PPP

WWRP

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WGSIP and Polar Prediction Project: areas of collaboration

M.Tolstykh

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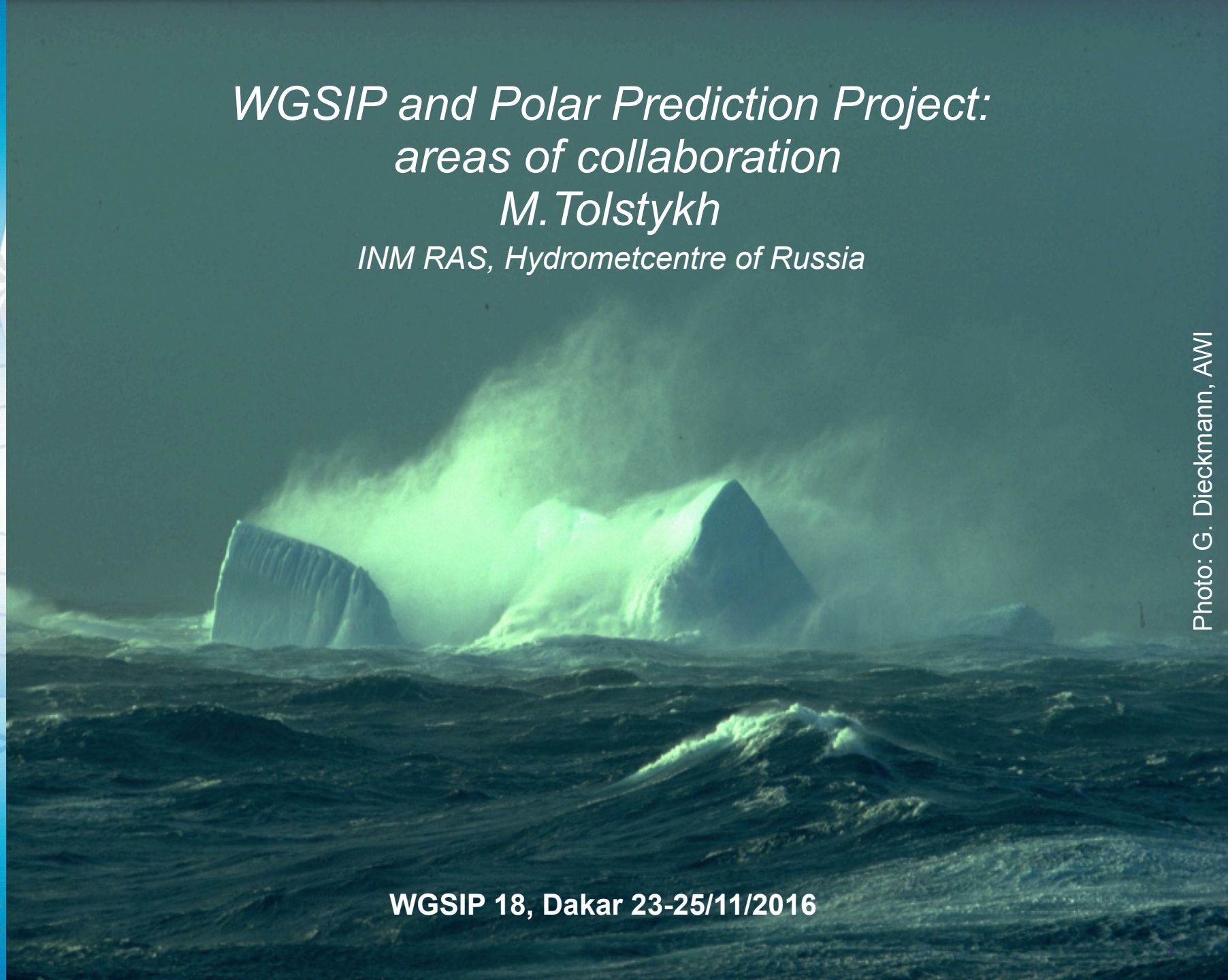

Photo: G. Dieckmann, AWI

WGSIP 18, Dakar 23-25/11/2016

Polar Prediction Project: Goals

- Improve the understanding of the requirements for, and evaluate the benefits of, enhanced prediction information and services in polar regions
- Establish and apply verification methods appropriate for polar regions
- Provide guidance on optimizing polar observing systems, and coordinate additional observations to support modelling and verification
- Improve representation of key processes in models of the polar atmosphere, land, ocean and cryosphere
- Develop data assimilation systems that account for the unique characteristics of polar regions
- Develop and exploit ensemble prediction systems with appropriate representation of initial condition and model uncertainty for polar regions
- Determine predictability and identify key sources of forecast errors in polar regions
- Improve knowledge of two-way linkages between polar and lower latitudes, and their implications for global prediction.

