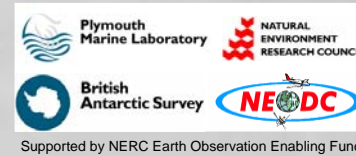


# A unique AVHRR time-series of the changing Antarctic

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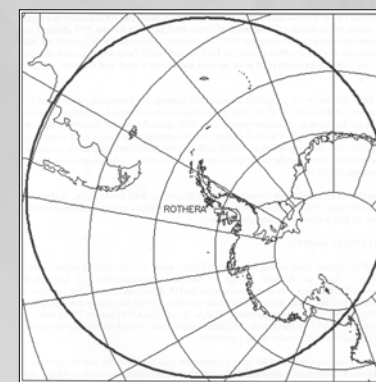


Supported by NERC Earth Observation Enabling Fund

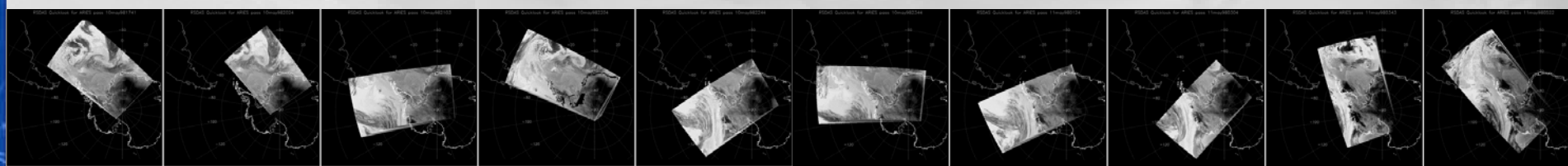


Pictures of the Rothera research station where the AVHRR images are received directly from NOAA satellites.

The British Antarctic Survey (BAS) has collected an important and long-term series of Advanced Very High Resolution Radiometer (AVHRR) data at Rothera research station covering the Southern Ocean, Antarctic Peninsula and coast of West Antarctica, from February 1993 to date. Until now these data have not been easily available to the UK environmental science community, but will be valuable in studies of climate change, the effect of sea-surface temperature (SST) variability on Southern Ocean ecosystems, iceberg tracking and weather systems. A copy of the archive has been transferred to the NERC Remote Sensing Data Analysis Service (RSDAS), where existing systems have been extended to generate a complete scientific data set of polar products at full 1.1 km spatial resolution. Products include SST, brightness temperature, visible reflectance, cloud and ice properties; these will be provided for each scene and for weekly and monthly composites to reduce the effect of cloud cover. Website tools are being developed to facilitate searching, visualisation and analysis of these data sets. All raw and processed data will be catalogued using metadata for searching at the NERC Earth Observation Data Centre website and via the NERC DataGrid. This poster presents sample products and search and visualisation tools available at: <http://www.npm.ac.uk/rsdas/projects/rothera/>.

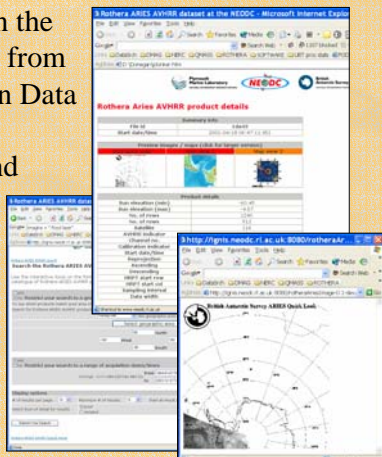


Receiving range is ~3000km around Rothera. Collecting 15-20 passes per day. From 1993-2005+. Current archive is around 2Tb.



## Increased visibility

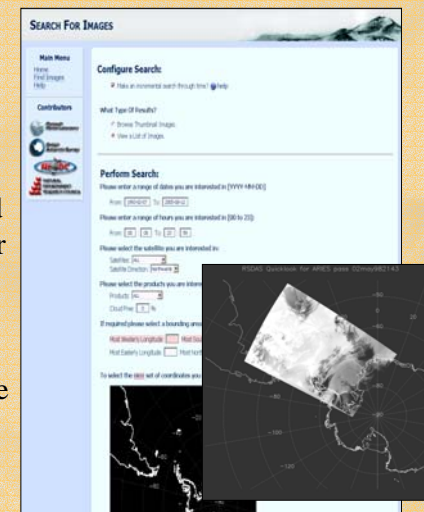
- Searchable metadata on the archive will be available from NERC Earth Observation Data Centre website.
- This allows users to find images by: times, dates, product, regions of interest.
- Linked to RSDAS web site where the data can be accessed.



