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ANTscape: ANTARCTIC PALEOTOPOGRAPHIC MAPS FOR THE LAST 100 MILLION YEARS

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Keywords: paleotopography, Cenozoic, maps

ANTscape is a project of the Antarctic Climate Evolution (ACE) Research Program to develop a series of maps to show changes in Antarctic paleotopography over the last ~100 million years. The reconstructions will provide a base for summarising a range of paleoenvironmental data, and for use as inputs for the next generation of ice sheet-ice shelf models. The present-day bedrock topography from the SCAR BEDMAP project will be used as a starting point for reconstructing past paleotopography, moving to BEDMAP 2 when it becomes available. Six maps, one for each significant climatic regime or shift, are planned: 4, 14, 34, 50, 70 and 92 Ma. Work is well advanced on the map for 34 Ma (Wilson and Luyendyk, 2009, *Geophysical Research Letters*). This is a time that is far enough back for there to be a significantly different topography, but not so far back that reconstruction is seriously unconstrained. It is also of great interest to paleoclimatologists as the largely ice-free landscape on which the first continental ice-sheet formed. The maps prepared by ANTscape will depend not only on restoration of Antarctic continental geography by reversing tectonic movements and elevation changes, but also the restoration of sediment eroded from the continent and deposited around and beyond the Antarctic margin. This will require modeling changes to the Antarctic landscape from erosion (Jamieson et al., 2010, *Earth & Planetary Science Letters*) and estimates of sediment volumes through the Circum-Antarctic Stratigraphy and Paleobathymetry Project (CASP). For further information see www.ANTscape.aq.