PROGRAMME OF SESSIONS

MONDAY, 5 DECEMBER 2005

Hajo Eicken, Lars G. Backstrom, Daniel Pringle, Jeremy Miner and Joe Trodahl: Convective and advective contributions to heat transfer through sea ice

Sebastian Gerland, Børge Hamre, Christina A. Pedersen and Kåre Edvardsen: Spectral albedo, reflectance and transmittance of first year sea ice Anthony Worby, James Reid and Angus Munro: Evolution of the ice thickness distribution downstream of the Mertz Glacier polynya, as determined from EM measurements

Simon Prinsenberg, A. van der Baaren, Ingrid Peterson and Scott Holladay: Pack ice ridging and drift in southern Gulf of St. Lawrence during the winter of 2004

Pablo Clemente-Colón, Marie-France Gauthier, Katherine Wilson, Towarda Street, Kelly Taylor, Paul Seymour, John Falkingham and Denis Dube: The North American Ice Service (NAIS) – present status and future directions

Erland M. Schulson, Andrew Fortt and Daniel Iliescu: Brittle failure envelope for first-year Arctic sea ice

Thorsten Markus and Donald J. Cavalieri: Inter-annual and regional variability of Southern Ocean snow on sea ice and its correspondence with sea-ice cover and atmospheric circulation patterns

Takeshi Tamura, Kay I. Ohshima, Hiroyuki Enomoto, Kazutaka Tateyama, Atsuhiro Muto, Shuki Ushio and Robert A. Massom: Validation of seaice thickness calculated from AVHRR data in an Antarctic coastal polynya

Petra Heil, Robert A. Massom and Ian Allison: Sea-ice drift and deformation during ARISE 2004: observations and modelling results

Sea-ice morphology, motion and deformation

Ocean Mercier, Mark Hunter and Paul Callaghan: Brine diffusion in first year sea ice measured by earth's field PGSE-NMR

Zhijun Li, Zhanhai Zhang, Xilu Dong, Peng Lu, Bin Cheng, Zhi Chen and Kunio Shirasawa: Measured physical behavior of Arctic summer ice in 2003

Carola von Saldern, Thomas Busche, Christian Haas and Wolfgang Dierking: Parameterisation of Arctic sea ice surface roughness for application in ice type classification

Carrie Breneman and John Yackel: An evaluation of dual-polarization ENVISAT ASAR for discrimination of first-year sea ice deformation Jennifer K. Hutchings and William D. Hibler III: Multiple equilibrium states of the Arctic ice cover due to sea-ice mechanics

Christopher J. Banks, Mark A. Brandon and Paul H. Garthwaite: Measurement of sea-ice draft using an autonomous underwater vehicle

Sibylle Goebell and Christian Haas: Airborne laser altimeter measurements of sea ice freeboard and comparison with coincident thickness data Bo Sun, Zhanhai Zhang, Dali Wang, Bangbin Wang and Yuansheng Li: Sea ice thickness measurements and its underside morphology analysis in the Arctic Ocean using ground-penetrating radar

Christian Haas and Stefan Hendricks: Comparison of the sea ice thickness distribution in the Lincoln Sea and the adjacent Arctic Ocean in 2004 and 2005

Shotaro Uto, Takenobu Toyota, Haruhito Shimoda, Kazutaka Tateyama and Kunio Shirasawa: Ship-borne electromagnetic induction sounding of sea ice thickness in the south Okhotsk Sea

Anthony Worby, Petra Heil, Adam Steer and Kelvin Michael: Changes in floe size distribution observed during early summer in the western Weddell Sea

Atmosphere-ice-ocean

Gunnar Spreen, Stefan Kern, Detlef Stammer and Rene Forsberg: About a technique to estimate the sea ice volume flux into the greenland sea by use of spaceborne remote sensing

Wouter Lefebvre and Goosse Hugues: Influence of the southern annular mode on the sea ice-ocean system: the role of the thermal and mechanical forcing

Siobhan O'Farrell and Ian Smith: Climate variability of sea ice in the Australian sector of the Southern Ocean

Kunio Rikiishi and Shingo Miyahata: The role of atmospheric circulation in the negative correlation between sea ice extents in the Sea of Okhotsk and snowfalls in the Japanese islands

