

YOPP-SH telecon Monday 17 September 2018

Attendees:

Dave Bromwich, Inga Smith, Daniela Liggett, Lynne Talley, Matthew Mazloff, Robert Grumbine, Vito Vitale, Matthew Lazzara, Jordan Powers

News:

- July 19 Meeting in Madison – Summary of outcomes still forthcoming
- Australia - Scott Carpentier – Radiosonde Plans Confirmed
- Italy - Vito Vitale – Engage high school students with radiosondes & helping forecasting
 - Increased to 4 soundings per day at Concordia to complement the 4/day on the coast at Terra Nova Bay
 - First 15 days in January
- Brazil – Ron Desouza (Air-sea-flux measurements – Brazilian Antarctic Program)
- USA – Wisconsin AWS program starting to program up the creation of BUFR format for AWS observations for YOPP support and beyond...

SOP Discussion:

- Matthew Lazzara presented the idea (summary – see attached)
- Dave Bromwich: too soon in 2019
- Daniela Liggett: I agree that it would be good to have a winter SOP for Antarctica but I wonder whether mid-2019 is too soon for most national Antarctic programs (especially considering rather long-term planning and preparation times). Should we possibly consider moving the observing period into the consolidation period of YOPP, i.e. 2020?
 - Can we do it in 2020?
 - Getting into the Consolidation Phase.
 - Probably yes. (Yay!)
- Scott Carpentier comments:
 - Good idea...modest possibilities could get some resources around Davis for Winter 2020.
- Vito Vitale comments:
 - Needs to bring Koreans into the discussion
 - Need to bring in materials considerations
 - 2020 is very good.
 - Can we repeat the summer again?
 - Focus efforts on winter...SOP in each season rather than two summers...
- Lynne Talley:
 - Great idea: As ice is forming...no ships in the water, but ARGO floats and under ice floats
 - Have to wait until later to get the data.
 - How and where does the ice extend to, etc.?
 - Yes - practical
 - Missing automatic floats – that can freeze in and handle melt out...and refreeze in.
 - Questions: how does the ocean destratify? Flash freeze? Sea ice forms over a large region quickly.
- Inga Smith:
 - A bit longer to get ready...

- Fast ice measurement systems...by Scott Base...later period would be ideal
 - <http://seaice.otago.ac.nz/ice-temp-graph/contour/>
- Joint ocean/ice studies...
- 2020 is practical, not 2019.
- Ice mass balance station, etc.
- Matthew Mazloff
 - Ice issues are interesting
 - Fluxes
 - Ice
 - Extreme heat fluxes
 - Polynyas...
 - Sairdron (See additional document)
 - Two in Dec 2018 – full year circum-navigation around the Antarctic.
 - Very attractive questions:
 - Deep mixing in the ocean
 - Forcing on the atmosphere
 - Time scales of impact
 - Prediction implications
 - Can we do better prediction in winter?
 - Lots of question (speed of ice formation...)
- Vito Vitale
 - Forecast for users?
 - Operations are limited...
 - Link – to users – focus on operations
 - (e.g. medevacs and preparing for future winter operations?)
 - Challenges justifying this for operational uses/users
 - Differences between summer/winter
 - Dave: Peninsula operational? (Matthew Lazzara: Nearly year round)
- Daniela Liggett:
 - SERA – No longer at data collection, but winter operation (seem reasonable, but cannot contribute per se)
 - SCAR HORIZON SCAN – says need more access to Antarctica in Winter
 - PPP-SERA
 - Wish to connect with Scott Carpentier to take what we come up with and communicate with the users. Is there is an additional element or data? What do we want to collect?
 - Share with PPP-SERA – and see how users respond
 - Special Services Period? When in 2020?
 - Connecting to the user and meaningful products/services to end users.
 - Not additional data collection
 - Involve increased interactions with users – more symposium
 - SCAR in 2020 in Hobart
 - Users with modelers with PPP-SERA members, find out:
 - What do they require?
 - What would help for more “relaxed” operations?
 - Dates: YOPP Special Services Periods (SSPs) are currently envisioned to take place in mid/late 2020, with the possibility of having another one (with a primary focus on the Arctic) in late 2019 (needs clarification by PPP-SERA).
 - Overlap with SOP in 2020
 - Gets public involved?? (Observation period during a conference!)
 - FYI: 16th WAMC meeting in Hobart too??

