



PAG 2019 Fall Meeting

Modified and then presented at to 5th DBO Data Workshop Participants, Seattle, WA
January 23, 2020
by Jackie Grebmeier

Date: 14-16 October, 2019

Venue: Hangzhou Jinxi Hotel

**No. 39 Yang Gong Di, West Lake District,
Hangzhou, Zhejiang Province, CHINA**

◆ **Self-introduction of participants** (Jianfeng He)

Agenda items 1: PAG Business meeting

1. Review of the minutes of PAG 2019 Spring meeting (Jianfeng He)

2. Country report: results from 2019 field season and future planning

- Canada: Bill Williams
- China: Jianfeng He
- Japan: Shigeto Nishino (rescheduled to 15th Oct.)

15 minutes' Coffee Break

- Korea: Eun-Jin Yang
- United States: Jackie Grebmeier

3. PAG joint research activities

- Update on the Arctic Integrated Ecosystem Research Program (Jackie Grebmeier)

4. Report of PAG endorsed projects and proposal for new activities

- Distributed Biological Observatory (DBO): Jackie Grebmeier
- Pacific Arctic Climate Ecosystem Observatory (PACEO): Hyoung Chul Shin
- Central Arctic Ocean (CAO): Shigeto Nishino

End of day 1

18:00

PAG Dinner at Hangzhou Jinxi Hotel (Restaurant Room No. 5 SHICUI & No. 6 WENXI, 1st floor)

5. Interactions with other organizations and activities

- Shigeto Nishino: Sixth International Symposium on Arctic Research (ISAR-6)

6. PAG Synthesis Activities

- Updates on the recent Synoptic Arctic Survey activities and results (Jackie Grebmeier)
 - ✓ United states: Jackie Grebmeier
 - ✓ Japan: Shigeto Nishino
 - ✓ Korea: Kyoung-Ho Cho
 - ✓ others??

Agenda

7. PAG structure

- Executive committee composed of
 - ✓ PAG Chair (Jianfeng He), Vice-Chairs, leads from each of PAG activities: DBO (Jackie Grebmeier), PACEO (Hyoung Chul Shin), CAO (Shigeto Nishino)
- Current rotation plan: Chair and Secretariat
 - ✓ 2016-2018– Japan (Takashi Kikuchi, JAMSTEC)
 - ✓ 2018-2020 – China (Jianfeng He, PRIC)
 - ✓ 2020-2022 – Canada (Bill Williams, IOS.DFO)
 - ✓ 2022-2024 –??

8. Future PAG meetings

- Fall 2019 – Hangzhou, China (Oct. 14-16 2019)
- ASSW 2020 – Akureyri, Iceland (Mar. 27-Apr. 1, 2020)
- Fall 2020 – Canada (Fall, 2020)
- ASSW 2021 –Lisboa, Portugal (Mar. 19-26, 2021)

9. Group Photo

10. End of business meeting

15 minutes' Coffee Break

Agenda items 2: PAG Science Workshop

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

- Brief update of recent activities and results of DBO
 - ✓ USA DBO results (Jackie Grebmeier)
 - ✓ Japan DBO results (Shigeto Nishino)
 - ✓ Korean DBO results (Jinyoung Jung)
- Presentations about
 - ✓ Trends of surface water pCO₂ during 1994-2017 in the western Arctic Ocean (Wei-Jun Cai)
 - ✓ Net community production and carbon export to trophic levels in the northern Norwegian Sea (Youhui Gao)

Lunch (12:00-14:00 from SIO)

2. Pacific Arctic Climate Ecosystem Observatory (PACEO) (Hyoung Chul Shin-lead)

- Brief update of PACEO recent activities (Hyoung Chul Shin)
 - ✓ Biological activity (Hyoung Sul La)
 - ✓ Observation-based recent CO₂ flux estimate (Keyhong Park)
 - ✓ Sea Ice and Climate activity (Joo-Hong Kim)
 - ✓ Satellite activity (Hyun-cheol Kim)
- Presentations about
 - ✓ Leonid Yurganov: satellite retrieval results of methane data (virtual presentation)
 - ✓ Benthic hotspots in icy waters: influence of biological production and advection regimes on the northern Bering and Chukchi continental shelf (Zhixuan Feng)

15 minutes' Coffee Break

3. Central Arctic Ocean (CAO) (Shige Nishino-lead)

➤ Brief country reports

- ✓ Japan CAO activities and results (Shigeto Nishino)
- ✓ Korean CAO activities and results (Hyoung Chul Shin)
- ✓ USA CAO activities and results (Jackie Grebmeier)
- ✓ others??

