



SCAR SG

PS

Paper 14

Agenda item 7

Person
Responsible:

D. Bromwich

SCAR Executive Committee Meeting 2019

Plovdiv, Bulgaria, 29-31 July 2019

Physical Sciences SG

2018-19 Report

Report Author(s)

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Summary paragraph

Highlights for the Sub-Groups are given below under “What has been achieved”. Individual Sub-Group reports have also been uploaded to the Google Drive. Most EGs and AGs are delivering on their activities proposed at Polar2018 in Davos, Switzerland. There are too many EGs and AGs under the PS umbrella and termination of dormant groups will be recommended to the SCAR Delegates in Hobart 2020.

The two-term appointments of the Chief Officer and Secretary will be completed at the SCAR Meeting in Hobart 2020, and candidates are being recruited.

Sub-group updates

Please include any information that has changed since the SCAR 2018 Delegates Meeting, following the headings below.

Sub-group – what has been achieved?

Sub-group	Activity
IPICS EG	Oldest Ice Initiative Vigorously Continues.
GRAPE EG	Working on proposal for new Scientific Research Program, "RESOURCE".
ISMASS EG	ISMASS continues to be involved in intercomparison projects such as ISMIP6 (climate and ice sheets), MISOMIP (ocean and ice sheet). Several members of ISMASS are members of the PPG AISSL (Antarctic Ice Sheet Dynamics and Global Sea Level)
SORP EG	Extensive planning for upcoming meetings has occurred. Task Teams have been appointed to facilitate activities.
ANTOS EG	SCAR Integrated Science for the Sub Antarctic ISSA Workshop October 10-13, 2018. Matching funding has been obtained through an internal grant to Sharon Robinson (ANTOS Committee Member) from the University of Wollongong (~\$28K) to develop an ANTOS terrestrial survey protocol. The Italian National Programme has supported one of its researchers to install 4 new ANTOS Tier 1 systems at 4 locations near Terra Nova Bay.
ASPECT EG	ASPeCt continues to work on its database of ship-borne sea ice observations.
FRISP EG	Nothing reported.
OpMet EG	Actively participated in the Workshop on Antarctic Meteorology and Climate in Charleston, South Carolina, June 25-27, 2019.
ACCE EG	Nothing reported.
Remote Sensing AG	Communication with the European Space Agency (ESA) since 2016 resulted in a regular coverage of Antarctic coastline by Sentinel-2 every 10 days from September 2018 to April 2019.
ACA AG	ACA AG met during 2019 EGU Meeting.
SnowAnt AG	Nothing reported
PACT AG	Finalizing a manuscript for submission to Atmospheric Chemistry and Physics detailing the AG outcomes.
TATE AG	TATE sponsored a half -day workshop on TATE research topics on 20 June 2019 in conjunction with 8th Malaysian International Seminar on Antarctica. A report on the TATE workshop will be published in Advances in Polar Sciences after the workshop. TATE group also contributes to a session on "Tropical and Antarctic Teleconnection and Antarctic Climate Change" in ISAES2019 meeting to be held at Songdo Convensia in July 2019.
AntArchitecture AG	<i>AntArchitecture</i> Workshop at International Glaciological Society Symposium "Fifty Years of Radioglaciology" at Stanford University, 8 July 2019. This will form the main

SCAR Physical Science Group: 2018-19 Annual Report, cont.

	assembly point in 2019 for the international <i>AntArchitecture</i> community to discuss progress and plan delivery over the forthcoming year in advance of the SCAR Delegates Meeting in Hobart.
ANGWIN AG	ANGWIN Journal of Geophysical Research joint special issue (Atmospheres and Space Physics) fully launched in January 2019: 10 papers on ANGWIN science: https://agupubs.onlinelibrary.wiley.com/doi/toc/10.1002/(ISSN)2169-8996.ANGWIN1
EOG AG	Nothing reported.

More details provided in the individual group reports.

Sub-group – what lies ahead?

Sub-group	Activity
ACA AG	Development of cloud observation database

Budget

Changes to planned use of funds for 2019 and 2020

Year (YYYY)	Purpose/Activity	Amount (in USD)	Contact Name	Contact Email
Total				

Membership

Changes to Sub Group Leadership since 2018 Delegates Meeting report

Role	First Name	Last Name	Affiliation	Country	Email	Date Started	Date Term is to End

*Please identify early-career researchers with * in first column*

SCAR Fellowship Reviewers

Please list any people (name and email address) volunteered by sub-groups who would be willing to serve as reviewers for the next few years, along with 1-3 keywords on their principal expertise.

First Name	Last Name	E-mail	Principal Expertise

Additional information (optional)

Outreach, communication and capacity-building activities

Brief highlights of any activities undertaken since the SCAR Delegates Meeting in 2018.

Notable Papers

1. Sutter, J., Fischer, H., Grosfeld, K., Karlsson, N.B., Kleiner, T., Van Liefferinge, B., Eisen, O., 2019. Modelling the Antarctic Ice Sheet across the Mid Pleistocene Transition - Implications for Oldest Ice. The Cryosphere Discuss. 2019, 1-24.

Planning for Oldest Ice Initiative of IPICS.

2. Edward Hanna, Frank Pattyn, Francisco Navarro, Vincent Favier, Heiko Goelzer, Michiel R. van den Broeke, Miren Vizcaino, Pippa L. Whitehouse, Catherine Ritz, Kevin Bulthuis, Ben Smith (submitted to Earth Science reviews): Mass balance of the ice sheets and glaciers – progress since AR5 and challenges.

This article is the outcome of the ISMASS workshop held in Davos in June 2018. Title: “Update on mass balance of Greenland and Antarctica (linkages between data and models)”.

3. Harris, C et al.: Environmental guidelines for operation of Remotely Piloted Aircraft Systems (RPAS): Experience from Antarctica. Biological Conservation. (in press).

Key publication from Remote Sensing AG.

4. Moffat-Griffin, T. (2019) An introduction to atmospheric gravity wave science in the polar regions and first results from ANGWIN. Journal of Geophysical Research: Atmospheres, 124. 1198-1199.
<https://doi.org/10.1029/2019JD030247>

This paper introduces the JGR ANGWIN special issue (that came about as a result of the 3rd ANGWIN workshop). It also provides an overview of ANGWIN.

Direct support from outside organisations received for your activities

(Numbered list with values indicated if direct cash support. Please restrict in-kind support to substantive in-kind support only)

Major collaborations your Science Group has with other SCAR groups and with organisations/groups beyond SCAR

(Numbered list of substantive collaborations)

Within SCAR

1. X

Outside SCAR

1. X