

Notes from YOPP-SH Telecon from 27 March 2018

1. Review of Telecon Outcome from February 28, 2018 – Dave Bromwich

David Bromwich gave a brief review of the last telecon's outcome from February 28, 2018 (see attached document).

2. Review of PPP SG-9 in Iceland – Kirstin Werner and Dave Bromwich

Kirstin informed the community about the recent ninth Polar Prediction Project Steering Group meeting (PPP SG#09) that was held from March 13–15 at the Icelandic Meteorological Office in Reykjavik, Iceland.

YOPP endorsement

The PPP Steering Group (PPP SG) has decided that YOPP endorsement can also be requested past the YOPP Core Phase (mid 2017 to mid 2019), probably until end of 2021. Results from YOPP-endorsed projects will, however, be already included to the YOPP Consolidation phase outcomes.

YOPP data

Modelling and forecast data sets that do not have a sustainable medium to long-term home are of concern by the PPP SG as currently it is not clear where to archive those. PANGAEA is a good option, however, does not have the OPeNDAP option so that parts or certain variables of a dataset can be downloaded. The YOPP Data Portal team (led by Øystein Godøy and SiriJodha Khalsa) should be informed of new datasets that are in danger of being lost. The International Coordination Office for Polar Prediction (ICO) is currently looking into solutions.

Temporal and spatial sampling of data in the Southern Hemisphere during YOPP in particular at **YOPP Supersites** should be the same as in the Arctic. If that is not possible, the temporal and spatial resolution of data should at least be sufficient to elaborate key processes as identified for the Southern Hemisphere in the [YOPP Modelling Plan](#).

Similarly, the **YOPP-SH Special Observing Periods (SOP) observational data** should be organized in the same manner as in the Arctic to allow for **verification** efforts and intermodel comparison. A representative of the YOPP Supersites/Verification Task Team will attend the YOPP-SH#03 meeting in Madison, WI, United States in July this year to encourage the countries with supersites in SH to organize their data according to what has been done in the Arctic during previous Special Observing Periods. The YOPP Supersites/Verification Task Team will also provide the ICO with relevant documents that need to be forwarded to countries that operate supersites in Antarctica.

Data providers need to tag their data as '**YOPP data**'. It was recommended that data archives storing YOPP data shall collaborate with the YOPP Data Portal so that the YOPP Data Portal is able to harvest data from other archives.

Data Denial experiments

For the Numerical Weather Prediction (NWP) Centers that are planning to run data denial experiments, it will be crucial to know what are the observations that are routinely taken and what are extra YOPP observations. The **Automatic Weather Station** (AWS) network of the collaborative research effort: ‘Antarctic Automatic Weather Station Program 2016-2019’ (Wisconsin AWS, currently under review for YOPP endorsement) is most likely one that will be taken as the “normal situation” compared to other potentially newly installed AWS. Germany is running two Automatic Weather Stations at Filcher and Sørasen stations at least until the end of the YOPP-SH SOP.

For **radiosondes**, the decision as to what are YOPP extra observations is more straight forward. **The current list of extra radiosondes is attached to this email.**

Regarding **buoys**, the YOPP Buoy Task Team has to make a decision about the situation/number of buoys that have been deployed during the last years and what are official extra observations during the YOPP phase. The decision might be somewhat arbitrary, however, the ICO needs to make sure that all those who conduct data denial experiments are using the same list.

Holger Schmithüsen commented that the **Baseline Surface Radiation Network** (BSRN) data sets that are routinely released only once per year from Neumayer station will be available on a monthly basis during YOPP-SH SOP. Holger will encourage other stations soon at a BSRN meeting to also release their data more often. David Bromwich emphasized the importance of these data sets for the community.

It will be important that the **NWP centres** advise the ICO if they are planning to do denial of observation experiments and observation system design experiments for the Arctic or Antarctic. The European Centre for Medium-Range Weather Forecasts (ECWMF) will not carry out data denial for the YOPP-SH SOP, however, United States National Centers for Environmental Prediction (NCEP) may be able to do so after some computer issues have been worked out.

Bob Grumbine from **NCEP** mentioned that there is the possibility due to the arrival of a new computer and the not-yet retirement of an old computer at NCEP to run these extra paired data denial experiments with the NCEP DA (data assimilation) system. He notes that this won't be at full resolution but will still be usable as it is equivalent to 25 to 30 km resolution.

