



The Use of Satellite Data Assimilation Instruments for the Synoptic Interpretation of Numerical Weather Prediction Model Outputs

V. Kveton, **M. Zak**

Dept. of Climatology, Czech Hydrometeorological Institute, Prague, Czech Republic
(michal.zak@chmi.cz)

The work is aimed at the application of the Meteosat satellite pictures for the so-called “model-to-satellite” approach for the study of the upper troposphere and tropopause dynamics and their comparison with results of the numerical weather prediction model forecast. The ARPEGE global model has been used for this purpose. The simulation of the Meteosat measured channels was made with the help of predicted fields by the model. From these simulated channels some fields are constructed for the comparison of results between simulated and measured channels. The comparison is made for different prognostic times of the model (6, 12, ..., 96 hours). This can provide us with information about possible phase shift between the model and reality what can result in correction of the model forecast. The work is focused on the synoptic scale structures, such as tropopause anomalies, jet stream and their connection with intensive cyclogenesis. Case studies of several intensive cyclone developments are presented.