



Supplement of

Optimal site selection for a high-resolution ice core record in East Antarctica

T. R. Vance et al.

Correspondence to: Tessa R. Vance (tessa.vance@utas.edu.au)

The copyright of individual parts of the supplement might differ from the CC-BY 3.0 licence.



Figure S1.

Assessing continental Antarctica for areas that show potential for high resolution ice core sites. The colour bar shows ice age at 300 m depth using the annual average (1979-2012) surface mass balance data from RACMO2.1/ANT (Lenaerts et al., 2012). The mass balance data was converted to ice equivalent depth (ice density of 917 kg m⁻³ and a Nye vertical strain rate profile (Nye1963) based on the BEDMAP2 ice thickness compilation (Fretwell et al., 2013) was applied. A red boundary shows regions that have an ice age of >500 years at 300 m depth, receive >200 mm y⁻¹ IE and are above the 1000 m contour.



Figure S2.

Sea surface temperature, 500 metre geopotential height and Australian rainfall correlation analysis with the IPO during the warm season (November-March) for positive (top) and negative (bottom) IPO years over the ERA-Interim period of 1979-2014. Positive and negative years were defined as for Figure 7 (0.5 std deviation above or below average). Note the colourbar defines a rainfall increase over Australia, as well as warm SSTs, as the red spectrum (conversely, a rainfall decrease and cool SSTs are blue). The three regions identified in fuschia are regions shown in previous figures: 1 - Law Promontory/Enderby Land, 2 - Cape Darnley and 3 - Mt Brown. Law Dome is shown as a red star on the coast to the east of the three possible sites.