

Researchers forecast 1 in 3 chance of record low sea ice in 2007

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University of Colorado at Boulder researchers are forecasting a one in three chance that the 2007 minimum extent of sea ice across the Arctic region will set an all-time record low.

The researchers at CU-Boulder's Colorado Center for Astrodynamics Research also say there is a 57 percent chance the 2007 sea-ice minimum will be lower than the 2006 minimum of 2.27 million square miles, now the second lowest on record. There is a 70 percent chance the 2007 sea-ice minimum will rank within the lowest five years on record, according to Research Associate Sheldon Drobot of CCAR's Arctic Regional Ice Forecasting System group in CU-Boulder's aerospace engineering sciences department.

Sea-ice extent is the area of an ocean covered by at least 15 percent ice. Declining sea ice in the Arctic is believed by researchers to be caused by higher winter temperatures due to greenhouse warming, said Drobot. Arctic sea ice has been declining since the late 1970s.

Researchers pay particular attention to September and March because they generally mark the annual minimum and maximum sea-ice extents respectively, said Drobot. On April 4, researchers from CU-Boulder's National Snow and Ice Data Center reported the maximum extent of this year's March Arctic sea ice, 5.7 million square miles, was the second-lowest maximum on satellite record.

While regional sea ice declines were sharpest in the western Arctic over

the past few years, large declines also occurred last year in much of the eastern Arctic, according to Drobot. Such regional variation is of interest to the maritime industry, including government agencies, international shipping companies, energy exploration corporations and tourism cruise lines active in the far North, he said.

"The practical offshoot here is that people operating ships in Arctic waters can use these forecasts to try to plan activities several months in advance," said Drobot. The sea ice research by the CCAR group -- the only research group in the world currently making seasonal Arctic sea ice forecasts based on probability -- is funded by the National Science Foundation and NASA, he said.

The CCAR researchers used satellite data from the U.S. Department of Defense and temperature records from the National Oceanic and Atmospheric Administration for the forecasts, which they have been producing for five years, said Drobot. Updated forecasts will be provided throughout the spring and summer, he said.

Source: University of Colorado at Boulder

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