➤ Presentations about

- ✓ Net Production and biological pump in the central Arctic under rapid sea ice retreat (Jianfang Chen)
- ✓ Study on marine microbial ecology in the Arctic (Fang Zhang)

End of Day 2

Agenda

Pacific Arctic Group (PAG)
2019 Fall meeting
October 14-16, 2019
Hangzhou, CHINA

- Discussion on cooperations in the central Arctic Ocean

15 minutes' Coffee Break

- Other topics??

End of the meeting

2020 PAG and DBO Cruise Plan Table

2020 PAG and DBO Field Season (version 10_14_19): Sampling Contributors. Projects Key: AON=US Arctic Observing Network (National Science Foundation); ArCS=Arctic Challenge for Sustainability; ArcticEIS2=Arctic Ecosystem Integrated Survey, C30=Canada's Three Oceans; CHINARE=Chinese Arctic Research Expedition; DBO=Distributed Biological Observatory; EcoFOCI= JAMSTEC= Japan Agency for Marine-Earth Science and Technology; JOIS=KOPRI = Korea Polar Research Institute; MOSAiC= Multidisciplinary drifting Observatory for the Study of Arctic Climate (MOSAiC); NCIS=Northern Chukchi Integrated Study; NIPR = National Institute of Polar Research; NOAA=National Oceanic and Atmospheric Administration; Office of Naval Research (ONR) Marginal Ice Zone (MIZ) project; PMEL=Pacific Marine Environmental Laboratory. **DBO Region Key:** DBO1=So. St. Lawrence Is., DBO2=Chirikov Basin, DBO3=So Chukchi Sea, DBO4=NE Chukchi Sea, DBO5=Barrow Canyon, DBO6=East Beaufort Sea, DBO7=Beaufort Sea Central, DBO8=Bathurst polynya region.

Dates 2019 (Port calls)	Ship	DBO Region	Projects	PAG contact	Chief Scientist
July 12-24 (Dutch Harbor-Utqiagvik)	Sir Wilfrid Laurier	1,2,3,4,5	C30/DBO (AON)	Jackie Grebmeier jgrebmei@umces.edu	John Nelson John.Nelson@dfo-mpo.gc.ca
June-Sept (Shanghai-Shanghai)	Xuelong	-	CHINARE/MOSAiC	Jianfeng He hejianfeng@pric.org.cn	Jianfeng He hejianfeng@pric.org.cn
Aug 1-25 (Dutch Harbor-Utqiagvik)	Araon	1,2,3, 5	K-AOOS (Korea-Arctic Ocean Observing System)	Sung-Ho Kang shkang@kopri.re.kr	Eun Jin Yang ejyang@kopri.re.kr
Aug 1-230(Dutch-Dutch)	Healy	2,3,5	Harmful Algae Bloom Study	Robert Pickart rpickart@whoi.edu	Robert Pickart rpickart@whoi.edu
Aug 1-24 (Nome-Nome)	Fairweather	1,2,3,4,5	EcoFOCI/DBO-NCIS	Jackie Grebmeier jgrebmei@umces.edu and Phyllis.stabeno@noaa.gov	Jackie Grebmeier jgrebmei@umces.edu
Sept (Nome-Nome)	Norseman II	3	Bering Strait Mooring Project/AON	Rebecca Woodgate woodgate@apl.washington.edu	Rebecca Woodgate woodgate@apl.washington.edu
Sept-TBD (Dutch Harbor-Kodiak)	Dyson	1 and M8	EcoFOCI	Phyllis Stabeno, Phyllis.stabeno@noaa.gov	Geoff Lebon geoffrey.t.lebon@noaa.gov
Sept -Oct	Louis S. St-Laurent	-	JOIS/AON-BGOS	Bill.Williams@dfo-mpo.gc.ca	Bill.Williams@dfo-mpo.gc.ca
Sep-Nov (TBD)	Mirai	1,2,3	Japanese Atmospheric cruise; National Institute of Polar Research (NIPR)	Takashi Kikuchi takashik@jamstec.go.jp	Dr. Kazutoshi Sato stakashik@jamstec.go.jp
Sept-Nov	Healy	-	Glider Program	Craig Lee < craiglee@uw.edu >	Craig Lee < craiglee@uw.edu >
Oct	Sir Wilfrid Laurier	4,8	C30	Bill.Williams@dfo-mpo.gc.ca	Humfrey.Melling@dfo-mpo.gc.ca