Buoys

The PPP SG recommended the deployment of ice and ocean data buoys during YOPP as these are important to better understand the ice and ocean processes. As well the data is critical to reach the goals of YOPP and crucial for the use in verification efforts during the YOPP Consolidation Phase starting in mid 2019.

The deployments of drifting buoys during the YOPP-SH SOP looks very promising as a big effort is planned with more than 100 deployments.

Dave Bromwich mentioned that we need more information from Lynne Talley on oceanographic cruises that are planned during the SOP.

The following information has been provided by Lynne Talley, Sarah Gille and Bob Weller past the telecon:

The OOI mooring in the SE Pacific (Southern Ocean OOI) has indeed been extended. This past November, sea conditions were too extreme to retrieve it and so it was left in. The UK (who is involved because of the NERC program 'CUSTARD' that is looking at air-sea fluxes of carbon and other BGC quantities) has indicated willingness to support a recovery and turn around in November. NSF has indicated that they understand the community desire to have the mooring in place during the YOPP Southern Hemisphere Special Observing Period. Now that there is a federal budget for this fiscal year, NSF may soon be in a position to clarify the situation. For now NSF indicates the surface mooring will stay as it considers further.

South Pole Hole

No extra efforts will be undertaken to fill the Synthetic Aperture Radar (SAR) hole over Antarctica as SAR is primarily used for ice sheet dynamics.

ADM Aeolus

The Atmospheric Dynamics Mission Aeolus (ADM Aeolus, run by European Space Agency ESA, <https://www.ecmwf.int/en/research/projects/aeolus>) will be very useful for Arctic and Antarctic research during YOPP as it is the first weather satellite using a highly-sophisticated Doppler wind lidar and will thus further help improve weather forecasting skills. The valuable data from YOPP Supersites might be used to ground-truth the remotely sensed data. Launch of the ADM Aeolus is planned for end of August/beginning of September 2018.

Satellite Polar Space Task Group (PSTG)

If there is any strong case for additional support by PSTG, e.g., potential for support of field campaigns in YOPP Southern Hemisphere, please let the ICO know so that they can make the connections.

Consolidation Phase

There will be one YOPP Consolidation Plan including all work by different YOPP Task Teams.

Small dedicated and focused workshop will be organized in the beginning of the YOPP Consolidation Phase while YOPP will finalise with a larger YOPP Synthesis Summit (probably in 2022).

Standard acknowledgement shall be included with datasets and publications (to trace YOPP projects). The ICO will suggest a statement that can be used.

YOPP publications can be reported to the ICO via a link on the PPP website.

3rd Arctic Special Observing Period

PPP SG has decided that a 3rd Northern Hemisphere (NH) Special Observing Period (SOP3) will take place to support the Arctic drift experiment MOSAiC during NH winter 2019/2020. SOP3 will have the same timing as SOP1 (1 February to 31 March 2020).

PPP-YOPP adopts WMO Gender Action Plan

According to the WMO Gender Action Plan, there will be a statement published by ICO and PPP SG with regards to gender equality during YOPP that encourages groups and projects involved/endorsed by YOPP to carry out their research activities accordingly.

Education

The continuation of the Polar Prediction Schools (PPS, first one in 2016, second in 2018) is recommended so that another one is envisaged for 2021. It might be a good option for the YOPP-SH community to also be more active in education activities.

Communication

It has been recommended by PPP SG to maintain current social media activities. As for SOP1 when Arctic stations were contacted to send photos and information of radiosonde launches, a similar effort is planned for the YOPP-SH SOP. It would therefore be good for those who are in contact/in charge of station personnel to ensure they send feedback on the YOPP-SH SOP activities. That way, the staff at the stations can also be honoured and thanked for their extra work during the SOP. A nice article regarding the YOPP extra observations and their use by ECMWF has been published here: <https://www.ecmwf.int/en/about/media-centre/news/2018/ecmwf-uses-data-extra-radiosondes-launched-arctic>

3. Data portal/repository – Siri Jodha Khalsa

Siri Jodha Singh Khalsa who recently joined the PPP SG as a data expert presented on the YOPP Data Portal (see [here](#) for his presentation modified from Øystein Godøy).

