

## Appendix 1

### SCAR Members

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Full members (31)	(Associate Membership)	Full Membership
Argentina		3 February 1958
Australia		3 February 1958
Belgium		3 February 1958
Chile		3 February 1958
France		3 February 1958
Japan		3 February 1958
New Zealand		3 February 1958
Norway		3 February 1958
Russia (assumed representation of USSR)		3 February 1958
South Africa		3 February 1958
United Kingdom		3 February 1958
United States of America		3 February 1958
Germany (formerly DDR and BRD individually)		22 May 1978
Poland		22 May 1978
India		1 October 1984
Brazil		1 October 1984
China		23 June 1986
Sweden	(24 March 1987)	12 September 1988
Italy	(19 May 1987)	12 September 1988
Uruguay	(29 July 1987)	12 September 1988
Spain	(15 January 1987)	23 July 1990
The Netherlands	(20 May 1987)	23 July 1990
Korea, Republic of	(18 December 1987)	23 July 1990
Finland	(1 July 1988)	23 July 1990
Ecuador	(12 September 1988)	15 June 1992
Canada	(5 September 1994)	27 July 1998
Peru	(14 April 1987)	22 July 2002
Switzerland	(16 June 1987)	4 October 2004
Bulgaria	(5 March 1995)	17 July 2006
Ukraine	(5 September 1994)	17 July 2006
Malaysia	(4 October 2004)	14 July 2008
<b>Associate Members (12)</b>		
Pakistan	15 June 1992	
Denmark	17 July 2006	
Portugal	17 July 2006	
Romania	14 July 2008	

## Appendices

Monaco	9 August 2010
Venezuela	23 July 2012
Czech Republic	1 September 2014
Iran	1 September 2014
Austria	29 August 2016
Colombia (rejoined)	29 August 2016
Thailand	29 August 2016
Turkey	29 August 2016

### Former Associate Members (2)

Colombia	23 July 1990	withdrew 3 July 1995
Estonia	15 June 1992	withdrew 4 July 2002

### ICSU Union Members (9)

IAU	International Astronomical Union
IGU	International Geographical Union
INQA	International Union of Quaternary Science
IUBS	International Union of Biological Sciences
IUGG	International Union of Geodesy and Geophysics
IUGS	International Union of Geological Sciences
IUPAC	International Union of Pure and Applied Chemistry
IUPS	International Union of Physiological Sciences
URSI	Union Radio Scientifique Internationale

BRD	Federal Republic of Germany
DDR	German Democratic Republic
USSR	Union of Soviet Socialist Republics

## Appendix 2

# SCAR Delegate Meetings

### Chronological List of SCAR Delegates' Meetings 1958–2008

I SCAR	The Hague	Netherlands	3 – 5 February	1958
II SCAR	Moscow	USSR	4 – 11 August	1958
III SCAR	Canberra	Australia	2 – 6 March	1959
IV SCAR	Cambridge	United Kingdom	29 August – 2 September	1960
V SCAR	Wellington	New Zealand	9 – 14 October	1961
VI SCAR	Boulder	United States	20 – 24 August	1962
VII SCAR	Cape Town	South Africa	23 – 27 September	1963
VIII SCAR	Paris	France	24 – 28 August	1964
IX SCAR	Santiago	Chile	20 – 24 September	1966
X SCAR	Tokyo	Japan	10 – 15 June	1968
XI SCAR	Oslo	Norway	17 – 22 August	1970
XII SCAR	Canberra	Australia	14 – 19 August	1972
XIII SCAR	Jackson Hole	United States	3 – 7 September	1974
XIV SCAR	Mendoza	Argentina	18 – 23 October	1976
XV SCAR	Chamonix	France	16 – 26 May	1978
XVI SCAR	Queenstown	New Zealand	14 – 24 October	1980
XVII SCAR	Leningrad	USSR	5 – 9 July	1982
XVIII SCAR	Bremerhaven	Germany	1 – 5 October	1984
XIX SCAR	San Diego	United States	23 – 27 June	1986
XX SCAR	Hobart	Australia	12 – 16 September	1988
XXI SCAR	São Paulo	Brazil	23 – 27 July	1990
XXII SCAR	Bariloche	Argentina	15 – 19 June	1992
XXIII SCAR	Rome	Italy	5 – 9 September	1994
XXIV SCAR	Cambridge	United Kingdom	12 – 16 August	1996
XXV SCAR	Concepción	Chile	27 – 31 July	1998
XXVI SCAR	Tokyo	Japan	17–21 July	2000
XXVII SCAR	Shanghai	China	22–26 July	2002
XXVIII SCAR	Bremerhaven	Germany	3–8 October	2004
XXIX SCAR	Hobart	Australia	17 – 19 July	2006
XXX SCAR	Moscow	Russia	14–17 July	2008
XXXI SCAR	Buenos Aires	Argentina	11 August	2010

## Appendices

XXXII SCAR	Portland	United States	23–25 July 2012
XXXIII SCAR	Auckland	New Zealand	1–3 September 2014
XXXIV SCAR	Kuala Lumpur	Malaysia	29–30 August 2016
XXXV SCAR	Davos	Switzerland	15–26 June 2018

## Appendix 3

### SCAR Elected Officers

The elected officers of SCAR constitute the Executive Committee. In 1958, SCAR elected a President, a Vice-President and a Secretary. In 1982 a second Vice-President was added, in 1990 a third Vice-President was added and, in 1997 the office of Secretary was changed to a fourth Vice-President. The immediate Past-President of SCAR also served on the Executive Committee for the 4-year term of his successor until 2002 when, following the SCAR review, the immediate Past-President's term of continuing office was reduced to 2 years.

Name	Country	President	Vice-President	Secretary	Honorary Member
G A Avsiuk	USSR		1968-72	1978-84	1984-88
C R Bentley	USA		1990-94		
K Birkenmajer	Poland			1992-96	
W F Budd	Australia		1988-92		
K E Bullen	Australia		1958-62		
S Chown	Australia	2016-20			
J P De Wit	South Africa		1982-86		
Z Dong	China		1992-96		
F J Davey	New Zealand		1997-00	1996-97	
T Gjelsvik	Norway	1974-78			1978-2007
L M Gould	USA	1963-70			1970-95
G Hempel	FRG		1984-88		
C Howard-Williams	New Zealand		2002-06		
A H L Huiskes	Netherlands		2008-12		
M C Kennicutt II	USA	2008-12	2004-08		2012-
G A Knox	New Zealand	1978-82		1974-78	1982-2008
E S Korotkevich	USSR		1986-90		1990-93
V Kotlyakov	Russia				2012-
G R Laclavère	France	1958-63	1979-80		1963-94
R M Laws	UK	1990-94			1996-2014
K Lochte	Germany		2012-20		
J López-Martínez	Spain	2012-16	2002-06		
C Lorius	France	1986-90		1984-86	1996-
S A Marensi	Argentina		2006-10		
R M Martínez-Abal	Argentina		1980-84		
A Meloni	Italy		2006-10		
T Nagata	Japan		1972-76		1984-91
O Orheim	Norway		1994-98		

## Appendices

Name	Country	President	Vice-President	Secretary	Honorary Member
R N M Panzarini	Argentina		1962-68		1968-92
P G Quilty	Australia		1994-98		
C G Rapley	UK	2006-08	2000-04		2008-
R Ravindra	India		2008-12		
C A Rinaldi	Argentina		1990-94		
G de Q Robin	UK	1970-74		1959-70	1974-2004
A C Rocha-Campos	Brazil	1994-98		1986-92	2002-
R H Rutford	USA	1998-02	1996-98		2004-
R Schlich	France		1998-04		
V Schytt	IGU (Sweden)			1958-59	
J Simões	Brazil		2016-20		
H Shimamura	Japan		2004-05		
P M Smith	United States				2012-14
B C Storey	New Zealand		2012-16		
J Thiede	Germany	2002-06			2006-
J Valencia	Chile		1998-02		
A D M Walker	South Africa		1998-02		
P Welkner	Chile		1976-79		
R W Willett	IUGS (New Zealand)			1970-74	
T Wilson	United States		2012-16		
Z Zhang	China		2005-08		
J H Zumberge	USA	1982-86			1990-92

### Presidents

G R Laclavère	France	1958-63
L M Gould	USA	1963-70
G de Q Robin	UK	1970-74
T Gjelsvik	Norway	1974-78
G A Knox	New Zealand	1978-82
J H Zumberge	USA	1982-86
C Lorus	France	1986-90
R M Laws	UK	1990-94
A C Rocha-Campos	Brazil	1994-98
R H Rutford	USA	1998-02
J Thiede	Germany	2002-06
C G Rapley	UK	2006-08
M C Kennicutt II	USA	2008-12
J López-Martínez	Spain	2012-16
S L Chown	Australia	2016-20

### Vice-Presidents

K E Bullen	Australia	1958-62
R N M Panzarini	Argentina	1962-68
G A Avsiuk	USSR	1968-72
T Nagata	Japan	1972-76
P Welkner	Chile	1976-79
G R Laclavère	France	1979-80
R M Martínez-Abal	Argentina	1980-84
J P De Wit	South Africa	1982-86

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### Vice-Presidents

G Hempel	FRG	1984–88
E S Korotkevich	USSR	1986–90
W F Budd	Australia	1988–92
C R Bentley	USA	1990–94
C A Rinaldi	Argentina	1990–94
Z Dong	China	1992–96
O Orheim	Norway	1994–98
P G Quilty	Australia	1994–98
R H Rutford	USA	1996–98
J Valencia	Chile	1998–02
F J Davey	New Zealand	1997–00
A D M Walker	South Africa	1998–02
R Schlich	France	1998–04
C G Rapley	UK	2000–04
C Howard-Williams	New Zealand	2002–06
J López-Martínez	Spain	2002–06
M C Kennicutt II	USA	2004–08
H Shimamura	Japan	2004–05
Z Zhang	China	2005–08
S A Marensi	Argentina	2006–10
A Meloni	Italy	2006–10
A H L Huiskes	Netherlands	2008–12
R Ravindra	India	2008–12
S Marensi	Argentina	2010–14
Y-D Kim	Korea	2010–14
K Lochte	Germany	2012–16
B C Storey	New Zealand	2012–16
T Wilson	United States	2014–18
A Samah	Malaysia	2014–18
K Lochte	Germany	2016–20
J Simões	Brazil	2016–20

### Secretaries

V Schytt	IGU (Sweden)	1958–59
G de Q Robin	UK	1959–70
R W Willett	IUGS (New Zealand)	1970–74
G A Knox	New Zealand	1974–78
G A Avsiuk	USSR	1978–84
C Lorus	France	1984–86
A C Rocha-Campos	Brazil	1986–92
K Birkenmajer	Poland	1992–96
F J Davey	New Zealand	1996–97

### Honorary Members

G R Laclavère	France	1963–94
R N M Panzarini	Argentina	1968–92
L M Gould	USA	1970–95
G de Q Robin	UK	1974–2004
T Gjelsvik	Norway	1978–2007
G A Knox	New Zealand	1982–2008

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### Honorary Members

G A Avsiuk	USSR	1984–88
T Nagata	Japan	1984–91
E S Korotkevich	USSR	1990–93
J H Zumberge	USA	1990–92
R M Laws	UK	1996–2014
C Lorus	France	1996–
A C Rocha-Campos	Brazil	2002–
R H Rutford	USA	2004–
J Thiede	Germany	2006–
C G Rapley	UK	2008–
M C Kennicutt II	United States	2012–
P M Smith	United States	2012–14
V Kotlyakov	Russia	2012–

## Appendix 4

# SCAR Executive Committee Meetings

### Chronological List of SCAR Executive Committee Meetings 1965–2009

Once SCAR had settled into a routine with the biennial SCAR meetings being held in even-numbered years from VIII SCAR in Paris, France, August 1964, the SCAR Executive Committee has met during the odd-numbered years. The members of the Executive Committee have often met opportunistically when several of them have together been attending other non-SCAR meetings and occasionally there have been additional formal meetings when the need arose. This list includes all the formal meetings of the Executive Committee as reported in the SCAR Bulletin. From 1997, the SCAR Executive Meeting was held in conjunction with the annual COMNAP Meeting and in the even-numbered years the annual COMNAP Meeting was held in conjunction with the biennial SCAR Meeting. This arrangement has provided the opportunity for the Executive Committees of SCAR and COMNAP to hold an annual joint meeting.

1965	27 September	New York, United States
1967	24–26 July	Cambridge, United Kingdom
1969	14–16 July	Cambridge, United Kingdom
1971	2–5 August	Moscow, USSR
1973	9–11 July	Cambridge, United Kingdom
1975	25–26 June	Cambridge, United Kingdom
1977	6–7 July	Cambridge, United Kingdom
1979	26–29 June	Cambridge, United Kingdom
1980	14–16 May	Cambridge, United Kingdom
1981	28–30 September	Cambridge, United Kingdom
1983	15–17 June	Cambridge, United Kingdom
1985	17–19 August	Teton Village, United States
1987	1–3 July	Grenoble, France
1988	28–31 March	Paris, France
1989	28–30 June	Siena, Italy
1991	6–9 June	Zürich, Switzerland
1993	13–14, 16 April	Stockholm, Sweden
1995	16–20 September	Siena, Italy
1997	25–29 August	Cape Town, South Africa
1999	20–24 September	Goa, India
2001	20–24 August	Amsterdam, The Netherlands
2003	11–15 July	Brest, France
2005	11–13 July	Sofia, Bulgaria
2007	9–11 July	Washington, DC, United States
2009	5–7 August	Punta Arenas, Chile

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2011	18–19 July	Edinburgh, United Kingdom
2013	22–23 July	Barcelona, Spain
2015	26–28 August	Trømso, Norway
2017	28 July – 1 August	Brno, Czech Republic

## Appendix 5

# SCAR Chief Officers

### Chief Officers of SCAR Groups

Over the years, SCAR has had several different types of subsidiary groups but for most of the time these have been the Permanent Working Groups and Groups of Specialists. The person in charge of a Group of Specialists was appointed by the Executive Committee and has almost invariably been called the Convenor, but the Working Groups elected their officers from amongst themselves. Some Working Groups had a Chairman, some had a Secretary, some had both and some had one person who carried both titles. SCAR always required just one person to be the formal contact with the SCAR Secretariat, regardless of title, and this person was styled the Chief Officer. It is these people who are listed in this appendix.

