

Barcelona SCAR EXCOM SSG/PS report

M. Candidi

D. Bromwich

Preparation of Report from the Action Group on Ocean Acidification, Richard Bellerby, Chair

Document the scientific understanding of ocean acidification to inform on the latest knowledge of chemical and biological consequences of ocean acidification in the Southern Ocean through an ecosystem and earth system approach. Also identify important gaps in current research and propose approaches to better understand the rates, effects and feedbacks of future ocean acidification.

Main chapter writing complete by December 2013

Editing complete March 2014

Printing completed by May 2014

Presentation of report SCAR meeting summer 2014

The AG equests SCAR support to obtain funding for salaries to cover the writing efforts of the AG **from their national bodies** and **identify assistance for the editing and publication of the report**

The AG requests that a **communication team made up of SCAR and members of the AG be set up by Easter 2014 to develop and realise a communication strategy** for the efficient dissemination of the key findings and the scientific report

The AG also requests a **special session on OA at the SCAR OSC in New Zealand**

IPICS (International Programme in Ice Coring Science)

Prof. Eric Wolff BAS

Ice cores provide information about past climate and environmental conditions on timescales from decades to hundreds of millennia, and direct records of the composition of the atmosphere. As such, they are cornerstones of global change research. Developing this international collaboration is the charge of IPICS

Events:

-IPICS Open Science Conference, Giens, France 1-5 October, 2012. 5 days meeting, organised by Jerome Chappellaz. 230 scientists from 23 nations . Sponsorship by SCAR and others, allowed the invitation of ten keynote speakers and six scientists from emerging countries. **A special joint journal issue of Climate of the Past/The Cryosphere is being produced based on the meeting.** Next OSC in 2016.

-A workshop on radar layers, organised by Dorthe Dahl-Jensen, May 2013, to assemble data for the oldest ice project.

Future Plans

*7th International Workshop on Ice Drilling Technology, University of Wisconsin, 9-13 September 2013.

*Call for proposals for the next IPICS OSC is going out in mid-2013.

Budgetary Issues

\$5000 was provided for the IPICS OSC. In 2013 and 2014, meetings will be held **to consolidate the site selection and planning for oldest ice.** Steering Committee business will be done by email, or by adding a day to an existing meeting attended by many members. **A financial contribution to these activities from SCAR** would ensure widened participation.

Antarctic Ice Rises 2013



all aspects of ice-rises's physical science to bring an Earth Systems Science perspective to their major controls of Antarctic ice-sheet dynamics



The Research Council
of Norway



**British
Antarctic Survey**

NATURAL ENVIRONMENT RESEARCH COUNCIL



ASPeCt (Antarctic Sea Ice Processes and Climate) Dr. Steve Ackley, USA

- **The reformulated ASPeCt** is a Working Group to foster **dialogue and cooperation between modellers and observers**. Regional focus is on the Southern Ocean, but it is broadly discipline based to include physical, biogeochemical and ecological systems. It provides a specialist focus for both the Southern Ocean modeling and observational communities. Interfaces with other WCRP groups including the Working Group on Climate Modelling (WGCM) and the Working Group on Model Development (WGOMD). It also interfaces with **specialist groups such as the Southern Ocean Observing System (SOOS)**, informing about observing requirements and optimal network design, and with the Cryosphere Working Group within the International Society for Photogrammetry and Remote Sensing.
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- **Objectives :**
- **Establish closer working relationships between the modelling and observing communities. Identify and categorise the connecting issues between observers and modellers.**
- **Identify the needs of the modelling community with respect to Southern Ocean data. Identify/Inventory current observed data**
- **Determine whether current and planned observing systems are adequate to initialize models for decadal predictions.**
- **Convey information to modellers on detailed aspects of sea ice to help formulate the physical equations etc. in the models.**
- **Determine how the interaction between modellers and observers will bring insight to the observing community.**

GRAPE (GNSS Research and Application for Polar Environment) Expert Group

- cross link between SSG PS and GS.
- *Chair: Giorgiana De Franceschi, INGV, Rome, Italy.*
- Report July 2012-May 2013
- The Annals of Geophysics (www.annalsofgeophysics.eu/index.php/annals) **GRAPE Special Issue is published**. It collects recent reports on work performed in the polar regions and on the datasets accumulated in time by the instrumentation deployed across various countries. Papers describe the instrumental arrays to observe the ionospheric scintillation phenomenon, the hardware/ software structures to store the relevant data and to make it available in appropriate formats. Other papers deal with more proper scientific analyses of the available data, ranging from the analysis of the relation between scintillation and conditions in the interplanetary medium to the evaluation of the effects taking place in the near Earth regions, in the inner magnetosphere and in the statistical representation of ionospheric conditions. A climatological description of the phenomenon is provided, and a different analysis is given for the water vapor content and its effects at tropospheric levels. **The group would welcome a contribution for printing and disseminating this SCAR product that carries the SCAR logo.**
- In collaboration with SANSA (South African National Space Agency) the proposal to organize the annual GRAPE meeting (2013) in Hermanus (SA) has been submitted to SCAR for support. The specific location and date (12-13 September) were selected to encourage participation of African early career scientists, as the proposed meeting was adjoined to the ISWI/SCOSTEP School on Space Science held at SANSA, 10 & 11 Sep 2013, also **contributing to the Capacity Building, Training and Outreach Activities of the RP "SERCE". This request has not been indicated to EXCOM for funding.**

