



ISMIP - POLICE : a new intercomparison exercise to assess model uncertainties in polar ice sheet simulations under future climate warming conditions

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Model projections of the evolution of the Greenland and Antarctic ice sheets to future climate warming are characterised by large uncertainties. These first of all derive from the wide range of climate changes predicted by available AOGCMs over the polar areas because of the range of greenhouse gas emission scenarios and climate sensitivities of individual models. Additional uncertainty is however introduced by the way these climate changes are used in models to force changes in ice-sheet mass-balance (snow accumulation, meltwater runoff, basal melting below ice shelves), and by the way ice-sheet models deal with ice-dynamics. POLICE (Polar Ice Sheet Models) is a subproject of the CliC (Climate and Cryosphere) Ice Sheet Model Intercomparison Project (ISMIP), aiming at testing and comparing the current generation of Antarctic and Greenland ice sheet models under conditions of future climatic warming. The poster will present a new set of model experiments to assess the uncertainty introduced by available models subjected to the same climate change input. It is anticipated that this exercise will throw more light on questions of ice-dynamic changes versus static mass-balance changes, and on the effects of various treatments for mass-balance changes in contemporary models.