PPP

WWRP

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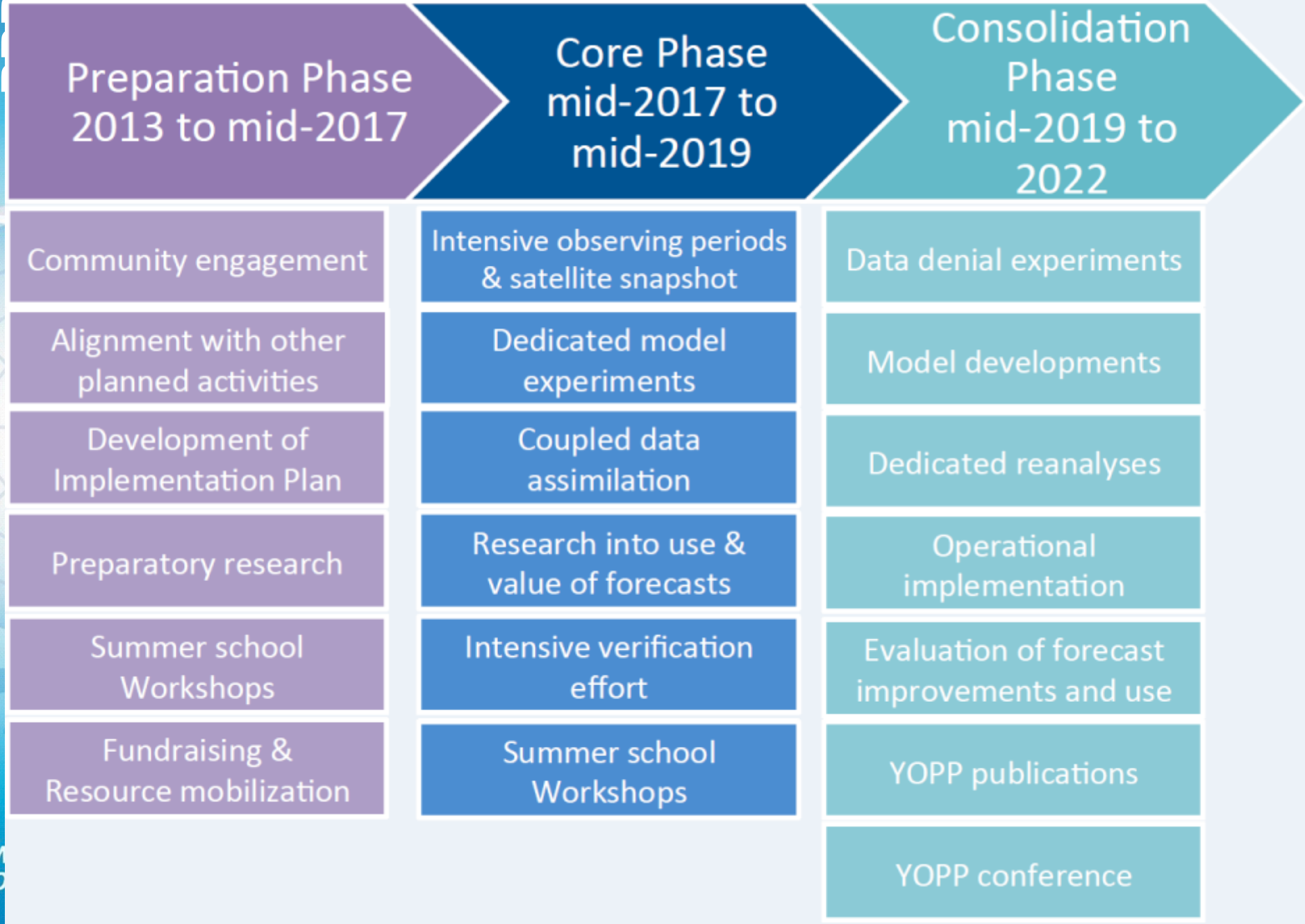
