

**TEMPLATE FOR THE REPORT BY THE DBCP ACTION GROUPS TO THE
THIRTIY-SECOND SESSION OF THE DBCP**
(La Jolla, 17-21 October 2016)

1) Summary

Name of Action Group	WCRP/SCAR International Programme for Antarctic Buoys (IPAB)
Date of report	11 Sep 2016
Overview and main requirements addressed	The Participants of the WCRP/SCAR International Programme for Antarctic Buoys (IPAB) work together to maintain a network of drifting buoys in the Southern Ocean, in particular over sea ice, to provide meteorological and oceanographic data for real-time operational requirements and research purposes. The IPAB was established in 1994 and became an Action Group of the Panel in October 1994.
Area of interest	South of 55°S and that region of the Southern Ocean and Antarctic marginal seas within the maximum seasonal sea-ice extent.
Type of platform and variables measured	Ice buoys measuring the following: <u>Minimum variables:</u> Buoy position <u>Basic variables:</u> Buoy position, atmospheric pressure and SST <u>Other variables:</u> Air temperature, ice and/or snow temperature, atmospheric pressure tendency, wind speed and direction, snow accumulation, other sea-ice properties and oceanographic variables
Targeted horizontal resolution	500 km x 500 km
Chairperson/Managers	Dr Petra Heil, AAD and ACE CRC, Hobart, Australia
Coordinator	Dr Christian Haas, York University, Toronto, Canada; and: Alfred Wegener Institute for Polar and Marine Research, Bremerhaven, Germany Dr. Ignatius Rigor, University of Washington, Seattle, USA
Participants	<ul style="list-style-type: none"> - Alfred Wegener Institut, Germany - Australian Antarctic Division, Australia - Bureau of Meteorology, Australia - British Antarctic Survey, UK - Finnish Institute for Marine Research, Finland - GI, University of Alaska Fairbanks, USA - IARC, University of Alaska Fairbanks, USA - National Ice Center, USA - National Snow and Ice Data Center NSIDC, USA - ISDM/MEDS, Dept. of Fisheries and Ocean, Canada - Meteorological Service NZ LTD, New Zealand - Norwegian Polar Institute, Norway - Polar Science Center, Univ. of Washington, USA - National Institute of Polar Research, Japan - JAMSTEC, Japan - Programma Nazionale di Ricerche in Antartide, Italy - DAMTP, UK - SAMS, UK - York University, Toronto, Canada - CLS/Service Argos, France

	<p>- South African Weather Service, South Africa- Meteorological Office, UK - CRREL, USA</p>
Data centre(s)	<p>Alfred Wegener Institute for Polar and Marine Research, Germany: http://www.pangaea.de/search?q=ipab National Snow and Ice Data Center NSIDC, USA: http://nsidc.org/data/docs/daac/nsidc0084_ipab_antarctic_buoys.gd.html</p>
Website	<p>http://www.ipab.aq/</p>
Meetings <i>(meetings held in 2015/2016; and planned in 2016/2017)</i>	<p>IPAB participants reported during the annual meeting of the International Arctic Buoy Programme IABP in Incheon, Korea, on May 12 and 13, 2016. It is considered to hold the next IPAB participants meeting during the IGS/IACS/CliC 2017 Cryo Symposium in Wellington, NZ, during the week 12–17 February 2017</p>
Current status summary <i>(mid-2016)</i>	<p>7 snow depth buoys, 9 IMBs, 7 SVPs and 3 AWSs were deployed on sea ice floes during AWI Polarstern cruise PS96/01 in the Eastern and Southern Weddell Sea, contributed by AWI. 11 SVP-B buoys with drogues were deployed in open water by USIPAB from the Polar Star in January 2016 on its trek from McMurdo to Punta Arenas.</p> <p>The South African National Drifting Weather Buoy Programme deployed 12 NOAA weather buoys during the 2015/16 period, north of the ice edge. The Meteorological Services Australia and New Zealand continue to operationally deploy numerous SVP's in the Southern Ocean, primarily north of the sea ice edge.</p>
Summary of plans for 2016/17	<p>USIPAB will deploy several SVPs in the Ross & Amundsen Sea. AWI will deploy few buoys in the Weddell Sea. South African Weather service plans to deploy 15 X drifters for 2016/17</p>

2 Deployment plans for 2016/17

- USIPAB will deploy several SVPs in the Ross & Amundsen Sea. AWI will deploy few buoys in the Weddell Sea. Buoy contributions from other participants are welcome during these cruises.
- The Meteorological Services of South Africa, Australia, and New Zealand will continue to operationally deploy numerous SVP's in the Southern Ocean, primarily north of the sea ice edge.