Melanie F. Fitzpatrick and Stephen G. Warren: The effects of clouds and sea ice on the solar radiation budget in the Southern Ocean from surface measurements

Jun Inoue, Takashi Kikuchi, Donald K. Perovich and James H. Morison: A drop in mid-summer shortwave radiation induced by changes in the ice-surface condition in the central Arctic

Erica L. Key and Peter J. Minnett: Implications of cloud forcing and feedbacks in the Southern Ocean

Gareth L. Vaughan, Timothy D. Williams and Vernon A. Squire: Scattering of ice-coupled waves by an ice sheet with arbitrary thickness Timothy D. Williams, Vernon A. Squire and Gareth L. Vaughan: The effect of a growing lead in sea ice on the passage of waves Sohey Nihashi and Kay I. Ohshima: Estimation of ice-ocean heat transfer coefficient from concentration–temperature relationship

TUESDAY, 6 DECEMBER 2005

Mingrui Dai, Hayley H. Shen, Stephen F. Ackley and Motoyoshi Ikeda: Wave-induced rafting effects on sea-ice edge development Katharine Giles, Seymour Laxon, Duncan Wingham, David Wallis, R. Keith Raney and William. B. Krabill: CryoSat retrievals of Arctic sea-ice thickness

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Douglas R. MacAyeal, Kelly Brunt, Olga Sergienko, Young-Jin Kim, Marianne Okal, Jonathan Thom, Shelly Knuth and Matthew Lazzara: Effects of the Ross Sea megabergs on local sea-ice conditions

Jean-Louis Tison, Anthony Worby, Bruno Delille, Véronique Schoemann, Johannes de Jong, Delphine Lannuzel and Christian Haas: Thermodynamic evolution of summer first year sea ice properties at ISPOL (Western Weddell Sea, Antarctica): implications for biological activity and air-ice-sea gas exchanges

Bin Cheng, Timo Vihma, Mats A. Granskog and Roberta Piazzini: Modeling of superimposed ice formation during spring melt–refreezing period in the Baltic Sea

Kenneth M. Golden, Amy L. Heaton, Hajo Eicken, Ali Jabini, Jingyi Zhu and Jeremy Miner: Fluid transport in sea ice

Sea-ice modelling

Keguang Wang: Pack ice as a two-dimensional granular plastic: a new constitutive law

Alexander Wilchinsky and Daniel Feltham: Anisotropic model of granulated sea ice dynamics

Torge Martin: Four ways of modelling sea ice deformation in the arctic: a comparison with measurement data from 1995 to 2004

Allison Kohout and Mike Meylan: A model for wave scattering by in the marginal ice zone using a two-dimensional multiple floe solution Toshinori Ogasawara and Shigeki Sakai: Numerical analysis on characteristics of wave propagating arbitrary ice-covered sea

Dmitri V. Alexandrov, Alexey P. Malygin and Irina V. Alexandrova: Solidification of leads: approximate solutions of nonlinear problem Paul Taylor and Daniel Feltham: A model of melt pond evolution on sea ice

Sea-ice ecology and habitat

Meibing Jin, Clara Jodwalis Deal, Jia Wang, Kyung-hoon Shin, Nori Tanaka, Terry Whitledge and Sang Hon Lee: Controls of the landfast ice—ocean ecosystem offshore Barrow, Alaska

Jean-Louis Tison, Thomas Mock, David Thomas, Andreas Krell, Stathis Papadimitriou, Véronique Verbeke, Bruno Delille and Gerhard Dieckmann: A comparative study of O₂ measurments in experimental (Interice II) and natural (ISPOL, Western Weddell Sea, Antarctica) first vear sea ice

Jean-Louis Tison and Jacqueline Stefels: High resolution DMS and DMSP time series profiles in summer first year sea ice at ISPOL (Western Weddell Sea, Antarctica)

Large scale sea-ice processes

Martin Doble, David Meldrum, Duncan Mercer, Oli Peppe and Jeremy Wilkinson: Wave propagation within sea ice: developments in instrumentation

Torge Martin and Thomas Martin: Anomalies of sea-ice transports in the Arctic

Wouter Lefebvre and Goosse Hugues: Modes of variability of the winter sea ice in the Southern Ocean

Petra Heil and Samantha Lake: Increase in sea-ice velocity in East Antarctica as evidenced by SMMR and SSM/I

Poster session

Karolina Widell, Peter M. Haugan and Frank Nilsen: Brine release from warm sea ice

Bruno Delille, Véronique Schoemann, Christiane Lancelot, Delphine Lannuzel, Jeroen T.M. de Jong, Bronte Tilbrook, Daniel Delille, Alberto V. Borges and Jean-Louis Tison: What controls pCO₂ dynamics in Antarctic sea ice and related air-ice CO₂ fluxes?

