

# **Microwave Activities in Toulouse**

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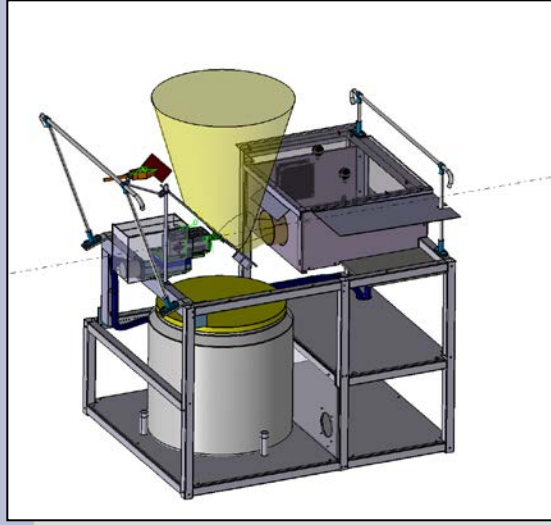
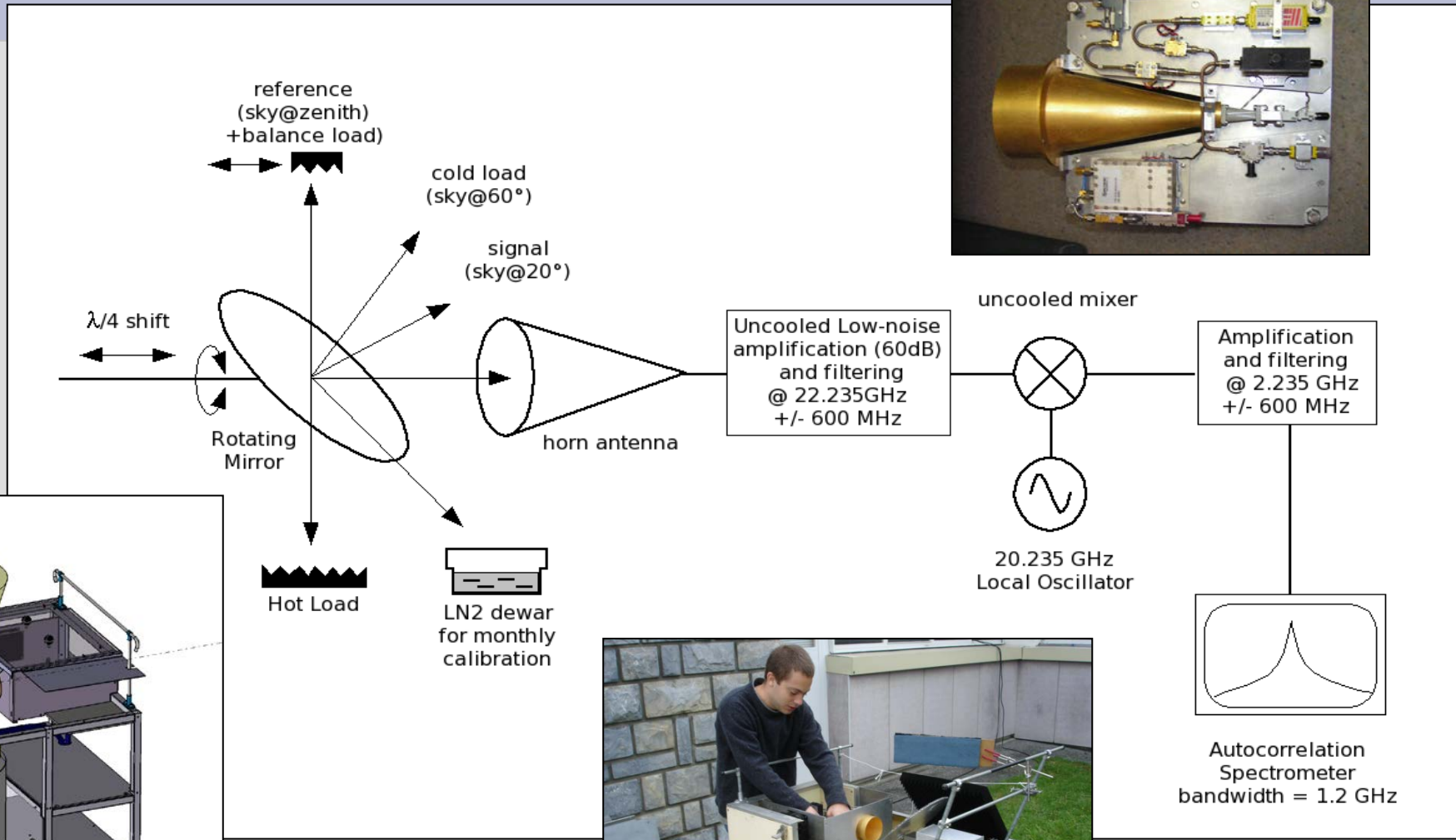
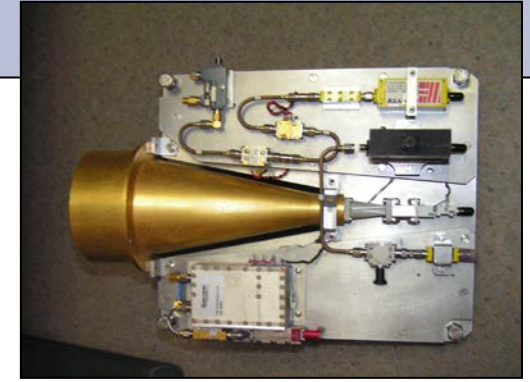
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# *Background*

