Polar Gateways Arctic Circle Sunrise 2008
Barrow, Alaska, January 23-29, 2008

Home Page: http://www.polargateways2008.org/

01/31/2008 Note: The conference has ended and all abstracts, slide (PPT or PDF) presentations, and video recordings will be made available only via links from the following program document. Contact the Conference Chair, John.F.Cooper@nasa.gov (phone +1-301-286-1193) for updates on conference proceedings availability.

Conference Program (Version Jan. 31, 2008)

All times in Alaska Standard Time (AKST, GMT-9) 00:00 – 23:59 unless otherwise indicated.

Wednesday, January 23, 2008

06:30 – 08:30 Breakfast – Iḷisaġvik College Kitchen (hours)

08:30 – 09:00 *Conference Briefing for On-Site Participants*
John F. Cooper, NASA Goddard Space Flight Center

I. Conference Opening, Kiruna, Historical Perspectives for IPY I/II to IGY

Opening Ceremony

09:00 – 09:05 *Invocation*
Kenneth Toovak, Elder, Hon. Ph.D., BASC Board member
09:05 – 09:15 *Welcome to Barrow & BASC, Introduction of Mayor*
Richard K. Glenn, Board President, BASC
09:15 – 09:30 *Importance of Science to the Communities of the North Slope*
George Olemaun, Special Assistant to the Mayor, North Slope Borough
09:30 – 09:45 *Commemoration of the First International Polar Year at Barrow*
Glenn W. Sheehan, Executive Director, BASC

09:45 – 10:00 Break

Kiruna Video Conference: 09:45 – 12:00

10:00 – 10:15 Welcome and Introduction
Ingrid Sandahl, Swedish Institute of Space Physics, Kiruna
Presentation
10:15 – 10:45 *Kiruna, A Northern City, Past, Present and Future*
Anna Mämmi, Municipality of Kiruna, Sweden
Presentation
10:45 – 11:00 *Latest News from MARA, the Movable Atmospheric Radar in Antarctica*
Sheila Kirkwood, Aboa/Wasa Bases, Antarctica {telecon via Kiruna, Uwe Raffalski}
Presentation
11:00 – 11:30 *Recent Results on Mars and Venus*
Hans Nilsson, Swedish Institute of Space Physics, Kiruna, Sweden
Presentation
11.30 – 12:00 *Auroral studies by the Russian-Swedish expedition to Spitsbergen 1899-1900*
Ingrid Sandahl, Swedish Institute of Space Physics, Kiruna
Sergey Chernouss, Polar Geophysical Institute, Apatity, Russia
Presentation Video (do not stream from site; right-click to download)

12:00 – 13:00 Lunch – Iḷisaġvik College Kitchen (hours)

13:00 – 13:30 Sunrise Conference Group Photograph

1st sunrise at 13:06, sunset at 14:12**,** based on historical data from Jan. 23, 2007.

The Second International Polar Year

14:00 – 14:15 *Local Memories of Early Arctic Aviation at Barrow, Post-Rogers Memorial*
Kenneth Toovak, Elder, Hon. Ph.D., BASC Board member {pending confirmation}
14:15 – 15:00 *Early Arctic Aviation and the Bergen School of Meteorology (telecon)*
Roger Turner, University of Pennsylvania
Abstract Presentation

University of Alaska Fairbanks Video Conference: 14:45 – 18:30
The International Geophysical Year

15:00 – 17:00 Sidney Chapman, IGY, and the Geophysical Institute (UAF videocon)

Personal Experiences Working with Sydney Chapman During the IGY
Syun-Ichi Akasofu, University of Alaska Fairbanks
Motivations and Legacies of the First Three International Polar Years
Carl Benson, Geophysical Institute, University of Alaska at Fairbanks
International Achievements of the IGY and Parallels with the Current International Years
Roger W. Smith, Director, Geophysical Institute, University of Alaska Fairbanks

UAF Abstracts for Akasofu, Benson, and Smith

General Discussion of Chapman and IGY Legacies for the Present and Future
All Participants

17:00 – 18:30 Personal Remembrances of the International Geophysical Year 1957 – 1958

Personal Reminisces
Kenneth Toovak, BASC (with John F. Cooper)

The First Winter at the Amundsen-Scott IGY South-Pole Station
Robert F. Benson, NASA Goddard Space Flight Center
Presentation
A Young Physics Student's Perspective of the IGY
Margaret A. Shea, University of Alabama Huntsville
Abstract Presentation
Reminisces of the Thule, Greenland IGY Program
Don Smart, University of Alabama Huntsville
Abstract Presentation
R. P. Kane, Instituto Nacional de Pesquisas Espaciais, Brazil (prerecorded, 10min}
Video (do not stream from site; right-click to download)

