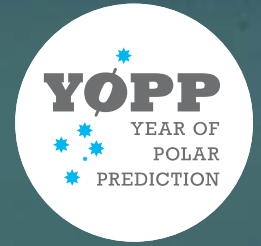


PPP

WWRP

WMO
OMM



The Year of Polar Prediction Relationship to Ice Services

Photo: G. Dieckmann, AWI

Gregory Smith, Environment and Climate Change Canada
PPP/YOPP Sea Ice Prediction Theme Lead
(presented by Helge Goessling)

IICWG Meeting, 24-28 Oct 2016, Ottawa, Canada

YOPP & IICWG



- PPP Mission Statement:
 - *Promote cooperative international research enabling development of improved weather and **environmental prediction** services for the polar regions, on time scales from hourly to seasonal*
- YOPP Mission Statement:
 - *Enable significant improvement in environmental prediction capabilities for the polar regions and beyond, by coordinating a period of intensive **observing, modelling, prediction, verification, user engagement and education activities***
- Sea ice Prediction is a key topic for Year of Polar Prediction
 - *One of five flagship themes in Polar Prediction Project*
- Opportunity for National Ice Services to benefit from significant international effort and provide important contributions
- Strong potential role for IICWG
 - *Identified from the beginning as an important partner*
 - *Representation of PPP/YOPP at past IICWG meetings and vice versa*

Pre-YOPP Contributions

- IICWG fostering development of sea ice prediction science and user engagement
 - Annual meetings
 - E.g. two discussions sessions later today
 - Working Group on Sea Ice Data Assimilation
 - Joint Workshop with PPP at ESA, April 2016 focusing on sea ice verification
 - Documentation of products
 - "Sea Ice Information Services in the World" (2010; WMO-574)
 - Wide-spread use of products from Ice Services for model evaluations
 - E.g., Charts, Stage of Development, ...
 - Dissemination via IPY Ice Logistics Portal

Potential IICWG YOPP Contributions



- Specialized products for YOPP, e.g.:
 - Pan-arctic stage of development charts
 - Enhancement of IPY Logistics Portal
- Contribution toward a Polar Regional Climate Centre
 - Enhanced long-range ice products and services
 - See presentation tomorrow
- Collaboration in terms of user aspects
 - PPP-SERA Group
- Operational "YOPP Desk"
 - Leverage international effort to accelerate:
 - Tighter interactions between modellers and forecasters
 - Improved products to address users' ice information needs
- Evaluation of Experimental Products
 - e.g. GODAE Oceanview Intercomparison (next slides)
- Explore other YOPP datasets (e.g. ECMWF ones, S2S, ...)

GOV "Class4" Intercomparison

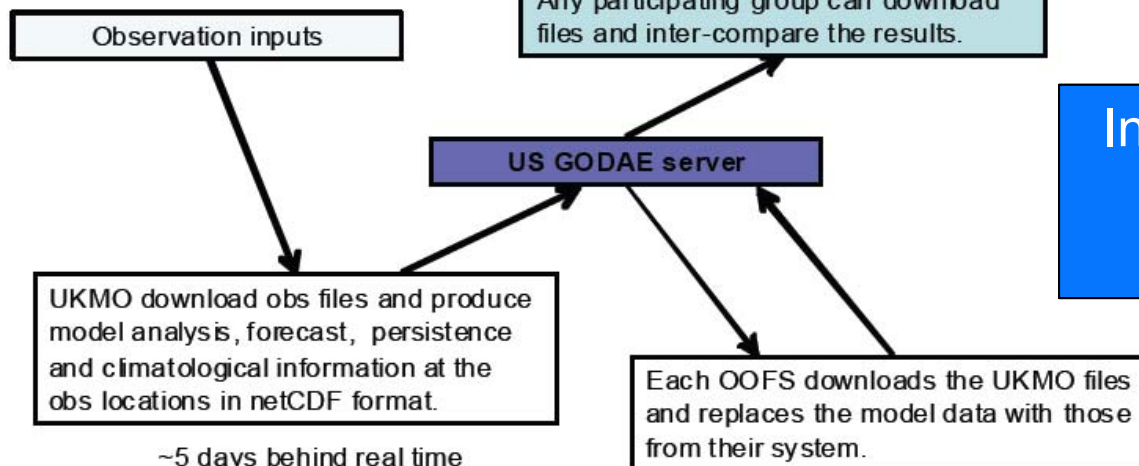


Intercomparison made using dataset of model outputs interpolated to location of observations

Produce a core set of plots for the GOV web-site (password protected).

