

PICES/MONITOR meeting , PICES 2012, Hiroshima, Japan
14 October 2012 18:00-19:30

I.

18:00-18:05 Welcome, Introductions and Sign-in (all)

II. Advisory Panel's report

18:05-18:20 Status of Pacific CPR program and
advisory panel (Mundy)

18:20-18:30 Status of CREAMS w. POC (Ishizaka)

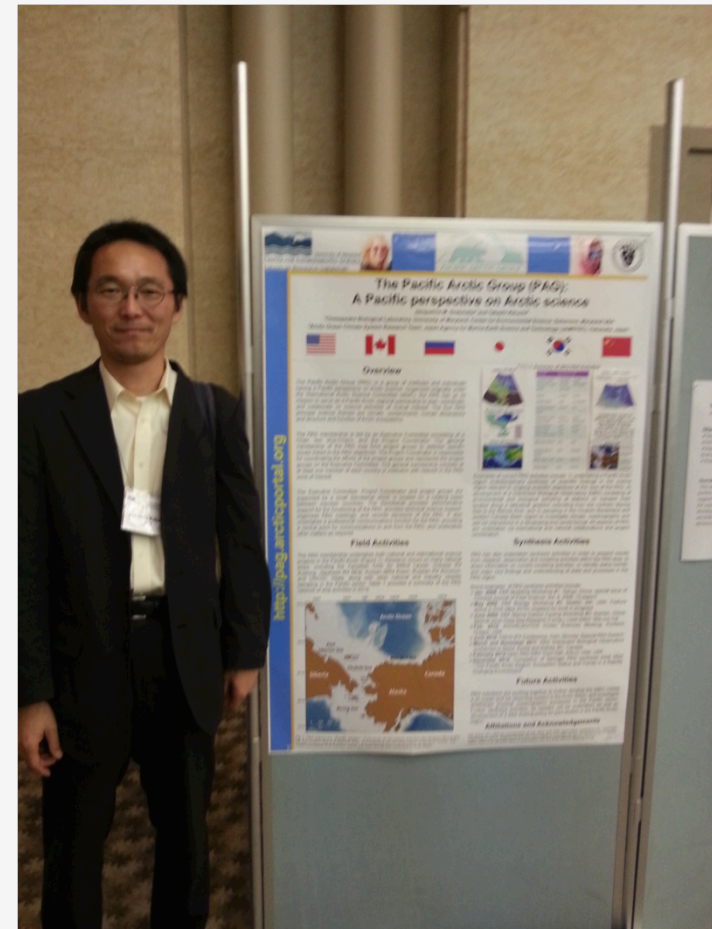
18:30-19:10 Report on the meetings on FUTURE
(AICE: Ro, COVE: Lobanov, SOFE: Mundy)

III. Information and discussion

for PICE-2012 annual meeting

19:10-19:20 Information for S11 (Sugisaki) and
S4 (Boldt)

19:20-19:30 Judging of the best presentation
award and other information (Sugisaki)



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17 October 2012 14:00-18:00

IV. National reports of relevant monitor/observation activities

14:00-14:10 Canada (Boldt, Mackas)

14:10-14:20 China (Zhang, Zhao)

14:20-14:30 Japan (Chiba, Saitoh, Sugisaki)

14:30-14:40 Korea (Park, Ro, Suh)

14:40-14:50 **Russia** (**Kulik**)

14:50-15:05 United States(+ NaNOOS, **AOOS**) (Barth, **Mundy**)

V. 15:05-15:45 Reports of representatives from corresponding organizations

CenCOOS (Bograd), SCOOS (Koslow), PaCOOS (TBA)

NEAR-GOOS (Jeong), Argo (Suga), **PAG (Kikuchi)**

SAHFOS(Batten), **AMAP(Drinkwater)**

VI. 16:00-17:00 Action Plan of MONITOR and proposals for NPESR (continued from Agenda II)

VII. 17:00-17:10 Report on POMA (Sugisaki)

VIII. 17:10-17:40 Proposals for PICES 2013 MONITOR workshops, special sessions, inter-sessional meetings (All)

IX. 17:40-17:50 Other business (if Any)

17:50 **Adjorn**

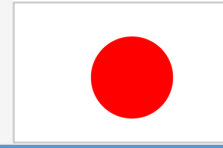
The Pacific Arctic Group (PAG)

Jacqueline Grebmeier¹ and Takashi Kikuchi²

¹ Chesapeake Biological Laboratory,
University of Maryland Center for Environmental Science,
Solomons, Maryland, 20688, USA