Arctic Archeological History

18:30 – 19:30 *Tour of BASC Arctic Archeology Laboratory*
Anne M. Jensen, Ukpeagvik Inupiat Corporation (UIC) {pending confirmation}

19:30 – 20:00 Break

Opening Dinner at Barrow Restaurant
20:00 – 22:00

Thursday, January 24, 2008

II. Heliophysics Science and Mission Highlights for IPY-IHY 2007-2009

06:30 – 08:00 Breakfast – Iḷisaġvik College Kitchen (hours)

08:00 – 09:00 *Heliosphere Impact on Geospace: Solar-Terrestrial and Aeronomy Research During the Fourth Polar Year Campaign*
Kirsti Kauristie[1], Juha-Pekka Luntama, A. Weatherwax, and R. Harrison
[1]Finnish Meteorological Institute, Helsinki, Finland
Abstract Presentation

Apatity Phone Conference: 08:55 – 09:30

09:00 – 09:30 *Polar Neutron Monitors in the Study of Solar Cosmic Rays* {telecon}
Eduard V. Vashenyuk, Yuri V. Balabin, and Boris B. Gvozdevsky
Polar Geophysical Institute RAS, Apatity, Russia
Abstract Presentation

09:30 – 10:00 Break

Svalbard Video Conference: 09:45 – 12:00

10:00 – 10:05 *Welcome and Introduction*
Nikolai Ostgaard, University of Bergen, Norway
Presentation
10.05 – 10:40 *History of Svalbard as a Research Community with Focus on Space Science*
Prof. Asgeir Brekke, University of Tromsø, Norway
Abstract Presentation
10:40 – 11:10 *Continuous Incoherent Scatter data through the IPY*
Tony V. Eyken, Director, EISCAT Svalbard Radar, Spitzbergen, Norway
Abstract Presentation
11.10 – 11:35 *The Mystic Twins: Aurora Borealis and Australis*
Nikolai Ostgaard, University of Bergen, Norway

Abstract Presentation

11.35 – 12:00 *The Space Science Suitcase - Instruments for Exploring Near-Earth Space from the Classroom*
Assoc. Prof. Kjartan Olafsson, University of Bergen, Norway
Abstract Presentation

12:00 – 13:00 Lunch – Iḷisaġvik College Kitchen (hours)

GSFC-I Video Conference: 12:45 – 16:00

13:00 – 13:30 *The Global Heliophysics Observatory for IPY-IHY 2007 - 2009*
John F. Cooper, NASA Goddard Space Flight Center
Abstract Presentation

13:30 – 14:00 *The Ulysses Mission: Studies of Solar (and Jovian) Polar Regions*
Robert J. Macdowall, NASA Goddard Space Flight Center (GSFC Videocon)
Abstract Presentation

14:00 – 14:45 *SOHO and Stereo Observations of Polar Coronal Holes at Solar Minimum*
Barbara J. Thompson, NASA Goddard Space Flight Center (GSFC Videocon)
Presentation

14:45 – 15:00 Break

15:00 – 15:30 *International Reference Ionosphere and the Polar Ionosphere*
Dieter Bilitza, George Mason University / NASA GSFC (GSFC Videocon)
Abstract Presentation

15:30 – 16:30 Break

UC-Berkeley Video Conference: 16:15 – 17:45

16:30 – 17:45 *The Onset of Dynamic Aurora and THEMIS: Understanding a Polar Phenomena*
Laura M. Peticolas[1], J. W. Bonnell, M. Bester, D. G. Sibeck, E. F. Donavan, S. B. Mende, H. U. Frey, J. P. McFadden, D. E. Larson, C. T. Russell, and V. Angelopoulos
[1]Space Science Laboratory, UC-Berkeley (UCB Videocon)
Abstract Presentation

17:45 – 18:45 Dinner – Iḷisaġvik College Kitchen (hours)

19:00 – 19:30 *The Voyagers Leave the Supersonic Bubble of the Heliosphere*
John D. Richardson, Massachusetts Institute of Technology
Abstract Presentation Movie-1 Movie-2

19:30 – 20:00 *IBEX Neutral Atom Imaging of the Polar Heliospheric Boundary Regions*
Christina L. Prested, Boston University {pending confirmation}
Abstract Presentation

20:00 – 21:00 *Open Discussion on IPY-IHY Heliophysics Impact, Legacy, and Future*

Friday, January 25, 2008

III. Present and Changing Polar Environment of Earth

06:30 – 08:00 Breakfast – Iḷisaġvik College Kitchen (hours)