Any participating group can download files and inter-compare the results.

Intercomparison made in near real-time



Participating centres

<i>Institution</i>	<i>System</i>	<i>Ocean Model</i>	<i>Resolution</i>
UK Met Office	FOAM	NEMO	¼ degree
Bureau of Meteorology	OceanMAPS	mom4p1	1 degree (1/10 around Australia)
NOAA/NWS/NCEP/EMC/MMAB	RTOfS	HYCOM	1/12 degree
Mercator-Ocean	PSY3	NEMO	¼ degree
Canadian Meteorological Centre	CONCEPTS-GIOPS	NEMO	¼ degree
REMO	HYCOM	ATLe0.25	¼ degree (Atlantic only)

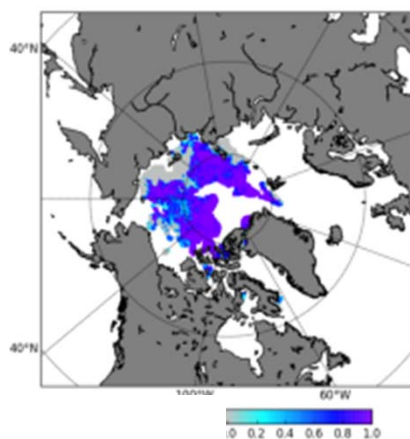
Others that have expressed interest in joining: NRL-GOFS, TOPAZ, DMI, ...

Differences from AMSR-2

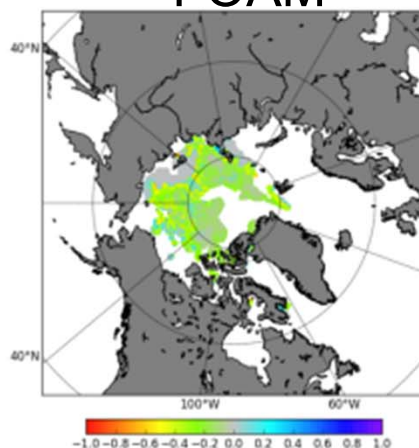
2016-08-08, Analyses (Obs-Model)



