

**DATA-SET FROM TALL METEOROLOGICAL MASTS FOR USE IN COST 728
MODEL EVALUATION STUDY**

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Abstract: As part of the COST 728 action (Enhancing Mesoscale Meteorological Modelling Capabilities for Air Pollution and Dispersion Applications) a major model comparison exercise is planned.

The purpose is to evaluate if a certain model is scientifically able to simulate certain processes according to aimed specific applications. It is not to rank models or compare model output in the traditional way. Both prognostic and diagnostic models will be included in the evaluation.

The model domain is central and northern Europe. The modeling period will be February-March 2003, in which special attention will be devoted to the period 24 February to 11 March 2003.

An extensive database on emission and air pollution has been provided (Peter Bultjes, TNO, the Netherlands) together with a Meta-data base. Meteorological data from tall towers for model comparison and description of the weather conditions will be collected. The meteorological data set should not only contain high quality profiles of the usual mean profiles but also data on the atmospheric turbulence. In this respect the boundary-layer height and its determination is a central issue.

Measurements from the 106 meter mast at Risø (Risø National Laboratory), the 92 meter mast at Lindenberg (DWD), the 250 meter at Hamburg (University of Hamburg) and 200 meter mast at Cabauw (KNMI) will be used in the study.

The datasets behind the scientific data evaluation will be described with special emphasis on the meteorology and turbulence characteristics. Experience on advantages and limitations from the scientific data evaluation will be discussed with main emphasis on the meteorology.