

High-resolution simulation of the extent and flow of Antarctic Peninsula glaciers

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Steig et al (2009) identified the Antarctic Peninsula as one of the fastest warming regions on Earth over recent decades. Changes to glacier systems consequent on atmospheric and oceanic temperature perturbations will best be understood through combined interpretation of high-resolution ice sheet modelling, remotely-gathered, and field-based empirical data. We outline an incipient research program which aims to use high-resolution numerical glacier modelling to interpret geological proxy evidence concerning recession of Peninsula glaciers through the last Termination. Assuming this can be achieved with realistic model physics and forcing conditions, our aim is to use the validated model to assess glacier sensitivities to predicted future environmental changes.