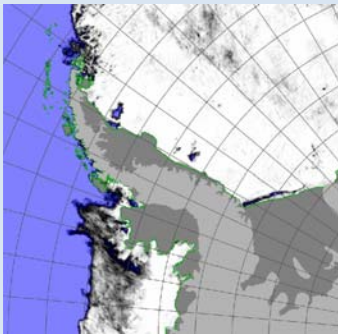




GLOBAL SEA ICE MONITORING

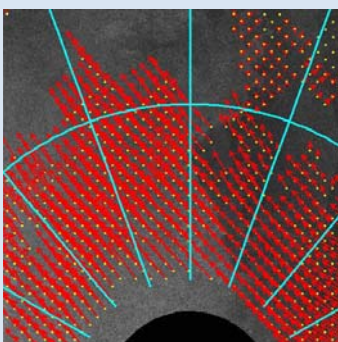
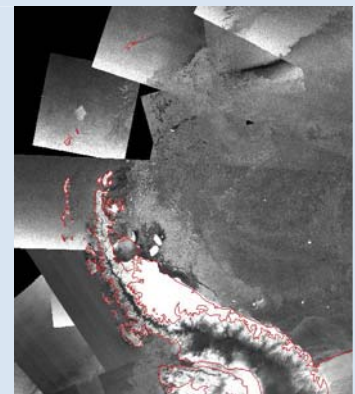
POLAR VIEW IN THE ANTARCTIC

Timely information on sea ice conditions is essential for all types of marine operations in the Southern Ocean. Global sea ice monitoring for the Antarctic will be based on extending a number of the services developed in the Northern hemisphere. However a number of differences between sea-ice in the Antarctic compared to the Arctic need to be taken into account. Southern hemisphere sea-ice cover extent is larger and shows a much larger yearly variability than in the Arctic. A smaller volume of ship traffic in the south means less interest by the national ice services in the Antarctic sea ice and therefore relatively fewer ice charts are produced. The use of these lower resolution data is the only way of providing regular information covering the entire Southern Ocean.



Passive microwave data from the AMSR-E instrument are used to provide information about sea ice extent and concentration. The University of Bremen delivers these daily datasets with spatial resolution of approximately 5 km. This is currently the highest resolved sea ice information that is daily and globally available. This information offers a valuable broad view of sea ice conditions over a wide area.

Envisat SAR data is used to compile mosaics of the entire Antarctic region. Vexcel compile daily updated mosaics, based on ASAR Global Monitoring Mode data, with a spatial resolution up to 1 km. This provides an unprecedented regular view of sea ice distribution, completely unaffected by clouds.



Danish Technical University produce ice drift data in near real time from the ASAR Global Monitoring Mode and wide swath data. The 3-day period is selected in order to obtain maximum overlap between satellite swaths. Drifts are derived automatically using a cross correlation technique, producing a grid of drift vectors with 33km spacing. Data can be viewed in the online browser together with the other sea ice information layers.

Polar View is funded by the joint European Space Agency as part of the Global Monitoring for Environment and Security (GMES) programme. The overall Polar View programme operates in the north and south, delivering a range of polar environmental information services. For further information on the Polar View programme please visit either the Antarctic network website www.polarview.aq or the Polar View programme website www.polarview.org. The British Antarctic Survey manages Polar View in the Antarctic. You can contact Andrew Fleming at Andrew.Fleming@polarview.org or on +44 (0)1223 221451.