

# 4<sup>nd</sup> FAMOS School and Meeting

# AGENDA

#### Tuesday, November 3, 2015

### 2015 School for young scientist

#### Cape Codder Resort and Spa, 1225 Iyannough Rd, Hyannis, MA02601

- 8:15 8:30 Coffee
- 8:30 9:00 Introductions from Mike Steele and students/postdocs
- 09:00 10:00 Lars Smedsrud: The Barents Sea
- 10:00 10:30 Coffee
- 10:30 11:30 Igor Polyakov: The Laptev Sea
- 11:30 12:30 Phyllis Stabeno: The Bering Sea
- 12:30 13:45 Lunch
- 13:45 15:30 Outreach discussion
- 15:30 16:30 Bob Pickart: The Chukchi Sea
- 16:30 17:30 Humfrey Melling: The Canadian Arctic Archipelago
- 17:30 17:45 Voting & Awards Ceremony
- **19:30** Dinner in town



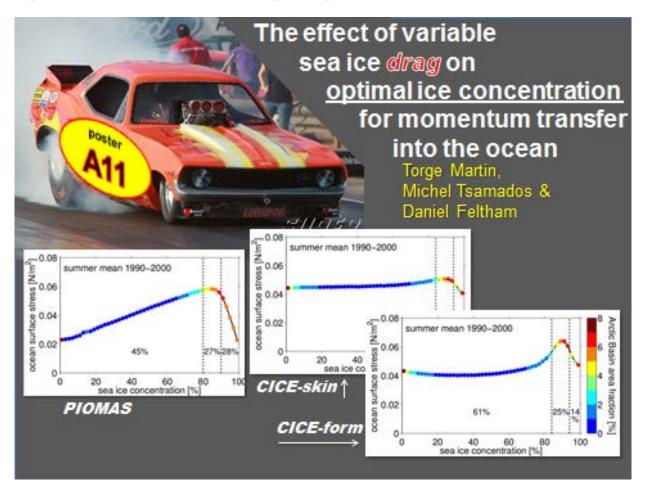
Forum for Arctic Modeling and Observational Synthesis

NOTE # 1: Keynote oral presentation time = 25 minutes + 5 minutes for questions; Regular oral presentation time = 12 minutes + 3 minutes for questions (AGU style)

NOTE #2: All Posters will be displayed from 9:00 am November 3 to 11:00 am November 6, 2015.

Poster size: width - no wider than 3 feet (91 cm) Poster size: height - no longer than 5 feet (152 cm)

NOTE #3 1- slide – 1 – minute presentation slide example is shown below (no animation allowed): You have to show: poster number, title, authors, short and impressive information about your poster presentation



#### SESSION 1: Sea ice highlights session (Convener: A. Proshutinsky) Wednesday, November 4, 2015

#### Cape Codder Resort and Spa, 1225 Iyannough Rd, Hyannis, MA02601

8:45 – 9:00 Coffee

**9:00 – 9:30** Andrey Proshutinsky: *Introduction (welcome, meeting major goals, tasks and instructions for working groups* 

**09:30 - 10:00** Dmitry Dukhovskoy "2015 sea ice conditions and results of 2015 sea ice outlook"

**10:00 - 10:15** Richard Allard "A Study of the Impact of Snow Cover on the Navy's Arctic Cap Nowcast/Forecast System"

#### 10:15 - 10:30 Coffee

**10:30 - 10:45** David Hebert "Regional Arctic Sea Ice Forecasting in Support of the U.S. Coast Guard Operations"

10:45 – 11:15 Julienne Stroeve "Looking back at Sea Ice Outlook Predictions"

**11:15** – **11:30** Yevgeny Aksenov et al. "Future navigability of Arctic sea routes: High-resolution projections of the Arctic Ocean and Sea Ice decline"

SESSION 2: Sea ice observations and modeling (Convener: A. Proshutinsky)

11:30 – 12:00 Jackie Richter-Menge "Sea ice observations: Present and future needs to advance the state-of-knowledge"

**12:00** – **12:30** Daniel Feltham "High resolution ice modeling and future sea ice modeling needs"

12:30 – 13:00 Andrew Roberts "Toward the floe scale: High resolution coupled modeling of sea ice"

13:00 – 14:00 Lunch (provided)

**14:00** – **14:15**\_Jean-Francois Lemieux "Combining isotropic tensile strength and a parameterization for grounded ridges for modeling landfast ice"

14:30 – 15:30 Discussion: What is the future of accurate sea ice predictions and who cares about this? Panelists: Julienne Stroeve, Andrew Roberts, Richard Allard, Jackie Richter-Menge and Daniel Feltham

# 15:30 - 16:00 Coffee

**16:00 – 17:30 One-slide poster summary** presentations (1 minute per presentation: please provide your slide for these presentations by October 27, 2015)

### 17:30 - 18:30 Poster session

### 18:30 – 20:00 Reception and poster session continuation



## Thursday, November 5, 2015

## Cape Codder Resort and Spa, 1225 Iyannough Rd, Hyannis, MA02601

#### 08:15 – 08:30 Coffee

**08:30 – 08:50 Summary** of "Sea Ice" poster session and results of sea ice discussion (panelists: Julienne Stroeve, Andrew Roberts, Richard Allard, Jackie Richter-Menge and Daniel Feltham)