GSFC-I / UA-Fairbanks Videoconference: 08:45 – 12:00

09:00 – 12:00 ICESAT, Sea Ice, Polar Ozone, Carbon Balance

09:00 – 09:30 *Polar ozone: Past, Present, and Future*
Paul A. Newman, NASA Goddard Space Flight Center (GSFC Videocon)
Abstract Presentation
09:30 – 10:00 *Detecting Tundra Ecosystem Change Using Remote Sensing*
K. Fred Huemmrich, University of Maryland Baltimore County (GSFC Videocon)
Abstract Presentation

10:00 – 10:30 Break

10:30 – 11:00 *Arctic Sea Ice: What We Have Learned From Satellite Passive-Microwave Observations*
Claire L. Parkinson, NASA Goddard Space Flight Center (GSFC Videocon)
Abstract Presentation Yearly Change 1979-2003 Daily Change 2003
11:00 – 11:30 *Sea-Ice Change Around Alaska & Impacts on Human Activities*
Hajo Eicken, University of Alaska Fairbanks (UAF Videocon)
Abstract Presentation
11:30 – 12:00 *Greenland Ice Environment {get exact title from ppt file}*
Waleed Abdalati, NASA Goddard Space Flight Center (GSFC Videocon)
Presentation

12:00 – 13:00 Lunch – Iḷisaġvik College Kitchen (hours)

13:00 – 14:00 *Radio Sounding in the Polar Regions*
Robert F. Benson[1], Nathan Kurtz, Kris Atkins, and Thorsten Markus,
[1]NASA Goddard Space Flight Center
Abstract Presentation
14:00 – 15:00 *GREAT Ice Rover Robotics Demonstration*
Michael A. Comberiate, NASA Goddard Space Flight Center (+6 team members)
15:00 – 15:30 *Geomagnetic Field Evolution and Cosmic Ray Penetration*
Don F. Smart and Margaret A. Shea, University of Alabama Huntsville
Abstract Presentation
15:30 – 16:00 *Nitrate Enhancements in Polar Ice: A Historical Record of Large Fluence Solar Proton Events*
Margaret A. Shea and Don F. Smart, University of Alabama Huntsville

Abstract Presentation

16:00 – 16:30 Break

16:30 – 17:00 *Shorebird Migration from the Arctic to Patagonia*
Dave Grant, Ocean Institute, Brookdale Community College
Abstract Presentation

Saturday, January 26, 2008

IV. Barrow Community Outreach and Cultural Orientation

06:30 – 08:45 Breakfast – Iḷisaġvik College Kitchen (hours)

Fred Ipalook Elementary School (outreach volunteers)

09:00 – 12:00 *GREAT Robotics Demonstration*
Michael A. Comberiate, NASA Goddard Space Flight Center

12:00 – 12:30 Lunch at Barrow Restaurants

12:00 – 13:00 *Europa and Enceladus - Public Lecture and Demonstration*
John F. Cooper, NASA Goddard Space Flight Center
Matthew Burger, NASA Goddard Space Flight Center

Tour of Inupiat Heritage Center

Mid-Conference Dinner at Barrow Restaurant

19:00 – 21:00

Sunday, January 27, 2008

V. Personal Expeditions of Polar Exploration

BASC Theater Building

10:00 – 11:00 *Expedition Equipment and Safety Orientation*
BASC Staff and Guides

11:30 – 12:30 Brunch – Iḷisaġvik College Kitchen (hours)

BASC Theater Building

13:00 – 16:00 *Field Expedition "On the Ice"*
BASC Staff and Guides

17:00 – 18:30 Dinner – Iḷisaġvik College Kitchen (hours)

19:00 – 21:00 Personal Journeys of Polar Exploration

John F. Cooper, Europa Focus Group Arctic Ice Field Conference, Barrow, April 2003
Lewis Brower, Arctic Sea Ice
Dave Grant, Arctic Voyages
Don Smart, Thule, Greenland, IGY
Andrew Quinn, Ethiopia IHY

Monday, January 28, 2008

VI. Exploration of the Outer Solar System

06:30 – 08:45 Breakfast – Iḷisaġvik College Kitchen (hours)

GSFC-II Video Conference: 07:45 – 14:00
JPL Video Conference: 07:45 – 18:00

08:00 – 09:00 *NASA Planetary Science Program*
James L. Green, NASA Headquarters (GSFC Videocon)
Presentation

09:00 – 10:00 *Ices of Pluto and the Kuiper Belt Objects*
Dale P. Cruikshank, NASA Ames Research Center
Abstract Presentation

10:00 – 10:15 Break

10:15 – 11:00 *Cassini at Titan and Enceladus*
Wayne T. Kasprzak[1], et al., [1]NASA Goddard Space Flight Center (GSFC Videocon)
Abstract Presentation