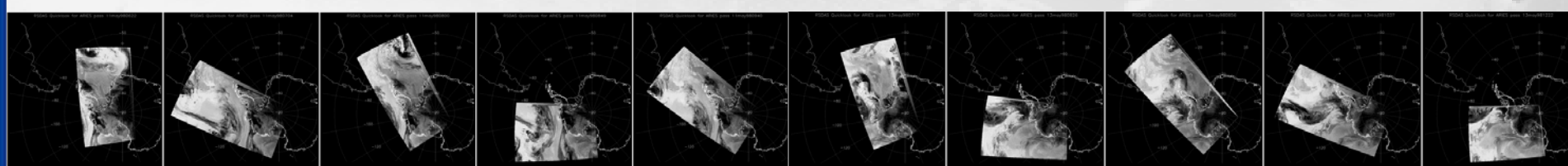
<http://ignis.neodc.rl.ac.uk/rotheraAriesSearch/>

## Easier access

- Access data through new website at NERC Remote Sensing Data Analysis Service.
- Search for and download products.
- Extract data from user or pre-defined regions, e.g. the Antarctic Peninsula or Ronne Ice Shelf.
- On the fly production of weekly and monthly composite images.
- Reduced resolution composites of the full receiving area.
- Please e-mail [pim@pml.ac.uk](mailto:pim@pml.ac.uk) to be informed of progress on this project.

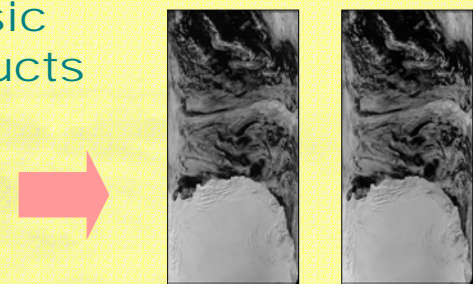


<http://www.npm.ac.uk/rsdas/projects/rothera/>

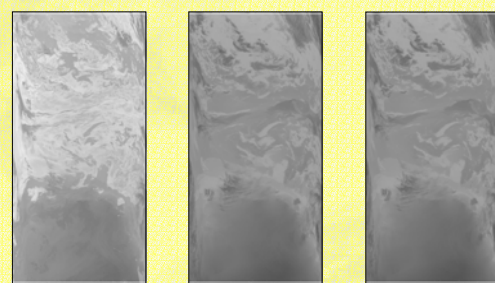


## Basic Products

Raw HRPT pass file

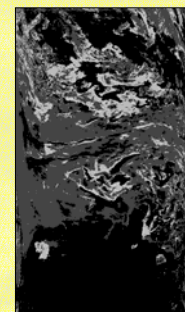


Channel 1 and 2 Reflectance

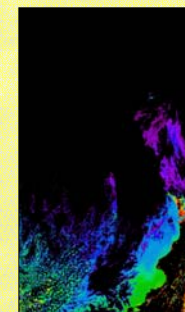


Channel 3, 4 and 5 Brightness Temperatures

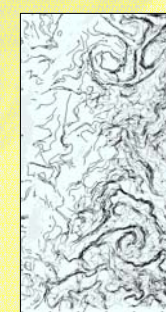
## Value Added Products



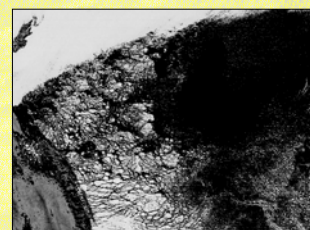
Cloud mask



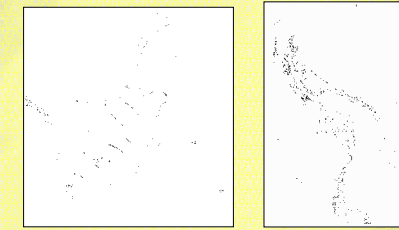
SST



Thermal fronts



Ice map



Extracted Regions of Interest

