

YOPP-SH online meetings, 9 September 2021, 9:00-10:15 am EDT (1300-1430 UTC) and 5:00-6:22 pm EDT (2100-2222 UTC).

Present Session 1: Kirstin Werner, Marcello Vichi, Matthew Lazzara, Jordan Powers, Nadine Hillenbrand, Eric Bazile, David Bromwich, Jerry Zou, Adriana Gulisano, Denys Pishniak, Svitlana Krakovska, Anastasiia Chyhareva, Clare Eayrs, Yanina García Skabar, Francois Massonnet, Steve Colwell (Apologies if we missed anyone).

Present Session 2: David Bromwich, Anastasiia Chyhareva, Jeff Wilson, Svitlana Krakovska, Matthew Mazloff, Inga Smith, Lynne Talley, Victoria Heinrich, Penny Rowe, Jerry Zou, Simon Alexander, Raul Cordero, Paolo Rodriguez Imazio, Vito Vitale.

Apologies: Daniela Liggett.

Based on notes taken by Jerry Zou (Session 1) and Jeff Wilson (Session 2).

Minutes:

1. **YOPP-SH session at the International Conference on Southern Hemisphere Meteorology and Oceanography (ICSHMO)**. Will be held in Christchurch, NZ February 8-12, 2022. **Abstracts are due September 19, 2021.**
<https://confer.eventsair.com/icshmo-2022/call-for-abstracts>. **Please contribute!**

Session 1: OSU is planning one abstract on summer SOP results and one overview for YOPP-SH. Matthew and Lee Welhouse are planning one. Lee may be able to attend in person on the way back from Antarctica. Jeff Wilson may be there as well. Francois Massonnet will have an abstract on SIPN-South. Most participation will be remote.

Session 2: Hoping for a good turnout for this session. See session description on conference webpage. Registration fee unknown at this stage (hard to find out). There is an AGU Ocean Sciences Meeting in Hawaii the week after ICSHMO so registration cost for ICSHMO should be modest for those interested in both meetings. Vicki will be contributing a paper to ICSHMO covering her Social Science material. There will also be another social science paper with Daniela. Penny and Matthew may also put in a joint paper. Paolo had an issue trying to submit an abstract. Inga checked the abstract submission procedure, and it is working. There is a box to submit for specific sessions and YOPP-SH is the very last session in the drop-down list.

2. **Other Meetings:**

AMS Collective Meeting in Madison, Wisconsin in 8-12 August 2022. Will combine Polar Meteorology and Oceanography, Satellite Meteorology, and Cloud Physics/Atmospheric Radiation conferences.

Session 1: Next Workshop on Antarctic Meteorology and Climate (WAMC) will be held there. 1-1.5 days in duration. Hybrid. (No Washington, DC meeting near NSF for WAMC in 2022) Science aspects will be at AMS Polar. **Question:** Should there be a YOPP-SH session there? Or YOPP (Antarctic and Arctic combined) session(s)? Discuss with PPP Steering Group next week, Sept 14.

Session 2: David is trying to get a YOPP session at the AMS Polar Meeting but not sure whether to do YOPP or YOPP-SH. Outcome of discussion was to open up to YOPP (both poles and if too many papers we can focus down). Jeff will raise this at the PPP-SG to gauge interest in doing YOPP. Deadline for session submissions for AMS Polar: October 15.

YOPP Final Summit in Montreal, May 1-4, 2022.

Session 1: Suggestion is to have an “operational” session for YOPP-SH there emphasizing the Special Observing Period that will have been underway for only 2 weeks. Hopefully a satisfactory Internet arrangement can be found. Also, a YOPP-SH session is planned for the Summit itself that will likely have the following components: Review/overview, operational aspects and achievement so far for winter SOP, showcase results achieved so far. Francois will have a paper on SIPN-South.

Session 2, additional aspects: We may have some double up of papers between the Final Summit and the AMS Polar Meeting YOPP session. No problem with this arrangement.

This means that YOPP-SH science will occur at the AMS Polar meeting in August, while the more hands-on part of YOPP-SH will take place in Montreal in early May either before or after the Final Summit.

3. Publications

- Dave – OSU and NCAR will have a paper soon for QJRMS special collection on Impact of Polar Observations on Predictive Skill. Final Submission Deadline: December 31, 2021. Contact him for details if you are interested in submitting.
- Do we need a special journal issue for YOPP-SH?
Session 1: Can encourage manuscript preparation. Weather and Forecasting is a good choice (Dave). Advances in Atmospheric Science (Matthew) is another possibility. This is open for discussion. Time scale: sometime after SOP in late 2022. Francois is interested. Eric B. would have a paper on this time frame. Tom Lachlan-Cope: Clouds and Aerosol group for the Antarctic Peninsula have publication plans that may fit this timetable.

