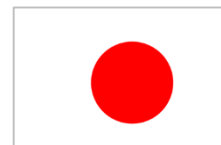
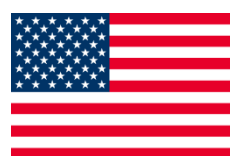
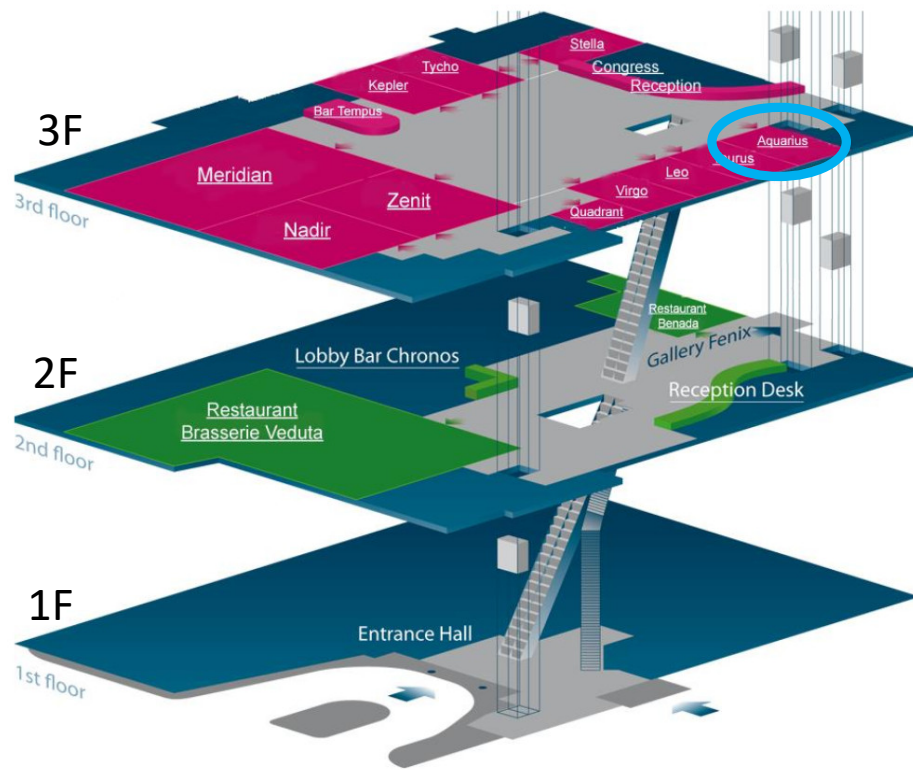
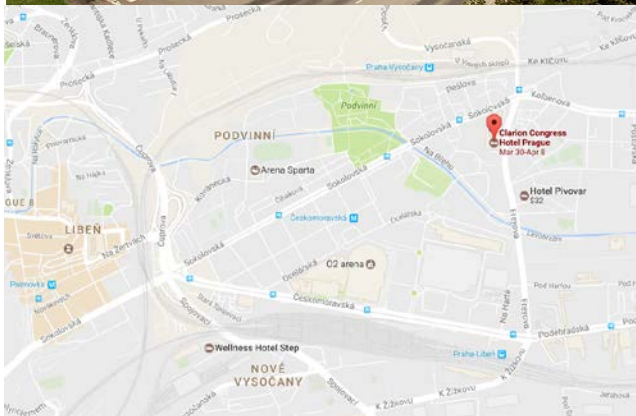




Pacific Arctic Group 2017 Spring Meeting

Arctic Science Summit Week 2017, Prague, Czech Republic
Date: April 2nd, 2017 (9:00 – 17:30)

Venue: Clarion Congress Hotel Prague, Rm **Aquarius**





Pacific Arctic Group 2017 Spring Meeting

Arctic Science Summit Week 2017, Prague, Czech Republic

Date: April 2nd, 2017 (9:00 – 17:30)

Venue: Clarion Congress Hotel Prague, Rm Tycho

Welcome and Introduction

Takashi Kikuchi

Chair, Pacific Arctic Group

Deputy Director,

Institute of Arctic Climate and Environment Research (IACE)

Japan Agency for Marine Earth Science and Technology (JAMSTEC)





Pacific Arctic Group

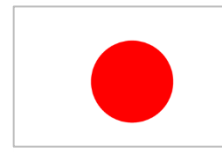
- The Pacific Arctic Group (PAG) is an informal group of organizations and individuals having a Pacific perspective on Arctic science.
- Originally organized under the International Arctic Science Committee (IASC), the PAG is now an independent affiliate of the IASC and has as its mission to serve as a Pacific Arctic regional partnership to plan, coordinate and collaborate on science activities of mutual interest.
- PAG Executive committee is composed of Chair, Vice-Chairs (2), and lead-scientists from PAG synthesis activities.





