

ARM North Slope of Alaska Update 2001

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The Atmospheric Radiation Measurement (ARM) program, the main U.S. Department of Energy climate change research effort, maintains the North Slope of Alaska (NSA) Cloud and Radiation Testbed (CART) on NOAA land adjacent to the CMDL Barrow Observatory. ARM also has another facility at the village of Atqasuk, about 100 km south of Barrow. The ARM/NSA CART site has been operational since spring 1998 and is rapidly maturing. A list of the installed instruments currently acquiring data can be found at (www.arm.gov).

At Barrow during this past year, the downward-looking albedo radiometers were relocated to the top of a 10-m tower, a downward-looking video camera was installed on the top of the 40-m tower to provide information on snow cover during melt and freeze up, a 915 MHz wind profiler with radio acoustic sounding (for temperature profiles) was brought into service, the road upgrade was completed, and various experiment campaigns were conducted. At Atqasuk the instrument shelters were moved off of a road to a gravel pad created for the purpose, a 10-m tower was installed, and downward-looking albedo radiometers, as well as standard meteorological instrumentation, were installed on it, an elevated platform was designed to accommodate upward-looking radiometric instrumentation, and arrangements for visitor lodging were markedly improved. The ARM data from both Barrow and Atqasuk, as well as from the other ARM sites in the Southern Great Plains of the United States and the Tropical Western Pacific, are available through the ARM archive (www.archive.arm.gov). A view of the Barrow facility is shown below.