11:00 – 11:30 *New Horizons at Jupiter*
John R. Spencer, Southwest Research Institute, Boulder (JPL Videocon 1)
Abstract Presentation

11:30 – 12:00 *Titan: Earth's REAL Sister Planet*
Louis A. Mayo, NASA Goddard Space Flight Center
Abstract Presentation

12:00 – 13:15 Lunch – Iḷisaġvik College Kitchen (hours)

13:30 – 14:00 *Laboratory Chemistry of the Outer Solar System*
Marla H. Moore, NASA Goddard Space Flight Center (GSFC Videocon)
Abstract Presentation

14:00 – 14:30 *Hotspots and Hexagons: Saturn's Polar Circulation Systems*
Leigh N. Fletcher et al., NASA Jet Propulsion Laboratory (JPL Videocon 2)
Abstract Presentation

14:30 – 15:00 Saturn's Poles Revealed: New Visual and Near-Infrared Views of Polar Clouds, Waves, Hexagonal Features, and Vortices by Cassini/VIMS
Kevin H. Baines[1], T. W. Momary, M. Roos-Serote, A. P. Showman, S. K. Atreya, R. H. Brown, B. J. Buratti, R. N. Clark, P. D. Nicholson, and the Cassini /VIMS Science Team, [1]NASA Jet Propulsion Laboratory (JPL Videocon 2)
Abstract Presentation

15 :00 – 15 :30 *Exploring Europa*

Robert T. Pappalardo, NASA Jet Propulsion Laboratory (JPL Videocon 2)
Abstract Presentation

15:30 – 16:00 *Exploring the Interiors of Icy Satellites Using Magnetic Induction*
Krishan K. Khurana, University of California Los Angeles (JPL Videocon 2)
Abstract Presentation

16:00 – 16:15 Break

16:15 – 16:45 *Radar Imaging of Europa's Subsurface Properties and Processes: The View from Earth*
Donald D. Blankenship[1], D. A. Young, M. E. Peters, and W. B. Moore, [1]University of Texas at Austin (JPL Videocon 2)
Abstract Presentation

16:45 – 17:15 *The Jupiter System Observer: A Mission to study Jupiter, its Moons and Magnetospheric Environment*
David A. Senske[1], L. Prockter, J. Kwok, T. Spilker and the JSO Science Definition Team, [1]NASA Jet Propulsion Laboratory (JPL Videocon 2)
Abstract Presentation

17:15 – 17:45 *The Jupiter System Observer Mission Concept: Implementing the Scientific Investigation of the Jovian System*
Thomas R. Spilker[1], D. A. Senske, L. Prockter, J. H. Kwok, G. H. Tan-Wang, and JSO SDT NASA, [1]Jet Propulsion Laboratory (JPL Videocon 2)
Abstract Presentation

17:45 – 18:45 Dinner – Iḷisaġvik College Kitchen (hours)

19:00 – 19:30 *Observations of Polar Aurora at Jupiter and Saturn during IPY*
Jonathan D. Nichols[1], J. T. Clarke, J.-C. Gérard, D. Grodent, K. C. Hansen, W. Kurth, G.R. Gladstone, J. Duval, S. Wannawichian, E. Bunce, S. W. H. Cowley, F. Crary, M. Dougherty, D. Mitchell, W. Pryor, K. Retherford, and T. Stallard, [1]Boston University
Abstract Presentation

19:30 – 20:00 *Biosignatures on Icy Worlds*
Kevin P. Hand, NASA Jet Propulsion Laboratory
Presentation

20:00 – 20:30 *Europa's Tenuous Atmosphere and its Interaction with Jupiter's Magnetosphere*
` Timothy A. Cassidy, University of Virginia
Abstract Presentation

Tuesday, January 29, 2008

06:30 – 08:00 Breakfast – Iḷisaġvik College Kitchen (hours)

Enceladus and Saturn's Magnetosphere

08:00 – 08:30 *No Sodium in the Enceladus Plume: Implications for a Sub-Surface Ocean*
Matthew H. Burger[1], N. M. Schneider, R. E. Johnson, J. S. Kargel, E. L. Schaller, and M. E. Brown, [1]NPP, NASA Goddard Space Flight Center
Abstract Presentation

08:30 – 09:00 *Searching for N_2 And Ammonia In Saturn's Inner Magnetosphere*
H. Todd Smith[1], R. E. Johnson, E. C. Sittler, M. Shappirio, D. Reisenfeld, F. J. Crary, D. McComas, and D. Young, [1]Applied Physics Laboratory, Johns Hopkins University
Abstract Presentation