Roberta Pirazzini, Mats A. Granskog, Timo Vihma and Bin Cheng: Surface albedo measurements over sea ice in the Baltic Sea during the spring snowmelt period

Donald K. Perovich: The reflection and transmission of ultraviolet light by an arctic sea ice cover

Jens Ehn, Mats Granskog, Tim Papakyriakou, Ryan Galley and David Barber: Surface albedo observations of Hudson Bay land-fast sea ice during melt onset

Ian Allison, Michel Beland and David Carlson: Sea ice research within the International Polar Year 2007–2008

Richard Hall and Nicholas Hughes: The classification of ASAR alternating polarization data with co-incident in situ data

Annette F.M. Foster, Mark A.J. Curran, Barbara T. Smith, Tas D. van Ommen and Vin I. Morgan: Covariation of sea ice and methane sulphonic acid in Wilhelm II Land, Antarctica

Rob Massom, Tony Worby, Thorsten Markus, Vicky Lytle, Ted Scambos, Ian Allison, Hiroyuki Enomot, Kazutaka Tateyama and Terry Haran: ARISE (Antarctic Remote Ice Sensing Experiment) in the East: validation of satellite sea-ice data products

Julienne Stroeve, Walt Meier and Thorsten Markus: The role of melt in the recent extreme Arctic summer ice extent minima

Guy Williams, Peter Wadhams and Jeremy Wilkinson: Ice thickness and hydrography of the North East Water polynya

R.H. Krapp, J. Berge, B. Gulliksen and I. Werner: Antarctic sympagic amphipods in the central Weddell Sea

Matthias Steffens, Mats A. Granskog, Hermanni Kaartokallio, Harri Kuosa and David N. Thomas: Spatial variation of biogeochemical properties of landfast sea ice in the Gulf of Bothnia (Baltic Sea)

Stefan Kern, Martin Gade, Andreas Paffling and Christian Haas: Retrieval of thin-ice thickness using the L-band polarization ratio measured by the helicopter-borne scatterometer HELISCAT

Takenobu Toyota, Shinya Takatsuji, Kazuhiro Naoki, Kazutaka Tateyama and Kay I. Ohshima: Properties of sea ice and overlying snow in the southern Sea of Okhotsk

Sebastian Gerland and Richard Hall: Variability of sea-ice thickness off West Spitsbergen

Fern Scott and Daniel Feltham: Modelling the areal evolution of Arctic melt ponds

Daniela Flocco and Daniel L. Feltham A new parameterization of melt ponds in the cice model: preliminary results

Kazutaka Tateyama, Shotaro Uto, Kunio Shirasawa and Hiroyuki Enomoto: Thickness measurements of the deformed sea ice by using an electromagnetic-inductive device

William M. Connolley and Ann Keen: EVP dynamics in HadCM3

Mark A. Hopkins and Donald K. Perovich: A discrete element, ray tracing model of radiative transfer in snow

Ruth Preller, Pamela G. Posey and Robert C. Rhodes: NRL's Polar Ice Prediction System (PIPS 3.0): Current capabilities and future plans

Nicholas Hughes and Richard Hall: IceCam: Sea ice data collection on vessels of opportunity in IPY 2007-8

Walter N. Meier and Mingrui Dai: High-resolution sea ice motions from AMSR-E imagery

Pablo Clemente-Colón, Sean Helfrich, Kelly Taylor and Gene Swope: A review of sea ice remote sensing observations during the Healy transarctic crossing of 2005

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Marc Mueller-Stoffels, Pat J. Langhorne, Chris Petrich and Edward W. Kempema: Crystal orientations in quietly frozen ice sheets from fresh water and low concentration NaCl solutions

Jamie Morison, Knut Aagaard, Kelly Falkner, Takashi Kikuchi, Miles G. McPhee, Dick Moritz, Jim Overland, Tim Stanton and Mike Steele: The North Pole Environmental Observatory: change in the marine Arctic and opportunities for research