ICESTAR Expert Group on Interhemispheric Conjugacy in Solar Terrestrial and Aeronomy Research: Chair A. Weatherwax, Siena College, USA

Fall AGU Meeting session SA005: Geospace Exploration from Antarctica: Antarctica offers a unique location to observe vast region of geospace for a variety of research dedicated to studying the earth's atmosphere, its space environment, and solar-terrestrial interactions. Space Physics and Aeronomy research efforts in Antarctica are collectively directed towards improving our understanding of the mechanisms which couple solar processes to the polar geospace environment. This session solicits papers on recent advances in space physics and aeronomy focusing on the Antarctic region. Inter-hemispheric and conjugacy studies as well as studies incorporating Antarctic observations in the global context are also welcome.



PACT – Polar Atmospheric Chemistry at the Tropopause



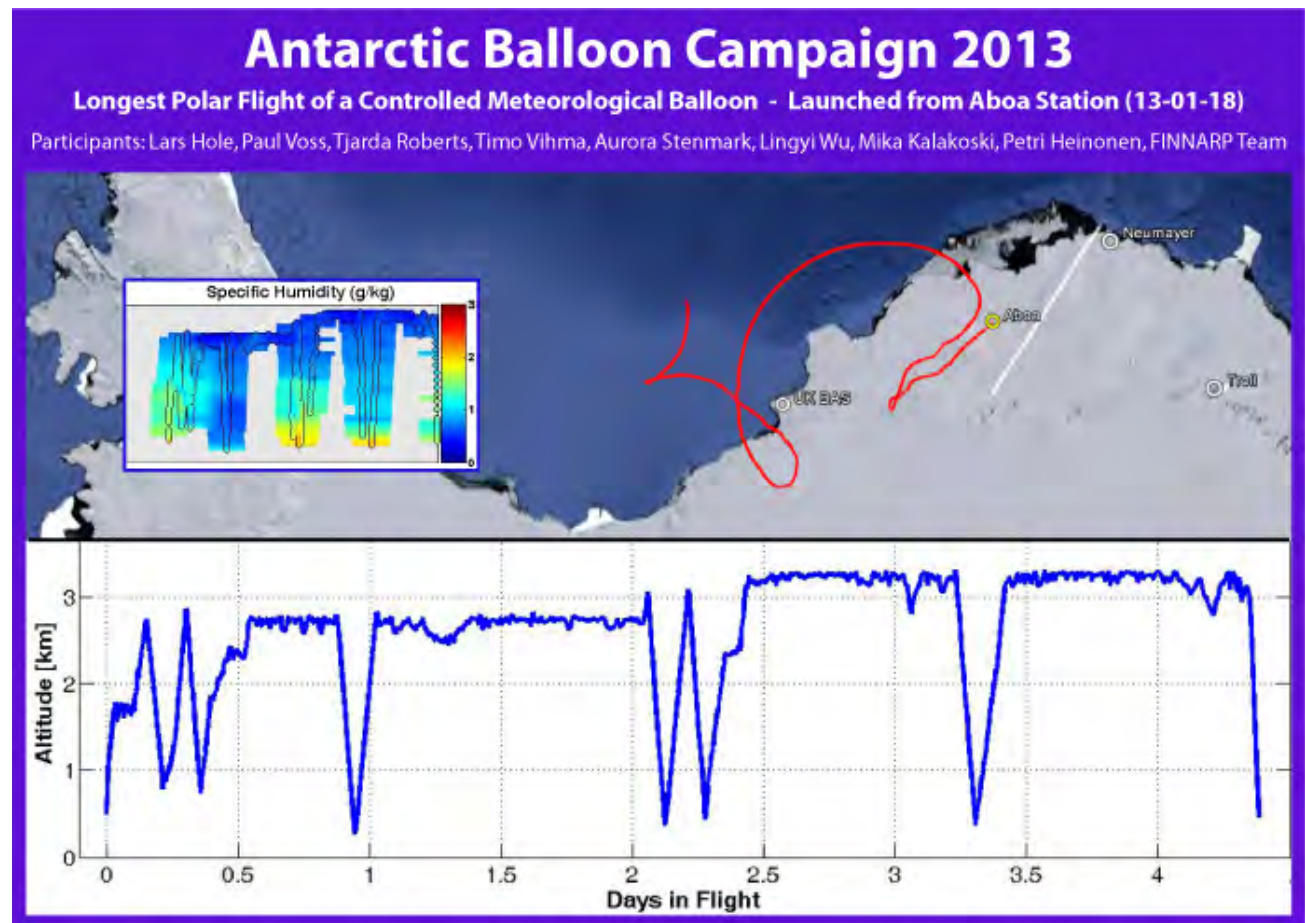
Andrew Klekociuk (Australian Antarctic Division, Australia) and
Gennadi Milinevsky (University of Kyiv, Ukraine)