09:00 – 09:30 *How In-Situ Plasma Measurements at the Outer Planets Can Inform Our Understanding of the Earth's Magnetosphere*
Abigail M. Rymer[1], M. Sitnov, S. Ukhorskhiy, H. T. Smith, D. Mitchell, C. Paranicas, and B. H. Mauk, [1]Applied Physics Laboratory, Johns Hopkins University
Abstract Presentation

09:30 – 10:00 Break

10:00 – 11:00 *Environment Challenges for Exploration of the Moon*
Joseph I. Minow[1], William C. Blackwell, Jr, Victoria N. Coffey, William J. Cooke, James W. Howard, Jr., Linda N. Parker, John R. Sharp, Richard G. Schunck, Robert M. Suggs, and Joseph J. Wang, [1]NASA Marshall Space Flight Center
Abstract Presentation

11:00 – 12:00 *From Mars Global Surveyor to Mars Reconnaissance Orbiter: A Decade of Visible and Infrared Observations of Mars Polar Processes*
Timothy N. Titus[1], K. Herkenhoff, K. D. Seelos, F. P. Seelos, S. L. Murchie, W. M. Calvin, P. B. James, L. H. Roach, J. F. Mustard, H. H. Kieffer, Y. Langevin, T. H. Prettyman, C. Hansen, P. R. Christensen, A. McEwen, [1]USGS Astrogeology
Abstract Presentation

12:00 – 13:00 Lunch – Iḷisaġvik College Kitchen (hours)

VII. Exploration and Habitation of the Inner Solar System

GSFC-I Video Conference: 12:45 – 15:00

13:00 – 15:00 The Moon: Robotic and Manned Exploration

13:00 – 13:15 *Lunar Science Overview*
James Garvin, NASA Goddard Space Flight Center (GSFC Videocon)
Presentation
13:15 – 13:45 *Lunar Reconnaissance Orbiter: Instrument Suite and Objectives*
Richard R.Vondrak, John W. Keller, and the LRO Team, NASA Goddard Space Flight Center (GSFC Videocon)
Abstract Presentation
13:45 – 14:15 *The Once and Future Moon: Planned and Potential Lunar Architectures and their Impact on Scientific Exploration*
Pamela E. Clark, NASA GSFC (GSFC Videocon)
Abstract Presentation
14:15 – 15:00 *Spacecraft Exploration of the Moon - (Almost) 50 Years of Data*
David R. Williams, NASA Goddard Space Flight Center (GSFC Videocon)
Abstract Presentation

JPL Video Conference: 14:45 – 17:45
University of Arizona Video Conference: 14:45 – 17:45

15:30 – 16:00 *The Phoenix Mission*
Leslie K. Tamppari[1], Susanne Douglas (JPL), Sam Kounaves, (Tufts), Chris Mckay (Ames), Doug Ming (JSC), Peter Smith (UA), Aaron Zent (Ames), [1]NASA Jet Propulsion Laboratory (UA Videocon)
Abstract Presentation
16:00 – 16 :30 *Mars Analog Science in Antarctica*
Leslie K. Tamppari[1], Susanne Douglas (JPL), Sam Kounaves, (Tufts), Chris Mckay (Ames), Doug Ming (JSC), Peter Smith (UA), Aaron Zent (Ames), [1]NASA Jet Propulsion Laboratory (UA Videcon)
Abstract Presentation
16:30 – 17:00 *Radar Observations of the Polar Layered Deposits of Mars*
Sarah Milkovich[1], J. J. Plaut, A. Safaeinili, N. E. Putzig, R. J. Phillips, J. W. Holt, G. Picardi, and R. Seu, [1]NASA Jet Propulsion Laboratory
Presentation
17:00 – 17:30 *Ionization: A key chemical pathway in ices under radiation environment?*
Murthy S. Gudipati, NASA Jet Propulsion Laboratory (JPL Videocon)
Abstract Presentation

Conference Closing

17 :30 – 18:00 *Postconference Publication Planning*
John F. Cooper, NASA Goddard Space Flight Center
Margaret Shea, University of Alabama Huntsville

17:45 – 18:45 Dinner – IIsagvik College Kitchen (hours)

20:21 Evening Departure Flight from Barrow

Wednesday, January 30, 2008

06:30 – 08:45 Breakfast – Iḷisaġvik College Kitchen (hours)

11:04 Morning Departure Flight from Barrow

Please direct all questions about this draft program to the Chairperson:

Dr. John F. Cooper
Heliospheric Physics Laboratory, Code 672
NASA Goddard Space Flight Center
8800 Greenbelt Road
Greenbelt, Maryland 20771
Phone: +1-301-286-1193
Fax: +1-301-286-1617
E-mail: John.F.Cooper@nasa.gov

We shall not cease from exploration.
And the end of all our exploring
will be to arrive where we started,
and to know the place for the first time.
Through the unknown, remembered gate,
when the last of the earth left to discover
is that which was the beginning;

From T. S. Eliot, Little Gidding, Four Quartets

See you soon at the top of the world!

