.): consequences for water storage, outburst flood hazards and glacier response to global warming
- Z131 EGU2012-2660
S. P. Pudasaini and M. Krautblatter
A Real Two-Phase Mechanical Model for Rock-Ice Avalanches
- Z132 EGU2012-7979
J.P. Müller, **M. Mergili**, and J.F. Schneider
Development and characteristics of alpine lakes in the upper catchment of the Amu Darya river, Central Asia
- Z133 EGU2012-9384
C. Johansson, V. Pohjola, C. Jonasson, and T.V. Challagan
50 years of snow stratigraphy observations
- Z134 EGU2012-9420
N. Neckel, J. Kropacek, and T. Bolch
Glacier elevation changes on the Tibetan Plateau derived by ICESat
- Z135 EGU2012-9886
S.K. Allen and C. Huggel
Recent high mountain rockfalls and warm daily temperature extremes

- Z136 EGU2012-10804
Y. Schaub, C. Huggel, M. Serraino, and W. Haeberli
New lakes in deglaciating high-mountain areas: Regional intercomparison of current and future risks from impact waves due to rock/ice avalanches in the Swiss Alps
- Z137 EGU2012-10856
D. Kriegel, C. Mayer, W. Hagg, S. Vorogushyn, D. Duethmann, A. Gafurov, and J. Zimmer
Changes in glaciation, climate and runoff over the past four decades in the Naryn basin, Central Asia.
- Z138 EGU2012-11082
L. Ravanel, **P. Deline**, C. Lambiel, and C. Vincent
Instability of a highly vulnerable high alpine rock ridge: the lower Arête des Cosmiques (Mont Blanc massif, France)
- Z139 EGU2012-11574
L. Ravanel, **C. Lambiel**, T. Oppikofer, B. Mazotti, and M. Jaboyedoff
Evolution of a highly vulnerable ice-cored moraine: Col des Gentianes, Swiss Alps
- Z140 EGU2012-5219
M. Huss, M. Zemp, P. Joerg, L. Sold, and N. Salzmann
High uncertainty in 21st century runoff projections from glacierized catchments

