



International
Science Council

Paper No: 13 **Agenda item: 4.2.3**
SCAR Group Physical Sciences
Person David H. Bromwich
Responsible:

XXXVII SCAR Delegates Meeting
India, September 2022

Physical Sciences Group
2020-22 Report

Summary

Report Author(s)

David H. Bromwich, Chief Officer (USA)
Adriana Gulisano, Deputy Chief Officer (Argentina)
Steven Colwell, Secretary (UK)

Summary of activities from 2020-22

Covid-19 negatively impacted in a big way the activities of all Action Groups (AGs) and Expert Groups (EGs) in 2020-2022.

AntArchitecture AG (joint with GS) has made steady progress on documenting the internal layering especially of the West Antarctic Ice Sheet.

ANTOS EG (joint with LS and GS) has identified a supplier for three scalable monitoring systems for both near-shore and terrestrial environments, and these are starting to be deployed. ANTOS is also involved in pursuing major philanthropic funding.

ASPeCt EG has continued its efforts in collecting ship-based observations of the Antarctic sea ice zone.

GRAPE EG (joint with GS) developed a Proposal Planning Group.

IPICS EG has made major progress in acquiring oldest ice samples from Antarctica via its close association with the US-NSF approved the Centre for Oldest Ice Explorations (COLDEX), which will enable targeted large-scale oldest ice activities.

ISMSS EG has continued with meetings and projects dealing with the mass balance of both Greenland and Antarctic Ice Sheets.

RINGS AG has been very active with meetings and publications to get the AG up and running. It only started in March 2021.

SORP EG members are leading a group of 10+ scientists that are creating a protocol and running first exemplary model experiments for a community-wide **Southern Ocean Freshwater** release experiment **InitiActive (SOFIA)** focusing on a model intercomparison for the ocean and climate response to enhanced **freshwater release** from Antarctica.

Summary Budget 2021 to 2024

	2021	2022	2023	2024
	Spent	Allocated	Request	Request
(US\$)	?	28,500	28,500	28,500

Progress and Plans

Outcomes/Activities Summary

See Summary of Activities above.

Group Cash Flow

(Since previous report to Delegates in 2020)

Not much spending has taken place since 2020 although it looks like there will be spending taking place before the end of 2022. This is a developing situation for which information is just coming in.

Purpose/Activity	Allocation	Amount spent		
		2020	2021	2022

Future Plans

See individual AG and EG reports.

Budget

Planned use of funds for 2022 to 2024

(one row per activity)

Year (YYYY)	Purpose/Activity	Amount (in USD)	Contact Name	Contact Email
2023-2024	ACA	2,000	T. Lachlan-Cope	tlc@bas.ac.uk
2023-2024	ANGWIN	3,000	T. Moffat-Griffin	tmof@bas.ac.uk
2023-2024	ANTOS	6,000	C. Cary & V.Cummings	caryc@waikato.ac.nz yonda.cummings@niwa.co.nz
2023-2024	AntArchitecture	4,000	Robert Bingham	r.bingham@ed.ac.uk
2023-2024	ASPeCt	6,000	M. Raphael	raphael@geog.ucla.edu
2023-2024	EOAG	2,000	A. Hogg	a.e.hogg@leeds.ac.uk
2023-2024	FRISP	3,000	A Jenkins	adrian2.jenkins@nothumbria.ac.uk
2023-2024	GRAPE	4,000	Lucilla Alfonsi	Lucilla.alfonsi@ingv.it
2023-2024	ISMASS	4,000	Frank Pattyn	Frank.Pattyn@ulb.be
2023-2024	OpMet	4,000	S. Colwell	src@bas.ac.uk

Physical Sciences Group: 2020-22 Report, cont.

2023-2024	RINGS	5,000	Kenichi Matsuoka	kenichi.matsuoka@npolar.no
2023-2024	SORP	4,000	Torge Martin	torge.martin@gmail.com
2023-2024	TATE	6,000	Sheeba Chenoli	sheeba@um.edu.my
2023-2024	Discretionary - ECRs	4,000	T. Nakamura	nakamura.takuji@nipr.ac.jp
TOTAL		57,000		

Membership

Leadership

Role	First Name	Last Name	Affiliation	Country	Primary Language	Email	Date Started
Chief Officer	David	Bromwich	Ohio State University	USA	English	bromwich.1@osu.edu	2012
Deputy Chief Officer	Adriana	Gulisano	Instituto Antártico Argentino/Dirección Nacional del Antártico	Argentina	Spanish	adrianagulisano@gmail.com	2016
Secretary	Steven	Colwell	British Antarctic Survey	UK	English	src@bas.ac.uk	2012

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

Note: David Bromwich and Steven Colwell have completed their terms of office and are no longer eligible for re-election.

Other members

Listed on the website at <https://www.scar.org/science/psg/contact/>

First Name	Last Name	Affiliation	Country	Primary Language	Email

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

Additional information (optional)

(Please add any more detail here that you wish on activities, papers published, linkages, etc, since the last report to Delegates in 2020)

Notable Papers

(Five to ten most notable papers – see the example below, which includes a brief statement [shaded] indicating the link to the group)

See individual AG and EG reports.

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)

See individual AG and EG reports.

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

(Numbered list of substantive collaborations)

Within SCAR

1. PSG collaborates throughout SCAR

Outside SCAR

1. PSG subgroups collaborate with groups throughout the world.

Outreach, communication and capacity-building activities

(Provide a numbered list of no more than half a page)

See individual AG and EG reports

Contributions to equality, diversity, and inclusion (EDI)

(Any specific actions the group has undertaken to advance EDI within the group and/or within SCAR)

See individual AG and EG reports. PSG supports actively supports EDI.

SCAR Fellowship Reviewers

First Name	Last Name	Email	Principal Expertise
Adriana	Gulisano	adrianagulisano@gmail.com	Upper atmosphere physics
Steven	Colwell	src@bas.ac.uk	Meteorology