Other Information for Conference Participants

Conference Home Page

http://polargateways2008.org/

Barrow Arctic Science Consortium (BASC)

http://www.arcticscience.org/

ICESTAR/IHY Home Page

http://www.ipy-id63.org/

Phones, Computers, Internet Access, Video Conferencing, Web Broadcast

There are mobile phones but no standard cell phone service in Barrow. All communications are otherwise via by landlines except as supported for prearranged activities by BASC. Long distance calling is by credit card, e.g. 1-800-CALL-ATT. The long distance operator can be reached by dialing "00" from the phones, e.g. in the library or the conference room in Building 360, the main College and BASC office facility adjacent to the NARL Hotel.

High-bandwidth internet access is available through BASC facilities. Wireless access for laptop computers is available in Building 360 and at the conference building, the Barrow Arctic Research Center (BARC), but should not be used while conference broadcast streaming and video conferences are in progress.

Conference Presentation Broadcasting

The external home page for the conference is polargateways2008.org. Conference presentations from on-site contributors originated from the BARC conference building and were broadcast through video conferencing services of the University of Alaska Fairbanks. The Fairbanks services integrated contributions from remote video-conference sites into the broadcast stream and for two-way interactions with other active sites. Teleconferencing was used for some presenters not at video conferencing sites. *All comments and questions on conference presentations should be addressed via e-mail to the Conference Chairperson, John.F.Cooper@nasa.gov.*

Conference Presentation File Submission

Powerpoint presentation files were provided to the conference organizers by one of two methods: (1) sending via e-mail for file sizes less than 15 MB, or (2) uploading larger files to BASC via anonymous FTP login (username = "anonymous", password = *personal e-mail address*) to www.arcticscience.org.

Instructions for using FTP command line client in Windows are at http://technet.microsoft.com/en-us/library/bb491071.aspx (then click ftp). It is possible to set up a folder using "My Network Places" -- see http://support.microsoft.%20com/kb/308416. Another possibility to make file transfer easier is the FileZilla client at http://www.sourceforge.net/project/filezilla (then click download). A file hosting service like mytempdir.com could be another possibility for file transfer.

Barrow Information -General

http://en.wikipedia.org/wiki/Barrow%2C_ak

Wiley Post-Will Rogers Memorial Airport, Barrow, Alaska (BRW)

Alaska Airlines Arrival Schedules – 10:19 AM and 7:36 PM

Alaska Airlines 143 from Anchorage (ANC) departing 6:00 AM to Fairbanks arriving 6:56 AM, continuation of AA 143 departing 7:36 AM to Prudhoe Bay (SCC) arriving 8:46 AM, continuation of AA 143 departing 9:31 AM to Barrow (BRW) **arriving 10:19 AM**.

Alaska Airlines 145 from Anchorage (ANC) departing 4:29 PM to Fairbanks arriving 5:25 PM, continuation of AA 145 departing 6:05 PM to Barrow (BRW) **arriving 7:36 PM**.

Alaska Airlines 187 from Anchorage (ANC) departing 3:16 PM to Fairbanks arriving 4:16 PM, connecting on AA 145 departing 6:05 PM to Barrow (BRW) **arriving 7:36 PM**.

Alaska Airlines Departure Schedules – 11:04 AM and 8:21 PM

Alaska Airlines 143 from Barrow (BRW) **departing 11:04 AM** to Anchorage (ANC) arriving 1:07 PM, connecting to AA 162 departing 3:21 PM to Seattle arriving 7:45 PM. This allows overnight stops in Seattle for morning departures to the east coast.

