Progress towards ensemble estimates of Antarctic ice shelf basal melting and evaluation with observations

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With recent developments in the modelling of Antarctica and its interactions with the ocean several realistic simulations now exist. Due to unique parameterisations, model-specific numerics and discretisation and different choices of boundary forcing, basal melt rates simulated across the whole Antarctic continent are likely to differ between models. This talk describes progress towards an initial phase to analyse these existing simulations for improved constraints on both present and future ocean-driven impacts on Antarctica, and facilitate much needed evaluation with both satellite-derived and in situ estimates of ice shelf basal melt rates and ocean forcing. Some examples of comparisons will be shown of realistic ice-shelf/ocean model simulations of Antarctic ice shelf/ocean interaction. This talk will also describe a proposed framework within the Marine Ice Sheet Ocean Model Inter-comparison (MISOMIP) project, to facilitate the collection and analysis of realistic simulations, evaluation with observations, and proposed strategy for more refined evaluation of ensembles of realistic ocean, ice-sheet and future coupled models.