COMBINED OBSERVATIONS OF THE EAST GREENLAND SEA BY SAR AND AVHRR IMAGES IN WINTER 2002.

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In the framework of the EU Project CONVECTION, several field campaigns had been planned in the East Greenland Sea. In the winter 2002 a cruise was carried on by the RV "Lance" from mid-February to mid-March. During the cruise, a service of quasi-real time remote sensing observations was organized, aimed to support field operations. AVHRR data were acquired by the receiving station of the University of Dundee, processed as geo-referenced image at ISAC and delivered by e-mail to the ship only few hours after the acquisition.

At the end of the campaign, we acquired and processed 15 ERS-2/SAR scenes for the same period and areas of "Lance" cruise. Different scenes of the same orbit were composed in a mosaic in order to produce a clear picture of the ice-sea border.

We present a comparison between sea ice maps of the East Greenland Sea obtained from low-resolution AVHRR images and from high-resolution SAR images.

Some of the SAR scenes were also utilized to estimate ice thickness from wave dispersion by frazil and pancake ice at the ice-sea border [1]. A new method of inversion of SAR images to retrieve wave spectra has been developed: this method makes use of the wind field (obtained from the ECMWF) to initialize the inversion procedure. Results from the application of this new methodology are presented and discussed.
REFERENCES