Pacific Arctic Group

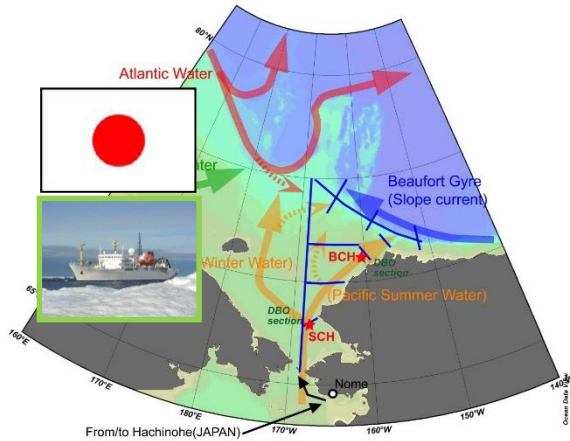
- The PAG has established five objectives:
 - i. To identify gaps in knowledge and priority research needs across the Pacific Arctic Region (PAR) and seek means to implement programs and activities that address them.
 - ii. To facilitate and coordinate science operations among PAG member countries.
 - iii. To promote and facilitate data accessibility and integrated data bases for the region.
 - iv. To serve as a forum for information exchange on PAR science programs.
 - v. To establish and maintain a direct link between PAG and other relevant science organizations.