² Arctic Ocean Climate System Research Team,
Northern Hemisphere Cryosphere Program, Research Institute for Global Change,
Japan Agency for Marine-Earth Science and Technology (JAMSTEC),
Yokosuka, 237-0061, Japan

**PICES/MONITOR Meeting
PICES 2012
Hiroshima, Japan**



Overview of PAG

- The Pacific Arctic Group (PAG) is a consortium of institutes and individuals having a Pacific perspective on Arctic science
- PAG serves as a Pacific Arctic regional partnership to plan, coordinate, and collaborate on science activities
- The four PAG principle science themes are climate, contaminants, human dimensions and structure and function of Arctic ecosystems
- The PAG membership is led by an Executive Committee consisting of a Chair, two Vice Chairs, one Executive Member and the Project Coordinator
- Members are chosen nationally to represent regional variety and breadth of scientific expertise required in PAG

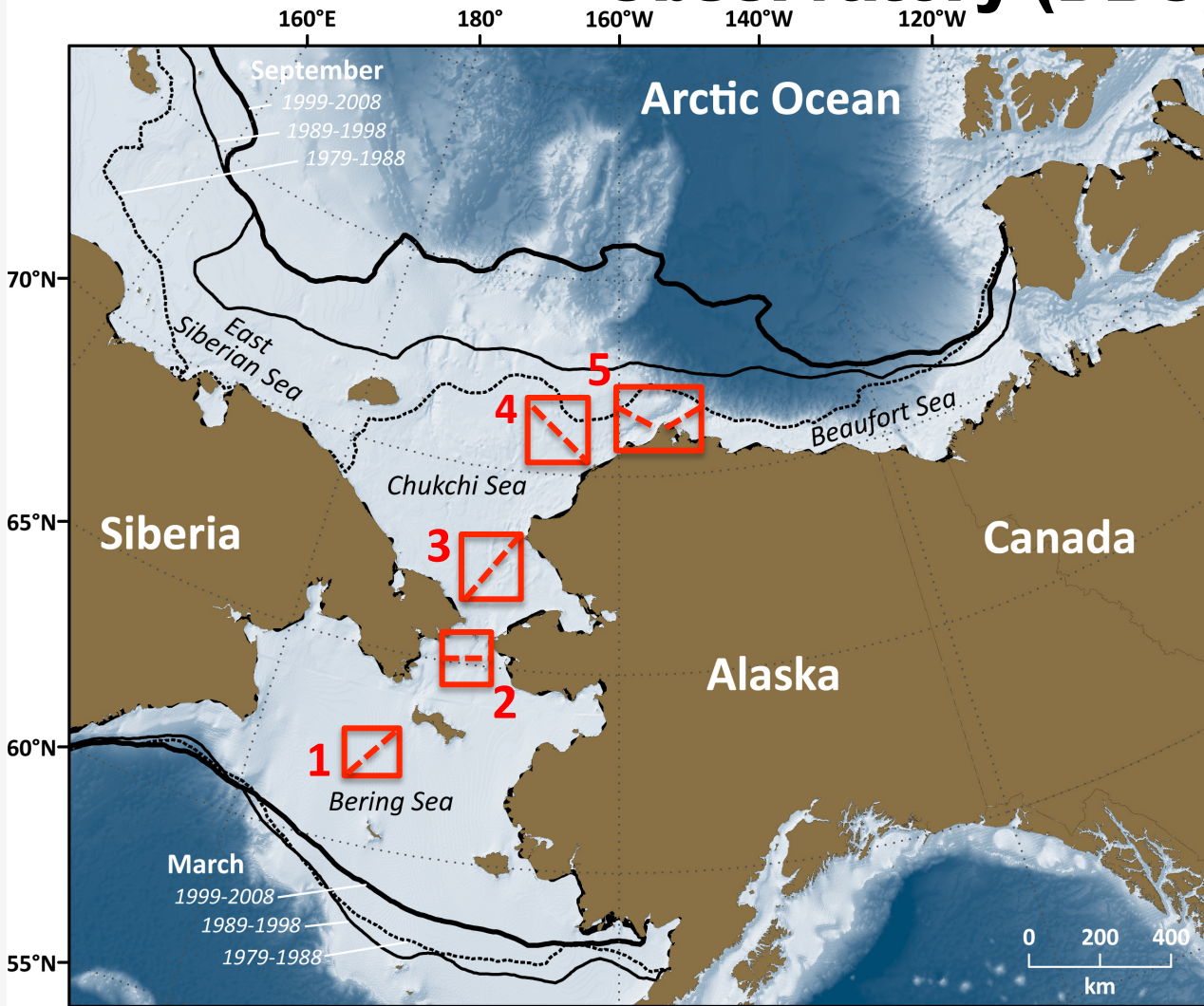
Examples of current PAG activities:

- undertaking a Pacific Arctic regional, multidisciplinary synthesis of scientific findings in the marine region relevant to ongoing scientific objectives at the core of the PAG,
- development of a Distributed Biological Observatory (DBO) of environmental and biological sampling at stations on transect lines located along a latitudinal gradient extending from the northern Bering Sea to the Barrow Arch, and
- sampling in the Chukchi Borderland and western Canada Basin region to investigate climate, oceanographic and sea ice interactions in a developing time series format.

Summary of PAR Synthesis Activities

- **Fall 2007:** PAG created Pacific Arctic Region (PAR) synthesis group
- **Jan. 2008:** PAR Modeling Workshop #1, Sanya, China; resulted in special issue of Chinese Journal of Polar Science, Vol. 9, 2008; 13 papers
- **May 2009:** PAR Biology Workshop #2, Seattle, WA, USA; Feature article in EOS (May 2010); producing chapters for book in progress
- **June 2009:** PAR Marine Carbon Cycling Workshop #3, Xiamen, China; Special issue Deep Sea-Research in progress, Lead editor: Wei-Jun Cai et al.
- **Feb. 2010:** AGU/ALSO/TOS Ocean Sciences Meeting, Portland, Oregon, USA: Oceans10-IT24: Ecosystem Change in the Pacific Arctic in Relation to the Pan-Arctic System (Leads: Grebmeier, Moore, Maslowski, Zhao), orals and posters
- **June 2010:** OSLO IPY Conference, Oslo, Norway; Session T3-1: Ecosystem Change in the Pacific Arctic in Relation to the Pan-Arctic System (Leads: Grebmeier, Zhao, Mathis)
- **June 2010:** PAR Synthesis Lead author meeting, OSLO IPY Conference, Oslo, Norway
- **Fall 2011-Fall 2012:** submission, review, revisions of chapter manuscripts
- **December 2012:** Submission final volume for Springer book; published 2013

Linking Physics to Biology: the Distributed Biological Observatory (DBO)



[modified by Karen Frey from Grebmeier et al. 2010, EOS 91]

- DBO sites (red boxes) are regional “hotspot” transect lines and stations located along a latitudinal gradient
- DBO sites are considered to exhibit high productivity, biodiversity, and overall rates of change
- DBO sites will serve as a change detection array for the identification and consistent monitoring of biophysical responses
- Sites occupied by national and international entities with shared data plan



Distributed Biological Observatory: Linking Physics to Biology

Core standardized ship-based sampling:

- CTD
- Chlorophyll
- Nutrients
- Ice algae/Phytoplankton (size, biomass and composition)
- Zooplankton (size, biomass and composition)
- Benthos (size, biomass and composition)
- Seabird (standard transects, no additional shiptime)
- Marine mammal observations (no additional ship time)

“Change detection array” – same measurements every year, process information in near real time <6 mos; detect regime shifts in rapid changes