SCAR subsidiary groups were normally established and closed at SCAR meetings. Some individual Chief Officers may have resigned between meetings but a new Chief Officer may not have been elected or appointed until the following SCAR meeting. Therefore, there may be some slight discrepancies among the dates in this list where the changes have not been accurately documented.

I SCAR: WG I.	J van Meighem (Be)
I SCAR: WG II.	L M Gould (US)
I SCAR: WG III.	K E Bullen (Au)
II SCAR: WG I.	L Zenkevitch (Ru)
II SCAR: WG II.	G R Laclavère (Fr)
II SCAR: WG III.	H Wexler (US)

At I SCAR and II SCAR, both in 1958, the three Working Groups were formed at the meeting but from III SCAR the Permanent Working Groups were established although, despite their generic description, some of these were short-lived.

### Permanent Working Groups

<i>Cartography</i>	G R Laclavère (Fr)	1959–61
<i>Exchange of Information</i>	G de Q Robin (UK)	1959
<i>Meteorology and Physical Oceanography</i>	H Wexler (US)	1959
<i>Programme Amendments</i>	L M Gould (US)	1959
<i>Biology</i>	R Carrick (Au)	1959–64
	M W Holdgate (UK)	1964–68
	G A Knox (NZ)	1968–74

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	W S Benninghof (US)	1974–80
	R M Laws (UK)	1980–88
	G Hempel (De)	1988–90
	J Valencia (Cl)	1990–96
	P D Shaughnessy (Au)	1996–98
	Y Le Maho (Fr)	1998–2002
<i>Upper Atmosphere Physics</i>	F Jacka (Au)	1959–65
	R Schlich (Fr)	1965–66
	T Nagata (Jp)	1966–84
	M J Rycroft (UK)	1984–90
<i>Meteorology</i>	W J Gibbs (Au)	1960–63
	M J Rubin (US)	1963–82
	E Raschke (Ru)	1982–86
<i>Geology</i>	R W Willett (NZ)	1960–66
	R J Adie (UK)	1966–74
	I R McLeod (Au)	1974–78
	C Craddock (US)	1978–80
	R J Tingey (Au)	1980–88
	M R A Thomson (UK)	1988–96
	J R Krynauw (ZA)	1996–98
	R A J Trouw (Br)	1998–2002
<i>Crustal Geophysics</i>	K E Bullen (Au)	1960–62
<i>Oceanography</i>	M M Somov (Ru)	1960–62
	W J Tressler (US)	1962–64
	M M Somov (Ru)	1964–70
	G E Hemmen (UK)	1970–82
<i>Communications</i>	A H Sheffield (UK)	1960–66
<i>National Reports</i>	J van Meighem (Be)	1960–62
<i>Logistics</i>	A P Crary (US)	1960–61
	G W Markham (NZ)	1961–65
	P-E Victor (Fr)	1965–67
	F E Bastin (Be)	1967–72
	D F Styles (Au)	1972–76
	R B Thomson (NZ)	1976–86
	J E Bleasel (Au)	1986–88
<i>Geodesy and Cartography</i>	G R Laclavère (Fr)	1962–66
	B P Lambert (Au)	1966–76
	A G Bomford (Au)	1976–82
	C Veenstra (Au)	1982–88
<i>Geomagnetism</i>	T Nagata (Jp)	1962–66
<i>Glaciology</i>	G de Q Robin (UK)	1962–66
	U Radok (Ru)	1966–72
	C Swithinbank (UK)	1972–78
	C B Bull (US)	1978–86
	O Orheim (No)	1986–92
	H Miller (De)	1992–98
	D Qin (Ch)	1998–2002

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<i>Solid-Earth Geophysics</i>	K E Bullen (Au) E I Robertson (NZ) R D Adams (NZ) C R Bentley (US) F J Davey (NZ) F Thyssen (De) P F Barker (UK) D Damaske (De)	1962–64 1964–66 1966–76 1976–82 1982–88 1988–90 1990–96 1996–2000
<i>Human Biology and Medicine</i>	J Rivolier Fr) D J Lugg (Au) A Peri (It)	1974–84 1984–2000 2000–02
<i>Geodesy and Geographic Information</i>	G Lindsay (Au) A L Clarke (Au) J Manning (Au)	1988–92 1992–2000 2000–02
<i>Atmospheric Sciences</i>	M J Rycroft (UK)	1988–90
<i>Physics and Chemistry of the Atmosphere</i>	D H Bromwich (US) J Turner (UK)	1990–98 1998–2002
<i>Solar-Terrestrial and Astrophysical Research</i>	L Lanzerotti (US) J R Dudeney (UK) A D M Walker (ZA) M Candidi (It)	1990–92 1992–94 1994–2000 2000–02
<i>Geosciences</i>	P E O'Brien (Au)	2000–02
<b>Groups of Specialists</b>		
<i>Seals</i>	R M Laws (UK) D B Siniff (US) J L Bengtson (US)	1972–88 1988–98 1998–2002
<i>Ice Shelf Drilling Projects</i>	J H Zumberge (US) P-N Webb (US)	1972–74 1974–78
<i>Late Cenozoic Studies</i>	E M van Zinderen-Bakker (ZA)	1972–80
<i>Southern Ocean Ecosystems and their Living Resources</i>	S Z El Sayed (US)	1974–85
<i>EAMREA</i>	J H Zumberge (US)	1976–80
<i>AEIMEE</i>	R H Rutford (US)	1980–86
<i>Antarctic Climate Research</i>	M J Rubin (US) K Kusunoki (Jp) I F Allison (Au)	1980–82 1982–88 1988–90
<i>Antarctic Sea Ice</i>	W F Budd (Au)	1984–90
<i>BIOMASS Executive</i>	S Z El Sayed (US)	1985–91
<i>Southern Ocean Ecology</i>	J-C Hureau (Fr) G Hubold (De) D G M Miller (ZA)	1986–90 1990–94 1994–96

## Appendices

<i>Structure and Evolution of the Antarctic Lithosphere</i>	I W D Dalziel (US)	1986–96
<i>Cenozoic Palaeoenvironments of High Southern Latitudes</i>	P-N Webb (US)	1986–96
<i>Environmental Affairs and Conservation</i>	W N Bonner (UK) D W H Walton (UK)	1988–92 1992–2002
<i>Global Change and the Antarctic</i>	C R Bentley (US) J H Priddle (UK) A H L Huiskes (Ne)	1992–98 1998–2000 2000–02
<i>Antarctic Neotectonics</i>	T J Wilson (US)	1998–2002
<i>Antarctic Subglacial Lakes</i>	J C Priscu (US)+ H Miller (De)+	2000–02 2000–02
<b>ad hoc groups</b>		
<i>Coordination of Antarctic Data</i>	R G Barry (US)	1990–92
<i>Planning Group on Antarctic Data Management</i>	A L Clarke (Au)	1992–97
<i>SCAR Organization and Strategy</i>	P M Smith (US)	1999–2000
<b>(SCAR–COMNAP) Joint Committee</b>		
<i>Antarctic Data Management (JCADM)</i>	L Belbin (Au) M R Thorley (UK) D Peterson (NZ) T de Bruin (Ne)	1997–2000 2000–02 2002–04 2004–08
<b>Federated to SCAR</b>		
<i>COMNAP</i>	D J Drewry (UK) M Zucchelli (It) A Karlqvist (Se) G E Wratt (NZ) K A Erb (US) G Jugie (Fr) J Retamales (Cl)	1988–91 1991–94 1995–98 1998–2001 2001–04 2004–07 2008–11
<i>SCALOP</i>	H Kohnen (De) J C A Sayers (Au) E Chiang (US) P Eberhard (Cl) K A Pitt (NZ) J Pye (UK)	1988–92 1992–95 1995–98 1998–2001 2001–05 2005–08

At the XXVII SCAR Meeting in Shanghai, China, July 2002, following the implementation of the recommendations of the *ad hoc* Group on SCAR Organization and Strategy, all the existing Working Groups and Groups of Specialists were formally closed and replaced by the Scientific Standing Groups (SSGs) on Geosciences, Life Sciences and

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Physical Sciences with subordinate Action Groups and Expert Groups. In addition, the Group of Specialists on Environmental Affairs and Conservation was replaced by a Standing Committee for the Antarctic Treaty System. Only the SCAR-COMNAP Joint Committee on Antarctic Data Management continued beyond 2002 until 2008 when COMNAP ceased its sponsorship of the group and it became a SCAR Standing Committee.

All the activities of the former groups are now undertaken by the SSGs and their sub-groups.

### Delegates' Committees

<i>Scientific Affairs</i>	chaired by a Vice President
<i>Outreach and Administration</i>	chaired by a Vice President

### Scientific Standing Groups

<i>Geosciences</i>	P E O'Brien (Au)	2002-04
	A Capra (It)	2004-10
	W B Lyons (US)	2012-16
	J Galindo-Zaldivar (Es)	2016-
<i>Life Sciences</i>	S L Chown (ZA)	2002-04
	K Conlan (Ca)	2004-12
	G Hosie (Au)	2012-16
	Y Ropert-Coudert (Fr)	2016-
<i>Physical Sciences</i>	J Turner (UK)	2002-06
	M Candidi (It)	2006-10
	T Yamanouchi (Jp)	2010-12
	D Bromwich (US)	2012-

### Standing Committees

<i>Finance</i>	R Schlich (Fr)	2002-04
	M C Kennicutt (US)	2004-08
	S Marensi (Ar)	2008-10
	A H L Huiskes (Ne)	2010-12
	B C Storey (NZ)	2012-16
	J Simões	2016-
<i>Antarctic Treaty System (SC-ATS)</i>	D W H Walton (UK)	2002-06
	S L Chown (ZA)	2006-15
	A Terauds (Au)	2015-
<i>Antarctic Geographic Information (SC-AGI)</i>	S Vogt (De)+	2006-10
	H Brolsma (Au)+	2006-10
	A Fox (UK)+	2010-
	J-Y Pirlot (Be)+	2010-
<i>Antarctic Data Management (SC-ADM)</i>	K Finney (Au)	2008-12
	T de Bruin (Ne)+	2012-15
	B Danis (Be)+	2012-15
	A Van de Putte (Be)	2015-

## Appendices

### Scientific Research Programmes

<i>Antarctic Climate Evolution (ACE)</i>	M J Siegert (UK)+ R B Dunbar (US)+ C Escutia (Es)+ R M DeConto (US)+	2004–09 2004–09 2009–12 2009–12
<i>Antarctica and the Global Climate System (AGCS)</i>	J Turner (UK) A C Naveira Garabato (UK)	2004–09 2009–12
<i>Evolution and Biodiversity in the Antarctic (EBA)</i>	G di Prisco (It)+ P Convey (UK)+	2004–12 2004–12
<i>Interhemispheric Conjugacy Effects in Solar-Terrestrial and Aeronomy Research (ICESTAR)</i>	A Weatherwax (US)+ K Kauristie (Fi)+	2004–10 2004–10
<i>Subglacial Antarctic Lake Environments (SALE)</i>	J Priscu (US)	2004–10
<i>Past Antarctic Ice Sheet Dynamics (PAIS)</i>	C Escutia (Es)+ R M DeConto (US)+ L De Santis (It)+ T Naish (NZ)+	2012–16 2012–16 2016– 2016–
<i>Solid Earth Responses and influences on Cryospheric Evolution (SERCE)</i>	T Wilson (US) P Whitehouse (UK)+ M King (Au)+	2012–16 2016– 2016–
<i>Astronomy and Astrophysics from Antarctica (AAA)</i>	J Storey (Au) A Moore (Au)	2012–16 2016–
<i>Antarctic Climate Change in the 21<sup>st</sup> Century (AntClim<sup>21</sup>)</i>	N Bertler (NZ) T Bracegirdle (UK)	2012–16 2016–
<i>State of the Antarctic Ecosystem (AntEco)</i>	A Terauds (Au) J Strugnell (Au)+ H Griffiths (UK)+	2012–15 2015– 2015–
<i>Antarctic Thresholds – Ecosystem Resilience and Adaptation (AnT-ERA)</i>	J Gutt (Ge)	2012–

+ co-Chairman

Abbreviations used for nationalities of Chief Officers are as follows:

Au – Australia	Be – Belgium	Br – Brazil
Ca – Canada	Cl – Chile	Ch – China
De – Germany	Es – Spain	Fi – Finland
Fr – France	It – Italy	Jp – Japan
Ne – Netherlands	No – Norway	NZ – New Zealand
Ru – Russia *	Se – Sweden	UK – United Kingdom
US – United States	ZA – South Africa	

\* Russia was the USSR until 1991.

