Antarctic Peninsula Automatic Weather Station Update

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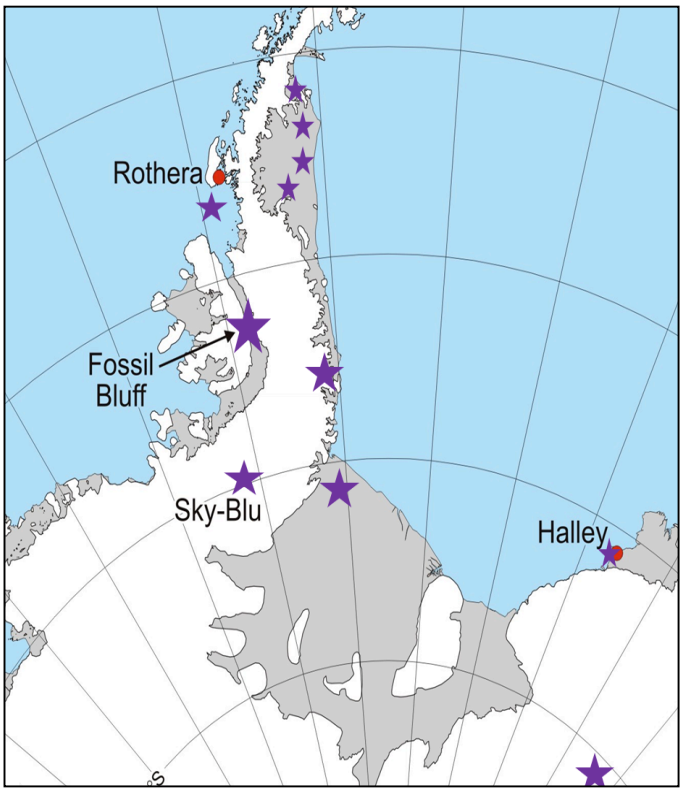

Above: map showing BAS serviced AWS locations marked as purple stars

Existing AWS Network

BAS currently runs a network of 14 AWS located across the Antarctic Peninsula and around Halley in East Antarctica (see map). We maintain a further 4 stations through ongoing collaboration with the University of Utrecht and The University of Boulder. All of these sites have been recently serviced and are expected to continue running for the foreseeable future.

From 2013, we are no longer using data transmitted on the ARGOS satellite network and instead rely on Iridium SBD messages transmitted every 3 hours and relayed as SYNOPS on the GTS.

Recent Work and Changes

We now have a line of 3 AWS near to Halley running from close to the grounding line of the ice shelf to the coast. We hope to use these stations to investigate how temperatures on the Brunt Ice Shelf vary with distance from the coast. During the past 55 years, the distance from the coast of Halley Station has varied and we are keen to find out whether this has had any significant impact on the continuous meteorological data set from Halley.

We installed an AWS at Sky Blu Skiway in February 2013. Although it is located only a few kilometres from the long running AWS, initial analysis shows significant differences in meteorological conditions experienced at the two sites.

We have carried out a comparison of data from the collocated Dutch and British AWS on the Larsen C Ice Shelf, I will present a summary.

Future Plans

During summer 2013/14, we intend to install an AWS at Korff, in the south western section of the Ronne Ice Shelf. Otherwise we plan to maintain the existing network of AWS with no major changes.