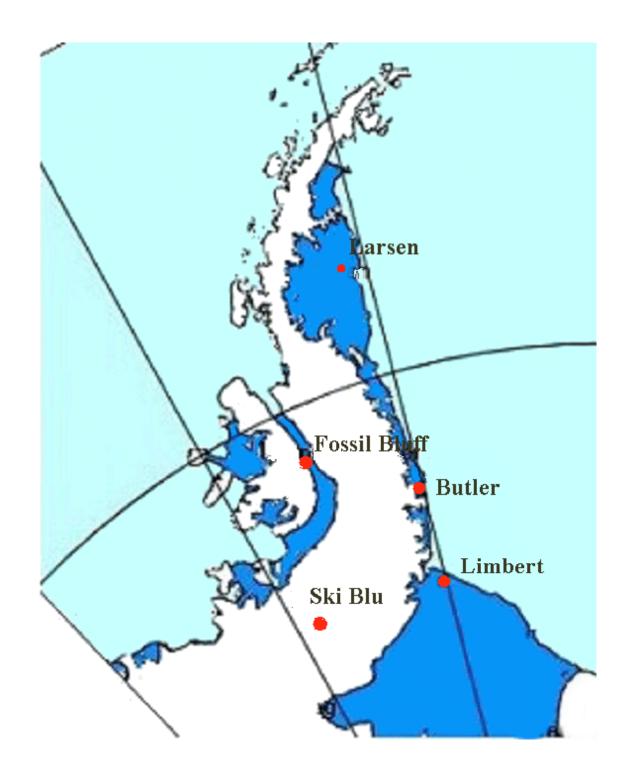
Antarctic Peninsula Automatic Weather Station Servicing by BAS for Summer 2005/2006 and an update on the READER project

Steve Colwell

Overview

- The AWS network.
- Work done this season
- Future plans
- READER

Click on an area to enlarge



Current Status

Name	Temperature	Pressure	Wind speed	Wind direction
Larsen	ОК	OK	OK	ОК
Butler	ОК	ОК	ОК	ОК
Ski Blu	ОК	ОК	ОК	ОК
Limbert	ОК	ОК	OK	FROZEN
Fossil Bluff	ОК	ОК	ОК	ОК

Servicing done this last season

- To assist with the servicing a Telonics TSUR-400 receiver was purchased and sent to Rothera this season. This proved to be very useful in the field.
- Limbert
 - The whole system was dug up and re-erected on the same site and the boom aligned with magnetic North.
- Ski Blu
 - The AWS looked to be in good condition and did not need to be raised.
 - The power cable to the battery box was replaced due to incorrect wiring from the previous year

- Uranus Glacier
 - The AWS was dug up and all equipment was removed.
 - A new AWS was put in place at Fossil Bluff.
- Larsen
 - This site was initially visited on the 14/12/05 and the battery box was found to be full of corrosion and hence testing of the AWS was not possible.
 - A second visit was made to install a new battery box and test that the AWS was transmitting.
- Butler Island
 - The mast was raised and the box repositioned up the mast.

New Fossil Bluff AWS

- A Campbell CR10X AWS was installed at Fossil Bluff and has the same ARGOS ID as the AWS that was at Uranus Glacier.
- Data are sampled every 10 seconds then averaged every 10 minutes and transmitted.
- The data are downloaded from the ARGOS website every hour then decoded and error checked.

- The data is then formatted into a synoptic message that includes the wind speed, wind direction, temperature and station level pressure which are the measured parameters.
- Dewpoint, sea level pressure and pressure trend are calculated and also added to the synoptic message.
- The synoptic message is then sent to the Met Office via E-mail for insertion onto the GTS.

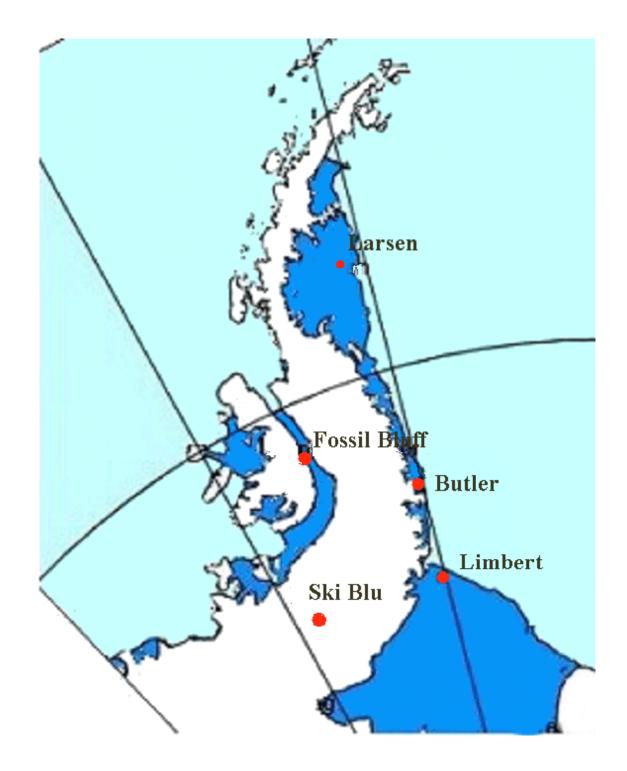
- Only the synoptic data from Butler Island is being inserted onto the GTS by ARGOS.
- Data for Larsen, Limbert and Ski Blu are being downloaded from the SSEC website ever hour by a script that runs at BAS.
- A synoptic message is being constructed from the data and E-mail to the Met Office for insertion onto the GTS.
- This route can be stopped if ARGOS begin to insert the data for Larsen, Limbert and Ski Blu.