WEDNESDAY, 7 DECEMBER 2005

Josefino C. Comiso: Impacts of the variability of ice types on the decline of the Arctic perennial ice cover

H. Jay Zwally and Per Gloersen: Arctic sea ice surviving the summer melt

Kay I. Ohshima, Takeshi Tamura and Sohey Nihashi: Sea ice production in the Okhotsk coastal polynya and its relation to interannual variability of Okhotsk Sea intermediate water

Jackie Richter-Menge, Don Perovich, Bruce Elder, Ignatius Rigor and Mark Ortmeyer: Ice mass balance buoys: a tool for measuring and attributing changes in the thickness of the Arctic sea ice cover

Donghui Yi and H. Jay Zwally: Freeboard measurements and thickness estimates of Antarctic sea ice, 2003-2005 from ICESat

Michelle E. Johnston and Garry W. Timco: Growth and decay of first-year sea ice: Arctic ice compared to sub-Arctic ice

Sea ice and climate

Sinead L. Farrell, Seymour W. Laxon, Katharine A. Giles, Jay H. Zwally, Donghui Yi and Dave C. McAdoo: Combining satellite laser and radar altimeter estimates of sea ice freeboard and thickness.

Shuki Ushio: Temporal variation of fast ice in Lützow-Holmbukta, Antarctica: analysis for physical factors of frequent breakup

Sea-ice growth and decay

Shotaro Uto, Haruhito Shimoda and Shuki Ushio: Characteristics of sea-ice thickness and snow-depth distributions of the summer land-fast ice in Lützow-Holmbukta, East Antarctica

Edward W. Kempema and Dirk Dethleff: The role of Langmuir circulation in new ice formation and suspension freezing

Ted Maksym: Effect of snow and small scale processes on the distribution of Antarctic sea-ice types

THURSDAY, 8 DECEMBER 2005

Walter N. Meier, Julienne Stroeve and Shari Fox Gearheard: Impact of decreasing sea ice cover on native communities in the Baffin Bay region Jeff Ridley and Anne Pardaens: Sea ice response to climate change in the Met Office climate model, HadGEM1.

Nicholas Hughes and Peter Wadhams: Beyond SCICEX: Measurement of Arctic sea ice thickness and oceanography by submarine in the 21st Century

James H. Morison, Miles G. McPhee, John S. Wettlaufer and M. Grae Worster: The role of the molecular sublayer under freezing sea ice and implications for mushy layer convection.

Donald K. Perovich and Jacqueline A. Richter-Menge: From points to Poles: extrapolating point measurements of sea ice mass balance

Toshiyuki Kawamura, Hiroyuki Wakabayashi and Shuki Ushio: Growth, properties and relation with backscattering coefficient of sea ice in Lutzow-Holm Bay, Antarctica

Sea ice and climate

Jeremy Wilkinson, Peter Wadhams, Guy Williams, Steve McPhail, Gwyn Griffiths and Arthur Kaletzky: Simultaneous ice thickness and oceanographic measurements by an AUV in the North East Water polynya

Margaret A. Knuth and Stephen F. Ackley: Sea ice concentration in the Ross Sea: comparison of in situ ASPeCt observations and satellite passive microwave estimates

Jia Wang, B. Wu and John Walsh: The response of arctic sea ice to the winter atmospheric dipole anomaly (DA)

Paul Miller, Seymour Laxon and Daniel Feltham: The significance and origin of changes in Arctic sea ice mass balance during the last four decades: an investigation using a highly optimised sea-ice model

Christophe Kinnard, Christian M. Zdanowicz and David A. Fisher: Calibration of an ice-core glaciochemical (sea salt) record with sea ice variability in the Canadian Arctic

William M. Connolley: A comparison of SSM/I, ULS and HadCM3 Sea ice concentrations in the Weddell Sea

Bea Alt, Katherine Wilson and Tom Carrieres: A case study of old ice import and export through Peary and Sverdrup channel in the Canadian Arctic Archipelago: 1998–2004

Tracy L. DeLiberty, Cathleen A. Geiger, Michael Van Woert, Anthony Worby and Stephen Ackley: A four year dataset of sea-ice thickness and mass balance for the Southern Ocean

