

**GLACIER ELEVATION CHANGES IN THE VICINITY OF PATRIOT HILLS**

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In November and December of 2004 and in January of 2006 detailed GPS measurements with dual-frequency receivers were carried out at Patriot Hills (80° 18' S, 81° 22' W). A base station was set up on rock at the foot of Patriot Hills, while a rover station was installed on a snowmobile. 165 sites on ice and snow were surveyed in detail, located on the blue ice area (BIA) of Patriot Hills and on Horseshoe Valley, covering a distance of ~30 km from the base station. These sites had been surveyed in 1995, 1996 and 1997, and comparison of surface elevations had shown near-equilibrium conditions for the 3-year period. Occupation of the sites in 2004 and 2006 will allow to assess surface elevation changes in the 7-8 year period since 1997, and to test the hypothesis of near-equilibrium. The spatial extent of the BIA at different periods will be compared from the ground GPS surveys and from satellite imagery. A 1:10,000 scale map, with a contour line interval of 1 m in elevation, will be presented for the BIA, including Patriot Hills, the location of the ice and snow runways, and the logistic base stations.