- Timely...
- General discussion on dates: Which dates?
 - July 15 – October 15?
 - New instruments?
 - Ask the MOSAIC folks??
 - Planes around...
- Data Denial Work
 - Not paid by NSF for AMPS to look at a winter SOP in 2020: would have to be a new proposal or a supplementary request to the existing grant?
 - Colleagues from Japan and France may be doing this work (see below)
 - Will this show impact?
 - WINFLY impacts in US program – takes place in mid to late August.
- Bob Grumbine:
 - Nothing to add...
 - Sea Ice: Two physics phases: Growing rapidly and then slow expansion

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Attendees:

David Bromwich, Jeff Wilson, Seong-Joong Kim, Stefanie Arndt, Isa Rosso, Jun Inoue, Eric Bazile, Kirstin Werner

News:

- David Bromwich ran through the notes from the previous session (group 1, see above)
- Wisconsin AWS, BUFR format will be created for YOPP

SOP Discussion:

- Dave Bromwich: Is it a good idea, if it should be in winter 2019 or winter 2020, what are the motivating arguments and what will it achieve?
- Dave Bromwich First group said only practical time was 2020 as this gave enough preparation time. Matthew Lazzara offered two time periods (15 April to 15 July, or 15 July to 15 October) to fit with either the rapid expansion of the sea ice or to catch the maximum extent. Next SCAR Conference is in Hobart in Aug 2020 so the second period would coincide. Most people in first meeting thought it was a good idea to hold a second SOP and focus on the winter.
- Isa Rosso: 2020 and the April one with the sea ice expanding is preferable. What additional types of observations could we have during this SOP?
- Dave Bromwich: Scott Carpentier said it may be possible to do something at Davis in 2020. Vito wanted to talk to Korean station to see if something possible. There may be some additional sondes but not like the summer SOP.
- Isa Rosso – what about modelling efforts, in particular forecast models? Data denial experiments for forecast models?
- Dave Bromwich: 2019 may be too early for modelling. Will there be any NWP modelling for a winter SOP. David's NSF (AMPS) project has only funding for the summer experiments at the

moment and would need to come up with additional funds, some possibilities. There may be options from France or Japan.

- Seong-Joong Kim: Korea (Jang Bogo station) may be able to participate in one of the periods in 2020 and possibly 2019. We have around 90 radiosondes available. Not sure how we would collaborate with the Italians as they do not winter over. Vito knows the Italian station in Terra Nova Bay is not open so it would be Concordia to collaborate with Korea.
- Jun Inoue – it may be possible for Japan but will depend upon funding. Like to do a second SOP but will need to consider what to study, katabatic, cyclones or polar vortex as the motivating science questions.
- Eric Bazile: for modelling 2020 is tricky as Météo France will change computers at this time. 2019 maybe okay for modelling. Things could change but the timetable for computer change over makes it hard to commit now.
- Jeff Wilson – winter SOP makes lots of sense, last part of freeze over or max ice extent. 2020 makes more sense, to get money for people to get extra sondes.
- Stefanie Arndt: 2019 would be better for AWI as 2020 clashes with MOSAIC (year-long Polarstern drift in Arctic) and sea ice physics group at AWI would not be able to do any deployment from Polarstern as it will not be available in Antarctica until Dec 2020. We could deploy buoys in February to April 2019. May have some snow buoys for 2020 deployed from Neumayer station.
- Dave Bromwich: US Antarctic Program/NSF would be more interested in the later period as it coincides with their first flight operations of the season.
- Kirstin Werner – go for the science questions which would be the expansion of the sea ice.
- Isa Rosso: would prefer first SOP and then use the SCAR meeting to publicise the first results. We could get ARGO float data from the first period.
- Seong-Joong Kim: earlier period better as there is a polyna near Jang Bogo station.
- Jeff / Kirstin / Dave: better to make a decision sooner rather than later.
- Dave Bromwich: Summer SOP is on predictability and we have a lot of resources. Winter is not so busy but there is interest. I think we could formulate some broad things. It is not just about science.
- Voting:
 - 2020:
 - Eric for observations
 - Isa logistical point of view.
 - Jeff enough time for planning
 - Jun: simply due to preparations of logistics.
 - Kim: sondes for three months, for other countries might be easier in terms of logistics
 - David logistical reasons
 - Kirstin: to learn from lessons from first SOP
 - most people from yesterday's telecon prefer for 2020.
 - Seong-Joong Kim: from logistics perspective 2019 may be too early.
 - Dave Bromwich: from NSF data denial approach we would need time and 2019 not possible, 2020 may be possible.
 - Dave Bromwich to Seong-Joong Kim: is it possible to do a more regional approach, Concordia / Dome C and near Korean station in Terra Nova Bay?

- 2019
 - Isa: still OK
 - Dave: saildrone around Antarctica in 2019
 - Kim: radiosondes possible from Jang Bogo station
 - Stefanie: can contribute only to 2019

Other Points:

Dave Bromwich: the US has been talking about trying to make the season earlier and later. So the mid April to mid July to mid October periods can be adjusted. For YOPP, prediction is important thing to consider.

Seong-Joong Kim: When sea ice forming there is lots of brine rejections and with katabatic winds pushing sea ice out get reforming. So the early part (April-July) is probably more interesting.

Dave Bromwich: another telecon in the middle of October to go over things before the start of the SOP in mid-November.

Kirstin Werner: in October ICO will send out emails to all of the contacts regarding radiosonde flights and requests for detailed information including outreach material (e.g., pictures, videos).