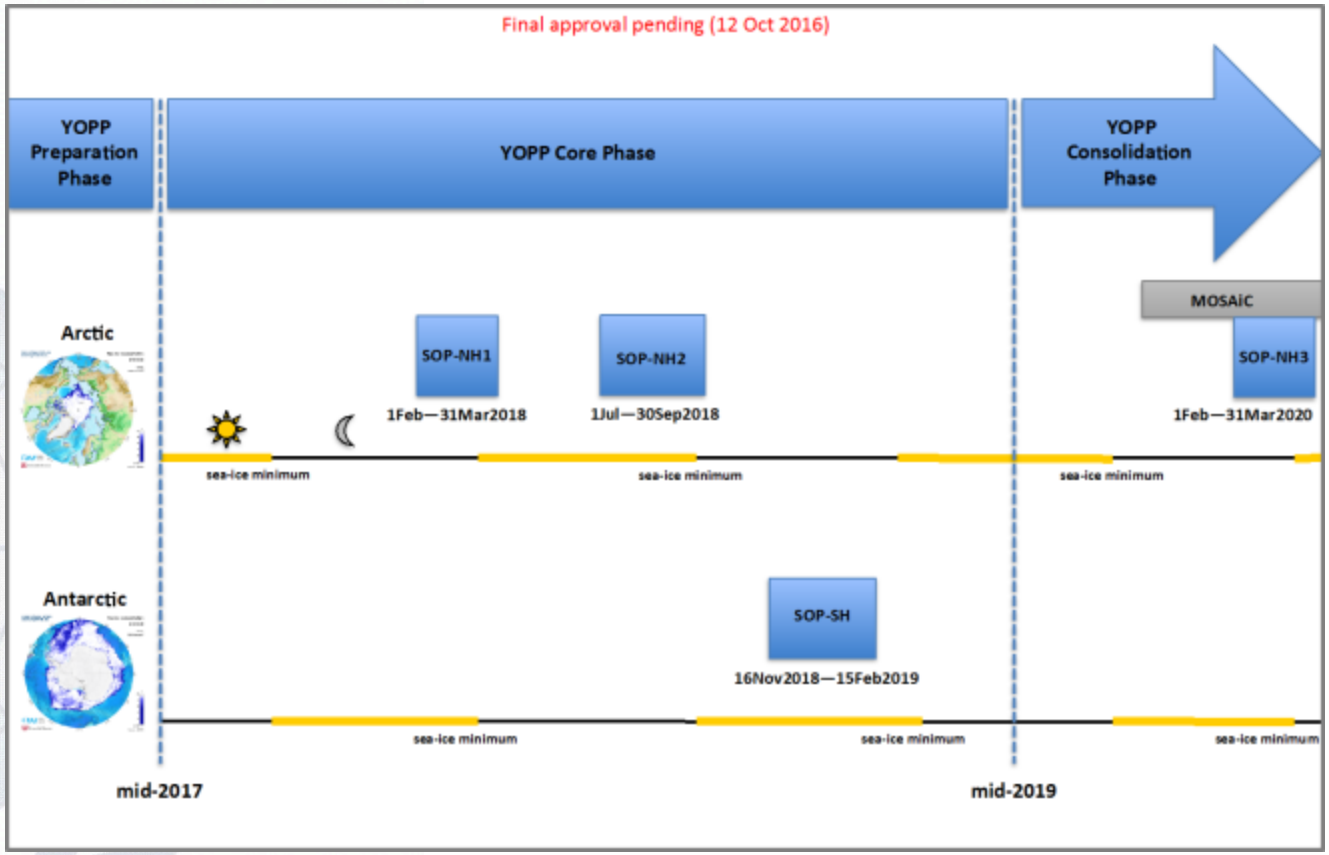
YOPP
YEAR OF
POLAR
PREDICTION