3 Data management

3.1 Distribution of the data

3.1.1 Data policy

Data are generally freely distributed among IPAB participants as part of general scientific collaboration. Participants are encouraged to submit their data to the IPAB coordinator upon completion of their own scientific analyses.

3.1.2 Real-time data exchange

Participants are encouraged to transmit their data to the GTS. Most of the buoys deployed by the USIPAB program transmitted to the GTS. Other participants are overwhelmed by new requirements due to increased usage of Iridium transmission.

3.1.3 Delayed mode data exchange

We work closely with the Integrated Science Data Management Service (ISDM) of the Department of Fisheries and Ocean (DFO), Canada on the reception, archiving, and posting of IPAB GTS data.

3.2 Data quality

Data quality is an ongoing issue. QC is performed by the individual science groups, or by some national data centres and the DBCP when data are transmitted to the GTS.

4) Instrument practices

N/A

5) Other issues as needed

- GTS transmission of data remains a challenge; need to raise awareness of buoy operators
 - Small number of buoys and short survival times remain important challenges, as does GTS transmission.
 - Need boost for YOPP
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Annex (optional)

Status maps and graphics

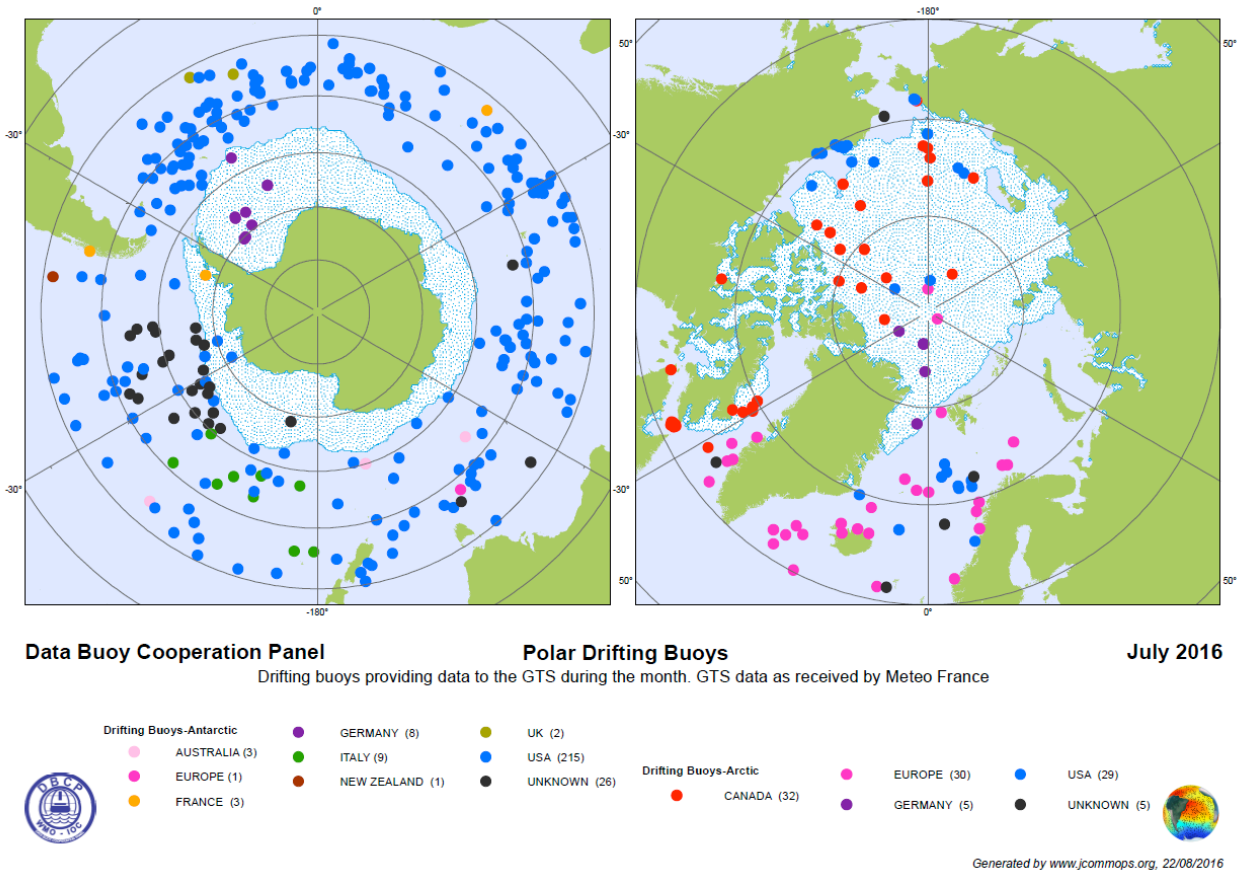


Figure 1: Status of Southern Ocean (left; and Arctic, right) GTS buoy network, July 2016. Downloaded from the DBCP @ <http://www.jcommops.org/dbcp/network/maps.html> .