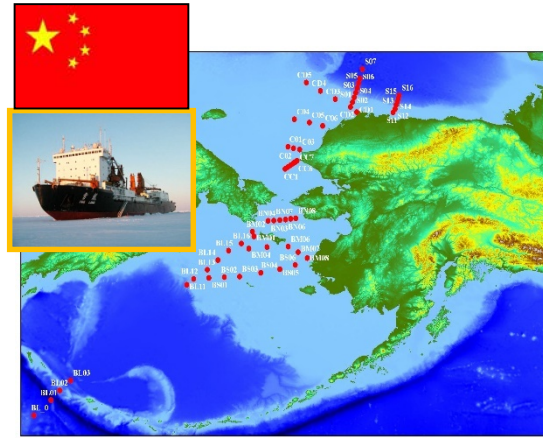


PAG research cruises in PAR

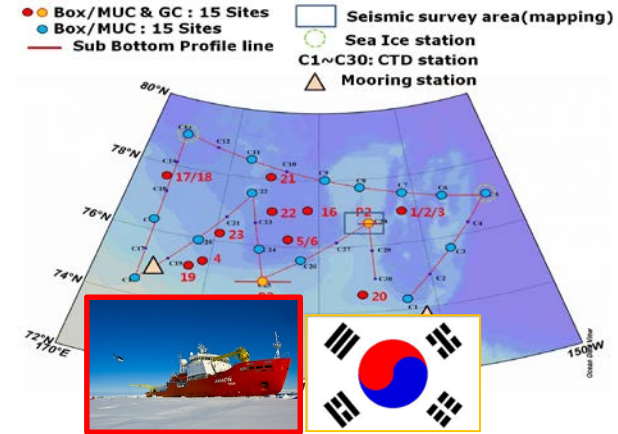
Japan: RV Mirai



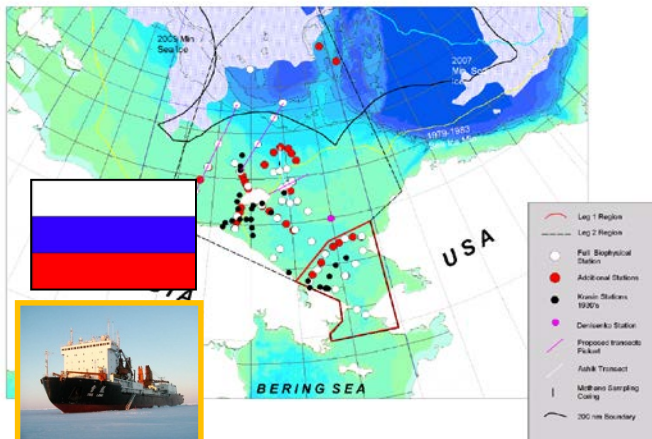
China: RV Xuelong



Korea: RV Araon

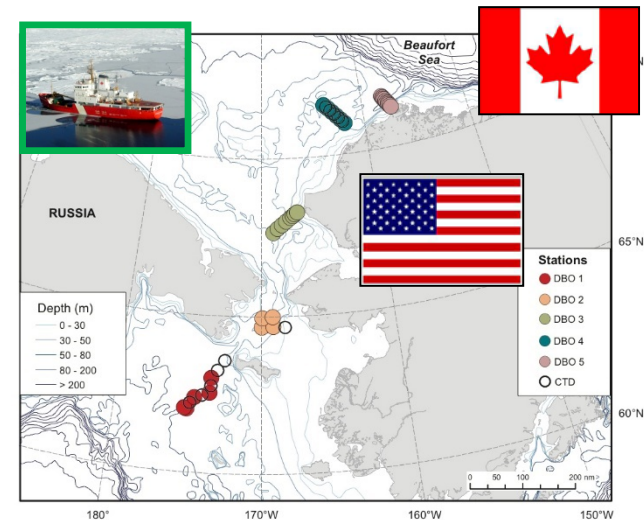


Russia-USA: RV Khromov



Canada: CCGS Sir Wilfrid Laurier, Louis St. Laurent

USA: Healy, RV Aquila, Brown etc.





Sharing information on annual field activities

2016 PAG and DBO Field Season

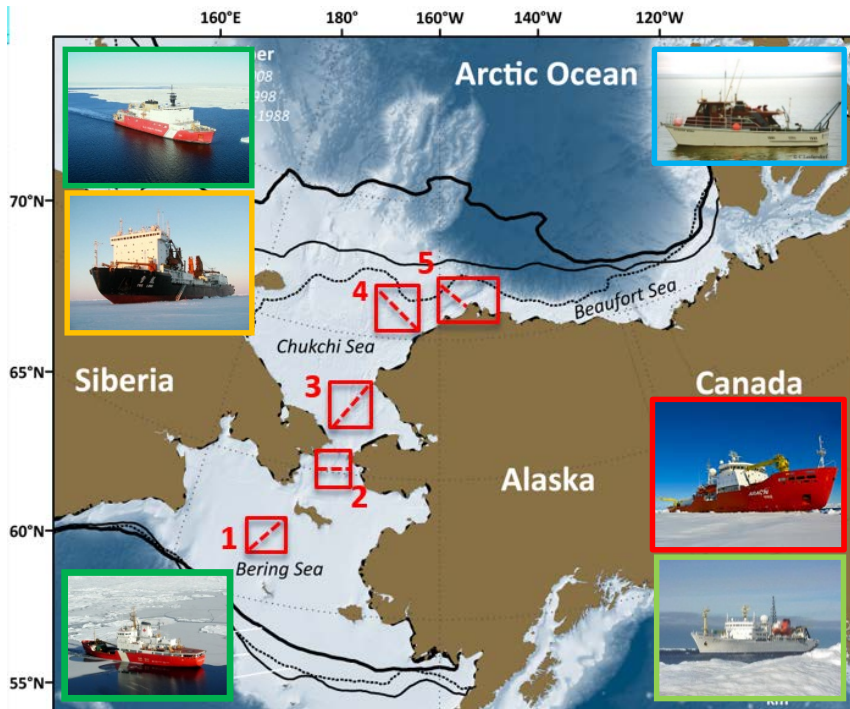
Dates (Port calls)	Ship	DBO Region	Projects	PAG contact	Chief Scientist
July 7-15 (Nome- Nome)	Norseman II	3	Bering Strait Mooring Project/AON	Rebecca Woodgate woodgate@apl.washington.edu	Rebecca Woodgate woodgate@apl.washington.edu
July 1-22 (Victoria, BC-Barrow)	Sir Wilfrid Laurier	1,2,3,4,5	C30/DBO (AON)	Jackie Grebmeier jgrebmei@umces.edu	Svein Vagle Svein.Vagle@dfo-mpo.gc.ca
July (2-Aug 10 (Seward- Seward)	Healy	- (Arctic Basin)	NOAA Ocean Exploration	Russell Hopcroft rrhopcroft@alaska.edu	Russell Hopcroft rrhopcroft@alaska.edu
July 11-Sept 28	Xuelong	3, 5+Arctic Basin	CHINARE	Jianfeng He hejianfeng@pric.org.cn	Jianfeng He hejianfeng@pric.org.cn
Aug 5-25	Araon	3+Chukchi Borderland+ East Siberian Sea	Korean Expedition (KOPRI) ocean and Sea- ice researches	Sung-Ho Kang shkang@kopri.re.kr	Leg 1 - Eun-Jin Yang eiyang@kopri.re.kr
Aug 27-Sept 10		Chukchi Borderland	Geophysical/paleocean- ographic researches	-same	Leg 2 - Young Ken Jin ykjin@kopri.re.kr
Aug 15-Sept 16	Healy	-	Navy	-NA	Navy/Worester
Aug 22-Oct 5	Mirai	3,5+Arctic Basin	Japanese ArCS	Takashi Kikuchi takashik@jamstec.go.jp	Shigeto Nishino nishinos@jamstec.go.jp
Aug 27-Sept 10	Araon	Chukchi Borderland	Geophysical and paleoceanographic researches	Sung-Ho Kang shkang@kopri.re.kr	Leg 2 - Young Ken Jin ykjin@kopri.re.kr
Aug-Sept	TBD	3,4,5	NOAA/PMEL	Phyllis.Stabeno@noaa.gov	Phyllis.Stabeno@noaa.gov
August-Sept	Sikuliaq	3,4,5,6	Arctic N Fixation Arctic Productivity/	rcrain@nsf.gov	ljuranek@coas.oregonstate.edu ; Rachel Sipler
Aug 24-Oct 4	Oscar Dyson F/V Cape Flattery	1 2	NOAA/AFSC/EMA/FOCI	jeanette.gann@noaa.gov	lisa.eisner@noaa.gov
Sept 19-Oct 6	Healy	-	UNCLOS	Rene.crain@nsf.gov	Larry Mayer larry@ccom.unh.edu