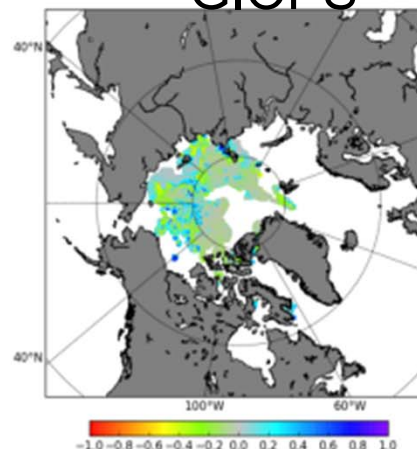
AMSR-2



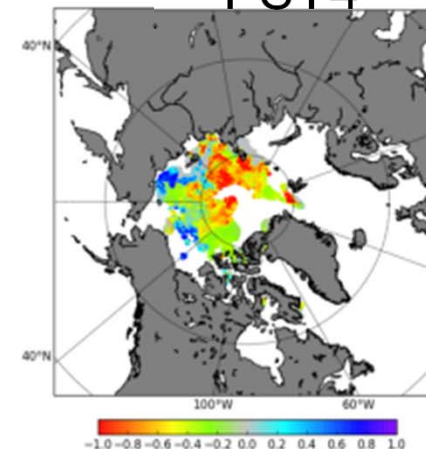
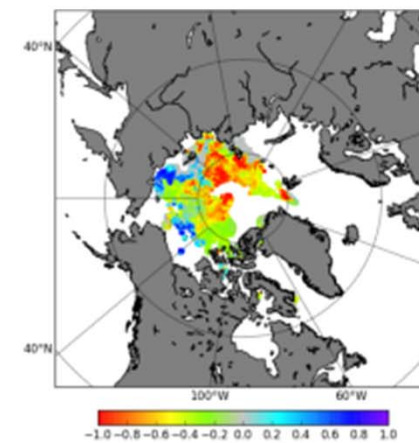
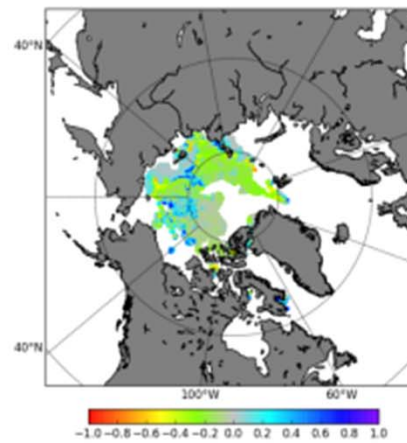
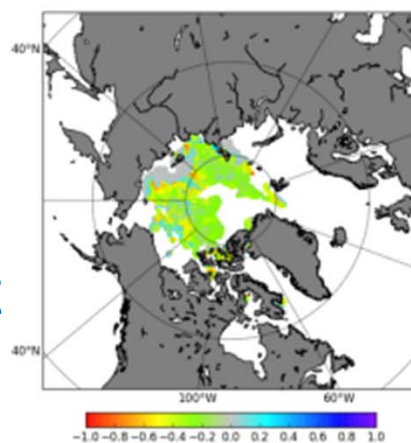
FOAM



GIOPS



PSY4

120hr
forecast

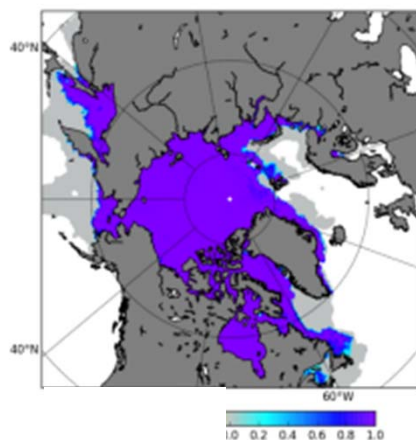
(sea-ice concentration)

Differences from AMSR-2

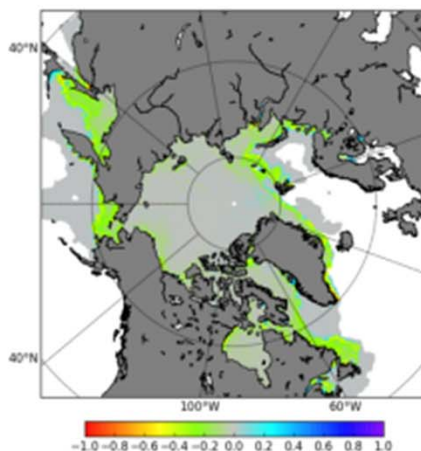
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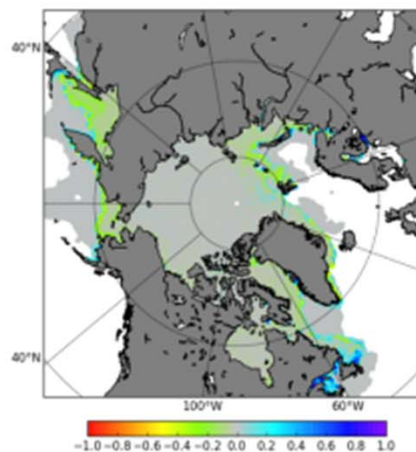
AMSR-2



