

OPERATION ICE BRIDGE OVERVIEW AND RESULTS FROM AIRCRAFT LASER ALTIMETRY OVER GREENLAND AND ANTARCTICA.

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The Arctic Ice Mapping group (Project AIM) at the NASA Goddard Space Flight Center Wallops Flight Facility has been conducting systematic topographic surveys of the Greenland Ice Sheet (GIS) since 1993, using scanning airborne laser altimeters (NASA ATM) combined with Global Positioning System (GPS) technology. In 2009, with ICESat I nearing its operational end, and a replacement not due for at least 5 years, NASA HQ decided to expand the aircraft remote sensing of ice sheets and sea ice to provide the cryospheric science community with interim data sets to monitor changes in Polar Regions. The first of these surveys took place in the spring of 2009, in which numerous segments of ICESat ground tracks in critical areas in Greenland were resurveyed along with many of the previously surveyed aircraft lines. In the fall of 2009 Operation Ice Bridge moved its focus to Antarctica. In a substantial deployment to Punta Arenas, Chile, using NASA's DC8 long-range aircraft, 21 flights of approximately 11 hours each were flown to survey critical sites in Antarctica. (See attached figure.) Results from these new data sets will be presented.

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