PAG Synthesis activities

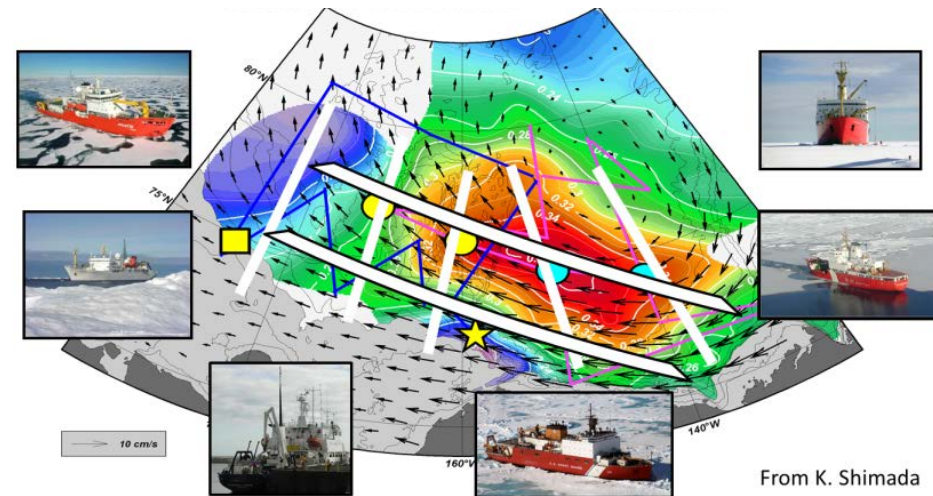
- PAG continues to develop and implement long-term monitoring activities such as
 - ✓ **Distributed Biological Observatory (DBO)** and
 - ✓ **Pacific Arctic Climate Ecosystem Observatory (PACEO)**

Distributed Biological Observatory (DBO)



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

Pacific Arctic Climate Ecosystem Observatory (PACEO)



From K. Shimada

Background color: dynamic height at 100dbar relative to 800dbar from Mirai and Louis S. St-Laurent 2008 cruises (Oceanic Beaufort Gyre)

Black vectors: average sea ice motion vectors for Nov. 2007- Apr. 2008 (Sea Ice Beaufort Gyre)

Symbols: Mooring array in 2012-2013 (TUMSAT/KOPRI/NIPR & WHOI)



Pacific Arctic Group

- The Spring PAG meetings are held during Arctic Science Summit Week and are focused on “business” issues and an update on research plans for the coming field season.
- The Fall PAG meeting is hosted at various locations in alternating PAG countries after the field season and is focused on review of accomplishments during the previous summer and outlooks for the future, including preliminary plans for the upcoming field season.
- The PAG 2017 Spring Meeting is held at Clarion Congress Hotel Prague. This meeting provides PAG country’s updates on 2017 field activities and on the progress of PAG field activities, such as the Distributed Biological Observatory (DBO) and Pacific Arctic Climate Ecosystem Observatory (PACEO), synthesis activities, and other ongoing Pacific Arctic pertinent activities.