Session 2, additional aspects: Another journal possibility is Journal of Geophysical Research which could be better for the ocean and atmosphere results. Inga noted that in some journals nothing happens until the last paper comes in. Other journals post as things become available. Lynne: AGU has a SOCOM collection across 5 journals consisting of about 20 papers.

- 4. Kirstin Werner** will leave the International Coordination Office (ICO) at the end of September for the University of Rostock (Germany) to lead their press and communications department. She will leave a big hole to fill. Thomas Jung, Jeff Wilson, Katharina Kirchoff, and Nadine Hillenbrand will continue to support the ICO but the level of activity will likely decline. Dave is currently searching for an undergraduate research assistant to assist him with YOPP-SH activities.

5. Future for YOPP-SH.

Session 1: ICO completes its work in December 2022. YOPP-SH is scheduled to continue through December 2024. This arrangement has to be formally endorsed by WMO WWRP. The WWRP Scientific Steering Committee will meet soon to consider this matter and a report has been prepared on PPP activities for their consideration (Jeff playing a leading role in the preparation). Kirstin is seeking input from the Polar Prediction Project Steering Committee.

Session 2: Vito will most likely be nominated for membership on WMO EC-PHORS that oversees YOPP currently. Co-chair of EC-PHORS, Sue Barrells, is very supportive of continuing some of the YOPP activities, like YOPP-SH.

6. Forecasting dry run in the greater Ross Sea, August 1-23, done by the US Team.

Forecasting Tools:

AMPS and ensembles.

Windy.com – great animations for ECMWF, NCEP, and ICON (new model from the German Weather Service) deterministic forecasts anywhere in the world including Antarctica out to 10 days. There is a “pole hole”, can access data for different times and levels.

ECMWF desktop display. Understand that research projects can request this capability. You do not have to be in the EU. You can apply to get high-resolution output for specific areas. Irina Gorodetskaya already has this capability.

Efforts:

Art Cayette prepared a very nice forecast outlook for McMurdo and Palmer, out to 5 days, and to 10 days for an overview. Had a headlight display for calling potential TOPs. Powerful storms impacted East Antarctica during this period with Davis and Dumont getting hit several times.

Observational Support:

Matthew Lazzara intends to bring up a website that has observations and satellite imagery available. Will also provide NIWC forecast products for McMurdo and Palmer.

Session 2 additional aspects: Vicki spoke to Scott Carpentier about a week ago regarding the Bureau of Meteorology doing a dry run and they are planning on doing a test in October when they have the summer forecasters on board. David will get an example from Art to Vicki for use by the Australians. **Done.**

Irina Gorodetskaya will have an online session on Sep 17, 12-14UTC to discuss coordination of TOP activities for the Antarctic Peninsula.

7. **Covid-19 and Antarctic Field Restrictions**

Session 1: Stringent restrictions on personnel from most nations seem likely to contain Covid-19 impacts. We heard from BAS, Argentina, and Ukraine.

Session 2: Stringent controls on the personnel going south with lots of quarantine occurring but not too much overall impact and it will look like a normal summer. Chile has much the same experience.

8. **Other**

Marcello Vichi hasn't heard anything definite about the June or July 2022 cruise to the Weddell Sea marginal ice zone but is hopeful. There for about 3 weeks. Should hear in November. The *Agulhas* will leave end of November, back January. It has been chartered to look for Shackleton's *Endurance*, probably in January or February.

Tom Lachlan-Cope is interested in YOPP endorsement for Antarctic Peninsula clouds and aerosols project. **Submitted proposal already.**

Dave talked about radiosonde contributions for winter SOP/TOPs: unofficially 1/day extra from Perth, Adelaide, Melbourne and Hobart – all these sites currently do 2/day. Punta Arenas is confirmed for 1/day extra.

A dream is to have an effort like Windborne Systems is performing for an Arctic weather research project funded by the Office of Naval Research, where they are releasing ~ 200 balloons total, from Barrow Alaska, and Svalbard. Balloons can be targeted by changing altitude to capture different wind patterns. Dave will send details around – **done.**

Session 2 additional aspects: The balloons can last some days (approx. 5) and can be quasi-steered by changing flight levels. OSU is planning to do some experiments on balloon impact on predictability in the Arctic but probably too expensive to use in the Antarctic SOP. Essentially equipped with normal radiosonde sensors with GPS. Similar to a 350gm balloon. Profiling up and down from boundary layer to stratosphere. There is not much detail on the Windborne website. Rain can cause them problems. They can handle gravity waves and some turbulence. Could be useful in the future to fill in holes

in data sparse areas such as the Southern Ocean. Windborne uses a satellite system to communicate with the sondes, probably using Iridium satellites to do the communications in close to real-time.