Polar Prediction Project (2)

- 10-year project, one of THORPEX successors. Target lead time range: from hours to 6 months
- Science and Implementation Plans.
- http://polarprediction.net
- Flagship activity – Year of Polar Prediction (mid-2017-mid-2019). Observational and Modelling components. All data should be available for research.
- Project Endorsement (both observations and modelling). So far, ~45 projects are endorsed

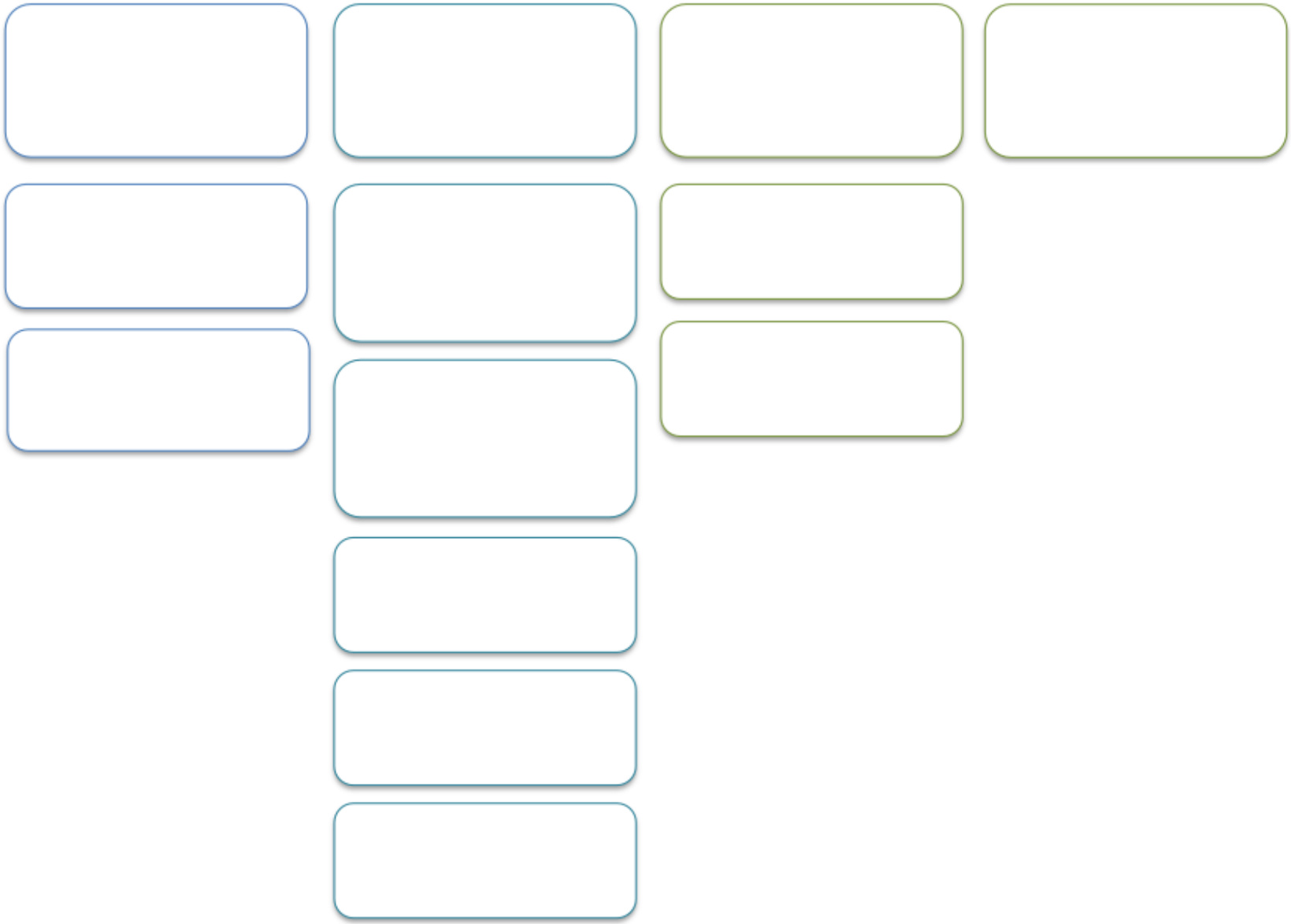

Preparation Phase
2013 to mid-2017
Core Phase
mid-2017 to
mid-2019
Consolidation
Phase
mid-2019 to
2022
Community engagement
Alignment with other planned activities
Development of Implementation Plan
Preparatory research
Summer school Workshops
Fundraising & Resource mobilization
Intensive observing periods & satellite snapshot
Dedicated model experiments
Coupled data assimilation
Research into use & value of forecasts
Intensive verification effort
Summer school Workshops
Data denial experiments
Model developments
Dedicated reanalyses
Operational implementation
Evaluation of forecast improvements and use
YOPP publications
YOPP conference

YOPP Special Observing Periods



- During Special Observing Periods (SOP) routine observations such as launches of radiosondes and buoy deployment will be enhanced in both the northern and southern hemisphere.
- In addition, shorter YOPP field campaigns will be scattered around the SOP during the YOPP Core Phase.

