

THICKENING OR THINNING OF WILKES LAND: FIRST RESULTS

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As a part of ITASE project (International Trans-Antarctic Scientific Expedition), between November 2001 and January 2002, the Italian *Programma Nazionale di Ricerche in Antartide* has been performed a traverse through Adélie, George V, Oates (Wilke Land) and northern Victoria Lands. IT-ITASE programme includes measurements of ice velocity, submerge velocity and ice thickness along the about 2200 m elevation contour line in the eastern part of Wilkes Land (East Antarctica) to provide information about ice sheet mass balance. During the 2001-02 traverse 23 stakes for ice velocity and 7 submerge velocity systems were established and measured using GPS. During the 2004 expedition 17 stakes and 7 submerge velocity systems were remeasured with the support of Twin-Otter. From 2000 to 2003 Radio-echo sounding by Twin Otter was performed to survey ice thickness along the traverse track. Here we present the first result of these measurements together with published estimates of snow accumulation rates infer the mass balance, and/or rate of thickening/thinning of ice sheet catchment area inland from the traverse surveyed by radar altimeter satellite.