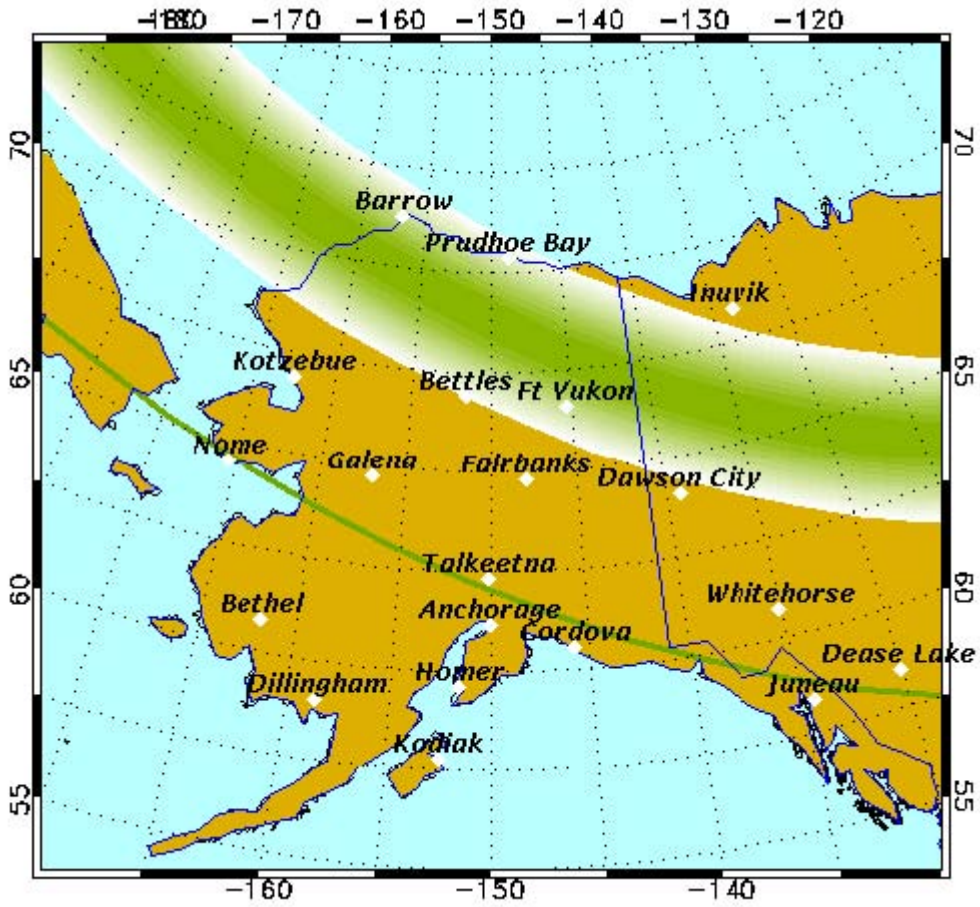
Alaska Airlines 146 from Barrow (BRW) **departing 8:21 PM** to Fairbanks (FAI) arriving 9:43 PM, continuation of AA 146 departing 10:23 PM to Anchorage (ANC) arriving 11:23 PM. This connects to overnight and next morning flights to the east coast.

Frontier Flying Service Inc. – local flights in Alaska on smaller planes

Schedules and reservation services available at http://www.frontierflying.com/.

Auroral Forecast –University of Alaska Fairbanks

http://www.gedds.alaska.edu/AuroraForecast/



Auroral Oval Map – Quiet Auroral Activity

Aurora oval is overhead within the shaded region and visible above the horizon north of the green curve. The southern boundary of the oval extends further south with increasing activity.

Comments from Charles Deehr, UA-Fairbanks Geophysical Institute:

> Auroral activity during the conference will be minimum to quiet. There may be low activity around the 23 and the 28th. However, you will be in one of the few places in the world where this level of activity will be overhead, mainly between the normal observing hours of 9pm to 3am local time. There will also be a full moon, which subtracts somewhat from the contrast of the aurora in the sky, but it is nice to see the landscape during the time under the sky.
>
> Watch the short-term forecast at http://www.gedds.alaska.edu/AuroraForecast/ for activity levels. It measures the solar wind one hour upwind at the ACE satellite and estimates the extent of the resulting aurora.

Barrow Sea Ice Observatory – Current Conditions

http://www.gi.alaska.edu/snowice/sea-lake-ice/Barrow_observatory.html

NOAA NWS Space Weather Prediction Center

http://www.swpc.noaa.gov/index.html

NOAA Sunrise-Sunset Calculator

http://www.srrb.noaa.gov/highlights/sunrise/sunrise.html

Alaska Time Zone

Alaska Standard Time (AKST) is ten hours behind Central European Time (CET), nine hours behind GMT or UT, four hours behind Eastern Standard Time (EST), and one hour behind Pacific Standard Time (PST).