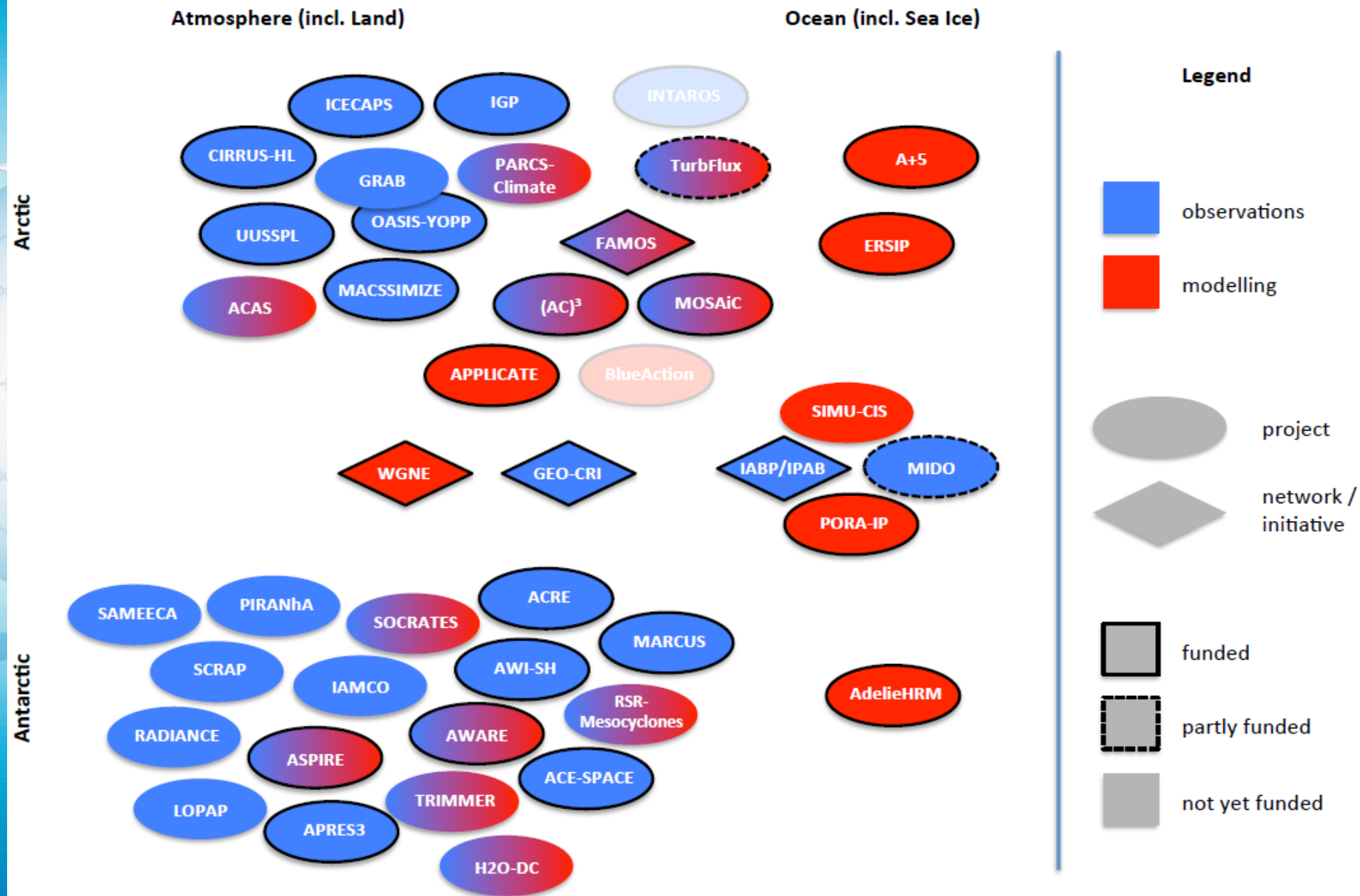
YOPP Modelling Plan—Components



YOPP-endorsed projects & initiatives

state 23 October 2016

YOPP YEAR OF POLAR PREDICTION



Sea Ice reanalyses

- The Ocean Reanalyses Intercomparison Project (ORA-IP) http://icdc.cen.uni-hamburg.de/1/daten/reanalysis-ocean/oraip.html - YOPP endorsed
- GODAE OceanView
- PORA-IP Polar ocean reanalysis intercomparison project https://agora.fmi.fi/display/ORAIP/Polar+ORA-IP+Home – YOPP endorsed. Detailed study of ORA-IP products in the polar areas.

Messages/questions from SG PPP

- WMO is planning to establish a Polar Regional Climate Centre (PRCC), targeting lead times of 0-4 months. WGSIP coordination? Links to YOPP?
- Sea Ice Outlook in Northern and Southern Hemisphere (Francois Massonet) (https://www.arcus.org/sipn/sea-ice-outlook) – proposal to participate and to provide data.
- List of archives that can provide YOPP relevant data, data provision: 1) availability of YOPP-relevant parameters 2) Possibility to rerun historical simulations with the latest models. Partially answered (S2S already in PPP, CHFP; to provide more on NMME). What else? CMIP5?

Thank you for attention!