**SESSION 3: Ocean modeling and observations #1** (Role of small-scale processes; Convener: Hayley Dosser)

**08:50** – **09:20** Marie-Louise Timmermans "Arctic Ocean observations: results and future needs"

**09:20 – 09:50** John Marshall "Understanding and Modeling a turbulent Arctic Ocean"

09:50 – 10:20 Mike Spall "Eddies in the Arctic Ocean: Sources and Dynamics"

**10:20 – 10:35** Wilken-Jon von Appen "Seasonal cycle of mesoscale instability of the West Spitsbergen Current"

## 10:35 – 11:00 Coffee

11:00 – 11:15 Igor Kozlov "Hotspots of internal solitary waves in the Arctic seas observed from space

11:15 – 12:15 Discussion: What is a high resolution modeling and observing and how high should it be in the small- and climate-scale studies?" (Panelists: J. Marshal, M. Spall, M-L. Timmermans, M. Steele, Mangnan Zhao, I. Kozlov, von Appen)

### 12:15 – 13:00 Lunch (provided)

**SESSION 4: Ocean modeling and observations #2** (Large-scale processes; Convener: Michael Karcher)

**13:00**–**13:15** Camille Lique "What drives the variability of the Atlantic Water circulation in the Arctic Ocean?"

13:15 – 13:30 Yevgeny Aksenov et al. "Dynamics of Arctic Pacific Water"

**13:30 – 13 :45** Eiji Watanabe "Subsurface warm water layer in the western Arctic Chukchi Abyssal Plain"

**13:45** – **14:00** Lars Smedsrud "Consequences of Future Increased Arctic Runoff on Ocean Stratification, Circulation, and Ice Cover"

14:00 – 14:15 Will Perrie "Decadal variations of the Arctic water temperature and salinity"

14:15 – 15:15 Discussion: Unsolved/untouched problems of large-scale regional Arctic Ocean modeling: what has to be done to better understand circulation and hydrography changes? (Panelists: C. Lique, Y. Aksenov, M. Karcher, L. Smedsrud, W. Perie, E. Watanabe)

# 15:15 – 15:45 Coffee break

## **SESSION 5: Ecosystem and biogeochemical modeling** (Convener: Mike Steele)

**15:45** – **16:15** Younjoo Lee "Ecosystem and biogeochemical modeling and observations: Present and future needs to advance the state-of-knowledge"

**16:15** – **16:30** Jonathan Lawrence "Balanced co-limitation sets Arctic Ocean biological carbon fixation: present and coming century"

**16:30** – **16:45** Meibing Jin "Ecosystem model intercomparison of under-ice and total primary production in the Arctic Ocean"

**16:45** – **17:00** Pedro Duarte "The ice associated-ecosystem studied during the Norwegian Young Sea Ice cruise (N-ICE2015) in the Arctic Ocean: preliminary results"

**17:00 – 18:00 Discussion:** Present and future challenges for biogeochemical modeling and observations with high resolution (Panelists: Y. Lee, M. Steele, J. Lawrence, M. Jin, P. Duarte, S. Elliot)

## 18:00 – 20:45 Poster session # 2 and reception



# Friday, November 6, 2015

Cape Codder Resort and Spa, 1225 Iyannough Rd, Hyannis, MA02601

08:00 - 08:15 Coffee

**08:15** – **8:25 Summary** of posters and discussion "Ocean modeling and observations session #2 (M. Karcher and Y. Aksenov)

**08:25 – 8:35 Summary** of posters and discussion "Ecosystem and biogeochemical modeling" session (Y. Lee and M. Steele)

#### SESSION 6: Data for model forcing and validation (Convener: M. Steele)

**08:35** – **08:50** Walt Meier "New satellite-derived observational sea ice concentration and extent products for modeling"

**08:50** – **09:05** Ron Lindsay "Arctic sea ice thickness loss determined using subsurface, aircraft, and satellite observations"

09:05 – 09:20 Sunke Schmidtko "MIMOC ocean hydrography"

SESSION 7: Planning of future FAMOS studies (Convener: A. Proshutinsky)

09:20 – 09:25 Andrey Proshutinsky "Introduction and tasks for session 7"

09:25 – 09:45 Thomas Jung "The Year of Polar Prediction (YOPP)"

09:45 - 10:00 Eddies (J. Marshal)

**10:00** – **10:15** Sub-sea permafrost and gas hydrates release conditions (N. Shakhova)

10:15 – 10:30 Pathways of melt water from Greenland (D. Dukhovskoy)

**10:30** – **10:45** Atlantic water transformation processes from entering to leaving the Arctic Ocean (M. Karcher)

#### 10:45 – 11:00 Coffee

11:00 – 11:15 Dynamics of the Beaufort and Greenland Gyres (A. Proshutinsky)

11:15 – 11:30 Internal waves of the Arctic Ocean including solitons (W. Zhang)

**11:30** – **11:45** Dynamics and rheology of sea ice in high and very high resolution models (A. Roberts)

11:45 – 12:00 Dynamics of eco- and geo-chemistry parameters (Y. Lee)

**12:00 – 12:10** FAMOS Lefora-based forum experience for communications (F. Dupont)

12:10 – 13:00 Working groups meetings and lunch

- 13:00 13:30 Plenary session with reports
- 13:30 Final remarks and workshop adjourn