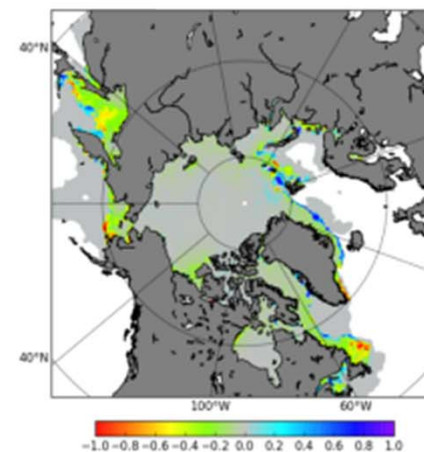
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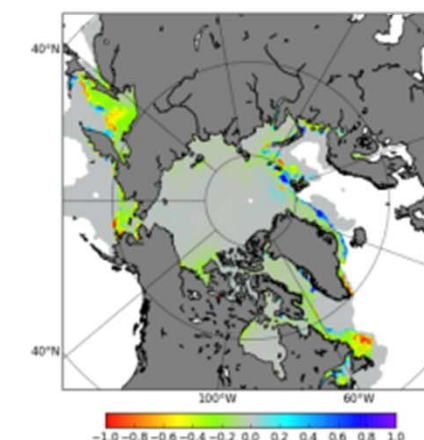
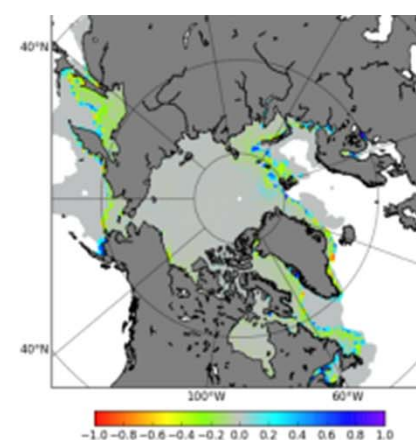
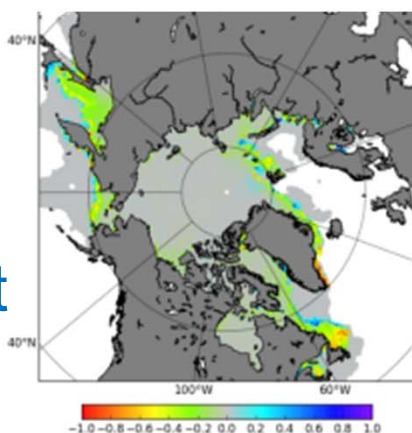
GIOPS



PSY4



120hr
forecast



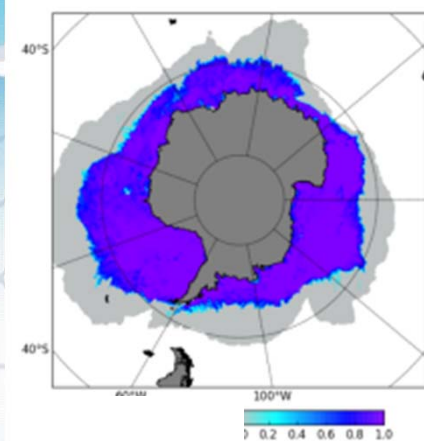
(sea-ice concentration)

Differences from AMSR-2

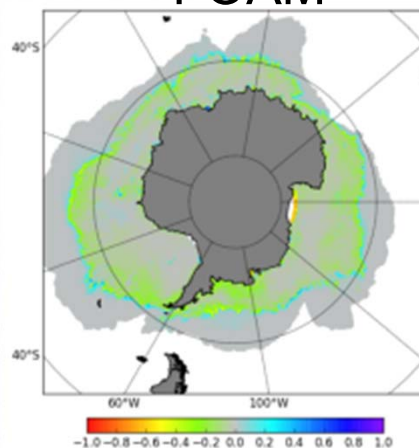
2016-08-08, Analyses (Obs-Model)



