
Notes from YOPP-SH Telecon from 15 May 2018

Attending: David Bromwich (DB), Holger Schmithüsen, Isa Rosso, Machiel Lamers, Lynne Talley, Robert Grumbine, Siri Jodha Khalsa, Thomas Lachlan-Cope, Tom Bracegirdle, Vicky Heinrich, Kirstin Werner.

Moderator: David Bromwich

0. Welcome David Bromwich:

- David welcomed all participants and noted that (unless there is request to hold another one) this will be the last telecon before the YOPP-SH#03 meeting that will be held in Madison on 19 July.

1. Introduction Isa Rosso

- New to the YOPP-SH group is Isa Rosso who is a postdoc at the Scripps Institution of Oceanography (San Diego, CA) who works with Lynne Talley and David Bromwich. Her background is on modelling/observation in the Southern Ocean.
- Currently, Isa's project is about a compilation of the meteorological and ocean observations during YOPP so she works on a list of cruises that contribute observations from the Southern Ocean to the YOPP-SH Special Observing Period.
- Isa has already contacted Brazil (Ronald de Souza) where the Navy runs 3 cruise per year. Currently, there is an issue with data transfer due to limitations of internet. David has sent a support letter to allow scientists to use internet during cruises to upload their data into the GTS.
- Also she's been contact with Argentina where the transfer of data in real time is an issue of funding.
- There has also been contact established with PIs of UK cruises, e.g., aboard the James Clark Ross there will be meteorological observations taken during YOPP-SH Special Observing Period (SOP).
- In addition, Isa has contacted IAATO to get more information on touristic cruises (no feedback yet), as well as with Japan who will run extra radiosondes including data upload to GTS from two ships (Shirase and Kaiyō Maru(?))
- If anyone has additional information, please provide Isa with an update.
- Isa will be at the YOPP-SH#03 meeting to present on her latest results. **Kirstin to send information about Argentina radiosondes.**
- **Isa to send an update to David Bromwich who would like to provide information when he presents on YOPP-SH at the COMNAP meeting in June.**

2. Introduction Vicky Heinrich

- Another new face in the group is Vicky who has worked for the Bureau of Meteorology in Australia and for several winters at the Australian Antarctic stations as a weather observer. She recently completed a Bachelor of Science with Honours in psychology and plans to start a PhD investigating the use of weather information in decision-making in the Antarctic.
- She is already in contact with PPP-SERA (Daniela Liggett), Scott Carpentier (BoM Australia), Linda Anderson-Berry (WMO SERA) and Brian Mills (formerly PPP-SERA)

as she is developing her project proposal. Her work will align with the PPP-SERA goals and research needs as described in the report WWRP/PPP No. 5 Navigating weather, water ice and climate information for safe polar mobilities.

- For her project, she wants to increase understanding of the scope and frequency of weather information use in the Antarctic, the decision context and constraints, and the use of weather information in decision-making. This research would provide empirical, evidence-based knowledge to develop a weather information value chain, education materials, improve forecast communication, inform gaps in weather services, and clarify where improved forecasting services and investment may reduce the risks associated with human activities in the Antarctic.

3. Update NCEP Data Denial Experiments (Bob Grumbine)

- Bob informed the group that due to the complete dedication for other purposes, the existing and the newly arrived computers at NCEP will not be available for globally paired Data Denial experiments for YOPP-SH. The timetables for the new generation computer have been moved up a year so that the new model (FV3) occupies all of the new and the old machines which is an NCEP priority.

4. Update Proposal AMPS Data Denial Experiments (David Bromwich/Jordan Powers)

- David Bromwich is positive about the funding of the NSF proposal to run AMPS Data Denial Experiments, however, they haven't heard back from NSF officially. For this project, there will be two experimental suites that will run the AMPS forecast model, with and without the additional observations during the YOPP-SH SOP, using two data assimilation approaches. Apart from that, it will be beneficial for AMPS to update its data assimilation procedure.
- A question by SiriJodha was about the data assimilation based on geophysical parameters vs. satellite radiances. DB responded that both approaches assimilate radiances.

5. Update SIPN South (François Massonnet)

- SIPN South had called and received forecasts (13 contributions) of the February 2018 sea ice conditions around Antarctica by different groups. This was a test for the 'real' experiment during YOPP-SH SOP. There will be a post-season report by SIPN South published in early June (available at POLAR2018).
- Submitted data will eventually be shared around mid-June.
- There is a good overlap with the Arctic SIPN2 initiative who do the yearly September Arctic sea ice minimum. François is part of SIPN2 so both networks can share their experiences.
- There was one Canadian contribution (ECCC), also NCEP was one of the participants.