The YOPP Data Portal (available at <https://yopp.met.no/>) is a discovery metadata catalogue enabling a unified view of the YOPP data holdings of connected data centres. There is not a central data repository but data maintained by different data centres that are committed to YOPP. This includes data centres that are connected to the WMO Information System (WIS) and the Global Telecommunication System (GTS).

The discovery of data can, however be done through the YOPP Data Portal which is harvesting data through different mechanisms (OAI-PMH serving GCMD DIF or ISO19115 with GCMD Science Keywords is preferred, but OGC CSW, and OpenSearch are somewhat supported). The discovery process is improved if the content of datasets is described using a standardised vocabulary (GCMD Science Keywords).

Data access and functionality is improved if OPeNDAP is supported for the datasets.

The portal is up and running, data products can be downloaded using a shopping basket when datasets have direct download possibility and this is encoded properly in the discovery

metadata. Visualization for gridded data is supported using OGC WMS (if supported by the host data centre).

On an example on slide 7, Siri Jodha shows an air temperature field that can be visualized when the dataset is exposed using OGC WMS. Currently, the YOPP Data Team is looking for tools to display profiles.

Last week, Siri Jodha has been attending a meeting of the Research Data Alliance in Berlin where it has been discussed where data should be stored so it won't be lost. More information can be found at

https://docs.google.com/document/d/1K4YhyTZ5p658_GtOpeEZ0CN3d2HwEYMw8pTfgA-qGOo/edit#heading=h.v2uhsdsn1o24

Further details on the YOPP Data Management system can be found at

<https://yopp.met.no/node/4>

4. SIPN-South - Francois Massonnet

François Massonnet gives an update of the current status of the SIPN South community effort (see [here](#) for his presentation). SIPN South is collection of sea ice predictions around Antarctica on a seasonal basis. The final target for SIPN South is February 2019 during the YOPP-SH SOP. Currently, they are in the middle of the project and had trained themselves with proposing the forecast for the 2018 season. This was quite successful as they received 13 contributions (daily sea ice area values) by various groups (mostly coupled dynamic models, four statistical submissions, one ocean sea ice model). The report on SIPN-South Feb. 2018 results can be accessed [here](#).

The post-season analysis is now underway. There was not yet any time to look into the real world data.

Jan Lieser will present a poster at POLAR2018 and the group will then prepare for the experiments during the YOPP-SH SOP.

5. SOCRATES and H2020 proposal (Kirstin Werner)

Irina Gorodetskaya from the University of Aveiro (Portugal) recently submitted a proposal to the H2020 call related to IPCC ('Addressing knowledge gaps in climate science, in support of IPCC reports'). The proposal entitled 'Aerosol-clouds interaction and its impact on radiation and precipitation in the Southern Ocean/Antarctica' is a continuation of the project SOCRATES (Southern Ocean Clouds, Radiation, Aerosol Transport Experimental Study) that has been endorsed by YOPP. Irina and her team will look at another part of the Southern Ocean (opposite side to SOCRATES) and will have some similar and also different approaches. Irina will soon seek endorsement from YOPP for the project.

6. COMNAP meetings (David Bromwich)

- a. AGM in Germany – presentation on YOPP-SH on June 12 to see how National Antarctic Programs can support YOPP-SH - Dave Bromwich**

b. COMNAP-Mini-Symposium at Polar2018 in Davos on June 19 targeted at connecting researchers with National Antarctic Programs for YOPP-SH - Dave Bromwich

David Bromwich will attend two Council of Managers of National Antarctic Program (COMNAP) meetings in summer, their Annual General Meeting in Garmisch-Partenkirchen, Germany (June 12) and the COMNAP Mini Symposium that will be held in conjunction with the POLAR2018 meeting in Davos, Switzerland (June 19).

The COMNAP Mini-symposium, OSC Davos, Switzerland, 19 June 2018 (09:00-12:30hrs) will be open to all Polar2018 Open Science Conference Delegates and is entitled: *“Implementing Multi-national Polar Research Projects: the nexus between researcher and the National Antarctic Program”* (co-chaired by Kelly Falkner & Michelle Rogan-Finnemore).

