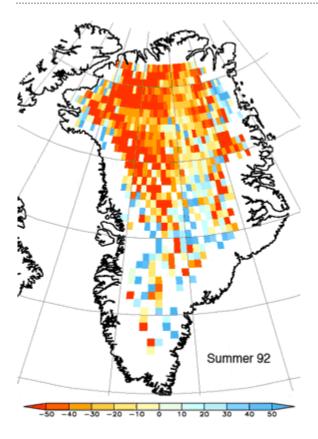


**European Space Agency** 

## ERS altimeter survey shows growth of Greenland Ice Sheet interior

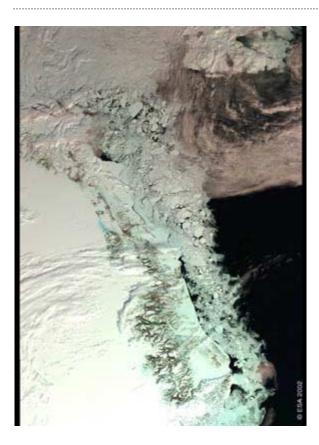


This animation of the Greenland results shows the boundaries (thick line) of the ice sheet and major ice divides (thin lines). The colours indicate ice sheet elevation change rate in centimetres per year (see colour scale). These values are derived from 11 years of ERS-1/ERS-2 satellite altimeter data, 1992–2003, excluding some ice-sheet marginal areas (white). The spatially averaged rate is +5.4 cm/year, or ~5 cm/year when corrected for bedrock uplift. The white areas between the colour-coded pixels and the thick line delimiting the ice sheet indicate no observations. Latitude in  $^{\circ}N$ , longitude in  $^{\circ}W$ .

O. M. Johannessen, K. S. Khvorostovsky, M. W. Miles and L. P. Bobylev (2005): Recent ice sheet growth in the interior of Greenland. Science (In Press, and October 20, 2005 issue of Science Express).

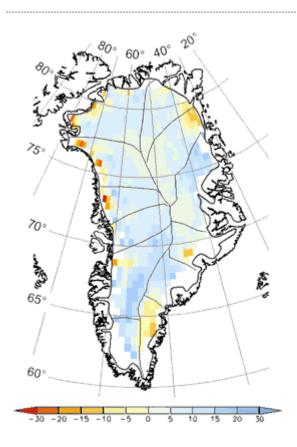


ERS in orbital configuration. ERS-1 and -2 have generated about 1.5 million SAR scenes, and upwards of 3500 scientists have published more than 30 000 scientific papers based on ERS data.



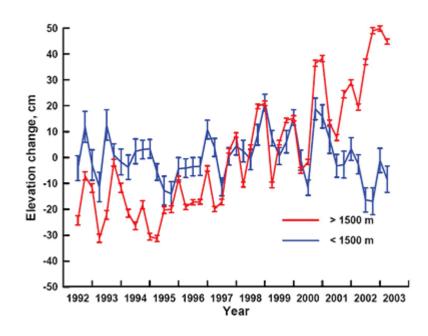
This image shows the east coast of Greenland, the largest island in the world. Its centre is a huge plateau of ice with a maximum thickness estimated at more than 3

km. It constitutes an important water reservoir for the planet. This Envisat MERIS Reduced Resolution mode image has a spatial resolution of 1200 metres and was acquired on 17 May 2002.



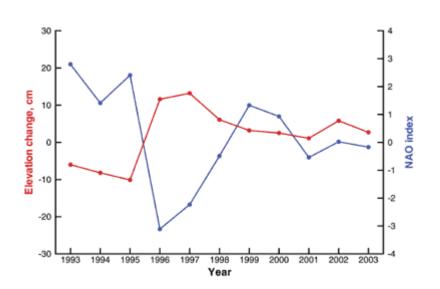
Greenland ice-sheet elevation change in cm/year (see colour scale) derived from 11 years of ERS-1/ERS-2 satellite altimeter data, 1992-2003, excluding some ice-sheet marginal areas (white). +5.4 cm/year, or ~5 cm/year when corrected for bedrock uplift.

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Interannual variability of spatially averaged Greenland ice sheet elevation, shown as anomalies from the 11-year mean, 1992-2003. The data are aggregated into areas>1500 m elevation (red) and <1500 m (blue), indicating divergent trends since 2000. The vertical bars indicate the standard errors of the mean when averaging the results for each cell.

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Spatially averaged changes in winter Greenland Ice Sheet elevation (red) and winter North Atlantic Oscillation (NAO) (blue) index, lagged one month 1992-2003. Winter elevation change during e.g, 1994/1995 was determined by subtracting autumn 1994 from winter 1994/1995.

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Artist's impression of the lost CryoSat spacecraft in orbit. ESA's first Earth Explorer mission was lost due to a launch anomaly on 8 October 2005.

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