## Appendix 6

# SCAR Secretariat Staff

### Assistant Secretary

G E Hemmen	(part-time)	1 January 1962	–	24 August 1970
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### Executive Secretary

G E Hemmen	(part-time)	25 August 1970	–	30 September 1989
P D Clarkson	(full-time)	1 May 1989	–	30 June 2005

### Executive Director

C P Summerhayes	(full-time)	1 April 2004	–	31 March 2010
M D Sparrow	(full-time)	1 April 2010	–	22 May 2015
J Baeseman	(full-time)	March 2016	–	16 November 2017
C Nath	(full-time)	July 2018	–	

### Executive Officer

M I Kaczmaraska	(full-time)	1 June 2005	–	31 March 2007
P D Clarkson	(acting, 80%-time)	1 March 2007	–	31 July 2007
M D Sparrow	(full-time)	1 July 2007	–	31 March 2010
R Badhe	(full-time)	22 February 2010	–	31 December 2014
E Griffin	(full-time)	1 January 2015	–	

### Project Officer

E Griffin	(part-time)	5 October 2011	–	31 December 2014
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### Secretary

Various SPRI staff	(part-time)		–	29 September 1959
Mrs H G Hatley	(part-time)	29 September 1959	–	1 September 1961
Miss J Cotton	(part-time)	1 September 1961	–	10 July 1963
Mrs L Jones	(full-time)	11 July 1963	–	6 March 1964
Miss E F Lingham	(full-time)	2 March 1964	–	1 August 1966
Miss L Teasdale	(full-time)	1 August 1966	–	26 August 1967
Miss P J Bunn	(full-time)	4 September 1967	–	27 April 1968

## Appendices

### Secretary

Mrs M Calder	(full-time)	6 May 1968	-	30 December 1968
Miss C M Gairdner	(full-time)	20 January 1969	-	28 August 1972
Mrs J M Jones	(full-time)	31 August 1972	-	30 April 1973
Mrs J E Whiting	(full-time)	14 May 1973	-	12 April 1985
Ms V Hunter	(full-time)	12 April 1985	-	3 September 1985
Mrs P M Richmond	(full-time)	10 March 1986	-	31 May 1998

### Administrative Assistant (Senior Clerk)

Mrs M J Hassett	(full-time)	1 July 1998	-	17 January 2000
Mr A Bislani	(temporary, part-time)			Maternity Leave cover
Mr D Dissanayake	(temporary, part-time)			Maternity Leave cover
Mr M Armansin	(temporary, part-time)			Maternity Leave cover
Mrs M J Hassett	(part-time)	5 September 2000	-	18 January 2002
Mrs A J Dalton	(full-time)	14 January 2002	-	31 August 2005

### Administrative Officer

Miss A Williamson	(full time)	17 October 2005	-	25 November 2005
Mrs K J Smith	(part-time)	27 January 2006	-	30 September 2007
Mrs R Nash	(part-time)	9 October 2007	-	

## Appendix 7

# SCAR Awards

### Honorary Members

When Georges Laclavère stood down after 5 years as first President of SCAR the Delegates wished to recognize his outstanding service in an appropriate way. Gordon Robin's proposal that he should be declared an Honorary Member was immediately approved and Georges Laclavère graciously accepted the honour. Subsequently, all retiring Presidents, four Vice-Presidents, one long-serving delegate who was not an elected officer, and a non-member with a very long association with SCAR who rendered invaluable service by chairing the ad hoc Committee on SCAR Organization and Structure (SOS), have been similarly honoured.

G R Laclavère	France	1963–94
R N M Panzarini	Argentina	1968–92
L M Gould	USA	1970–95
G de Q Robin	UK	1974–2004
T Gjelsvik	Norway	1978–2007
G A Knox	New Zealand	1982–2008
G A Avsiuk	USSR	1984–88
T Nagata	Japan	1984–91
J H Zumberge	USA	1990–92
E S Korotkevich	USSR	1990–93
C Lorius	France	1996–
R M Laws	UK	1996–14
A C Rocha-Campos	Brazil	2002–
R H Rutford	USA	2004–
J Thiede	Germany	2006–
C G Rapley	UK	2008–
M C Kennicutt II	United States	2012–
P M Smith	United States	2012–14
V M Kotlyakov	Russia	2012–

### SCAR Prince of Asturias Fellows

The Prince of Asturias Award to SCAR for “International Co-operation , 2002” included a cash prize of €50,000 that the Executive Committee decided should be used to establish a SCAR Fellowship programme for young scientists to undertake a research project at a facility in a country other than their own. The recipients would be known as SCAR Prince of Asturias Fellows. After the initial round of awards, SCAR was able to continue the programme from its own funds, assisted by some generous voluntary contributions and recipients are known as SCAR Fellows.

## Appendices

### 2003 SCAR Prince of Asturias Fellows

Elanor M Bell

Home: University of Potsdam, Germany

Host: Australian Antarctic Division, Australia

The diversity and tropho-dynamics of mixotrophic protists in Antarctic coastal waters

Steven Boger

Home: University of Melbourne, Australia

Host: Universität Bremen, Germany

Mesozoic evolution of the Lambert Graben, Mac.Robertson Land

Barbara Delmonte

Home: University of Siena, Italy

Host: Laboratoire de Glaciologie et Géophysique de l'Environnement, France

Millennial and secular periodicities in Antarctic atmospheric circulation during the Holocene

Cai Minghong

Home: Polar Research Institute of China, China

Host: Antarctic Climate and Ecosystems CRC, Australia

Ice shelf – ocean interaction at the Amery Ice Shelf, Mac.Robertson Land

Cristina Sobrino

Home: Instituto de Ciencias Marinas de Andalucía, Spain

Host: Smithsonian Environmental Research Center, United States

Phytoplankton photosynthetic kinetics of damage and repair in vertically mixed Antarctic waters

### 2005 SCAR Fellows

David Schneider

Home: University of Washington, United States

Host: Australian Antarctic Division, Australia

Using ice cores to determine proxies for the Southern Annular Mode, as a contribution to SCAR's Antarctica in the Global Climate System (AGCS) programme

Narelle Baker

Home: University of Wellington, Victoria

Host: University of Bristol, United Kingdom

The evolution of the Ross Ice Shelf as a contribution to SCAR's Antarctic Climate Evolution (ACE) programme

Veronica Fuentes

Home: University of Buenos Aires, Argentina

Host: Institut des Sciences de la Mer at Rimouski, Canada

Nutrients and the ecosystem as a contribution to SCAR's programmes on Evolution and Biodiversity in the Antarctic (EBA) and AGCS

Simone Brandao

Home: University of Hamburg in Germany

Host: Royal Belgian Institute for Natural Science, Belgium

A molecular study of Antarctic ostracods as a contribution to SCAR's EBA programme

**2006 SCAR Fellows**

Olaf Eisen

Home: Swiss Federal Institute of Technology (ETH), Switzerland

Host: British Antarctic Survey (BAS), United Kingdom

Reconstructing Antarctic ice sheet history from internal layering, as a contribution to SCAR's ACE and AGCS programmes

Stephanie Konfal

Home: Byrd Polar Research Centre, United States

Host: University of Modena and Reggio Emilia, Italy

Antarctic Neotectonics, as a contribution to SCAR's ANTEC programme

Nobue Kasamatsu

Home: National Institute of Polar Research, Japan

Host: Australian Antarctic Division, Australia

Krill, dimethyl sulphide and climate change: a contribution to EBA, ACE and AGCS programmes

Barbara Villoslada

Home: Cordoba University, Argentina

Host: University of Rio Grande do Sul, Brazil

Paleo-atmospheric circulation, as a contribution to the ACE programme

Victoria Metcalf

Home: University of Canterbury, New Zealand

Host: Northeastern University in Boston, United States

Fat transport in Antarctic fish: a contribution to the EBA programme

**2007 SCAR Fellows**

Ignino Coco

Home: Istituto di Fisica dello Spazio Interplanetario (IFSI) - Istituto Nazionale di Astrofisica (INAF), Italy

Host: Thayer School of Engineering - Dartmouth College, USA

The role of abrupt solar wind dynamic pressure variations on the polar ionosphere dynamics

Stefanie Kaiser

Home: University of Hamburg, Zoological Museum, Germany

Host: British Antarctic Survey, UK

Quantification of Southern Ocean biodiversity in space: richness and distribution of Isopoda (Crustacea, Malacostraca) in the Amundsen and Bellingshausen

*The Fellowship is awarded under the GCI IPY Programme*

Delphine Lannuzel

Home: Université Libre de Bruxelles, Belgium

Host: Antarctic Climate & Ecosystems CRC, Australia

The role of iron as a micro-nutrient to the Antarctica sea zone algal

*The Fellowship is awarded under the GCI IPY Programme*

Glen Phillips

Home: The University of Newcastle, Australia

Host: Bundesanstalt für Geowissenschaften und Rohstoffe, Germany

Structural controls and timing of upper crustal deformation within the Lambert Basin: Contribution to geodynamic, ice-sheet and mass balance models of the Mesozoic-Tertiary evolution of East Antarctica

## Appendices

### 2008 Fellows

Wendy (Wilhelmina) Clavano

Home: University of Alberta, Canada

Host: Gateway Antarctica, University of Canterbury, New Zealand

Retrieving snow thickness over land and sea ice by improving ground penetrating radar data processing

Nicholas Demetras

Home: University of Waikato, New Zealand

Host: Colorado State University, USA

The role of biotic and abiotic factors in determining the distribution of soil nematode communities in an Antarctic Dry Valley system

Marina Verducci

Home: University of Siena, Italy

Host: Leibniz-Institut für Meereswissenschaften (IFM-GEOMAR), Germany

Middle Miocene Southern Ocean climatic and paleoceanographic evolution and Antarctic cryosphere expansion

Ramón Hegedüs

Home: Eötvös Loránd University, Budapest, Hungary

Host: Lund University, Sweden

The role of polarized skylight in animal navigation and foraging in Antarctica

*SCAR/IPF/IAI/UNEP 6CI Fellowship (funded by IPF)*

### 2009 Fellows

Jennifer Lee

Home: Stellenbosch University, South Africa

Host: British Antarctic Survey, UK

Identification of glacial refugia in Antarctica

Nuncio Murukesh

Home: National Centre for Antarctic and Ocean Research, Goa, India

Host: Lamont Doherty Earth Observatory, USA

The link between tropical Indian Ocean processes, Indian Ocean Dipole (IOD), and sea-ice

Stefano Picotti

Home: Istituto Nazionale di Oceanografia e di Geofisica Sperimentale (INOGS), Italy

Host: Pennsylvania State University, USA

Ice properties and basal conditions inferred from seismic data acquired on two fast-flowing ice streams (West Antarctica)

Odile Volonterio

Home: Universidad de la República, Uruguay

Host: British Antarctic Survey, UK

The Antarctic-Magellan connection: Diversity and biogeography of interstitial turbellarians in the Scotia Arc

### 2010 Fellows

Sze Ling Ho

Home: Alfred Wegener Institute, Germany

Host: Universitat Autònoma de Barcelona, Spain

Development of organic sea surface temperature proxy, TEX<sub>86</sub> for application in the polar region

## Science in the Snow

Sunil Kumar Shukla

Home: National Centre for Antarctic and Ocean Research, Goa, India

Host: University of Bordeaux, France

Diatom-based Paleoclimate Inferences from Antarctic to Subtropical Indian Sector of the Southern Ocean

Ernesto Molina Balari

Home: University of Technology, Sydney, Australia

Host: Instituto Antártico Chileno, Chile

Bio-optical properties of Antarctic sea-ice algae

Francisca Vermeulen

Home: Victoria University of Wellington, New Zealand

Host: University of Tromsø, Norway

Particulate carbon and biogenic silica in sea ice in the Arctic and Antarctic

### 2011 Fellows

Runa Antony

Home: National Centre for Antarctic and Ocean Research, Goa, India

Host: Louisiana State University, USA

Implication of microbial processes for modifying gas records in Polar ice cores

Natalia Tilinina

Home: P.P. Shirshov Institute of Oceanology, Russian Academy of Sciences

Host: University of East Anglia, UK

Antarctic “missing” mesoscale cyclones representation in new reanalyses comparing to the satellite imagery

David Velázquez

Home: Universidad Autónoma de Madrid, Spain

Host: Montana State University, USA

Planktonic-benthic coupling in Lake Bonney (McMurdo Dry Valleys, Antarctica)

### 2012 Fellows

Bethan Davies

Home: Aberystwyth University, UK

Host: Victoria University of Wellington, New Zealand

Understanding Holocene glacier dynamics in the NE Antarctic Peninsula, and projection of future glacier behaviour under a warming climate

Elizabeth Shadwick

Home: ACE-CRC, Hobart, Tasmania, Australia

Host: Duke University, USA

Net community production and its regulating factors in the Australian Sector of the Southern Ocean

Megumu Tsujimoto

Home: National Institute of Polar Research, Japan

Host: British Antarctic Survey, UK

Is the reproductive strategy of Antarctic flowering plants changing in response to climate change?

### SCAR-COMNAP Combined Fellowship

Jenson V. George

Home: National Centre for Antarctic and Ocean Research, Goa, India

Host: GEOMAR | Helmholtz Centre for Ocean Research Kiel, Germany

Influence of small scale mixing on the primary productivity and water mass formation in the Southern Ocean

### 2013 Fellows

Paula Casanovas

Home: University of Maryland, USA

Host: British Antarctic Survey, UK

Mapping lichen richness on the Antarctic Peninsula using remote sensing and photographic documentation by citizen scientists

Bella Duncan

Home: Victoria University of Wellington, New Zealand

Host: University of Birmingham, UK

Miocene and Pliocene Antarctic climate history from a continental perspective: Climate reconstructions using molecular and isotopic biomarker proxies

Luis Huckstadt

Home: University of California Santa Cruz, USA

Host: IMAS, University of Tasmania, Australia

Retrospective Analysis of Antarctic Tracking Datasets (RAATD): Large-scale habitat use by pack-ice seals

Reny Tyson

Home: Duke University, USA

Host: IMAS, University of Tasmania, Australia

Estimating the physiology of Antarctic krill predators: a Bayesian approach

### 2014 Fellows

Jaimie Cleeland

Home: IMAS, University of Tasmania, Australia

Host: British Antarctic Survey, UK

Bottom-up and top-down influences on demographic parameters of Southern Ocean albatrosses

Manoj M.C

Home: Birbal Sahni Institute of Palaeobotany, India

Host: Kochi University, Japan

Biomarker based reconstruction of Late Quaternary Palaeoceanographic conditions in the Indian sector of the Southern Ocean

Camila Negrão Signori

Home: Federal University of Rio de Janeiro, Brazil

Host: Woods Hole Oceanographic Institution, USA

Microbial diversity across environmental gradients in the Southern Ocean: a spatial, temporal and vertical approach considering the climate changes

Fiona Shanhun

Home: Lincoln University, New Zealand

Host: St Francis Xavier University, Canada

Constraining baseline activities of Dry Valley terrestrial ecosystems: partitioning biotic and abiotic components of soil CO<sub>2</sub> fluxes

### 2015 Fellows

Christine Dow

Home: NASA Goddard Space Flight Center, USA

Host: Australian Antarctic Division

Analysis of Antarctic subglacial hydrological development in Aurora Basin using aerogeophysical data and numerical modeling

Jennifer Newall

Home: University of Stockholm, Sweden

Host: Bremen University, Germany

MAGIC-DML – integrating ice sheet modeling and field studies

Sebastian Rosier

Home: British Antarctic Survey, UK

Host: Gateway Antarctica, University of Canterbury, New Zealand

Satellite observation and model intercomparison of tidal processes in ice-sheet grounding zones

### 2015 Prince Albert II of Monaco Fellowship

Rowan Trebilco

Home: ACE-CRC, Hobart, Tasmania, Australia

Host: (1) Collecte Localisation Satellite, Ramonville-Saint-Agne and

(2) Muséum national d'Histoire naturelle, Paris, France

New models for understanding the role of mesopelagic fishes and squid in Southern Ocean ecosystems

### SCAR-COMNAP Combined Fellowship

Inka Koch

Home: University of Otago, New Zealand

Host: University of Texas Institute of Geophysics, USA

Detecting marine ice internal layers and thickness in an Antarctic ice shelf with airborne ice penetrating radar

### 2016 Fellows

Lavenia Ratnarajah

Home: Institute for Marine and Antarctic Studies, University of Tasmania, Australia

Host: Laboratoire d'Océanographie Microbienne, France

Effects of natural iron fertilisation by baleen whales on the microbial community in the Southern Ocean

Jilda Caccavo

Home: University of Padua, Italy

Host: Laboratoire d'Océanographie de Villefranche, France

Trophic dynamics and nutritional condition of *Pleuragramma antarctica* in the Weddell Sea, as related to population genetic structure

Ryan Reisinger

Home: Zoology Department, Nelson Mandela Metropolitan University, South Africa

Host: Australian Antarctic Division

Top Predator Habitat Use around the Sub-Antarctic Prince Edward Islands

## Appendices

### 2016 Prince Albert II of Monaco Fellowship

Graeme Clark

Home: The University of New South Wales, Australia

Host: McGill University, Canada

The final frontier: protecting Antarctica from invasive species

### 2017 Fellows

Leena Reikkola

Home: University of Auckland, New Zealand

Host: Marine Mammal Laboratory, NOAA, USA

Spatial analysis of humpback whale behaviour and habitat use patterns in Antarctica.

