



## Sea Ice Area Investigation over the East Greenland Sea during 2003-13

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Climate datasets derived from satellite images represent the most useful sources for monitoring and investigating present and (short) past climate, in order to understand the climate change evolution.

In this work, a subset of AMSR-E and AMSR-2 Sea Ice Concentration (SIC) data set retrieved from the archive of the Institute of Environmental Physics (IEP) of the University of Bremen, is investigated in order to assess the variability and a possible significant trend of sea ice area over the East Greenland Sea during the period 2003 – 2013. The target area goes, approximately, from 60° to 85°N and from 45°W to 20°E. The analysis shows that the strong decline of Arctic sea-ice extent in the last 10 years is not observed in the Greenland Sea, suggesting that large reductions have occurred in the Canadian and Russian Arctic. Similar preliminary investigations over West Greenland Sea and Bering Sea are being carried out.

Besides, for approximately the same period and target area, ATOVS tropospheric humidity and temperature fields and AVHRR fractional clouds cover (CFC) datasets have been collected from the Satellite Application Facility on Climate Monitoring (CM-SAF), to perform and analyze the correlation with sea ice area.

As expected, results show a high anti-correlation between air temperature (and also tropospheric humidity) with observed sea ice area.