LC-130 Deep Field Capabilities

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The LC-130 possesses a unique capability to fly cargo to remote polar regions, including west Antarctica. The LC-130, by virtue of being the largest ski-equipped aircraft in the world, is a valuable asset to the United States Antarctic Program. The cargo-carrying capacity, speed, range and endurance of the LC-130 make it uniquely suited to support remote, open-field camps in Antarctica. The 109th Airlift Wing, with a long history of operating in the polar regions, is prepared to increase the number of missions dedicated to support deep-field camps. South Pole Station Modernization is nearly complete, and the South Pole surface traverse is scheduled to become fully operational in 2009. This will relieve approximately 100 flights each season. Thus, the LC-130s will have the opportunity to increase their support for deep-field camps.

There are some improvements that promise to enhance the capability and accessibility of the LC-130. A new process for pre-season assessment of new deep-field sites is being developed. It is expected that this will shorten the planning process and allow more timely support. A new 8-bladed NP2000 propeller and new jet-assisted take-off rockets are in early stages of development, both if which will increase take-off capability. The most prominent improvement, still in early development, is the MiniSAR X-band Crevasse Detection Radar. This radar will have the ability to analyze the snow in real-time and significantly increase accessibility and safety of landing in deep-field sites. The potential for scientific uses of the radar have not yet been explored.