Geophysical Research Abstracts, Vol. 7, 03161, 2005
SRef-ID: 1607-7962/gra/EGU05-A-03161

Assimilation of cloud top temperature and vertically integrated cloud water.

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A simplified assimilation procedure based on the cloud top equivalent black body temperature and total cloud water has been applied to a hydrostatic limited area model. The humidity profiles that minimize the error of the mentioned physical quantities are extracted from a database of silmulated profiles, obtained with previous model runs and directly inserted in the actual integration. The aim of the work is to verify the effects on the very short time precipitation forecast skills. The procedure has been applied, in a "syntetic context" in wich the reference state has been obtained by ECMWF data and the forecasts (with and without assimilation) by NCEP data, to five test cases of intense precipitation. Results show a sensible improvement of the equitable threath score in the forecast range of three to six hours. This results will be shown in this talk and the possibility to apply this technique in a operational chain will be discussed.