Julie Janssens

Home: Institute for Marine and Antarctic Studies, Australia

Host: Laboratoire d'Océanographie et du Climat: Expérimentations et Approches Numériques (LOCEAN), France

Representation of iron in a sea-ice biogeochemical model.

Hanne Neilsen

Home: University of Tasmania, Australia

Host: KTH Royal Institute of Technology, Sweden

Framing Antarctica as Fragile: Tracing the evolution of media narratives about the far south (1945 – 2015).

Antonio Aguera Garcia

Home: Université Libre de Bruxelles, Belgium

Host: University of Otago, New Zealand

Transgenerational Plasticity (TGP) and acclimation in a keystone Polar Invertebrate in response to a warmer more acidic Antarctic.

Filip Hrbáček

Home: Department of Geography, Masaryk University, Czech Republic

Host: Insubria University, Italy

Effect of vegetation cover on active layer thermal regime in climatically contrasted environments of Antarctica.

### 2017 Prince Albert II of Monaco Fellowship

Shramik Patil

Home: The National Centre for Antarctic and Ocean Research (NCAOR), India

Host: UPMC-CNRS Station Biologique de Roscoff, France

Response of Southern Indian Ocean coccolithophores to climate change: evidence from laboratory culture experiments. The final frontier: protecting Antarctica from invasive species

### Visiting Professors

In 2013 SCAR introduced the Visiting Professor scheme for mid- to late-career scientists to spend time in a research institute of another SCAR country.

### 2013

Andrew Fountain

USA to Malaysia

Graham Hosie

Australia to South Africa

## Science in the Snow

Philip Kyle	USA to the Republic of Korea
Tony Press	Australia to Chile
Anna Wåhlin	Sweden to the Republic of Korea

### 2014

Mario De Stefano	Italy to Chile
Kevin Hall	Canada to South Africa
Carme Huguet	Spain to South Africa

### 2015

John Turner	UK to National Centre for Antarctic and Ocean Research (NCAOR), Goa, India
Robert Larter	UK to University of Tromsø, Norway

### 2016

Bryan Storey	New Zealand to Iranian National Institute for Oceanography and Atmospheric Science
Judd Case	USA to Museo de La Plata, Buenos Aires, Argentina

### 2017

Yeadong Kim	South Korea to ITU Polar Research Center, Turkey
Dermot Antoniades	Canada to Universidad de la Republica, Uruguay
Xavier Crosta	France to National Centre for Antarctic and Ocean Research, India
Yves Cherel	France to Port Elizabeth Museum, South Africa

## SCAR Medals

During his Presidency of SCAR Jörn Thiede proposed that there should be a SCAR Medal to reward outstanding service to Antarctic science through SCAR. After further consideration it was decided to create three medals. The medals for “Excellence in Antarctic Research” and for “International Scientific Coordination” would be awarded every second year at the SCAR Open Science Conference or the Delegates’ Meeting. The “President’s Medal for Outstanding Achievement in Antarctic Science” would be the personal gift of the President and would be awarded once in each Presidency. The first medals were awarded by Jörn Thiede at XXIX SCAR in Hobart, Australia, during July 2006.

### 2006

Peter Barrett	President’s Medal for Outstanding Achievement in Antarctic Science.
Paul Mayewski	SCAR Medal for Excellence in Antarctic Research.
David Walton	SCAR Medal for International Scientific Coordination.

## Appendices

### 2008

Vladimir Kotlyakov	President's Medal for Outstanding Achievement in Antarctic Science.
Angelika Brandt	SCAR Medal for Excellence in Antarctic Research.
Claude Lorius	SCAR Medal for International Scientific Coordination.

### 2010

John Turner	SCAR Medal for Excellence in Antarctic Research.
Alan Cooper	SCAR Medal for International Scientific Coordination.
Bob Rutford	SCAR Medal for International Scientific Coordination.

### 2012

Diana Wall	President's Medal for Outstanding Achievement in Antarctic Science.
John Priscu	SCAR Medal for Excellence in Antarctic Research.
Ian Allison	SCAR Medal for International Scientific Coordination.

### 2014

Steven Chown	SCAR Medal for Excellence in Antarctic Research.
Mahlon Kennicutt II	SCAR Medal for International Scientific Coordination.

### 2016

Francisco Hervé	President's Medal for Outstanding Achievement in Antarctic Science.
Robert Dunbar	SCAR Medal for Excellence in Antarctic Research.
Heinz Miller	SCAR Medal for International Scientific Coordination.

### 2018

Michael Hambrey	SCAR Medal for Excellence in Antarctic Research.
Terry Wilson	SCAR Medal for International Scientific Coordination.
James McClintock	SCAR Medal for Education and Communication

### Certificates of Appreciation

In 2004, SCAR also instituted the award of Certificates of Appreciation to those lesser mortals who may not receive any other award but whose service to SCAR warranted recognition.

### 2004

Chris G Rapley	Vice-President
Roland Schlich	Vice-President and Chairman: Standing Finance Committee
Robert H Rutford	Vice-President and President

## Science in the Snow

### 2005

Peter D Clarkson	Executive Secretary
Amanda J Dalton	Administrative Officer

### 2006

Jerónimo López-Martínez	Vice-President
Zhanhai Zhang	Vice-President

### 2008

Desmond J Lugg	Chairman: former Working Group on Human Biology and Medicine
Clive Howard-Williams	Vice-President
M C “Chuck” Kennicutt II	Vice-President

### 2010

Tony Meloni	Vice-President
Sergio Marensi	Vice-President
Mariano Memolli	Co-Chairman XXXI SCAR LOC
Sergio Marensi	Co-Chairman XXXI SCAR LOC
John Priscu	Co-Chairman of the LOC for the OSC
Carlota Escutia	Co-Chairman of the LOC for the OSC
Colin Summerhayes	Former Executive Director of SCAR

### 2012

Ad Huiskes	Vice-President
Alessandro Capra	Chief Officer of the SSG on Geosciences
Kathleen Conlan	Chief Officer of the SSG on Life Sciences
Michael Hambrey	Secretary of the SSG on Geosciences
Vladimir Kotlyakov	long service to SCAR as Russian Permanent Delegate
Philip O'Brien	Deputy Chief Officer of the SSG on Geosciences
Rasik Ravindra	Vice-President
Tas van Ommen	Secretary of the SSG on Physical Sciences
Takashi Yamanouchi	Chief Officer of the SSG on Physical Sciences

### 2014

Mahlon C. Kennicutt II	Vice President and President
Kim Finney	Chief Officer of the SC on Antarctic Data Management
Sergio Marensi	Vice-President

### 2016

Jeff Ayton	Leadership of the SCAR/COMNAP Joint Expert Group on Human Biology and Medicine
Graham Hosie	Chief Officer of the SSG on Life Sciences

## Appendices

Steven Chown	Substantial contributions to Antarctic Policy through leadership of SCATS
Berry Lyons	Leadership of the SSG on Geosciences
Renate Rennie and the Tinker Foundation	For support of many of SCAR's efforts
Claude De Broyer	Compilation of the Biogeographic Atlas of the Southern Ocean
Philippe Koubbi	Compilation of the Biogeographic Atlas of the Southern Ocean
Claude Bachelard	For decades of service to Antarctic medical practice and research
Karin Lochte	For leadership as Vice President
Bryan Storey	Vice-President and Chairman of the LOC for the 2014 OSC
Carlota Escutia	Leadership of ACE and PAIS SRPs
Rob DeConto	Leadership of ACE and PAIS SRPs
Terry Wilson	Establishing and leading the SERCE SRP
John Storey	Establishing and leading the AAA SRP
Nancy Bertler	Establishing and leading the AntClim21 SRP
Jan Strugnell	For successful Women in Antarctic Research Wikibomb
Chuck Kennicutt	Leadership through the 1st SCAR Antarctic and Southern Ocean Horizon Scan and beyond...
Mike Sparrow	Executive Officer and Executive Director of SCAR
Renuka Badhe	Executive Officer of SCAR
Guido di Prisco	Leadership of the EBA SRP
Peter Convey	Leadership of the EBA SRP
John Turner	Antarctic Climate Change and the Environment Report
Azizan Abu Samah	Chairman of the LOC for the 2016 SCAR OSC
Scott Polar Research Institute	For many years of collaboration and hosting the SCAR Secretariat
Alberto Naveira Garabato	Leadership of the AGCS SRP
Allan Weatherwax	Leadership of the ICESTAR SRP
Kirsti Kauristie	Leadership of the ICESTAR SRP
John Priscu	Leadership of the SALE SRP
Jesús Galindo-Zaldivar	Deputy Chief Officer of the SSG on Geosciences
Naresh Pant	Secretary of the SSG on Geosciences
Maurizio Candidi	Deputy Chief Officer of the SSG on Physical Sciences
Steve Colwell	Secretary of the SSG on Physical Sciences
Adrian Fox	Joint Chief Officer of SCAGI
Jean-Yves Pirlot	Joint Chief Officer of SCAGI
Marc Shepanek	Deputy Chief Officer of the SSG on Life Sciences

## Science in the Snow

Yan Ropert-Coudert	Secretary of the SSG on Life Sciences
David Bromwich	Chief Officer of the SSG on Physical Sciences
Carlo Alberto Ricci	For sustained and dedicated service to SCAR over many years in many roles

### Martha T Muse Prize

Since 2009, on behalf of the Tinker Foundation, SCAR has managed the process for awarding the prestigious Martha T Muse Prize (later the Muse Prize) for Science and Policy in Antarctica.

#### 2009

Steven Chown	for Antarctic Biology
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#### 2010

Helen Fricker	for Glaciology
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#### 2011

José Xavier	for Southern Ocean Biology
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#### 2012

Steve Rintoul	for Southern Ocean Circulation
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#### 2013

Martin Siegert	for Glaciology
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#### 2014

Tim Naish	for Palaeoclimatology
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#### 2015

Valérie Masson-Delmotte	for Palaeohydrology
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#### 2016

Rob DeConto	for Palaeoclimatology
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#### 2017

Matthew England	for Physical Oceanography
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#### 2018

Michael Meredith	for Physical Oceanography and Climatology
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## Appendix 8

### SCAR Symposia

Symposium	Sponsors	Place	Year
Antarctic Meteorology	SCAR/WMO	Melbourne	1959
Antarctic Glaciology (1 ISAG)	IASH/SCAR	Helsinki	1960
Logistics Symposium	SCAR	Boulder	1962
Antarctic Biology (1 ISAB)	SCAR/IUBS	Paris	1962
Antarctic Geology (1 ISAES)	SCAR/IUGS	Cape Town	1963
Antarctic Oceanography	SCAR/SCOR/IAPO/IUBS	Santiago	1966
Polar Meteorology	ICPM/WMO/SCAR	Geneva	1966
Antarctic Ecology (2 ISAB)	SCAR/IUBS/SCIBP	Cambridge	1968
International Symposium on Antarctic Glaciological Exploration (2 ISAG)	SCAR/IASH	Hanover	1968
Antarctic Quaternary Studies	SCAR	Cambridge	1968
Antarctic Geology and Solid Earth Geo- physics (2 ISAES)	SCAR/IUGS	Oslo	1970
Antarctic Ice and Water Masses	SCAR	Tokyo	1970
Energy Fluxes over Polar Surfaces	SCAR/ICPM/WMO	Moscow	1971
Technical and Scientific Problems affect- ing Antarctic Telecommunications	SCAR	Sandefjord	1972
Human Biology and Medicine in the Ant- arctic	SCAR/IUBS/IUPS	Cambridge	1972
Antarctic Quaternary Studies	SCAR	Canberra	1972
Polar Oceans	SCOR/ SCAR	Montreal	1974
Adaptations within Antarctic Ecosystems (3 ISAB)	SCAR/IUBS	Washington	1974
Living Resources of the Southern Ocean	SCAR/SCOR	Woods Hole	1976
Circum-Antarctic Marine Geology	CMG/ SCAR	Sydney	1976
Antarctic Geology and Geophysics (3 ISAES)	SCAR/IUGS/ICG	Madison	1977
Antarctic Glacial History and World Pal- aeoenvironment	SCAR	Birmingham	1977
Antarctic International Magnetospheric Study (IMS)	IAGA/SCOSTEP/ SCAR	Melbourne	1979
Ross Sea	SCAR	Queenstown	1980
Antarctic Glaciology (3 ISAG)	SCAR/IGS	Columbus	1981
Comparison of Late Miocene and Plio- Pleistocene Coolings of the Southern Ocean and their Influence on World Pal- aeoenvironments	SCAR/INQUA	Moscow	1982