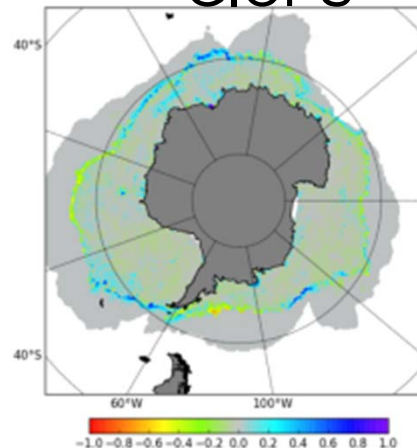
AMSR-2



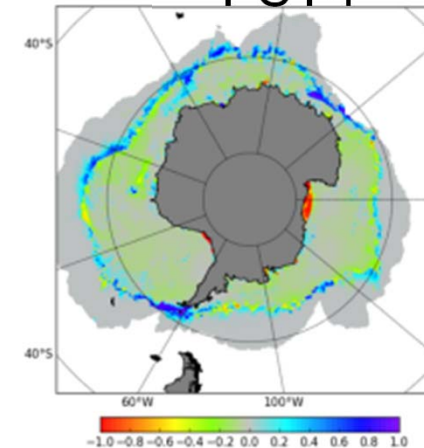
FOAM



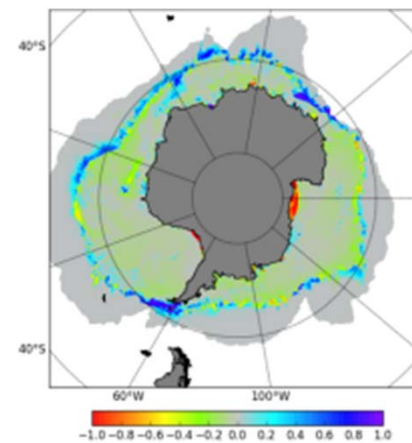
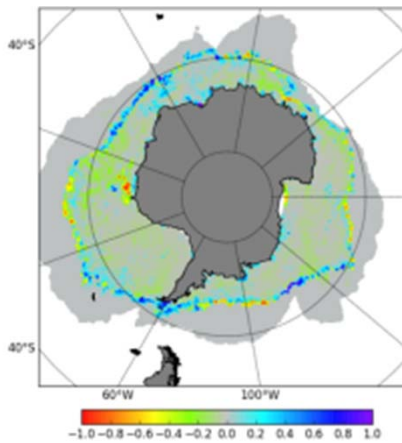
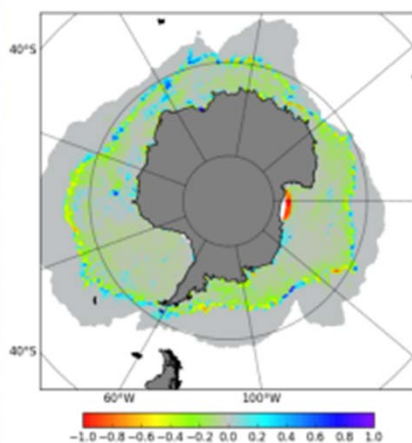
GIOPS



PSY4



120hr
forecast



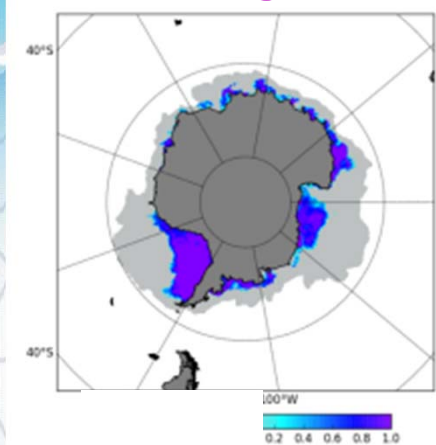
(sea-ice concentration)

Differences from AMSR-2

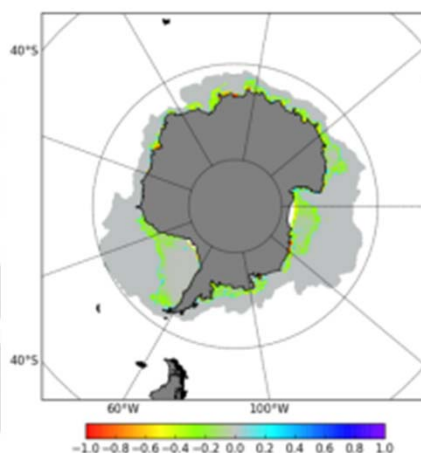
2016-03-08, Analyses (Obs-Model)