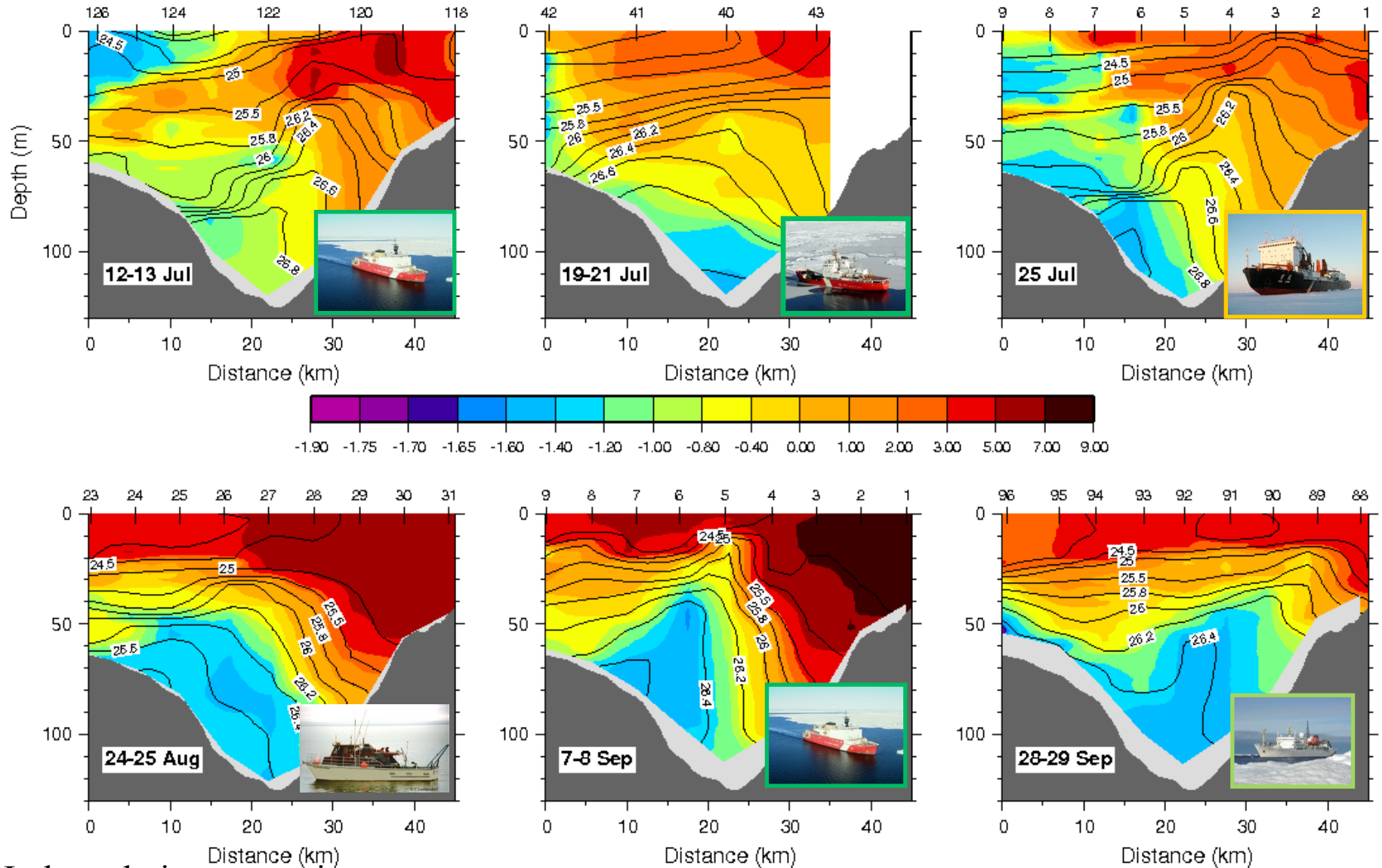
Second tier ship-based sampling:

- Fishery acoustics (less effort than standardized bottom trawling)
- Bottom trawling (every 3-5 years)

DBO occupations by national and international science programs

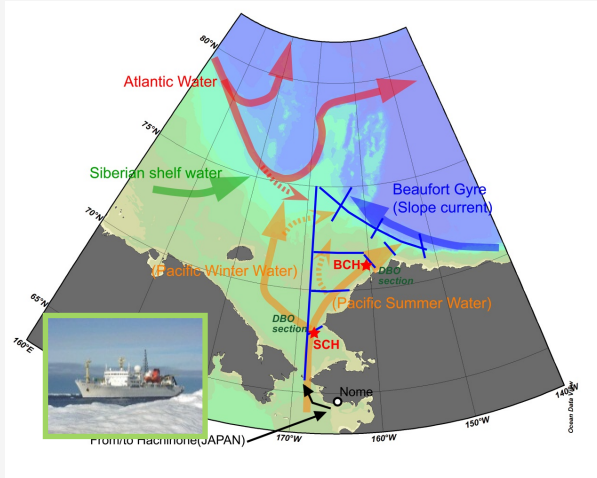
Linking Physics to Biology: the Distributed Biological Observatory (DBO)