## Science in the Snow

<b>Symposium</b>	<b>Sponsors</b>	<b>Place</b>	<b>Year</b>
Antarctic Earth Science (4 ISAES)	SCAR/IUGS/IUGG	Adelaide	1982
Antarctic Logistics	SCAR	Leningrad	1982
Polar Meteorology and Climate Nutrient Cycles and Food Webs in the Antarctic (4 ISAB)	ICPM/ SCAR SCAR/IUBS	Hamburg Wilderness	1983 1983
International Biomedical Expedition to the Antarctic	SCAR	Anchorage	1984
Space Observations for Climate Studies	COSPAR/ SCAR	Grazu	1984
Biology of Fur Seal	SCAR/US MMC	Cambridge	1984
Scientific Requirements for Antarctic Conservation	IUCN/ SCAR	Bonn	1985
Polar Meteorology	ICPM/ SCAR	Honolulu	1985
Nagata Symposium on Geomagnetic Conjugate Studies	SCAR/IAGA	San Diego	1986
Antarctic Glaciology (4 ISAG)	SCAR/IGS	Bremerhaven	1987
Antarctic Earth Sciences (5 ISAES)	SCAR/IUGG	Cambridge	1987
Antarctic Biology (5 ISAB)			1988
Biogeochemistry and Circulation of Water Masses in the Southern Ocean	SCAR/SCOR/CNFRA/TAAF	Brest	1990
Role of the Polar Regions in Global Change	CNFRO/CNRS/IFREM	Fairbanks	1990
BIOMASS Colloquium	SCAR/SCOR	Bremerhaven	1991
Antarctic Science – Global Concerns	SCAR/AWI	Bremen	1991
Antarctic Earth Sciences (6 ISAES)	SCAR	Tokyo	1991
Antarctic Glaciology (5 ISAG)	SCAR/IGS	Cambridge	1993
Antarctic Biology (6 ISAB)	SCAR	Venice	1994
Antarctic Earth Sciences (7 ISAES)	SCAR/MURST/PNRA/ENEA/CNR	Siena	1995
Polar Aspects of Global Change	SCAR/IASC	Tromsø	1998
Antarctic Biology (7 ISAB)	SCAR	Christchurch	1998
Antarctic Glaciology (6 ISAG)	SCAR/IGS	Lanzhou	1998
Antarctic Earth Sciences (8 ISAES)	SCAR	Wellington	1999
Antarctic Biology (8 ISAB)	SCAR	Amsterdam	2001
Antarctic Glaciology (7 ISAG)	SCAR/IGS	Milan	2003
Antarctic Earth Sciences (9 ISAES)	SCAR	Potsdam	2003
1 <sup>st</sup> Open Science Conference	SCAR	Bremen	2004
International Program for Antarctic Buoys (IPAB)	WCRP/SCAR	Dunedin	2005
Antarctic Biology (9 ISAB)	SCAR	Curitiba	2005
Cenozoic stratigraphic record from the East Antarctic margin	SCAR/Geoitalia/PNRA	Spoletto	2005
Southern Hemisphere climate variability	CLIVAR/CliC/SCAR	Cambridge	2005
2 <sup>nd</sup> Open Science Conference	SCAR	Hobart	2006
Antarctic Earth Sciences (10 ISAES)	SCAR	Santa Barbara	2007
3 <sup>rd</sup> Open Science Conference	SCAR/IASC	St Petersburg	2008
Antarctic Biology (10 ISAB)	SCAR	Sapporo	2009
Glaciology in the International Polar Year	SCAR	Newcastle	2009
Antarctic Climate Evolution (ACE)	SCAR	Granada	2009
Antarctic Subglacial Aquatic Environments (SAE)	SCAR	Baltimore	2010
4 <sup>th</sup> Open Science Conference	SCAR	Buenos Aires	2010
Antarctic Earth Sciences (11 ISAES)	SCAR	Edinburgh	2011

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5 <sup>th</sup> Open Science Conference	SCAR	Portland	2012
Antarctic Biology (11 ISAB)	SCAR	Barcelona	2013
6 <sup>th</sup> Open Science Conference	SCAR	Auckland	2014
Joint SCAR History, Humanities and So- cial Sciences Conference	SCAR	Colorado	2015
Antarctic Earth Sciences (12 ISAES)	SCAR	Goa	2015
7 <sup>th</sup> Open Science Conference	SCAR	Kuala Lumpur	2016
Antarctic Biology (12 ISAB)	SCAR	Leuven	2017
HASSEG Conference	SCAR	Hobart	2017
8 <sup>th</sup> Open Science Conference	SCAR	Davos	2018

## Appendix 9

# SCAR Publications

Over the years since the IGY countless papers, articles, reports and books have been published on the planning, administration, execution and results of Antarctic research. In addition to the *SCAR Bulletin* and *SCAR Report* series, SCAR has organized or published many works and many more have been published commercially on behalf of SCAR. The following selection includes the most important of these but the list is not exhaustive. The list does not include the thousands of papers in scientific journals that have resulted from research projects and programmes initiated and promoted by SCAR or the very large number of papers that have been submitted to Antarctic Treaty Consultative Meetings.

### Antarctic Biological Sciences

*Biologie Antarctique/Antarctic Biology*, R Carrick, M Holdgate and J Prevost (ed). 1964. Paris, Hermann, 651 pp. [Proceedings of 1st SCAR/IUBS Symposium on Antarctic Biology, Paris, 2–8 September 1962.]

*Antarctic Ecology*. M W Holdgate (ed). 1970. London and New York, Academic Press, 998 pp (2 volumes). [Proceedings of 2<sup>nd</sup> SCAR Symposium on Antarctic Biology, Washington 29 July – 3 August 1968.]

*Adaptations within Antarctic Ecosystems*, G A Llano (ed). 1987. Washington DC, Smithsonian Institution, 1252 pp. [Proceedings of 3<sup>rd</sup> SCAR/IUBS Symposium on Antarctic Biology, Washington 26–30 August 1974.]

*Antarctic Nutrient Cycles and Food Webs*. W R Siegfried, P R Condy & R M Laws (ed), 1985. Berlin, etc, Springer Verlag, 700 pp. [Proceedings of the 4<sup>th</sup> SCAR/SCOR/IUBS/ IABO/SASCAR Symposium on Antarctic Biology, Wilderness, South Africa, 12–16 September 1983.]

*Antarctic ecosystems: ecological change and conservation*. K R Kerry and G Hempel (ed), 1990. Berlin, etc., Springer-Verlag, 427 pp. [Proceedings of the 5<sup>th</sup> SCAR Symposium on Antarctic Biology, Hobart, Australia, 29 August – 3 September 1988.]

*Antarctic communities: species, structure and survival*. B Battaglia, J Valencia and D W H Walton (ed). 1997. Cambridge, Cambridge University Press, 464 pp. [Proceedings of the 6<sup>th</sup> SCAR Symposium on Antarctic Biology, Venice, Italy, 30 May – 3 June 1994.]

*Antarctic ecosystems: models for wider ecological understanding*. W Davison, C Howard-Williams and P Broady (ed). 2000. Christchurch, New Zealand Natural Sciences, 334 pp. [Proceedings of the 7<sup>th</sup> SCAR Symposium on Antarctic Biology, Christchurch, New Zealand, September 1998.]

## Appendices

*A Statistical Assessment of the Status and Trends of Antarctic and Sub-Antarctic Seabirds*; Montana Workshop Report. Woehler *et al.*, 2001.

*Ecological studies in the Antarctic sea ice zone*. Arntz, W. E. and Clarke, A. (eds.), 2002. Springer-Verlag, Berlin. 277 pp

*Antarctic Biology in a Global Context*. Huiskes, A.H.L., W.W.C. Gieskes, J. Rozema, R.M.L. Schorno, S.M. van der Vies, W.J. Wolff (eds), 2003. Leiden, Backhuys Publishers, XIII + 338pp. [Proceedings of the 8<sup>th</sup> SCAR International Biology Symposium 27 August - 1 September 2001, Vrije Universiteit, Amsterdam, The Netherlands.]

Adaptive Evolution of Antarctic Marine Organisms. Eastman, J., Gutt, J., di Prisco, G., (eds.), 2004, *Special Issue, Antarctic Science*, v.16: 1-93

*Evolution and Biodiversity in Antarctica*. E Fanta, W Arntz, W Detrich and H Kawall (eds), 2007. *Antarctic Science* 19(2): 145–281, Cambridge Journals Online. [Proceedings of the 9<sup>th</sup> SCAR International Biology Symposium, 25-29 July 2005, Curitiba, Brazil.]

*Trends in Antarctic Terrestrial and Limnetic Ecosystems: Antarctica as a Global Indicator*. Bergstrom, D M, Convey, P and Huiskes, A H L (ed). 2006, Springer, Dordrecht, 369pp.

*EASIZ: Ecology of the Antarctic Sea Ice Zone*. Clarke, A., Arntz, W. E., and Smith, C. R. (eds.), 2006. *Special Issue, Deep-Sea Research*, Part II, v.53. nos. 8-10, 803-1140.

*Antarctic Biology in the 21st Century – Advances in and beyond IPY*. Fukuchi, M., and Conlan, K., 2010. [X<sup>th</sup> SCAR International Biology Symposium on “Antarctic Biology in the 21<sup>st</sup> Century—Advances in and beyond IPY”: A brief overview.] *Special Issue: Polar Science*, 4 (2), 429 pp.

*The CAML / SCAR-MarBIN Biogeographic Atlas of the Southern Ocean*. ISBN 978-0-948277-28-3

### Antarctic Earth Sciences

*Antarctic Geology*, edited by R J Adie: 758 pp., 1964. Amsterdam, North Holland Publishing Co. (Proceedings of the First SCAR/IUGS International Symposium, Cape Town 16-21 September 1963).

*Antarctic Geology and Geophysics* (IUGS Series B No 1) edited by R J Adie: 876 pp., 1972, Universitetsforlaget. (Proceedings of SCAR/IUGS Symposium on Antarctic Geology and Solid Earth Geophysics, Oslo 6-15 August 1970).

*Antarctic Geoscience*. C Craddock (ed), 1982. Madison, The University of Wisconsin Press, 1172 pp. [Proceedings of the SCAR/IUGS/ICG Symposium on Antarctic Geology and Geophysics, Madison, Wisconsin, USA, 22-27 August 1977.]

*Antarctic Earth Science*. R L Oliver, P R James & J B Jago (ed), 1983. Canberra, Australian Academy of Science and Cambridge, Cambridge University Press, 697 pp. [Proceedings of the 4th SCAR/IUGS Symposium on Antarctic Earth Sciences, Adelaide, Australia, 16-20 August 1982.]

*Geological evolution of Antarctica*. M R A Thomson, J A Crame and J W Thomson (ed), 1991. Cambridge, Cambridge University Press, 722 pp. [Proceedings of the 5th SCAR/IUGS Symposium on Antarctic Earth Sciences, Cambridge, UK, 23-28 August 1987.]

*Recent Progress in Antarctic Earth Science*. Y Yoshida, K Kaminuma and K Shiraishi

(ed). 1992. Tokyo, Terra Scientific Publishing Company, 796 pp. [Proceedings of the 6th SCAR/ IUGS Symposium on Antarctic Earth Sciences, Saitama, Japan, 9–13 September 1991.]

*The Antarctic region: geological evolution and processes.* C A Ricci (de). 1997. Siena, Terra Antartica Publication, 1206 pp. [Proceedings of the 7th SCAR/IUGS Symposium on Antarctic Earth Sciences, Siena, Italy, 10–15 September 1995.]

*Antarctica at the close of a Millennium.* J A Gamble, D N B Skinner & S Henrys (ed), 2002. [Proceedings of the 8th International Symposium on Antarctic Earth Sciences, Wellington, New Zealand, July 1999.]

*Antarctica : contributions to global earth sciences.* D K Futterer, D Damaske, G Kleinschmidt, H Miller and F Tessensohn (eds), 2006. Berlin: Springer, 477 pp. [Proceedings of the 9th SCAR/IUGS International Symposium of Antarctic Earth Sciences, Potsdam, 2003.]

*Antarctica: A Keystone in a Changing World.* Cooper, A., Raymond, C., *et al* (eds), 2007. [Online Proceedings of the 10<sup>th</sup> SCAR/IUGS International Symposium on Antarctic Earth Sciences, Santa Barbara, California, USA, 26 August-1 September 2007]. U.S. Geological Survey Open-File Report 2007-1047 Version 2.0.

*Antarctic Climate Evolution.* Florindo, F., and Siegert, M., 2009, Developments in Earth and Environmental Sciences 8, Elsevier, 593pp.

*XII International Symposium on Antarctic Earth Sciences (ISAES) 2015 - Abstracts.* ISBN 978-0-948277-52-8

### Antarctic Glaciology

*Colloque sur la Glaciologie Antarctique/Symposium on Antarctic Glaciology* (IAHS Publication No 55): 162 pp., 1961. Gent-Brugge, de l'Association Internationale d'Hydrologie Scientifique. (Proceedings of the IASH/SCAR Symposium, Helsinki 25 July-6 August 1960).

*International Symposium on Antarctic Glaciological Exploration (ISAGE).* (IAHS Publication No 86), edited by A J Gow, C Keeler, C C Langway and W F Weeks: 543 pp., 1970. Gewntbrugge, International Association of Scientific Hydrology and Cambridge, SCAR. (Proceedings of SCAR/IAHS Symposium. Hanover, United States, 3-7 September 1968).