Weather History for Barrow

http://www.wunderground.com/history/airport/PABR/2007/1/23/WeeklyHistory.html

Recommended Clothing for Barrow

Significantly subzero temperatures (0 to –30 deg. F for Jan. 23-29, 2007) and wind chill should be expected. Avoid high costs of rarely-used cold weather gear by visiting your local Army-Navy store. Thick down parka with hood, thermally insulated boots, and thick gloves are highly recommended. Innermost layer is heavy-duty (not light cotton) thermal underwear, top and bottom, over cotton undershirt with inner light cotton and outer heavy wool socks. Lower body covering should include thick warm (e.g., wool) pants. Swedish army winter pants from the Army-Navy store are cheap. Add upper body layers consisting preferably of flannel shirt and wool sweater or down vest plus lighter inner fleece or sweater for indoor wear. Cover head with wool cap and hands with light wool (military-style) inserts fitting inside gloves. Glove inserts keep hands warm when heavy outer gloves are temporarily removed for manual operations requiring dexterity, e.g. photography. Bring comfortable shoes and removable layers for indoor wear. Face coverage options are: (1) full head mask if not wearing glasses, or (2) half-mask plus snow goggles over glasses. In windy conditions, and for extended periods outdoors, it is critical to keep all skin surfaces well covered to avoid frostbite. You will not want to be wearing all of this gear on flights inbound to or outbound from Barrow, so bring along a collapsible duffel bag or extra suitcase for the heavy outer gear including boots. Limited supplies of parkas, air-insulated boots, and other cold weather gear are available from BASC for field ice expeditions, as we may do on Sunday Jan. 27, weather permitting, but you should bring your own gear for normal wear and brief outdoor excursions at other times.

Photography

Any camera should have an optical viewfinder since LCD screens on digital cameras may not work at low temperature. Batteries will tend to freeze, so keep spares warm within inner layers of clothing. This is one reason to wear light glove inserts, so you can replace camera batteries while still keeping your hands warm. The conference takes place in the first week of polar sunrise at Barrow, so outdoor lighting conditions will be low except around mid-day. Consult experts on auroral photography. Barrow is within the quiet auroral oval zone (see above), so there may be good viewing opportunities even during the current solar minimum period, but auroral photography requires long exposures.

Safety

Briefings will be provided by BASC staff. Off-shore sea ice is forming later than normal and may be thin in places even where it extends accessibly to the shoreline. DO NOT go out onto the sea or lake ice without local guides. Contrary to the recent movie 30 Days of Night, there are no vampires in Barrow even before sunrise, but close encounters with hungry polar bears can be equally horrific, so these should not be approached under any circumstances. Long romantic walks in the polar night away from inhabited areas are not recommended. BASC staff will advise of warnings on polar bear sightings in inhabited areas and will provide armed guards for field ice expeditions. The most probable danger for extended outings is frostbite, so appropriate clothing should be worn at all times as recommended above.

Local Transportation

Conference and BASC staff will provide all needed ground vehicle transportation between the airport, town, conference, and residential sites. BASC will be responsible for arrangement of ground or air transportation to outlying communities for educational outreach. Private group arrangements can be made with local commercial organizations for ground or air tours. Information on these tour options, e.g. for Sunday Jan. 27, will be provided in a later conference update.

Lodging

On-site conference attendees have two main options for lodging: (1) no-cost dormitory residences (mostly shared rooms and bathroom facilities, a few single rooms available at special request in the NARL Hotel) as provided by contractual agreement between the conference organizers and BASC, and as requested by Jan. 7 via e-mail (John.F.Cooper@nasa.gov) or phone (+1-301-286-1193) to the conference chairperson, John Cooper, or (2) three commercial hotels in Barrow and the NARL Hotel at the conference site by private arrangement after Jan. 7.

King Eider Inn: ($185 - 305). Newest hotel in town. It features a variety of rooms and suites, some kitchenettes, cable TV and phones in each room, Eskimo crafts and gifts, and movie rental. It is located a half block from the Barrow airport. Phone (907) 852-4700, fax (907) 852-2025. Their email and web site are respectively eider@barrow.com and http://www.kingeider.net/. Local tours available through the hotel.

Top of the World Hotel: http://www.travelhero.com/prophome.cfm/id/77158/ Located near downtown Barrow, and has a restaurant (Pepe's North of the Border) and gift shop. It offers smoking and non-smoking rooms, and gives tours of Barrow. It is within walking distance of three other restaurants and the town bank. Phone 907-852-3900, fax 907-852-6752. Room rates are $160-190. Tundra Tours is the hotel tour company.

Airport Inn: Quiet, family-owned place located 1-2 blocks from the Barrow airport, and well within walking distance of a couple of Asian-American restaurants. The rooms are quiet and have phones, cable TV, and private bathrooms. A continental breakfast is included. Phone 907-852-2525, fax 907-852-2528. Room rates are $115 single or double.

NARL Hotel: Dormitory style hotel, with single or double occupancy rooms and communal bathrooms. There are laundry facilities, and each room has linens, towels, telephone, and television. The hotel is conveniently located just behind the main UIC-NARL building 360, and is just steps away from the BASC office, labs, and cafeteria. Phone 907-852-7800, fax 907-852-6890. Room rates are $75 single or $90 double.

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