Snow and Ice Research Group – New Zealand: Monthly video seminar

Pleistocene dynamics of the deep interior East Antarctic ice sheet

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Current models describing past configurations of the East Antarctic Ice Sheet (EAIS) are poorly constrained by observations. A scarcity of exposed bedrock surfaces within today's ice sheet means that few data are available to directly document past ice-volume variations, particularly in the interior sectors of the EAIS. Exposure dating of bedrock surfaces using in situ-produced cosmogenic nuclides provides an ideal tool for directly dating former changes in ice sheet elevation. We present cosmogenic radionuclide ^{10}Be and ^{26}Al measurements in bedrock surfaces and glacially transported cobbles. The bedrock exposure ages are successfully modelled only if changes in ice sheet surface elevation are described by both a long-term thinning trend and higher frequency oscillations. Very high cosmogenic nuclide concentrations measured in bedrock surfaces indicate that surface erosion rates have been extremely low over the Quaternary. No evidence was found at this location to suggest that ice sheet thickness was greater at the Last Glacial Maximum relative to today.

Wednesday 5 August 2009, 1pm-1:50pm

All interested are welcome to attend.

Video meetings are held every month over the Access Grid. Video rooms are sited at most universities. The locations of the video conference rooms for each campus are:

Massey: Room 4.40, Social Sciences Tower, Massey University, Palmerston North.

Canterbury: Room 164, Level 1, Geography-Psychology Building, Canterbury University, Christchurch

Otago: Teaching Facilities South West corner, Information Services Building

Victoria: Library RB106

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