*Annals of Glaciology* (vol. 3), 1982. Cambridge, International Glaciological Society, 362 pp. [Proceedings of the 3rd International Glaciological Symposium on Antarctic Glaciology, Columbus, Ohio, United States, 7-12 September 1981.] ISBN 0 9502484 4 4

*Annals of Glaciology* (vol. 11), 1988. Cambridge, International Glaciological Society, 229 pp. [Proceedings of the 4th International Glaciological Symposium on Antarctic Glaciology, Bremerhaven, Federal Republic of Germany, 7-11 September 1987.] ISBN 0 946417 02 4

*Annals of Glaciology* (vol. 20), 1994. Cambridge, International Glaciological Society, 458 pp. [Proceedings of the 5<sup>th</sup> International Glaciological Symposium on Antarctic Glaciology, Cambridge, United Kingdom, 5-11 September 1993.] ISBN 0 946417 14 8

*Annals of Glaciology* (vol. 29), 1999. Cambridge, International Glaciological Society, 302 pp. [Papers from the 6th International Glaciological Symposium on Antarctic Glaciology, Lanzhou, China, 5-9 September 1998.] ISBN 0 946417 24 5

### Other Symposia

*Symposium on Antarctic Logistics*: 778 pp., 1963. Washington DC, National Academy of Sciences/National Research Council. (Proceedings of SCAR Symposium, Boulder 13-17 August 1962).

*Symposium on Antarctic Oceanography*, edited by R I Currie. 268 pp., 1966. (Proceedings of the SCAR/SCOR/IAPO/IUBS Symposium, Santiago, 13-16 September 1966).

*Polar Meteorology: WMO Technical Note No 87 (WMO-No 211 TP. 111)*: 540 pp., 1967. Geneva, World Meteorological Organization. (Proceedings of the WMO/SCAR/ICPM Symposium, Geneva 5-9 September 1966).

*Palaeocology of Africa and of the Surrounding Islands and Antarctica*, (Vol 5), edited by E M van Zinderen Bakker: 240 pp., 1969. Cape Town, A A Balkema. (Proceedings of Conference on Antarctic Quaternary Studies, Cambridge 24-27 July 1968).

*Symposium on Antarctic Ice and Water Masses*, edited by Sir George Deacon: 113 pp., 1971. Cambridge, SCAR. (Proceedings of SCAR Symposium, Tokyo 19 September 1970).

*Antarctic Telecommunications*, edited by A H Sheffield: 402 pp., 1972, Cambridge SCAR. (Proceedings of the SCAR Symposium on Technical and Scientific Problems affecting Antarctic Telecommunications, Sandefjord 10-16 May 1972).

*Polar Human Biology*, edited by O G Edholm and E K E Gunderson: 433 pp., 1973. London, Wm Heinemann Medical Books. (Proceedings of the SCAR/IUPS/IUBS Symposium on Human Biology and Medicine in the Antarctic, Cambridge 19-21 September 1972).

*Energy Fluxes over Polar Surfaces: WMO Technical Note No 129 (WMO-No 361)*, edited by S Orvig: 300 pp., 1973. Geneva, World Meteorological Organization. (Proceedings of the IAMAP/IAPSO/SCAR/WMO Symposium, Moscow 3-5 August 1971).

*Palaeocology of Africa and of the Surrounding Islands and Antarctica* (Vol 8), edited by E M van Zinderen Bakker: 198 pp., 1973. Cape Town, A A Balkema. (Proceedings of SCAR Conference on Antarctic Quaternary Studies, Canberra 9-12 August 1972).

*Polar Oceans*, edited by M J Dunbar: 682 pp., 1977. Calgary, Arctic Institute of North America. (Proceedings of the SCOR/SCAR Conference, Montreal, May 1974).

*Circum-Antarctic Marine Geology*, In: *Marine Geology*, 25, No 1/3, (Scientific Report No 35), edited by D E Hayes: 277 pp., 1977. Amsterdam, Elsevier Scientific Publishing Co. (Proceedings of CMG/SCAR Symposium, Sydney 18-19 August 1976).

*Antarctic Glacial History and World Palaeoenvironments*, edited by E M van Zinderen Bakker: 172 pp., 1978. Rotterdam, A A Balkema. (Proceedings of SCAR Symposium, Birmingham 17 August 1977).

*Journal of the Royal Society of New Zealand*, (vol. 11, No. 4), 1981. Wellington, Royal Society of New Zealand, 205 pp. [Proceedings of the SCAR Symposium on the Ross Sea, Queenstown, New Zealand, 17-18 October 1981.]

*Southern Ocean ecology: the BIOMASS perspective*, S Z El-Sayed (ed). 1994. Cambridge, Cambridge University Press, 399 pp. [Proceedings of the BIOMASS Colloquium, Bremerhaven, Germany, September 1991.]

*Antarctica: Witness to the Past and Guide to the Future*. Abstracts submitted to the 4<sup>th</sup> SCAR Open Science Conference. S. Marensi (ed), 2010. Cambridge, SCAR. CD-ROM. ISBN 978 0 948277 24 5

*XXXII SCAR Open Science Conference 'Antarctic Science and Policy Advice in a Changing World' – Conference Abstracts.* ISBN 978-0-948277-29-0

*2014 SCAR Open Science Conference and COMNAP Symposium: Abstracts ('Global Messages from Antarctica').* ISBN 978-0-948277-30-6

*XXXIV SCAR Open Science Conference 2016 'Antarctica in the Global Earth System: From the Poles to the Tropics' - Abstract Book.* ISBN 978-0-948277-32-0

### Occasional publications

*Oil and Other Minerals in the Antarctic: the environmental implications of possible mineral exploration or exploitation in Antarctica.* M W Holdgate and J Tinker: 51 pp., 1979. Cambridge, SCAR. (Report of a Workshop at the Rockefeller Foundation Conference Centre, Bellagio, Italy, 5-8 March 1978).

*Possible Environmental Effects of Mineral Exploration and Exploitation in Antarctica,* edited by J H Zumbege: 59 pp., 1979. Cambridge, SCAR. (Adaptation of a report by the SCAR Group of Specialists on the Environmental Impact Assessment of Mineral Resource Exploration and Exploitation in Antarctica).

*A Visitor's Introduction to the Antarctic and its Environment.* W N Bonner (ed), 1980. Cambridge, SCAR, 28 pp.

*SCAR Constitution, Procedures and Structure:* 19 pp., 1981. Cambridge, SCAR. (Amendments and Additions to SCAR Manual 1972).

*Antarctic Climate Research: Proposals for the Implementation of a Programme of Antarctic Research contributing to the World Climate Research Programme.* I Allison (ed), 1983. Cambridge, SCAR, 65 pp.

*International Lexicon of Antarctic stratigraphic nomenclature,* R J Tingey (ed). [1983]. Canberra, Bureau of Mineral Resources for SCAR, 356 pp.

*Man's Impact on the Antarctic Environment.* W S Benninghoff and W N Bonner: 56 pp., 1985. Cambridge, SCAR. ISBN 0 948277 00 9

*Conservation Areas in the Antarctic.* W N Bonner and R I Lewis Smith (ed): 299 pp., 1985. Cambridge, SCAR. ISBN 0 948277 01

*Antarctic Environmental Implications of Possible Mineral Exploration and Exploitation.* R H Rutford (ed), 100 pp., 1986. Cambridge, SCAR. ISBN 0 948277 05

*SCAR Manual 1987.* 61 pp., 1987. Cambridge, SCAR. ISBN 0 948277 08 4

*International Research in the Antarctic.* R Fifield (ed), 1987. Oxford, Oxford University Press for SCAR and the ICSU Press, 146 pp.

*Man in the Antarctic.* J Rivolier, R Goldsmith, D J Lugg & A J W Taylor (ed), 1988. London, etc, Taylor & Francis, 223 pp.

*Waste Disposal in the Antarctic.* J E Bleasel (ed), 53 pp., 1989. Hobart, Australian Antarctic Division for SCAR. (Report of the SCAR Panel of Experts on Waste Disposal). ISBN 0 642 14498-2.

*The Role of Antarctica in Global Change.* Prepared by the SCAR Steering Committee for the IGBP: 28 pp., 1989. ISBN 0 930 35718 3.

*The Role of the Antarctic in Global Change: An International Plan for a Regional Research Programme,* Prepared by the SCAR Steering Committee for the IGBP: 54 pp., 1992. ISBN 0 948277 15 7.

## Appendices

*BIOTAS Manual of Methods* edited on behalf of the SCAR Biological Investigations of Terrestrial Antarctic Systems (BIOTAS) programme by David D Wynn-Williams. 273 pp (spiral bound). 1992. ISBN 0 948277 13 0

*Antarctic seals: research methods and techniques*, R M Laws (ed). 1993. Cambridge, Cambridge University Press, 390 pp.

*The Distribution and Abundance of Antarctic and Subantarctic Penguins*, compiled on behalf of the SCAR Bird Biology Subcommittee by Eric J Woehler. 76 pp. 1993. ISBN 0 948277 14 9.

*Antarctic digital database user's guide and reference manual*. BAS, SPRI and WCMC, 1993. Cambridge, SCAR, xi + 156 pp. This manual accompanies a CD-ROM. ISBN 0 948277 16 5

*Antarctic science: global concerns*. G Hempel (ed). 1994. Berlin, Springer-Verlag, xii + 287 pp. [Papers from the SCAR Antarctic Science Conference, Bremen, Germany, 23–27 September 1991.] ISBN 3540 57559 6.

*Developing the Antarctic Protected Area System*. R I Lewis Smith, D W H Walton and P R Dingwall (ed). 1994. Gland, IUCN and Cambridge, SCAR, xvi + 225 pp. [Proceedings of the SCAR/IUCN Workshop on Protected Areas, Cambridge, United Kingdom, 29 June – 2 July 1992.] ISBN 2-8317-0218-6

*Progress in the Conservation of the Subantarctic Islands*. P R Dingwall (ed). 1995. Gland, IUCN and Cambridge, SCAR, xvi + 225 pp. [Proceedings of the SCAR/IUCN Workshop on Protection, Research and Management of Subantarctic Islands Paimpont, France, 27–29 April 1992.] ISBN 2-8317-0257-7.

*Opportunities for Antarctic Environmental Education and Training*. P R Dingwall and D W H Walton (ed). 1996. Gland, IUCN and Cambridge, SCAR, xvii + 174 pp. [Proceedings of the SCAR/IUCN Workshop on Environmental Education and Training, Gorizia, Italy, 26–29 April 1993.] ISBN 2-8317-0297-6

*Monitoring of environmental impacts from science and operations in Antarctica*, M C Kennicutt II (ed). 1996. College Station, Texas A&M University for SCAR and COMNAP, x + 124 pp. ISBN 0 948277 17 3

*Composite Gazetteer of Antarctica (South of latitude 60°S)* Collated by R Cervellati and M C Ramorino (for the SCAR Working Group on Geodesy and Geographic Information). 1998. Rome, "Programma Nazionale di Ricerche in Antartide", 2 volumes, v + 227, and 328 pp.

*Subglacial lake exploration: workshop report and recommendations [volume 1] and supporting materials [volume 2]*, M C Kennicutt II (ed). [2000]. College Station, Texas A & M University for SCAR, iii + 26 and i + 70 pp. ISBN 0 948277 18 1

*Composite Gazetteer of Antarctica (South of latitude 60°S) [Supplement to the First Edition]* Collated by R Cervellati and M C Ramorino (for the SCAR Working Group on Geodesy and Geographic Information). 2000. Rome, "Programma Nazionale di Ricerche in Antartide", 46 pp.

*Antarctic Digital Database, Version 3.0, database, manual and bibliography*, 2000. Cambridge, SCAR, 93 pp. ISBN 0 948277 19 X

*Composite Gazetteer of Antarctica (South of latitude 60°S) [Supplement to the March 1998 Edition]* Collated by R Cervellati and M C Ramorino (for the SCAR Geoscience Standing Scientific Group). 2004. Rome, "Programma Nazionale di Ricerche in Antartide", 100 pp.

*SCAR Strategic Plan 2004-2010*. 2004. Cambridge, SCAR.

*Antarctic Climate Evolution - view from the margin*; Barrett, P., Florindo, F. and Cooper, A. (ed), 2006. *Palaeogeography, Palaeoclimatology, Palaeoecology*, v. 231, p 1-252.

*Integrated Global Observing Strategy Cryosphere Theme Report - For the Monitoring of our Environment from Space and from Earth*. IGOS, 2007. Geneva: World Meteorological Organization. WMO/TD-No. 1405. 100 pp.

*Persistent Organic Pollutants (POPs) in the Antarctic Environment: A Review of Findings*. R. Fuoco, G. Capodaglio, B. Muscatello and M. Radaelli (SCAR Action Group on Environmental Contamination in Antarctica): 98 pp., 2009. Cambridge, SCAR. ISBN 978 0 948277 23 8

*A Statistical Assessment of the Status and Trends of Antarctic and Subantarctic Seabirds*; Bird Biology Workshop, Montana. ISBN 978-0-948277-20-7

*Antarctic Climate Change and the Environment*. Turner, J., Bindshadler, R.A., Convey, P., Di Prisco, G., Fahrbach, E., Gutt, J., Hodgson, D.A., Mayewski, P.A., and Summerhayes, C.P.: 526 pp., 2009. Cambridge, SCAR. ISBN 978 0 948277 22 1

*The International Antarctic Weather Forecasting Handbook*. Turner, J. and Pendlebury, S. F. (eds.), 2004 (updated 2009), British Antarctic Survey, Cambridge, 663 pp.

*Analysis: Scientific Committee on Antarctic Research*, M Kennicutt, 2010. Published by Research Media.

*Science in the Snow: Fifty years of international collaboration through the Scientific Committee on Antarctic Research*. D W H Walton and P D Clarkson, 2011. Cambridge, SCAR, x + 258 pp. ISBN 978-0-948277-25-2

*A History of SCAR, 2004-2010*. C.P. Summerhayes, 2011. SCAR Occasional Publication. SCAR, Cambridge. ISBN 978 0 948277 26 9

*The Southern Ocean Observing System: Initial Science and Implementation Strategy*. ISBN 978-0-948277-27-6

*SCAR Research Day - Abstracts*. ISBN 978-0-948277-51-1

*Strategic Plan 2017-2022: Connecting and Building Antarctic Research*. ISBN 978-0-948277-53-5

*POLAR 2018 Abstracts*. ISBN 978-0-948277-54-2

### BIOMASS Scientific Series

*Biological Investigations of Marine Antarctic Systems and Stocks (BIOMASS): Research Proposals*. S Z El-Sayed (ed), 1977. Cambridge, SCAR & SCOR, (BIOMASS Scientific Series 1), 79 pp.

