



Harmonising observations and ice sheet models

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Given concern about the stability of present-day ice sheets and their influence on sea-level, it is imperative that we can predict future rates of change of these large ice masses. Numerical ice sheet models - capable of making predictions - exist and are being refined. However, deciding which of the many different models best represents ice sheet evolution relies on the availability of empirical data constraining the spatial and temporal distribution of different model outcomes, such as ice extent (vertical and horizontal), and sea level rise/fall. But what kind of empirical data do ice sheet modellers want? And what constitutes useful data?

Gathering empirical data of millennial changes for the current ice sheets by projects like MAGIC-DML are limited by spatial distribution and exposure of suitable materials. Hence the focus of projects like BRITICE-CHRONO has been on understanding the evolution of ice sheets by studying palaeo-ice sheets. Insights gained in the course of both the BRITICE-CHRONO and MAGIC-DML collaborations will be examined with a view towards improving confidence between those focused on establishing empirical ice sheet constraints and those seeking to utilise these constraints to inform ice-sheet models.