- Tropopause analysis using ozonesondes:
 - Data from WOUDC, NDACC, NOAA.
 - 33 sites (generally poleward of 50° lat);
9 Antarctic, 2 sub-Antarctic, 3 SH mid-lat, 19 Arctic.
 - Ozone and thermal tropopause parameters using data with ≤ 500 m vertical resolution.
 - Backward and forward 10-day trajectories on selected levels (1979 onward).
 - Chemical data along trajectories from Aura/MLS (2004 onward).
- Earliest data 1966 (Syowa), but majority from 1990s-2000s.
- Data available data.aad.gov.au/aadc/pact



In January a successful CMET balloon campaign was carried out at the ABOA station, partly funded by SCAR SSG-PS funds. The balloons were launched by a team from FMI and remotely controlled by Smith College, MA, USA, in collaboration with the Norwegian Meteorological Institute. The campaign is summarised in the referenced poster. One of the flights is the longest polar flight on record by a controlled meteorological balloon. See also: <http://www.science.smith.edu/cmet/>

**Suggest
connection
to
AntClim21?**



Action Group on Clouds and Aerosols

Chair T. Lachlan-Cope, BAS, UK.

- The group has not met since the SCAR meeting in Portland. It planned that a meeting should be held during the IAMAS/IACS Atmosphere and Cryosphere Assembly in Davos in July 2013. This meeting has a large session clouds at high Action Group on Clouds latitudes and so this should be an ideal time to get those interested in Antarctic clouds together in one place.
- The group's long term goal is to organise an international large scale campaign to investigate clouds and aerosols in Antarctica although the present economic climate will not make this easy. It is hoped that a large scale campaign will be discussed during **the Davos meeting, and a more complete report will be given after that.**

Expert Group on Operational Meteorology in the Antarctic (OpMet)

Chair S. Colwell, BAS, UK.

Over the past couple of year the group concentrated on establishing links between other groups working in the same area of operational meteorology in Antarctica. **The main links are to the Antarctic Meteorological Observation, Modeling, and Forecasting Workshop group** which holds annual meeting in June or July and SCAR provides some funds to pay for accommodation for representatives from some countries to attend.

Also a link between SCAR and the WMO EC-PORS (Panel of Experts on Polar Observations, Research and Services) where it is possible to carry out monitoring of the meteorological observations that come from Antarctica via AnTON (Antarctic Observing Network) which helps to identify problems with the data that is currently coming out from Antarctica, for more information see:

http://www.wmo.int/pages/prog/www/WIGOS_6_EC_PORS/EC_PORS_4/Doc3.2.1_AntON.doc

Establishing these links means that the groups are now working together better and we have seen an improvement in the quality and quantity of observations coming from Antarctica.

SCAR/SCOR Oceanography Expert Group

I dont think the SCAR/SCOR Oceanography Expert Group actually exists any more... it morphed into the SOOS Scientific Steering Committee when SOOS was formed. I'll cc Mike Sparrow here who can confirm whether I've understood this correctly!

If a SOOS report is needed, Louise Newman (also cc'ed here) can send you one - one was prepared for POGO very recently, and will serve equally well for SCAR.

All the best
Mike

-THE STRUCTURE OF SSG/PS:

The Action group ECA is going to be merged with the AGAFS group, and the Action group PACT was requested to prepare a plan to be presented at the next SCAR meeting, in which they either disband or propose modifications.

-REPORTING TO DELEGATES:

In the presentation of the reports to the Delegates, I found myself confronted with a problem: SCAR now has groups that are sponsored by the three SSG's, like ATHENA, and other groups that are jointly sponsored by two of the three SSG's. When presenting the reports, due to the alphabetical order, SSG/PS will be last, and all the joint groups will have been presented by the other two SSG's officers. We do not want duplication, so SSG/PS will present a very short report, basically on the groups that pertain to SSG/PS only, and the activity of SSG/PS will appear very reduced

Resume of financial requests from SSG/ PS

- IPICS: support for steering committee meetings**
- GRAPE: printing and disseminating AG special issue.**