*Biological Investigations of Marine Antarctic Systems and Stocks (BIOMASS): Selected Contributions of the Woods Hole Conference on Living Resources of the Southern Ocean 1976*. S Z El-Sayed (ed), 1981. Cambridge, SCAR & SCOR, (BIOMASS Scientific Series 2), 155 pp.)

*Swimming Behaviour, Swimming Performance and Energy Balance of Antarctic Krill, Euphausia superba*. U Kils, 1981. College Station, Texas, SCAR & SCOR, (BIOMASS Scientific Series 3), 122 pp.

## Appendices

*Distribution and Abundance of Antarctic and Sub-Antarctic Penguins: a synthesis of current knowledge.* G J Wilson (comp), 1983. Cambridge, SCAR & SCOR, (BIOMASS Scientific Series 4), 46 pp.

*Illustrated Guide to Fish Larvae of the Southern Ocean.* F N Efremenko, 1985. Cambridge, SCAR & SCOR, (BIOMASS Scientific Series 5), 74 pp. ISBN 0 948277 02 5

*Biology and Status of Exploited Antarctic Fish Stocks.* K-H Kock, G Duhamel & J-C Hureau, 1985. Cambridge, SCAR & SCOR, (BIOMASS Scientific Series 6), 143 pp. ISBN 0 948277 03 3

*Antarctic Aquatic Biology.* S Z El-Sayed & A P Tomo (ed), 1987. Cambridge, SCAR, (BIOMASS Scientific Series 7), 222 pp. ISBN 0 948277 06 8

*A Handbook for the Measurement of Chlorophyll *a* and Primary Production.* C A Evans, J E O'Reilly & J P Thomas, 1987. College Station, Texas, SCAR, SCOR & NOAA/NMFS, (BIOMASS Scientific Series 8), 114 pp. ISBN 0 948277 07 6

*Biology and Ecology of the Antarctic Krill (Euphausia superba Dana): a review.* D G Miller & I Hampton, 1989. (BIOMASS Scientific Series 9), Cambridge, SCAR & SCOR, 166 pp. ISBN 0 948277 09 2

*Identification Key and Catalogue of Larval Antarctic Fishes.* A. Kellerman (ed.), 1989. Cambridge, Alfred-Wegener-Institut für Polar- und Meeresforschung, SCAR and CCAMLR (BIOMASS Scientific Series 10), 136 pp. ISBN 0 948277 12 2

*Atlas of Polish Oceanographic Observations in Antarctic Waters 1981.* S Z El-Sayed (ed), 1985. Cambridge, SCAR & SCOR, (A BIOMASS incidental publication), 83 pp. ISBN 0 948277 04 1

## Appendix 10

# List of Acronyms and Abbreviations

AAA	Antarctic Astronomy and Astrophysics
ABI	Antarctic Biodiversity Informatics
ABII	Antarctic Biological Invasion Indicator
ACA	AG on Antarctic Clouds and Aerosols
ACCE	Antarctic Climate Change and the Environment
ACE	Antarctic Climate Evolution
ACIA	Arctic Climate Impact Assessment
ACMRR	Advisory Committee on Marine Resources Research
ACSE	Antarctic Coastal and Shelf Ecosystems
ADD	Antarctic Digital Database
ADGRAV	Antarctic Digital Gravity Map
ADMAP	Antarctic Digital Magnetic Anomaly Project
ADMS	Antarctic Data Management System
AEIMEE	Group of Specialists on Antarctic Environmental Implications of Possible Mineral Exploitation
AEON	Antarctic Environmental Officers Network
AEROARCTIC	Studiengesellschaft zur Erforschung der Arktis mit Luftfahrzeugen (International Society for the Exploration of the Arctic by means of Aircraft)
AESB	Antarctic Environmental Specimen Banks
AFoPS	Asian Forum for Polar Sciences
AG	Action Group
AGAFS	Action Group on Antarctic Fuel Spills
AGCS	Antarctica and the Global Climate System
AGONET	Antarctic Geospace Observatory Network
AGU	American Geophysical Union
AMAP	Arctic Monitoring and Assessment Programme
AMD	Antarctic Master Directory
ANDRILL	Antarctic Drilling Project
AnMAP	Antarctic Monitoring and Assessment Programme
AnSWeR	Antarctic Seismology Web Resource
AnT-ERA	Antarctic Thresholds - Ecosystem Resilience and Adaptation
ANTABIF	Antarctic Biodiversity Information Facility
ANTALITH	Antarctic International Lithosphere Project
AntClim <sup>21</sup>	Antarctic Climate in the 21 <sup>st</sup> Century
ANTEC	Antarctic Neotectonics, Expert Group on
ANTEC	Antarctic Neotectonics, Group of Specialists on
AntEco	State of the Antarctic Ecosystem
ANTIME	Late Quaternary Sedimentary Record of Antarctic Ice Margin Evolution
ANTOBIS	Antarctic node of the Ocean Biogeographic Information System

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ANTOS	Antarctic Near-shore and Terrestrial Observing System
ANTOSTRAT	Antarctic Offshore Seismic Stratigraphy
ANTPAS	Antarctic and sub-Antarctic Permafrost, Soils and Periglacial Environments
ANTPAS	Antarctic Permafrost and Soils
APECS	Association of Polar Early Career Scientists
APIS	Antarctic Pack Ice Seals
ARC	Antarctic Roadmap Challenge
ARC Project	Antarctic Research Challenges
ASCEND	Agenda of Science for Environment and Development into the 21 <sup>st</sup> Century
ASI	All-Sky Imager
ASMA	Antarctic Specially Managed Area
ASOC	Antarctic and Southern Ocean Coalition
ASPA	Antarctic Specially Protected Areas
ASPeCt	Antarctic Sea Ice Processes and Climate
ATCM	Antarctic Treaty Consultative Meeting
ATHENA	Advancing TechNological and ENvironmental stewardship for subglacial exploration in Antarctica
ATME	Antarctic Treaty Meeting of Experts
ATS	Antarctic Treaty System
ATSCM	Antarctic Treaty Special Consultative Meeting
AUV	Autonomous Underwater Vehicle
AWI	Alfred-Wegener-Institut für Polar- und Meeresforschung
AWS	Automated Weather Stations
BA	Bachelor of Arts
BAMM	Birds and Marine Mammals
BAS	British Antarctic Survey
BEDMAP	Antarctic Bedrock Topography
BEPSII	Biogeochemical Exchange Processes at the Sea-Ice Interfaces
BIOMASS	Biological Investigations of Marine Antarctic Systems and Stocks
BIOTAS	Biological Investigations of Terrestrial Antarctic Systems
BipAG	Bipolar Action Group (Joint IASC/SCAR)
CALM-S	Circumpolar Active Layer Monitoring-South
CAML	Census of Antarctic Marine Life
CASO	Climate of Antarctica and the Southern Ocean
CBD	Convention on Biological Diversity
CBE	Commander of the Order of the British Empire
CBET	Capacity Building, Education and Training
CCAMLR	Commission for the Conservation of Antarctic Marine Living Resources
CCAMLR	Convention on the Conservation of Antarctic Marine Living Resources
CCAS	Conservation of Antarctic Seals
CCRWP	Climate Change Response Work Plan
CD-ROM	Compact Disc – Read Only Memory
CEMP	CCAMLR Ecosystem Monitoring Programme
CEP	Committee for Environmental Protection
CGA	Composite Gazetteer of Antarctica
CHAMP	satellite magnetic observations
CliC	Climate and the Cryosphere
CLIVAR	Climate Variability
CMG	Coastal & Marine Geology (USGS)
CMIP-6	Coupled Model Intercomparison Project

## Science in the Snow

CNRS	Centre National de la Recherche Scientifique (National Centre for Scientific Research)
CO	Chief Officer
CO <sub>2</sub>	Carbon dioxide
COGS	Collaborative Geoscience in the South Shetland Islands
CoML	Census of Marine Life
COMNAP	Council of Managers of National Antarctic Programmes
COSPAR	Committee on Space Research
CPR	Continuous Plankton Recorder
CPRAG	Continuous Plankton Recorder Research Action Group
CRAMRA	Convention on the Regulation of Antarctic Mineral Resource Activities
CRISIS	Center for Remote Sensing of Ice Sheets
CryOS	Cryosphere Observing System
CSAGI	Comité Spécial de l'Année Géophysique Internationale (Special Committee for the International Geophysical Year)
DEMETER	Detection of Electro-Magnetic Emissions Transmitted from Earthquake Regions
DIVERSITAS	An Integrated Programme of Biodiversity Science
DNA	Deoxyribonucleic Acid
DPP	Division of Polar Programs
DSc	Doctor of Science
DueSouth	Database of Upcoming Expeditions to the Southern Ocean
EAIS	East Antarctic Ice Sheet
EAMREA	Environmental impact of mineral exploration/exploitation in Antarctica
EAMREA	Possible Environmental Effects of Mineral Exploration and Exploitation in Antarctica
EASIZ	Ecology of the Antarctic Sea Ice Zone
EBA	Evolution and Biodiversity in the Antarctic
ECA	Environmental Contamination in Antarctica, Action Group on
ECO	ASOC newsletter distributed at ATCMs
EG	Expert Group
EG-CCER-SAE	Expert Group on Code of Conduct for the Exploration and Research of Subglacial Aquatic Environments
EG-PAMP	Expert Group on Protected Area Management Plans
EGAPPE	Expert Group on Antarctic Permafrost and Periglacial Environments
ENSO	El Niño-Southern Oscillation
EPB	European Polar Board
EPICA	European Programme of Ice Drilling in Antarctica
ESA	European Space Agency
ETOPO2	Earth Topography
EVOLANTA	Evolutionary Biology of Antarctic Organisms
EXCOM	Executive Committee
FAO	Food and Agriculture Organization
FIBEX	First International BIOMASS Experiment
FRISP	Forum for Research into Ice Shelf Processes
FROST	First Regional Observing Study of the Troposphere
GAIA	Global Auroral Imaging Access
GAP	Glaciology of the Antarctic Peninsula
GBASE	GeomicroBiology of Antarctic Subglacial Environments
GBIF	Global Biodiversity Information System
GCMD	Global Change Master Directory
GEBCO	General Bathymetric Chart of the Oceans

## Appendices

GEOSS	Global Earth Observing System of Systems
GIA	Glacial Isostatic Adjustment
GIANT	Geodetic Infrastructure of Antarctica, Expert Group on
GIPPS	Global Integrated Polar Prediction System
GLOBEC	Global Ecosystems Dynamics
GLOCHANT	Global Change and the Antarctic
GLORIA	GLOBAL RIometer Array
GNSS	Global Navigation Satellite System
GOMOS	Global Ozone Monitoring by Occultation of Stars
GOOS	Global Ocean Observing System
GoS	Group of Specialists
GOSC	Group of Specialists on the Evolution of Cenozoic Palaeoenvironments of the Southern High Latitudes
GOSEAC	Group of Specialists on Environmental Affairs and Conservation
GRAPE/WSWF	Global Navigation Satellite System (GNSS) Research and Application for Polar Environment and Weather and Space Weather Forecasting
GTS	Global Telecommunications System
GWSWF	GPS for Weather and Space Weather Forecasting
HASSEG	Humanities and Social Sciences Expert Group
HEAT	High Elevation Antarctic Terahertz
IAA	International Association of Academies
IAATO	International Association of Antarctica Tour Operators
IABO	International Association of Biological Oceanography
IACS	International Association of Cryosphere Sciences
IAGA	International Association of Geomagnetism and Aeronomy
IAGP	International Antarctic Glaciological Project
IAMRC	International Antarctic Meteorological Research Centre
iAnZONE	international Antarctic Zone
IAPSO	International Association for the Physical Sciences of the Ocean
IASC	International Arctic Science Committee
IASH	International Association of Scientific Hydrology
IAU	International Astronomical Union
IBA	Important Bird Area
IBC-SO	International Bathymetric Chart of the Southern Ocean
IBEA	International Biomedical Expedition to the Antarctic
IBP	International Biological Programme
ICAIR	International Centre for Antarctic Information and Research
ICED	Integrating Climate and Ecosystem Dynamics in the Southern Ocean
IceREADER	READER for short ice core data
ICESTAR	Interhemispheric Conjugacy Effects in Solar-Terrestrial and Aeronomy Research
ICG	Intersessional Contact Group
ICSU	International Council for Science (formerly International Council of Scientific Unions)
IGBP	International Geosphere–Biosphere Programme
IGOS	Integrated Global Observing Strategy Partnership
IGRA	International Global Radiosonde Archive
IGU	International Geographical Union
IGY	International Geophysical Year
IHDP	International Human Dimensions Programme on Global Environmental Change
IHO	International Hydrographic Office

IHY	International Heliophysical Year
IMA	International Meteorological Association
IMBER	Integrated Marine Biogeochemistry and Ecosystem Research
IMC	International Meteorological Congress
IMO	International Meteorological Organization
IMOS	Integrated Marine Observing System
IMS	Committee for the International Magnetospheric Study
INQUA	International Union for Quaternary Research
INTECOL	International Association for Ecology
IOC	Intergovernmental Oceanographic Commission
IODE	International Oceanographic Data and Information Exchange
IODP	Integrated Ocean Drilling Program
IP	Information Paper
IPA	International Permafrost Association
IPAB	International Panel for Antarctic Buoys
IPBES	Intergovernmental Platform on Biodiversity and Ecosystem Services
IPCC	Intergovernmental Panel on Climate Change
IPICS	International Partnership in Ice Core Science
IPO	International Project Office
IPPI	International Polar Partnership Initiative
IPY	International Polar Year
IPY-JC	ICSU-WMO Joint Committee for the IPY
IQSY	International Quiet Sun Year
IRC	International Research Council
ISAES	International Symposium on Antarctic Earth Sciences
ISC	International Steering Committee
ISMAS	Ice Sheet Mass Balance and Sea Level
ISSA	Integrated Science for the Sub-Antarctic
ITASE	International Trans-Antarctic Scientific Expeditions
ITU	International Telecommunications Union
IUBS	International Union of Biological Sciences
IUCN	The World Conservation Union (formerly International Union for the Conservation of Nature)
IUGG	International Union of Geodesy and Geophysics
IUGS	International Union of Geological Sciences
IUPAP	International Union of Pure and Applied Physics
JC	ICSU-WMO Joint Committee
JCADM	Joint Committee on Antarctic Data Management
KGI	King George Island
KOPRI	Korean Oceanographic and Polar Research Institute
LGM	Last Glacial Maximum
LGP	Latitudinal Gradient Programme
LISSARD	Lake and Ice Stream Subglacial Access Research Drilling
LOC	Local Organizing Committee
MA	Master of Arts
MAPPPD	Mapping Application for Penguin Populations and Projected Dynamics
MarBIN	Marine Biodiversity Information Network
MBE	Member of the Order of the British Empire
MEDINET	Medical Network (COMNAP)
MERGE	Microbiological and Ecological Responses to Global Environmental
MetREADER	READER for climate data
MNAP	Manager of National Antarctic Programme