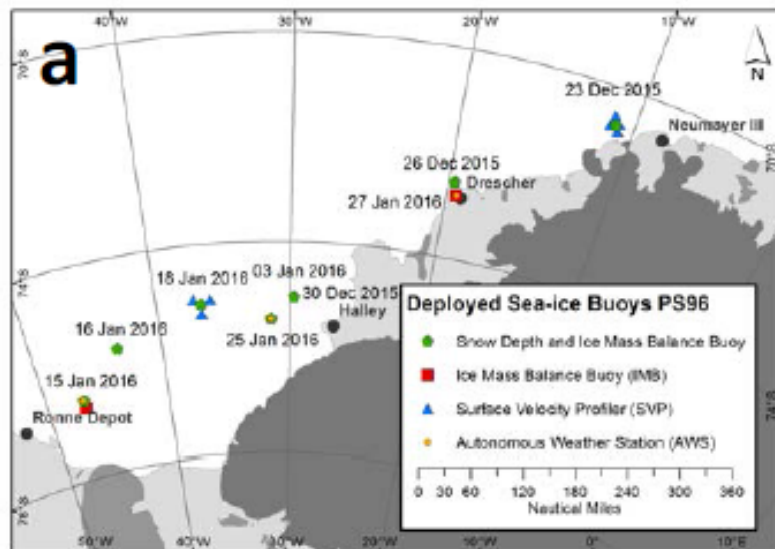


Figure 2: Map of all deployment locations of AWI buoys in January 2016. Map courtesy Stefanie Arndt, AWI, from PS96 cruise report.

INTERNATIONAL PROGRAMME FOR ANTARCTIC BUOYS

Report on the South African 2015/2016 National Drifting Weather Buoy Programme

The following report details progress of the South African National Drifting Weather Buoy Programme for the International Programme for Antarctic Buoys for the intersessional period 2015/2016, up to 30 June 2016. A total of 12 weather buoys were deployed during the 2015/16 period.

Drifting Weather Buoy Deployments

Deployments 2015/2016

Argos ID	Date of deployment	Latitude	Longitude
101810	13/11/2015	53° 11.30' S	044° 19.20' W
40433	17/12/2015	53° 12.0'S	044° 11.5'W
132636	27/12/2015	61° 09.80' S	025 0.20' W
132638	31/12/2015	52° 43.90' S	030° 0.00' W
132637	31/12/2015	52° 15.70' S	028° 0.00' W
132635	31/12/2015	50° 01.40' S	027° 0.20' W
132730	31/12/2015	51° 48.00' S	026° 03.80' W
139593	01/01/2016	51° 18.20' S	024° 0.00' W
132669	01/01/2016	51° 03.60' S	023° 0.00' W
132727	01/01/2016	51° 03.30' S	022° 58.50' W
132668	01/01/2016	51° 02.90' S	022° 56.80' W
J04VCY	01/01/2016	50° 49.00' S	21° 59.80' W
132728	01/01/2016	50° 31.00' S	020° 59.70' W
132729	01/01/2016	50° 30.60' S	020° 58.40' W
139595	01/01/2016	49° 58.60' S	018° 59.90' W
139587	12/03/2016	53° 09.30' S	044° 27.40' W

One stationary buoy was deployed at South Thule Island (with the previously-stationary buoy being subsequently deployed as a drifter).

Six drifters were handed over to South Georgia.

This brings the total deployed number to **22**.

Partnerships

All drifters deployed as part of the IPAB were supplied by NOAA. The South African Weather Service (SAWS) remains grateful to NOAA in this regard. Most of these drifters were deployed during the annual voyage to Antarctica on board the national research vessel, *SA Agulhas II*. Three of the drifters reported on here were deployed by the vessel *Pharos SG*. The National Department of Environmental Affairs: Oceans & Coasts (DEA: OC) paid for ship time and deployments. The SAWS paid for the customs clearance of the buoys. The Government of South Georgia and the South Sandwich Islands allows SAWS to place a buoy on South Thule Island to provide consistent pressure readings for this area.

Challenges

Consistent reporting of drifter deployment by Falkland Islands.

Future Plans:

15 X drifters for 2016/17.

