



Towards Optimal Use of GPS Slant Delay Observations in Numerical Weather Prediction

J. de Vries

KNMI, The Netherlands, Observation Research Department, (jdevries@knmi.nl/Phone:
+31-30-2206771

In the EU FP5 project TOUGH the assimilation of ground-based GPS slant propagation delay observations in the HIRLAM Numerical Weather Prediction model has been investigated with the aim to improve the accuracy of the description of the humidity content of the atmosphere. Results from this project on the validation of the observations, in particular the use of the Neill mapping functions under dynamic meteorological conditions, the modelling of correlated observation errors, a simulation study on the expected impact of these observations and a first assessment of the impact on the forecast quality will be presented.