## Appendices

MOSAK	Modelling and Observational Studies of Antarctic Katabatic Winds
MoU	Memorandum of Understanding
MPA	Marine Protected Area
MSc	Master of Science
MSP	Meridian Scanning Photometer
NAPD	National Antarctic Program Director
NASA	National Aeronautical and Space Administration
NEEM	North Greenland Eemian Ice Drilling
NGO	Non-Governmental Organization
NO <sub>2</sub>	nitrous oxide
NOAA	National Oceanic and Atmospheric Administration
NO <sub>x</sub>	nitrogen oxide
NSF	National Science Foundation (USA)
NZ	New Zealand
O <sub>3</sub>	ozone
OBIS	Ocean Biodiversity Information System
OMM	Organisation Météorologique Mondiale (World Meteorological Organization)
OPMet	Operational Meteorology in the Antarctic
OPP	Office of Polar Programs (USA)
OSC	Open Science Conference
PACA	Physics and Chemistry of the Atmosphere, Working Group on
PACE	Past and Future Change of the Antarctic Environment
PACT	Polar Atmospheric Chemistry at the Tropopause, Action Group on
PAGES	Past Global Environmental Changes
PAIS	Past Antarctic Ice Sheet Dynamics
PAMP	Protected Area Management Plan
PASTA	Plateau Astronomy Site Testing in Antarctica, Action Group on
PCPBEA	Prediction of Changes in the Physical and Biological Environment of the Antarctic, Action Group on
PCPI	Polar Climate Predictability Initiative
PhD	Doctor of Philosophy
PIC	Polar Information Commons
PLT	Polar Large Telescope
POGO	Partnership for Observations of the Global Ocean
POLAR2018	SCAR-IASC Open Science Conference
POLENET	POLar Earth observations NETwork
POP	Persistent Organic Pollutants
RADARSAT	Radar Satellite
RAGES	Robotic Access to Grounding-zones for Exploration and Science
RAMP	RADARSAT Antarctic Mapping Programme
RAMS	Register of Antarctic Marine Species
READER	REference Antarctic Data for Environmental Research
RESOURCE	Radio Sciences Research on AntarctiC AtmospherE
RiSCC	Regional Sensitivity to Climate Change in Antarctic Terrestrial Ecosystems
RISP	Ross Ice Shelf Project
RPAS	Remotely Piloted Aircraft Systems
SAER	State of the Antarctic Environment Report
SALE	Subglacial Antarctic Lake Exploration
SAM	Southern Hemisphere Annular Mode
SAON	Sustained Arctic Observing Network

## Science in the Snow

SASSI	Synoptic Antarctic Shelf-Slope Interactions Study
SAVANT	Seeps And Vents in ANTArctica
SC-ATS	Standing Committee on the Antarctic Treaty System
SCADM	Standing Committee on Antarctic Data Management
SCAGI	Standing Committee on Antarctic Geographic Information
SCALOP	Standing Committee on Antarctic Logistics and Operations
SCAR	Scientific (formerly Special) Committee on Antarctic Research
SCARCOM	SCAR Communications Manual
SCARCOM	SCAR Radio Communications Guidance Manual
SCARLOG	SCAR Working Group on Logistics
SCATS	Standing Committee on the Antarctic Treaty System
SCOR	Scientific (formerly Special) Committee on Oceanic Research
SCOR	Scientific Committee on Oceanic Research
SCOSTEP	Scientific Committee on Solar-Terrestrial Physics
SDLS	Seismic Data Library System
SERAnt	AG on Sun Earth Relationships and Antarctica
SERCE	Solid Earth Response and influences on Cryospheric Evolution
SIBEX	Second International BIOMASS Experiment
SieGE	Sub-Ice Geological Exploration, Action Group on
SIGE	Sub-Ice Geological Exploration, Action Group on
SO-CPR	Southern Ocean Continuous Plankton Recorder
SO-GLOBEC	Southern Ocean GLOBEC
SOIP	Southern Ocean Implementation Panel
SOOS	Southern Ocean Observing System
SOOSMap	Interactive map of Southern Ocean Observing System
SOS	SCAR Organization and Strategy, ad hoc Group on
SPA	Specially Protected Area
SPRI	Scott Polar Research Institute
SRP	Scientific Research Programme
SSG	Scientific Standing Group
SSG-GS	SSG on Geosciences
SSG-LS	SSG on Life Sciences
SSG-PS	SSG on Physical Sciences
SSSI	Site of Special Scientific Interest
STAR	Solar-Terrestrial and Astrophysical Research, Working Group on
START	System for Analysis, Research and Training
TARANTELLA	Secure Global Desktop
TATE	Tropical Antarctic Teleconnections
TEWG	Transitional Environmental Working Group
THEMIS	Time History of Events and Macroscale Interactions during Substorms
ToR	Term of Reference
UAV	Unmanned Aerial Vehicle
UN	United Nations
UNCED	United Nations Conference on Environment and Development
UNCLOS	United Nations Convention on the Law of the Sea
UNEP	United Nations Environment Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFCCC	United Nations Framework Convention on Climate Change
URSI	Union Radio Scientifique Internationale (International Union of Radio Sciences)
USC	University of Southern California
USGS	United States Geological Survey

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USSR	Union of Soviet Socialist Republics
UTLS	Upper Troposphere – Lower Stratosphere
VLF	Very Low Frequency (radio waves)
WAIS	West Antarctic Ice Sheet
WAP	West Antarctic Peninsula
WCMC	World Conservation Monitoring Centre
WCRP	World Climate Research Programme
WDC	World Data Centre
WG	Working Group
WMO	World Meteorological Organization
WSSD	World Summit on Sustainable Development
WWF	World-Wide Fund for Nature (formerly World Wildlife Fund)

## Appendix 11

### Antarctic winter stations

#### Antarctic Stations operating during the IGY austral winters

	<i>Station</i>	<i>Nationality</i>	<i>Latitude</i>	<i>Longitude</i>
1.	South Pole	United States	90°00'S	
2.	Roi Baudouin (not open, 1957 winter)	Belgium	70°25'S	24°18'E
3.	Marion Island	South Africa	46°52'S	37°52'E
4.	Syowa (closed, 1958 winter)	Japan	69°00'S	39°35'E
5.	Mawson	Australia	67°36'S	62°52'E
6.	Port-aux-Français, Iles Kerguelen	France	49°21'S	70°12'E
7.	La Roche Godon, Ile Amsterdam	France	37°50'S	77°34'E
8.	Davis	Australia	68°34'S	77°58'E
9.	Sovetskaya	USSR	78°23'S	87°32'E
10.	Mirnyy	USSR	66°33'S	93°01'E
11.	Pionerskaya	USSR	69°44'S	95°30'E
12.	Komsomol'skaya	USSR	74°00'S	99°00'E
13.	Oazis	USSR	66°30'S	101°00'E
14.	Vostok	USSR	78°28'S	106°48'E
15.	Wilkes	United States	66°15'S	110°35'E
16.	Charcot	France	69°22'S	139°01'E
17.	Dumont d'Urville	France	66°40'S	140°01'E
18.	Macquarie Island	Australia	54°30'S	158°57'E
19.	Scott Base (combined station)	New Zealand	77°51'S	166°45'E
20.	Williams Air Operations Facility	United States	77°51'S	166°45'E
21.	Campbell Island	New Zealand	52°33'S	169°09'E
22.	Cape Hallett (joint station)	NZ/USA	72°25'S	170°55'E
23.	Little America V	United States	78°10'S	162°17'W
24.	Byrd	United States	80°00'S	120°00'W
25.	Horseshoe Island	United Kingdom	67°49'S	67°17'W
26.	General San Martín	Argentina	68°08'S	67°06'W
27.	Detaille Island	United Kingdom	66°52'S	66°48'W
28.	Prospect Point	United Kingdom	66°00'S	65°24'W
29.	Argentine Islands	United Kingdom	65°15'S	64°16'W

## Appendices

	<i>Station</i>	<i>Nationality</i>	<i>Latitude</i>	<i>Longitude</i>
30.	Anvers Island	United Kingdom	64°46'S	64°05'W
31.	Port Lockroy	United Kingdom	64°50'S	63°31'W
32.	Melchior	Argentina	64°20'S	62°59'W
33.	Presidente Gabriel González Videla	Chile	64°49'S	62°52'W
34.	Almirante Brown	Argentina	64°53'S	62°52'W
35.	Danco Island	United Kingdom	64°44'S	62°36'W
36.	Decepción	Argentina	62°59'S	60°42'W
37.	Presidente Pedro Aguirre Cerda	Chile	62°56'S	60°36'W
38.	Deception Island	United Kingdom	62°59'S	60°34'W
39.	Teniente Cámara	Argentina	62°36'S	59°57'W
40.	Capitan Arturo Prat	Chile	62°30'S	59°41'W
41.	Admiralty Bay	United Kingdom	62°05'S	58°25'W
42.	General Bernardo O'Higgins Riquelme and Luis Risopatron (combined station)	Chile	63°19'S	57°54'W
43.	Hope Bay	United Kingdom	63°24'S	56°59'W
44.	Esperanza	Argentina	63°22'S	56°59'W
45.	Signy Island	United Kingdom	60°43'S	45°36'W
46.	Orcadas	Argentina	60°44'S	44°44'W
47.	Ellsworth	United States	77°43'S	41°07'W
48.	General Belgrano	Argentina	77°46'S	38°14'W
49.	King Edward Point, South Georgia	United Kingdom	54°17'S	36°30'W
50.	Halley Bay	United Kingdom	75°35'S	26°32'W
51.	Gough Island	South Africa	40°22'S	09°52'W
52.	Norske Stasjon	Norway	70°30'S	02°32'W

### Antarctic Stations operating during the IPY austral winters

	<i>Station</i>	<i>Nationality</i>	<i>Latitude</i>	<i>Longitude</i>
1.	Amundsen-Scott	United States	89°59'51"S	139°16'22"E
2.	Troll	Norway	72°00'07"S	02°32'02"E
3.	Maitri	India	70°45'57"S	11°44'09"E
4.	Novolazarevskaya	Russia	70°46'26"S	11°51'54"E
5.	Marion Island	South Africa	46°52'34"S	37°51'32"E
6.	Syowa	Japan	69°00'22"S	39°35'24"E
7.	Molodezhnaya	Russia	67°40'58"S	46°08'05"E
8.	Alfred Faure, Iles Crozet	France	46°25'48"S	51°51'40"E
9.	Mawson	Australia	67°36'17"S	62°52'15"E

## Science in the Snow

10.	Port-aux-Français, Iles Kerguelen	France	49°21'05"S	70°12'20"E
11.	Progress 2	Russia	69°23'00"S	76°14'00"E
12.	Zhongshan	China	69°22'16"S	76°23'13"E
13.	Martin de Viviers, Ile Amsterdam <i>Station</i>	France <i>Nationality</i>	37°49'48"S <i>Latitude</i>	77°34'12"E <i>Longitude</i>
14.	Davis	Australia	68°34'38"S	77°58'21"E
15.	Mirnyy	Russia	66°33'07"S	93°00'53"E
16.	Vostok	Russia	78°28'00"S	106°48'00"E
17.	Casey	Australia	66°17'00"S	110°31'11"E
18.	Concordia	France and Italy	75°06'07"S	123°23'43"E
19.	Dumont d'Urville	France	66°39'46"S	140°00'05"E
20.	Macquarie Island	Australia	54°29'58"S	158°56'09"E
21.	McMurdo	United States	77°50'53"S	166°40'06"E
22.	Scott Base	New Zealand	77°51'00"S	166°45'46"E
23.	Rothera	United Kingdom	67°34'10"S	68°07'12"W
24.	San Martín	Argentina	68°07'47"S	67°06'12"W
25.	Vernadsky	Ukraine	65°14'43"S	64°15'24"W
26.	Palmer	United States	64°46'30"S	64°03'04"W
27.	Capitan Arturo Prat	Chile	62°30'00"S	59°41'00"W
28.	Frei	Chile	62°12'00"S	58°57'51"W
29.	Escudero	Chile	62°12'04"S	58°57'45"W
30.	Great Wall	China	62°12'59"S	58°57'44"W
31.	Bellingshausen	Russia	62°11'47"S	58°57'39"W
32.	Artigas	Uruguay	62°11'04"S	58°54'09"W
33.	King Sejong	Korea	62°13'24"S	58°47'21"W
34.	Jubany	Argentina	62°14'16"S	58°39'52"W
35.	Arctowski	Poland	62°09'34"S	58°28'15"W
36.	Comandante Ferraz	Brazil	62°05'00"S	58°23'28"W
37.	O'Higgins	Chile	63°19'15"S	57°54'01"W
38.	Esperanza	Argentina	63°22'02"S	56°59'46"W
39.	Marambio	Argentina	64°14'42"S	56°39'25"W
40.	Orcadas	Argentina	60°44'20"S	44°44'17"W
41.	Bird Island	United Kingdom	54°00'31"S	38°03'08"W
42.	King Edward Point	United Kingdom	54°17'00"S	36°29'37"W
43.	Belgrano II	Argentina	77°52'29"S	34°37'37"W
44.	Halley	United Kingdom	75°34'54"S	26°32'28"W
45.	Gough Island	South Africa	40°21'56"S	09°52'00"W
46.	Neumayer	Germany	70°38'00"S	08°15'48"W
47.	SANAE IV	South Africa	71°40'25"S	02°49'44"W