For this session, COMNAP intends to discuss SOOS (Southern Ocean Observing System), SOCCOM (Southern Ocean Carbon and Climate Observations and Modeling) and YOPP (Year of Polar Prediction) in the second half of the session (11:00-12:30). The goal is to discuss science requirements for each (What does the science community want to do?); then discuss science support requirements (What sort of NAP support will be required to deliver that science/extra observations and data collections?)-focus on any international/international needs and how these might be achieved; finally to consider any policy or funding considerations / changes that might be required-by way of key messages to the community (this may be done by way of a panel discussion following the talks). This session is about opening up communication between the science community and the science support community on these three key projects which will require marine platforms/marine science support capacity which is in addition to “traditional” science which is supported through peer review processes (so here they are thinking of the extra observation requests from YOPP or the extra technology/deployments of marine observation tools/technology-how can we get support/funding/ship time/expertise to do these things? What are the data transfer requirements and systems needed for these?). From this session, COMNAP will develop a sort of “Communique” out to our COMNAP Member National Antarctic Programs that highlights ways to support SOOS, SOCCOM and YOPP if they are able to. They can continue to work with SOOS, YOOP and SOCCOM to keep this sort of NAP Communique system going on a regular basis through the life-times of those projects.

7. Preparations for the YOPP-SH#3 meeting in Madison – Kirstin Werner and Dave Bromwich

The YOPP-SH#03 meeting will be held on July 19 in Madison, Wisconsin, United States. It follows the WAMC (Workshop on Antarctic Meteorology and Climate (16-18 July, 2018)). The goal of the third YOPP-SH meeting will be to further plan the YOPP-SH Special Observing Period (16 Nov 2018 to 15 March 2019), to get further updates of YOPP extra observations (e.g., radiosondes, buoys, Automatic Weather stations, field campaigns, cruises and aircraft campaigns) that will take place during the SOP, and to scope out the modelling to be undertaken during and following the SOP, including data denial experiments.

Registration and abstract submission is currently open. The meeting page can be reached via <http://amrc.ssec.wisc.edu/meetings/meeting2018/>. Deadlines are as follows:

- June 11, 2018 — Short abstract submission deadline
- June 25, 2018 — Registration deadline
- June 25, 2018 — Extended abstract submission deadline

There will be six poster boards available.

8. Any other business

Météo France Plans for YOPP-SH SOP (Data denial) (Éric Bazile)

Météo France will carry out modelling as presented during last years YOPP-SH#02 meeting (see the report [here](#) and Eric Bazile's presentation from last year [here](#)). Modelling efforts will be done with a dedicated configuration of the global ARPEGE model with 105 vertical levels and a horizontal resolution about ~7.5km over Antarctica thanks to the variable grid. The 4Dvar assimilation system will be used for this configuration but not in real time but in a delayed mode about 2 days. The configuration is now ready. Still under discussion is to offer higher resolution at the YOPP Supersites with the NH model AROME at 1.3 or 2.5km (see for the YOPP Supersites in the YOPP [kml file](#)). For more information, see a [poster](#) Eric had shown in the Pan-Gass meeting in Australia recently. Eric suggests that people who are interested in this effort should organize a dedicated meeting. Eric will most likely not be able to come to the Madison meeting. If not he suggests to ask if Matthieu Chevallier would be available to attend.

Chile National Weather Service (Jorge Carrasco)

Jorge Carrasco reports that the Chilean National Weather Service will use the Polar Weather Research and Forecasting mode (PolarWRF, see more info [here](#)). They will provide all the operational modelling results their website before end of this year, Jorge will send more details on that to Dave.

Additional radiosoundings at Russian stations (Alexander Klepikov)

Additional radiosoundings (1/day) will be carried out during YOPP-SH SOP from Russian Antarctic stations Mirny and Novolazarevskaya. Normally, Mirny and Novo make soundings once a day at 00:00 GMT. Extra radiosondes will be launched at 12:00 GMT during Southern Hemisphere YOPP Special Observing Period. Data will be transferred into the GTS in real time.

9. Next meeting

Prior to the Madison YOPP-SH#03 meeting, we'll have another telecon most around mid of May. Please fill the doodle at <https://doodle.com/poll/bmwn9v4ac2pq5ahx> to indicate your availability.

