Record Air Temperature for the NOAA Barrow, Alaska Atmospheric Observatory

12 September, 2007

Global Monitoring Division - **ESRL-GMD**
This story entered on 4th Sep, 2007 10:58:41 AM PST

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On July 7, 2007 ambient air temperature reached 75.2 F at the Barrow Observatory, the highest ever recorded at the observatory since the measurement began, February 1973. The NOAA Climate Reference Network Station (in operation since August 2002) located on the southern boundary of the Barrow Observatory property recorded a high of 75.5 F. The Barrow National Weather Service (NWS) station, located 3 miles west of the Barrow Observatory nearer the seashore and within Barrow town limits recorded a maximum of 22.8 C (73.0 F). At the Barrow Observatory the mean temperature for July was 41.5 F compared to the July mean temperature of 37.9 F for the period 1977-2006. (There is some missing data between the start of measurements in 1973 and 1977.)

Background:

Climate models are predicting that greenhouse gas induced warming in the Arctic will be earlier and greater than at lower latitudes. Although there is great variability in day-to-day and week-to-week temperatures measured at Barrow, the monthly mean temperatures over a month have a robust nature and smooth out anomalies.

Significance:

There are a number of current reports in both the scientific and popular press stating that the seasonal melt-back of the Arctic ice cap in 2007 may be the largest ever recorded. Possibly the anomalous warm air temperatures in July in Barrow and elsewhere in the Arctic during recent years are related to that melt-back.

Contact information
Name: Schnell Russ
Tel: (303) 497-6733
Russell.C.Schnell@noaa.gov

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