GCOS monitoring

- BAS has agreed to carry out the GCOS monitoring for Antarctica.
- This will include the monitoring of the SYNOP and TEMP messages that go out on the GTS and also the CLIMAT and CLIMAT TEMP messages.
- Internal consistency checks SYNOPS and CLIMAT messages and TEMP and CLIMAT TEMP messages.

<mark>89269</mark>	Bonaparte Point	18-JAN-2000				
89266	Butler Island	On GTS				
<mark>89324</mark>	Byrd	06-SEP-2000				
<mark>89834</mark>	D-47	19-NOV-2005				
89828	Dome C II	04-FEB-2006				
<mark>89734</mark>	Dome F (Fuji)	17-NOV-2000				
<mark>89873</mark>	Elaine	29-NOV-2001				
89332	Elizabeth	04-FEB-2006				
<mark>89872</mark>	Ferrell	20-AUG-2001				
89376	Gill	04-FEB-2006				
89108	Henry	04-FEB-2006				
89262	Larsen Ice Shelf	04-FEB-2006	ON	GTS	via	BAS
89377	Lettau	04-FEB-2006				
~ ~ ~			~ ~ ~			DAC
89257	Limbert	04-FEB-2006	ON	GTS	vıa	BAS
	Limbert Linda	04-FEB-2006 On GTS	ON	GTS	via	BAS
89769	Linda Manuela (Inex. Is.)	On GTS 26-APR-2006		GTS	via	DAS
89769 <mark>89864</mark>	Linda Manuela (Inex. Is.)	On GTS		GTS	via	BAS
89769 <mark>89864</mark> 89866	Linda Manuela (Inex. Is.)	On GTS 26-APR-2006		GTS	VIA	BAS
89769 <mark>89864</mark> 89866 89869	Linda Manuela (Inex. Is.) Marble Point	On GTS 26-APR-2006 04-FEB-2006		GTS	via	BAS
89769 89864 89866 89869 89768	Linda Manuela (Inex. Is.) Marble Point Marilyn (Byrd Gl.)	On GTS 26-APR-2006 04-FEB-2006 06-AUG-2000		GTS	VIA	BAS
89769 89864 89866 89869 89768	Linda Manuela (Inex. Is.) Marble Point Marilyn (Byrd Gl.) Minna Bluff Mount Siple	On GTS 26-APR-2006 04-FEB-2006 06-AUG-2000 08-OCT-2004		GTS	VIA	BAS
89769 89864 89866 89869 89768 89768 89799 89667	Linda Manuela (Inex. Is.) Marble Point Marilyn (Byrd Gl.) Minna Bluff Mount Siple Nico Pegasus North	On GTS 26-APR-2006 04-FEB-2006 06-AUG-2000 08-OCT-2004 04-FEB-2006		GTS	via	BAS
89769 89864 89866 89869 89768 89768 89799 89667	Linda Manuela (Inex. Is.) Marble Point Marilyn (Byrd Gl.) Minna Bluff Mount Siple Nico	On GTS 26-APR-2006 04-FEB-2006 06-AUG-2000 08-OCT-2004 04-FEB-2006 26-APR-2006		GTS	via	BAS
89769 89864 89866 89768 89768 89327 89799 89667 89879	Linda Manuela (Inex. Is.) Marble Point Marilyn (Byrd Gl.) Minna Bluff Mount Siple Nico Pegasus North	On GTS 26-APR-2006 04-FEB-2006 06-AUG-2000 08-OCT-2004 04-FEB-2006 26-APR-2006 26-JAN-2001		GTS	via	BAS
89769 89864 89869 89768 89327 89799 89667 89879 89868	Linda Manuela (Inex. Is.) Marble Point Marilyn (Byrd Gl.) Minna Bluff Mount Siple Nico Pegasus North Possession Island	On GTS 26-APR-2006 04-FEB-2006 06-AUG-2000 08-OCT-2004 04-FEB-2006 26-APR-2006 26-JAN-2001 26-APR-2006		GTS	via	BAS
89769 89864 89869 89768 89727 89799 89667 89879 89868 89345	Linda Manuela (Inex. Is.) Marble Point Marilyn (Byrd Gl.) Minna Bluff Mount Siple Nico Pegasus North Possession Island Schwerdtfeger	On GTS 26-APR-2006 04-FEB-2006 06-AUG-2000 08-OCT-2004 04-FEB-2006 26-APR-2006 26-APR-2006 04-FEB-2006				
89769 89864 89866 89768 89768 89799 89667 89879 89868 89345 89272	Linda Manuela (Inex. Is.) Marble Point Marilyn (Byrd Gl.) Minna Bluff Mount Siple Nico Pegasus North Possession Island Schwerdtfeger Siple Dome	On GTS 26-APR-2006 04-FEB-2006 06-AUG-2000 08-OCT-2004 04-FEB-2006 26-APR-2006 26-APR-2006 04-FEB-2006 04-FEB-2006 On GTS				