Pacific Arctic Group 2017 Spring Meeting

Agenda

Introduction and Welcome (**Takashi Kikuchi**)

1. Update plans for 2017 field season

Canada: **Humfrey Melling**

China: **Jianfeng He**

Japan: **Shigeto Nishino** (presented by **Takashi Kikuchi**)

Korea: **Eun Jin Yang**

Russia: **TBD**

United States: **Jackie Grebmeier**

(Break: 1040-1100)

2. Updates for planning of PAG joint field and modeling activities

NABOS (**Igor Polyakov** presented by **Takashi Kikuchi**)

SAON and observing activities (**Hajo Eicken**)

PEW and other groups developing science planning for the CAO (**Marc Meloche**)

Other updates or proposals for new activities?

(Lunch: 1230-1330)



Pacific Arctic Group 2017 Spring Meeting

Agenda

3. Status report on PAG-endorsed activities

3-1. Distributed Biological Observatory (Jackie Grebmeier-lead)

Brief highlight of science findings from the DBO program, examples of results 2010-2016 Pacific Arctic and planning of Atlantic-DBO (**Jackie Grebmeier**, others)
DBO/PAG moorings update (**Jackie Grebmeier** for Phyllis Stabeno)
Update on DBO data archive and metafile input (**Jackie Grebmeier**)

3-2. Pacific Arctic Climate Ecosystem Observatory

(Sung-Ho Kang-lead)

Physical oceanography (**Kyoung-Ho Cho**)

Biological oceanography (**Jisoo Park** presented by **Eun Jin Yang**)

Chemical oceanography (**Jinyoung Jung** presented by **Eun Jin Yang**)

Ocean Acidification (**Dong Sun Kim**)

Atmosphere and Sea Ice (**Joo-Hong Kim**)

Satellite observation (**Hyun-Cheol Kim**)

Modelling (**Baek-Min Kim** presented by **Joo-Hong Kim**)

p-WebGIS (**Hyun-Cheol Kim**)

3-3. Any other updates or proposals for new activities?



Pacific Arctic Group 2017 Spring Meeting

Agenda

4. PAG Synthesis activities

Biogeosciences special issue (**Takashi Kikuchi**)

Deep Sea Research - DBO Special Issue update (**Jackie Grebmeier**)

5. Interactions with other organizations and activities

Year of Polar Prediction (YOPP) (Jun Inoue)

Arctic in Rapid Transition (ART) (**Nathalie Morata**)

Central Arctic Ocean science planning activities (update) (**Jackie Grebmeier**)

Synoptic Arctic Survey (**Jackie Grebmeier** or **Are Olsen**)

CAFF/PAME/AMAP activities (**Phil Mundy, Jackie Grebmeier**)

Ecosystem Studies of Subarctic and Arctic Seas (ESSAS) (**Sei-ichi Saitoh**)

Belmont Forum: Resilience and adaptive capacity of arctic marine systems
under a changing climate (RACArctic) (**Sei-ichi Saitoh**)

International Conference on Arctic Science (AMAP conference) (**Takashi Kikuchi**)

Trilateral High-Level Dialogue on the Arctic (among China, Korea, and Japan)
(**Takashi Kikuchi**)

The 5th International Symposium on Arctic Science (ISAR-5) (**Yuji Kodama**)

Others?

(Session proposal for Arctic Change 2017? Ocean Sci. Meeting 2018? or others)



Pacific Arctic Group 2017 Spring Meeting

Agenda

6. PAG structure

Executive committee composed of PAG Chair, Vice-Chairs, and leads from each of PAG activities: DBO, PACEO, sea ice-atmosphere, and so on.

** One of two vice-chairs is now vacant. We should discuss who can fill this role?*

Current rotation plan: Chair and Secretariat

2014-2016 – Korea (Sung-Ho Kang, KOPRI)

2016-2018 – Japan (Takashi Kikuchi, JAMSTEC)

2018-2020 – Canada, China, Russia, or ?

7. Future PAG meetings

ASSW 2017 – Prague, Czech Republic

Fall 2017 – Japan (Nov., 2017 or **Jan. 2018 during ISAR-5?**)

ASSW 2018 – Davos, Switzerland (June 2018)

Fall 2018 – TBD

8. End of meeting (hopefully at 17:30)