6 occupations of Barrow Canyon transect in 2010

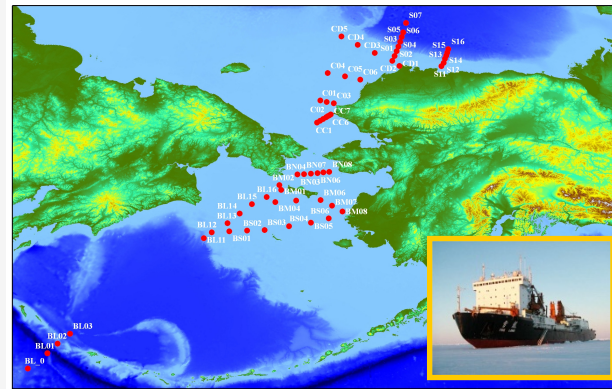


Some 2012 PAG research cruises in Pacific Arctic Region

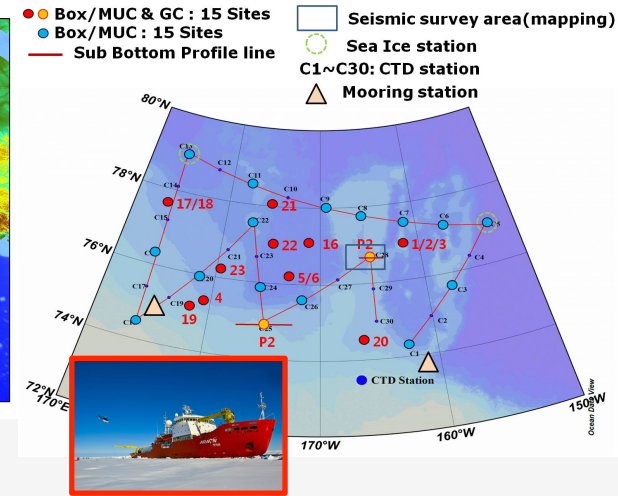
Japan: RV Mirai



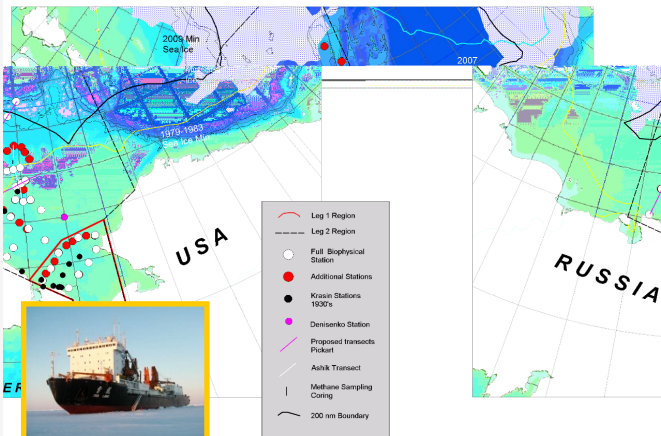
China: RV Xuelong



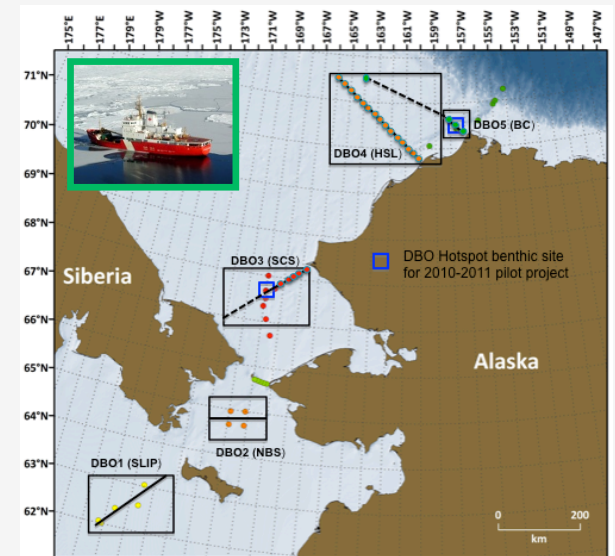
Korea: IBRV Araon



Russia-USA: RV Khromov



Canada-USA: CCGS Sir Wilfrid Laurier (DBO 1-3, 5 and RV Westward Wind DBO4)



Collaboration PAG and PICES MONITOR

- Information exchange on ship operations in the Pacific Arctic region, especially in time series observational mode
- Collaboration of data collections in the international DBO effort
- Assistance with developing international data management policy for time series observation sites, such as the DBO in subarctic-arctic waters
- Invitation for PICES MONITOR member to fall PAG meeting in Suzhou, China (Nov.4-7) to further develop cross-linkage between international groups for Pacific Arctic work