Future plans

- BAS has purchased 3 more Campbell AWS units.
- These are based on CR1000 loggers with ST-20 ARGOS transmitters.
- One will be installed at Limbert site.
- One will be installed at Butler Island
- One will be installed at Larsen Ice Shelf.
- The ones already at Fossil Bluff and Ski Blu will be upgraded to CR1000 logger with ST-20 ARGOS transmitters.

READER

- The READER project is expending so the current READER project will become Met READER and there will also be an Ice READER with information about ice cores and snow pits and an Ocean READER with information about ocean currents, salinity measurements, sea ice etc (but not biological samples).
- Ice READER and Ocean READER will initially just point to where the data are located.

- Met READER has been updated to the end of 2005 by contacting all of the national operators to get access to their more recent data. The task is still not completed but surface station data has been collected for;
- UK, all stations up to the end of 2005.
- America, all stations up to the end of 2005.
- Australia, all stations up to the end of 2005.
- Japan, Syowa station up to the end of 2004.
- Russia, data is arriving for all of the Russian stations.
- No surface data has yet been received from China, France, Argentina, Chile or Korea.

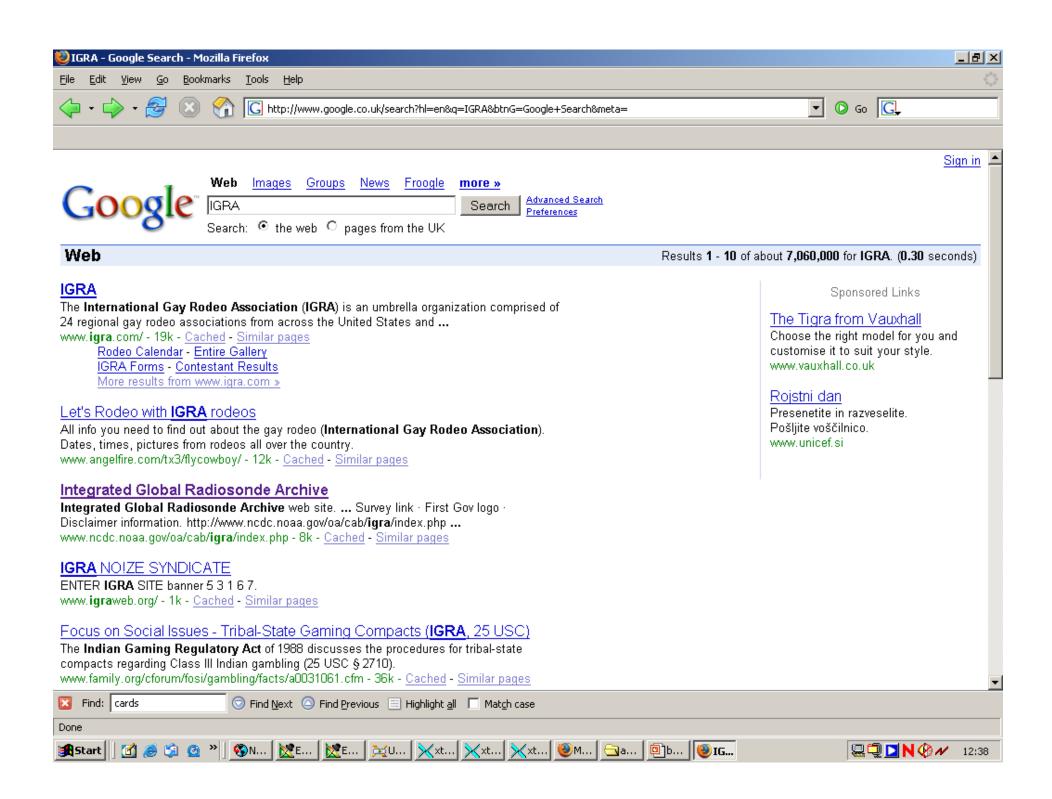
AWS data has been collect for

- America, up to the end of July 2001.
- Italy, up to the end of October 2005.
- Australia, up to the end of 2002.

Upper air data has been collected for

- UK, all stations up to the end of 2005.
- America, all stations up to the end of 2005.
- Australia, all stations up to the end of 2005.
- Japan, Syowa station up to the end of 2004.
- Russia, Mirny and Novolazarevskaja up to the end of June 2005
- No upper air data has yet been received from France, Argentina or Italy (but this is on its way).

 Upper air data that has been collected for READER has been offered to IGRA (Integrated Global Radiosonde Archive) which used to be CARDS (Comprehensive Aerological Reference Data Set) but they are not ready for accepting new data yet.



Questions

- <u>Src@bas.ac.uk</u>
- http://www.antarctica.ac.uk/
- http://www.antarctica.ac.uk/met/READER/