

GROUND VALIDATION AND FIELD EXPERIMENTS IN SUPPORT OF EUROTRMM

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The EuroTRMM program, conducted by a consortium of eight european research groups, includes mainly two components. The first one is to participate to the general effort of the US and japanese communities to improve the TRMM algorithms, and to validate them from ground based or field experiments. The second is to investigate the use of TRMM data in Numerical Weather Prediction models. This paper focuses on two experiment in support to EuroTRMM:

- a- Ground based : the Darwin C-band polarimetric radar, surrounded by a dense rain gauge network and several disdrometers;
- b- Airborne dual beam Doppler : The NOAA-P3 deployed during CAMEX-3 and ancillary data (in particular in situ microphysical data).

The concept of N_0^* to characterize the DSD is recalled. It is used to parameterize the rain relations that should be included in the radar retrieval algorithms (TRMM-PR, Darwin radar, P3 tail radar). It is shown that N_0^* may be retrieved by the algorithms, which helps tuning the $Z-R$ relationship.

The potential of the three-dimensional wind field and precipitation retrieval from the P3 in Hurricane Bonnie to test parameterization scheme in the regional model of MPI (REMO) is also investigated.