6. Update SOCRATES follow-up project (Irina Gorodetskaya/Tom Lachlan-Cope)

- Tom Lachlan-Cope is PI of a project submitted to the EU Horizon2020 that could, in part, be seen as a follow on project to SOCRATES. However, the study area is further south to even better learn about those processes that are driven by the Southern Ocean and impact Antarctica. Observations made during the project are planned to feed into

models. There's involvement of different EU partners in the project, plus international collaborators such as Chile.

- At the moment, the proposal is still in stage 1 so they are waiting for the project to get onto stage 2 for evaluation. Decision (about stage 1) is expected for end of May/June.
- Also different from SOCRATES is the focus on long-term measurements from ground-based stations (except for Australia ground-based stations that SOCRATES used). Thus, the new project also covers coastal areas in Antarctica, in total a larger area now that e.g. the Chilean station has been included.
- A campaign with aircraft, ships and helicopters from the station is planned for an entire year.
- Modelling work (global and regional models) includes the physics but also output from different work packages.
- Timeline: 2019/2020 austral summer
- Due to the timeline, some of the equipment from RV Polarstern won't be available as Polarstern will be occupied by the MOSAiC drift in Arctic sea ice.
- Tom noted that for some of the equipment the project proposal is at a too premature state yet.
- Tom, would you like to send the slide you shared via screen to the group?

7. Linking Southern Ocean programs with YOPP (Lynne Talley)

- Lynne mentioned that many of the Southern Ocean projects are not in the state to request YOPP endorsement but would like to connect with YOPP as they contribute to the YOPP observations. One idea is to introduce SO programs on the YOPP-SH webpage.
- Dave and Kirstin to follow up with Lynne. Agreement to have SO programs as partners (grey boxes) under YOPP explorer (<http://www.polarprediction.net/yopp-media-kit/yopp-explorer/>) as well as on the YOPP-SH or PPP website. Lynne and Isa to send information to David and Kirstin.

8. Update Météo France (via email by Eric Bazile)

- contribution to YOPP-SH: use 4DVAR with the global model ARPEGE at 7.5km (may be 5.5km) and Limited Area Model (AROME @ 2.5 or 1.3km) at dedicated YOPP-SH Supersites (Alexander Tall Tower, DDU, Dome C etc.). Which supersites needs to be decided for model intercomparison.
- For SOCRATES, if there is some comparison, Eric would be also interested to collaborate with ARPEGE and/or AROME models.

9. Update Chile (by Jorge Carrasco via email)

- Jorge has been in touch with the National Weather Service (Ricardo Alcaful running Polar WRF). He said that they will have everything ready for running the model in operational mode not later than November 2018. Actually, they have been running it, but

it will be publicly available later on. They do not have the computational resources to save everything, but they will try to save some variables for the special observing period (SOP). They will display in the DMC webpage the same kind of products that they do for other regions (you can see examples in www.meteochile.gob.cl, under Pronósticos/modelos numéricos).

- Penny Rowe and the team from the Universidad de Santiago will carry out radiosonde launches during the SOP. This is about three months. The plan is to launch around the same hour that a satellite (meteorological one) passes over King George Island. Most probably these radiosonde data will not feed any model during the SOP, but they will be very useful for evaluating not only satellite data (TOVS) but also the performance of the different models.
- The Universidad de Santiago has an Antarctic Research Platform (TARP-02), which is close to the Escudero Station (Chilean Antarctic Institute - INACH) / and Frei Station and it was deployed early 2015. The platform is fitted with state-of-the-art instruments aimed at measurements of the solar spectrum. These measurements allow us to retrieve the total ozone column (TOC), the aerosol optical depth (AOD), the precipitable water (PW), and the cloud modification factor (CMF). These measurements are part of our efforts to study the Southern Hemisphere Climate System Response to Stratospheric Ozone Depletion.

10. Any other business

- Madison meeting YOPP-SH#03:
 - registration is open http://www.ssec.wisc.edu/register/index.php?action=view_form&mid=55990011&fid=559900111
 - Deadlines: June 11, 2018 — Short abstract submission deadline, June 25, 2018 — Registration deadline, June 25, 2018 — Extended abstract submission deadline
 - a draft agenda is attached to the email
 - Irina mentioned that as a follow-up from the discussions last year at the YOPP-SH#02 meeting, she has been in contact with Penny Rowe who agreed to launch extra radiosondes for Irina's project on atmospheric rivers. So, in that sense, YOPP-SH has been very useful providing a network. **Irina, please send some more information about the outcome of these extra radiosondes at a certain stage to ICO so we can include a note on that on the website/newsletter etc.**
- Later 15 May telecon
 - another later telecon has been held the same day when in particular Dave and Jordan discussed for the first time about the Antarctic Supersites and about some practicalities with the AMPS Data Denial project that is getting closer to being funded.

