

Perspectives for the last year

- AERIS website : **complete the database** and projet information
- Final report – final meeting in Toulouse May/June 2023
- 20-m LES runs Meso-NH (task 3) : POI-14, 11 and 6.
- Publications :
 - already on-line published / in review :
 - ▶ Bell et al. amt-2022-30, Vishwakarma et al. amt-2022-3 : synergy MWR/radar
 - ▶ Marquet, P., Martinet, P., et al. : conservative thermodynamic variables in data assimilation: a case study using ground-based MWR measurements, AMT-15-2021-2022.
 - submitted / In review
 - ▶ Martinet et al. : MWR data paper : Database of temperature, humidity and LWP retrievals from a fog dedicated network of ground-based MWR" Bull. of Atmos. Sci. and Technology,
 - ▶ Antoine et al. : AROME-500m / microphysical parameterizations (WAF-D-22-0071)
 - in preparation :
 - ▶ Presentation of the campaign + main highlights : F. Burnet / all PI
=> ~~submission end of 2021 (?) => March 2023~~
 - ▶ MWR retrieval inter-comparison : P. Martinet + Univ. Cologne
 - ▶ Impact of MWR assimilation AROME : G. Thomas / P. Martinet
 - ▶ Microphysics vertical profile + thin / thick transition : T. Costablos / F. Burnet /...
 - ▶ LES Meso-NH POI-14 + heterogeneity : M. Taufour / C. Lac



Overview paper outline draft / ACP

- **1. Intro. + scientific questions** => ANR proposal
 - **2. instrumental strategy and setup**
 - site maps, instrument tables, remote sensing / in situ synergy
 - 3 nested domains for AROME-500 validation => high resolution LES
 - Contrast forest / open fields for heterogeneities study
 - MWR network for impact of assimilation
 - **3. Observations :**
 - Climatology + table of fog events + retrotraj
 - Aerosol and droplets microphysical properties (ground) (Denjean, Costabloy, Burnet)
 - Turbulence (Canut, Price) ? LWC deposition (Price) ? UAV (Roberts / Cayez)
 - Radar : scanning (Delanoë), LWC retrieval POI-11 (Vishwakarma / Delanoë – *paper*)
 - MWR / radar synergy (POI-14) (Martinet / Bell - *paper*)
 - **4. Process studies :**
 - Microphysics vertical profile from tethered balloon, POI-14 & contrast thin /thick (Costabloy / Burnet)
 - Conceptual model Toledo et al. 2021 (Dione / Haeffelin)
 - **5. NWP model :**
 - AROME-500m (Antoine / Seity/ Honnert – *paper*), PEARO (Martinet / PFE Mathias), MWR assimilation (Martinet / Thomas)
 - UM Deterministic model vs observations (Thornton / Price), ensemble (McCabe)
 - **6. High resolution LES Meso-NH** + impact of heterogeneities POI-14 (Taufour / Lac)
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- Number of case studies ? : POI-14, POI-11, 28 Oct. 2019
 - **Time line** : draft for October 2022 => contributions from PI for Dec 2022 => **submission March 2023**

