

ASPeCt Side-Meeting Draft Minutes

06/17/18 1300-1600

1. Welcome and introductions

The meeting began with a welcome from Chair Marilyn Raphael and self-introductions by all present. The meeting began with approximately 20 people in attendance but over the period more than thirty people attended for varying lengths of time as their schedules allowed.

2. Short announcements

- *Open position of Vice-Chair for ASPeCt.*

The Chair announced that the position of Vice-Chair for ASPeCt was currently open and encouraged interested members to consider serving in that position. Members interested in the position should contact the Chair.

3. Short comments on recent ASPeCt-related activities

- *Update on ASPeCt observation protocol*

Petra Heil gave an update on the current status of the ASPeCt underway observation protocol for sea ice. This included a discussion of the difficulties of converting the historical logbook data to digital data and an introduction to sea ice observation software **IceBox** which facilitates digital entry of ice observations and immediate analysis of said observations. Simultaneous access to historical ASPeCt cruise data is also possible for use within IceBox or standalone. More information and download of historic ASPeCt data plus IceBox install files can be found at <https://data.aad.gov.au/aspect/>. (Note: To access these pages a one-off sign-up to the AADC is required.) For more information contact Petra Heil

- *Proposal for snow-observation protocol*

The necessity for developing a snow observation protocol was discussed. A common protocol that other communities might use and be useful for non-science observers. The adaptation of MOSAiC protocols for generalized snow and sea ice work (on-ice work) was suggested. Elizabeth Hunke noted that IASC was developing a snow observation protocol that might be used and offered to find out more about IASC's protocol as their plans develop.

- *Due south Field Planning tool*

There was short discussion on a Due South Planning tool, led by Petra Heil. This tool would provide a means of collating information on what cruises were headed for Antarctica, at what time, and would allow scientists to share tasks and avoid duplicating efforts where possible. More information on this can be found at <http://www.soos.aq>.

- *YOPP activities*

It was noted that YOPP-SH is especially weak in terms of observations of ice and ocean. The ASPeCt data acquisition strategy was suggested as a potential project for YOPP and Marilyn Raphael volunteered to submit a proposal for endorsement by YOPP.

- *PIPERS (Polynyas Ice production and seasonal evolution in the Ross Sea)*

Sharon Stammerjohn gave a short presentation (overview) on the PIPERS winter into the Ross Sea on the RVIB Nathaniel B. Palmer from 10 April to 14 June 2017. On board was a large group of ASPeCt scientists from several countries, with responsibilities for a number of coordinated programs. The cruise by all accounts, was a successful one, making underway and on transit

measurements, as well as measurements at ice stations and buoy sites. All yielding new and interesting information. This was the subject of numerous papers and posters of the OSC in the week that that immediately followed the side-meeting.

4. Presentations on potential methods for instrumented sea ice observations

- Fast Ice Instrumentation (Petra Heil)

There was some discussion on sensor development for a Fast Ice Network (FIN) for Antarctica. A number of countries are observing the fast ice in their individual regions around Antarctica. Sharon Stammerjohn pointed out that the Polar Geospatial Centre was successfully tracking Fast Ice extent using crowd sourcing? The science would benefit from the development of a network with common observation practices and shared development. To this end a subgroup (small Focus Group) of ASPeCt scientists (Inga Smith, Stefanie Arndt, Petra Heil, Pat Langhorne) agreed to meet on Skype with the aim of developing a FIN for Antarctica. *This group has already met online at Davos with the inclusion of Greg Leonard.* Anyone interested to participate in upcoming meetings please contact Petra Heil or Stefanie Arndt.

- Towards an automated sensor suite for (new) ice breakers

Following on from ideas raised at the IGS meeting in 2017 we discussed potential methods for instrumented sea ice observations to complement bridge observations. An automated sensor suite of imaging instruments for an ice breaker could include – sideward looking cameras, EMs, EMIs, stereo cameras, infrared ice camera, lidar, marine radar. These would, to some extent, replace visual observations. Some cruises are already using some forms of automated instrumentation. We should learn from what they are doing. A suggestion was made to profit from MOSAiC (RV Polarstern) as similar techniques are currently developed for the drift experiment. A suggestion was also made to contact the Norwegian scientists (e.g. M. Granskog or S. Gerland) to learn from their expeditions such as N-ICE.

Other ideas that came up during the discussion: (1) the use of the sensor information that is obtained from the BAS vessel The David Attenborough as it breaks ice. This would need processing to convert to sea ice information. (2) Should ASPeCt include wave/ice processes among the suite of things that it considers – there was some question on how this could be implemented. (3) Karin Hayward mentioned that their Thwaites Glacier project slated for Jan/Feb 2019 needed some sea ice expertise. (4) An Engineering/Instrument Development Focus Group would be a good idea.

Steve Ackley gave presentations (for Guy Williams) on the use of drones and (with Blake Weissling) the use of automated cameras in sea ice observation. Examples of EISCam (Evaluative Imagery Support Camera), IR Imagery and Underway LiDAR were presented. Both presentations provided background and solid arguments for bringing automated observation into the ASPeCt sea ice observation especially for nighttime imaging. The discussion that followed included the development of a Pod system that is interchangeable among vessel geocams.

- Group discussion – on adopting instrumented sea ice observations as a project, etc.

Some potential workshop ideas were discussed: (1) Ice Sat2 – ground truthing the ice observations along the satellite track. (2) Developing a sea ice white paper to say what we know, what we don't know and how we could acquire the missing information. Inga Smith indicated that SORP was already writing such a paper and included a small piece on sea ice. The idea that ASPeCt could contribute to that paper was raised. This will be followed up by several ASPeCt members.

5. Other plans for the next two years

- 1-day ASPeCt Workshop

We will have a full ASPeCt workshop at the SCAR 2020 OSC in Hobart. The topic/s will be decided in the next few months but will include a showcase on ASPeCt achievements.

- Website - increase use of for - group achievements, publications, other announcements

We discussed better and expanded use of the website for highlighting group achievements, reports, publications, etc. Activities to this end will begin shortly and members will be informed via the email list.

- Twitter - adopt use of

We had a brief discussion on acquiring a Twitter handle for fast dissemination of topically interesting/exciting ASPeCt-related information including publicizing activities, events and notable occurrences as they occur. Members will be informed as plans for this are completed.