Wei Lixin, Zhang Zhanhai and Wu Huiding: Impacts of the recent decline of Arctic sea ice in summer on the Asia-Pacific climate in the GISS AGCM

Sea-ice growth and decay

Fumihiko Nishio, Josefino C. Comiso, Masashige Nakayama, Al Gasiewski and Boba Stanko: Physical and radiative characteristics of the Okhotsk Sea ice cover from current satellite, aircraft and in situ ship data

Inga J. Smith, Patricia J. Langhorne, Timothy G. Haskell, Russell D. Frew and M. Ross Vennell: Platelet ice formation in McMurdo Sound, Antarctica

Mats A. Granskog and Hermanni Kaartokallio: Tracer study of surface meltwater percolation into first-year Baltic Sea ice during spring melt

Marcel Nicolaus, Christian Haas, Sascha Willmes and Jörg Bareiss: Snow melt and formation of superimposed ice on Arctic and Antarctic sea ice Jerome Neufeld and John S. Wettlaufer: Control of sea ice permeability by an external shear flow

Chris Petrich, Pat J. Langhorne and Tim G. Haskell: Refrozen cracks in sea ice

Craig R. Purdie, Pat J. Langhorne, Greg H. Leonard and Tim G. Haskell: Growth and development of physical properties of first year land-fast Antarctic sea ice determined from winter field measurements

Dirk Notz and M. Grae Worster: The salinity evolution of sea ice

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Poster session

Klaus Görgen: A modelling study of the atmospheric impact on the evolution of sea ice area anomalies in the Laptev Sea during selected summers

Jun Inoue, Takashi Kikuchi and James H. Morison: Variability of the upper ocean heat content in the central Arctic associated with storm-driven mixing

Stefan Kern, Youmin Chen, Detlef Stammer and Gunnar Spreen: The sea-ice compactness in the northern North-Atlantic during 1979–2003: changes and links to the surface air flow

Frank Nilsen, Karolina Widell, Sebastian Gerland, Peter M. Haugan, Jan-Gunnar Winther, Miles McPhee, Anders Sirevaag, Kåre Edvardsen and James Morison: Atmosphere–ice–ocean (AIO) interaction studies in Svalbard

Kenji Baba, Shoshiro Minobe, Noriaki Kimura and Masaaiki Wakatsuchi: The feature of the intraseasonal variability of sea-ice in the Antarctic Takashi Kikuchi, Jun Inoue and Masuo Hosono: Observational paradigm of ocean-ice-atmosphere interaction using ice drifting buoys

Marcelo Carignano, E. Baskaran, P.B. Shepson and I. Szleifer: Molecular dynamics simulation of ice growth from pure water and brine

Kelly M. Brunt, Olga Sergienko and Douglas R. MacAyeal: The Impact of tabular icebergs on the formation of fast ice in McMurdo Sound, Antarctica

Seymour Laxon, Sinead Farrell, Andrew Ridout, Katharine Giles, Jay Zwally and Donghui Yu: Antarctic sea-ice thickness from space?

Terry Haran, Ted A. Scambos and Robert Massom: Validation of sea-ice skin temperature algorithms for AVHRR and MODIS

Christophe Kinnard, Christian M. Zdanowicz, David A. Fisher, Bea Alt and Steve McCourt: Climatic analysis of sea ice concentration in the Canadian Arctic derived from operational charts, 1979–2004

Masahiro Hori, Teruo Aoki, Tomonori Tanikawa, Hiroki Motoyoshi, Konosuke Sugiura and Teppei J. Yasunari: Directional emissivity of snow and ice in the thermal infrared wavelength region

Thomas C. Grenfell, Bonnie Light and Donald K. Perovich: Spectral transmission and implications for the partitioning of shortwave radiation in Arctic sea ice

Thomas C. Grenfell, Hajo Eicken, Donald K. Perovich, Jacqueline Richter-Menge, Bruce Elder, Andrew Mahoney and Matthew Sturm: Energy and mass balance observations of the land-ice-ocean-atmosphere system near Barrow, Alaska November 1999-July 2002

Mats A. Granskog, Jari Uusikivi, Alberto Blanco Sequeiros, Eloni Sonninen and Tonu Martma: Relation of ice growth rate to salt segregation during freezing of low-salinity seawater (Baltic Sea)

