CCRES MWR Central Facility - Status & Updates

- **Python based processing software under development**
  - started with operational test run for Jülich
  - more stations will follow soon

- **In the process of acquiring 2 additional RPG MWRs**
  - low humidity (90 / 183 GHz)
  - replacement for operational MWR (G5 K / V Band)

- **Organized workshop on MWR operation and calibration in Jülich** (Bernhard Pospichal, Tobias Marke, Lukas Pfitzenmaier, Rainer Haseneder-Lind, Tobias Böck)

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Discussion Points

- **Implementation of MWR processing software into CloudnetPy**
  (processing chain can run using existing retrieval coefficients)
- **Setup of centralized calibration database**
  (storage of absolute calibration LOG files)
- **HKD monitoring**
  (define variables to be monitored and alert settings)
- **ACTRIS conformity**
  (data levels, vocabulary)
- **Data visualization**
  (dynamic quicklooks)

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Next steps

- **Test and implement processing software; request retrieval coefficients**
- **Start raw data transfer from pilot stations** (SIRTA, JOYCE, Lindenberg, …)
- **Retrieval development plans / first ideas**
  - Retrieval derivation with ERA5 input / compare to radiosonde based retrievals
  - Include passive channel of cloud radar (89 GHz)
  - Statistical retrieval method (Neural Network including auxiliary information)
  - Tests regarding shifts in center frequency / bandwidth (V-band)
  - Spectral consistency retrieval for off-zenith angles
  - MWR + IRT synergy retrieval for LWP
- **Work on data quality assessment strategy (+ documentation) for labelling**

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