



The Microphysics of Antarctic Clouds – Part two Modelling.

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We compare different cloud microphysical schemes implemented in the Weather Research & Forecasting model (WRF, v3.5.1) to investigate their ability to simulate clouds over the Antarctic Peninsula. We also discuss first results obtained over the Weddell Sea. Comparisons are made to cloud in-situ measurements performed with the British Antarctic Survey's instrumented Twin Otter aircraft. We discuss the performance of the microphysical scheme currently used by the operational model Antarctic Mesoscale Prediction System (AMPS), which uses the Polar version of WRF, by contrasting its results with the ones of more sophisticated WRF schemes. We also evaluate the reliability of Ice Nuclei and Cloud Condensation Nuclei parameterizations used by the schemes, which are almost exclusively based on mid-latitudes measurements.