<http://pag.arcticportal.org>

The screenshot shows the website for the Pacific Arctic Group (PAG). The browser address bar displays <http://pag.arcticportal.org>. The page layout includes a navigation menu on the left with links to Home, About PAG, News & Events, Documents, Research Projects, Contact us, Related Links, and Login/Logout. The main content area features a 'What is PAG?' section with a description of the group's mission and a 'READ MORE' button. Below this are three columns: 'LATEST PAG DOCUMENTS' listing various reports and documents, 'NEWS AND EVENTS' mentioning the IPY 2012 Conference and Arctic Science Summit Week, and 'RESEARCH AND PROJECTS' highlighting that 2011 research projects have been published. The footer contains logos for the Pacific Arctic Group (PAG) of the International Arctic Science Committee (IASC) and NOAA's Arctic Research Office, along with the text 'Sponsored by NOAA's Arctic Research Office' and 'Designed and hosted by Arctic Portal'.

Thank you for your attention.



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- Important Dates
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Detecting the change in the Arctic system and searching the global influence

Date January 14-17, 2013
(Public Lecture on January 14, 2013, in Japanese language)

Venue Miraikan (7th Floor)
National Museum of Emerging Science and Innovation
Tokyo, Japan

What's new

- Online registration started.** (Oct. 16, 2012)
[Online registration](#) started. Please notice the deadline of early bird (Oct. 31, 24:00 JST, 15:00 UT) and presenters registration closing (Nov. 20, 24:00 JST, 15:00 UT).
- Visa information updated.** (Oct. 16, 2012)
Free wireless LAN is not available in the venue.
- Free wireless LAN is not available in the venue.**
Free wireless LAN is not available in the venue, since it (may) cause trouble to some exhibits in this science museum. Only the person who has contract with Docomo Wi-Fi or Softbank Wi-Fi can use them in the venue.
- Travel Support application submission extended.** (Sep. 13, 2012)
Along with the abstract submission extension, the deadline for the travel support application submission is also postponed. New deadline for the travel support application submission is 24:00 (JST (UT+9)) on September 27, 2012.
- The deadline of abstract submission postponed.** (Sep. 13, 2012)
Abstract submission has been extended until 24:00(JST) September 27, 2012. (The deadline date written in the "Submission of Abstract" page will be changed on September 14th.)
- Public lecture is in Japanese** (Sep. 13, 2012)



(S4) International cooperation on Arctic observation and research
(Convener: Tetsuo OHATA, Volker RACHOLD)

International cooperation on research, observation, and also data archiving is essential for understanding the rapidly changing Arctic system. This session will include: (1) status reports on ongoing programs, projects, and activities on Arctic environmental research in various countries as a basis for the discussions on cooperation; and (2) presentations on the promotion of international cooperation such as IASC and the Arctic Council and related projects and initiatives, and programs of the ICSU and WMO and other international bodies relevant to the Arctic region. The session will allow time to discuss gaps and necessities regarding cooperation for better understanding the present and future state of the Arctic.

(S2) Changes in water and carbon cycles of



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Title:

History and Future of the Pacific Arctic Group (PAG)

Authors:

Jacqueline Grebmeier, Jianfeng He, Takashi Kikuchi, and John Calder (Oral, accepted)

Abstract:

The Pacific Arctic Group was imagined during the Arctic Science Summit Week of 2002 and formed during the International Arctic Science Committee (IASC) Council Meeting in April 2003 as a subunit of IASC with the mission to “Serve as a Pacific Arctic regional partnership to plan, coordinate, and collaborate on science activities of mutual interest”. During the formative years the Group developed a number of science themes that it wished to pursue and adopted a mode of action based on two primary types of activities: 1) enhancement of individual national field programs by inclusion of an international component; and 2) creation of collaborative activities focused on synthesis of data and publication on topics of mutual interest. Descriptions of these activities are available through the PAG website located at <http://pag.arcticportal.org>. The PAG is now distinct from but affiliated with the IASC, and is evolving to meet the needs of its major members (Canada, China, Japan, Korea, Russia, and United States). During and subsequent to the International Polar Year 2007-2009, the PAG members increased efforts on Arctic marine science and are developing a rich set of data to describe the Pacific sector of the Arctic. Discussions within the group have identified new areas for potential collaboration, such as model-data fusion, distributed biological observatory, and studies at the northward-moving sea ice edge. This presentation will highlight some of the accomplishments from these efforts and discuss the continuing role of the PAG in promoting international coordination of research in the Arctic.

(S2) Changes in water and carbon cycles of