



General Observation Period within priority program "Quantitative Precipitation Forecast"

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Within the Priority Program "Quantitative Precipitation Forecast" of the German Research Foundation the year 2007 has been chosen as a General Observation Period (GOP). The main goal of the GOP is to gather a comprehensive data set suitable for testing hypotheses and new modeling techniques developed within the QPF program. The GOP encompasses the Convectively and Orographically induced Precipitation Study COPS performed in south-west Germany in summer 2007 both in time and space and will help to relate the COPS results to a broader perspective (longer time series and larger spatial domain). The duration of one year will open up the possibility to statistically approach model problems and better pin down specific model weaknesses: The GOP will therefore provide a basis for reaching the QPF goal: Determination and use of the potentials of existing and new data as well as process descriptions to improve QPF.

The GOP will

- gather as many data about the atmospheric state as possible within an area covering Germany and neighbor states. The Alpine states (e.g. Austria and Switzerland) are of special interest to include the complex orography and to connect with MAP D-PHASE,
- optimize the exploitation of existing instrumentation by gathering routine measurements normally not available to the scientific community,
- focus on continuous/coordinated observations using existing instrumentations which are suitable for statistical evaluation,

- focus on measurements which are available in near real-time to enable a timely use within the QPF program,
- perform a rigorous quality control, cross-checking, and error estimation of the data,
- tailor the observations to model output (especially 2.8-km LMK and 7-km LME of Deutscher Wetterdienst, aLMO of MeteoSwiss, MAP D-PHASE forecasts),
- enable an easy access to data, quicklooks and first order analysis to the QPF community.

The GOP dataset encompasses data collected by rain gauges, weather radar, micro rain radar, polarimetric radar, disdrometer, ceilometer, gps water vapor observations, lightning networks, satellites, radiosondes, and special meteorological observation sites (e. g. cloudnet stations). Model forecast output needed for comparison with GOP data will also be extracted and archived.