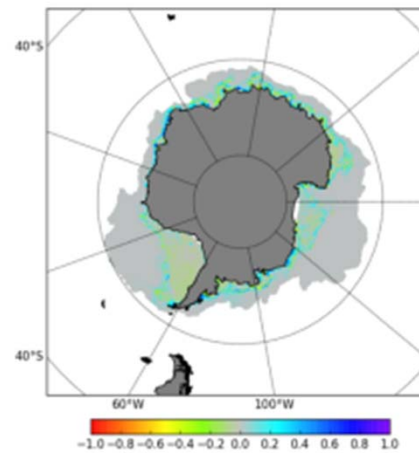
AMSR-2



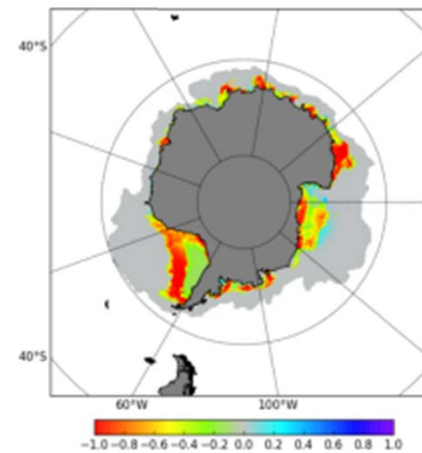
FOAM



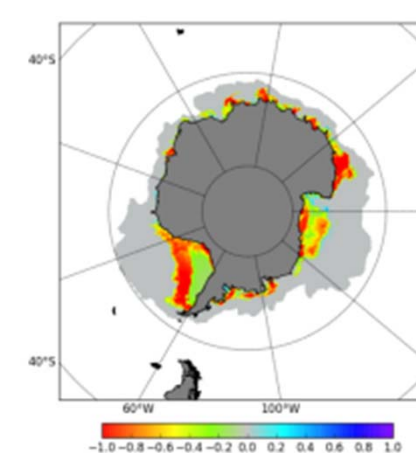
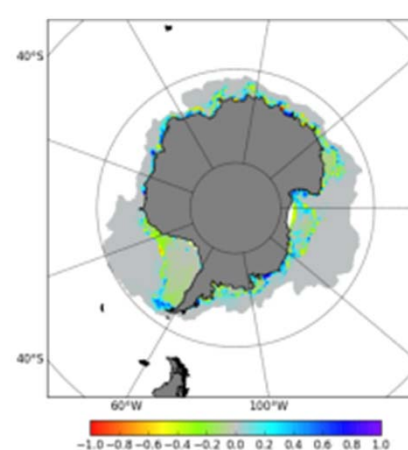
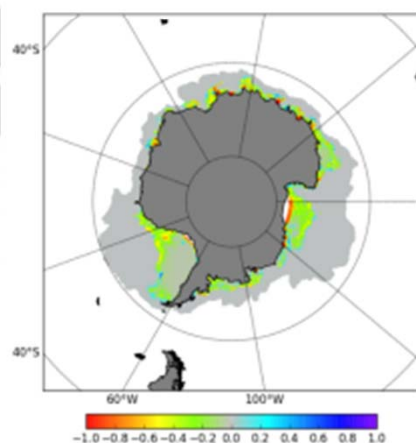
GIOPS



PSY4



120hr
forecast



(sea-ice concentration)

