



Optical properties of the antarctic atmosphere assessed with a Regional Climate Model

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The RCM MAR (Modèle Atmosphérique Régional) has been developed for simulating the climate of the polar regions. A parametrisation of optical turbulence has been added in the model and allows us to determine potential sites for the placement of telescopes over the antarctic plateau. A simulation from june to august 2004 has been performed with a high vertical resolution in the low troposphere. The model is nested in the ECMWF operational analyses. It is found that high stability conditions during polar night are responsible for a significant optical turbulence in the boundary layer when the simulated wind speed is stronger than 2 m/s. The simulated optical properties of the atmosphere over the antarctic plateau are in general agreement with available observations.