



Weighted projections of Antarctic climate parameters for the end of the Twenty First Century

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Output from the 20 models used in the IPCC Assessment Report 4 study are used to investigate how the Antarctic climate will evolve over the next 100 years. The fields from the different models are weighted according to how they reproduce the climate of the late Twentieth Century. Near-surface winds are expected to increase over the Southern Ocean, especially in the autumn, with a peak at 60 S. Whereas recent near surface temperature increases have been confined to the Antarctic Peninsula region, there is expected to be a large warming in the sea ice zone during winter of about 0.5 C per decade as the extent of the pack reduces. The models also suggest a warming of about 0.3 C per decade on the Antarctic plateau. Precipitation is projected to increase over the continent. Application of the weighting scheme compared to a simple mean of the models gives greater wind increases and slightly higher temperature trends, but makes little difference to the precipitation projections.