Other specific potential IICWG Contributions

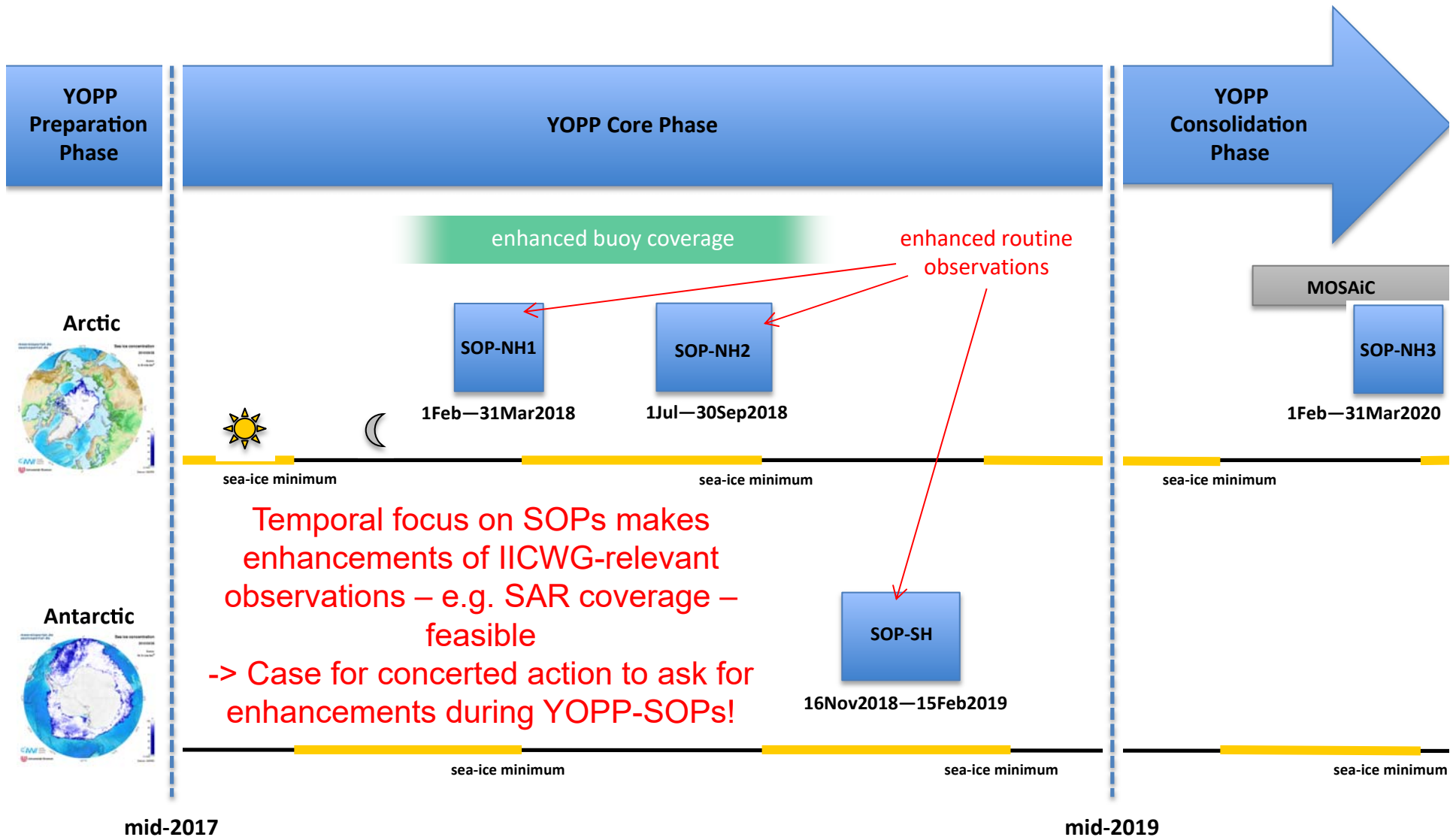
- Recommendations for YOPP from an ice-service perspective
 - A concise paper could be written to complement the book by Carrieres et al.
- White Paper on User needs, and future potential products
 - Build on "Sea ice information services of the world" (WMO-574)
- IICWG representation in YOPP's "Operational Centres" Task Team?
 - This includes the aspect of operational support for YOPP-related campaigns
- PPP/YOPP involvement in next IICWG Workshop
 - Focus on verification effort?
- Recommendations/coordination of sea ice observational efforts
 - Link with IABP/IPAB, PSTG

Year of Polar Prediction

Special Observing Periods (SOPs)



Final approval pending (12 Oct 2016)



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Other specific potential IICWG Contributions



Other suggestions?

Thank you!

YOPP
YEAR OF
POLAR
PREDICTION



GODAE OceanView



MODIS

29 février / February 29, 2008

Golfe du Saint - Laurent
Gulf of St. Lawrence