Sascha Willmes, Jörg Bareiss, Christian Haas and Marcel Nicolaus: The seasonal cycle of sea ice brightness temperatures in the Weddell Sea – results from the ISPOL drift station and SSMI swath data

Jörg Bareiss, Sascha Willmes, Christian Haas and Marcel Nicolaus: Spatial and temporal variability of diurnal melt-freeze cycles in the Weddell Sea during summer 2004/2005 derived from sub-daily SSMI brightness temperatures

Kazuki Nakamura, Hiroyuki Wakabayashi, Shotaro Uto, Kazuhiro Naoki, Fumihiko Nishio and Seiho Uratsuka: Sea-ice thickness retrieval in the Sea of Okhotsk using dual-polarization SAR data

Shinsuke Kojima, Tomonori Tanikawa, Akihiro Hachikubo, Hiroyuki Enomoto and Kazutaka Tateyama: Estimation of liquid-water content of wet snow on sea ice

Daniel Feltham: Granular flow in the marginal ice zone

Todd E Arbetter, Walter N Meier and Ming Rui Dai: Data assimilation of sea-ice motion vectors: sensitivity to the parameterization of sea-ice strength

Mike Van Woert, Mingrui Dai and Walt Meier: Kalman filter techniques for the assimilation of ice-concentration data into an ice-prediction model

Paul Taylor, Daniel Feltham, Peter Sammonds and Daniel Hatton: Continuum sea-ice rheology determined from subcontinuum mechanics Martin Vancoppenolle, Cecilia Bitz, Thierry Fichefet and Wouter Lefebvre: Modelling sea-ice halothermodynamics

Dirk Notz and M. Grae Worster: A 1-D enthalpy model of sea ice

James E Reid, Andreas Pfaffling, John Bishop and Anthony P. Worby: In situ measurements of the direct-current conductivity of Antarctic sea ice: implications for airborne electromagnetic sounding of sea-ice thickness

Anthony Worby, Cathleen Geiger, Michael van Woert, Stephen Ackley and Tracy DeLiberty: Regional and seasonal variability in Antarctic sea ice thickness

Pablo Clemente-Colón, Towanda Street, Sean Helfrich and Kelly Taylor: National ice center sea-ice activities around Antarctica Jim Renwick: Interactions between Antarctic sea ice and atmospheric circulation on weekly to seasonal time scales

FRIDAY, 9 DECEMBER 2005

Atmosphere-ice-ocean; interactions between sea ice and ice shelves

Greg Leonard, Pat Langhorne, Craig Purdie, Tim Haskell, Mike Williams and Ross Vennell: Tidal mixing and platelet ice formation during the winter of 2003 in McMurdo Sound, Antarctica

Takeshi Tamura, Kay I. Ohshima and Sohey Nihashi: Estimation of sea-ice production from passive microwave data in Antarctic coastal polynyas Lars H. Smedsrud, Paul Budgell and Alastair D. Jenkins: Fine scale sea ice modelling of the Storfjorden polynya

Frank Nilsen, Katja Weigel and Ragnheid Skogseth: Modeling the opening and closing of the Storfjorden polynya from the wind stress curl field over the Barents Sea

Jari Uusikivi, Jens Ehn and Mats A. Granskog: Direct measurements of turbulent momentum, heat and salt fluxes under landfast ice in the Baltic Sea

Angelika Humbert, Ralf Greve, Kolumban Hutter and Christopher A. Shuman: Simulation of the ice flow of the Brunt Ice Shelf, Antarctica Michael J. M. Williams and Roland C. Warner: A frazil-ice model for embedding within three-dimensional ocean circulation models Nicole Albrecht, Mike Williams, Ross Vennell, Craig Stevens, Greg Leonard, Pat Langhorne and Tim G. Haskell: Internal waves under a solid cover of land-fast sea ice

W. D. Hibler III, Andrew Roberts, Petra Heil and A. Proshuntinsky: Comparison of embedded and levitated Arctic ice-ocean tidal models Caixin Wang, Aike Beckmann and Jean-Marc Molines: The representation of Antarctic Sea Ice in a global ice-ocean model Richard Brandt, Stephen Warren, Tony Worby and Thomas Grenfell: surface albedo of the Antarctic sea-ice zone