- **Former Team from Bordeaux**
  - Spaceborne measurements (ODIN)
  - Ground based Ozone and Water vapour
  - MOLIERE radiative transfer and inversion code
  
- **Moved to Toulouse**
  - Chemistry / transport models
  - Tropospheric in situ measurements (Ozone, Aerosols,...)
  - Involved In MOZAIC, AMMA...
  - Clouds and Wind Radars
  - 2 Remote sites for measurement: Lannemezan & Pic du Midi

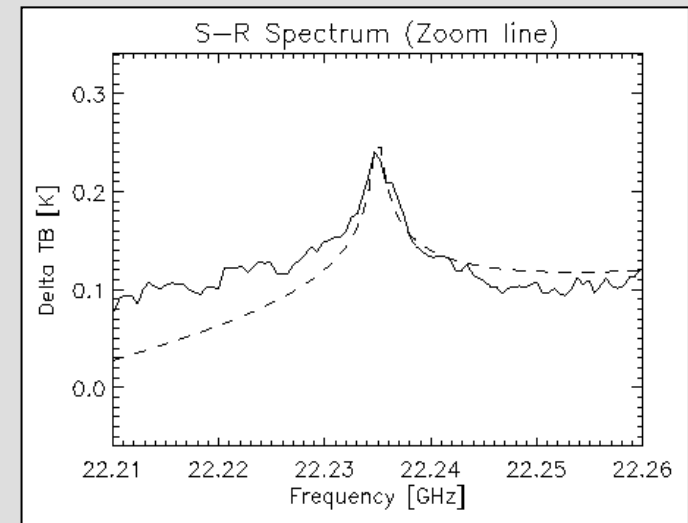
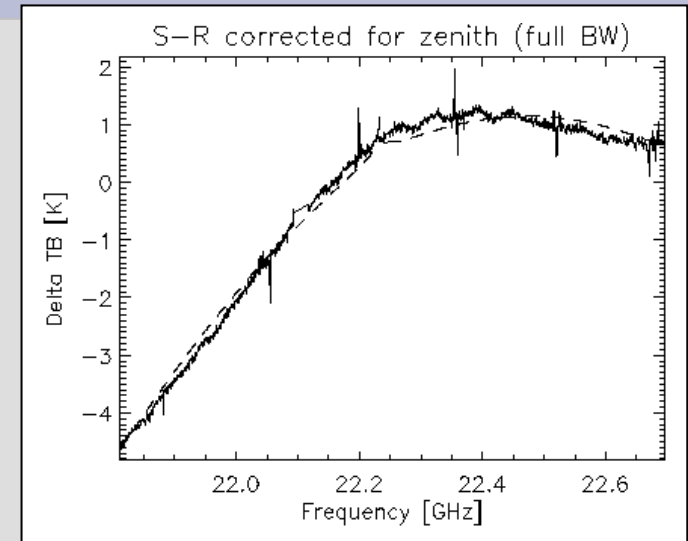


# The Radiometer



# Mobile Water Vapour stratospheric Radiometer

- Features
  - Easily transportable
  - Trec around 200-250 K
  - 800 MHz AOS Spectrometer
  - LN2 calibration required
- Recent activities
  - Prototype modified
  - Lots of problems solved
  - Tests at Pic Du Midi
- To be done
  - Retrieval tuning
  - Validation / intercomparisons
  - New spectrometer



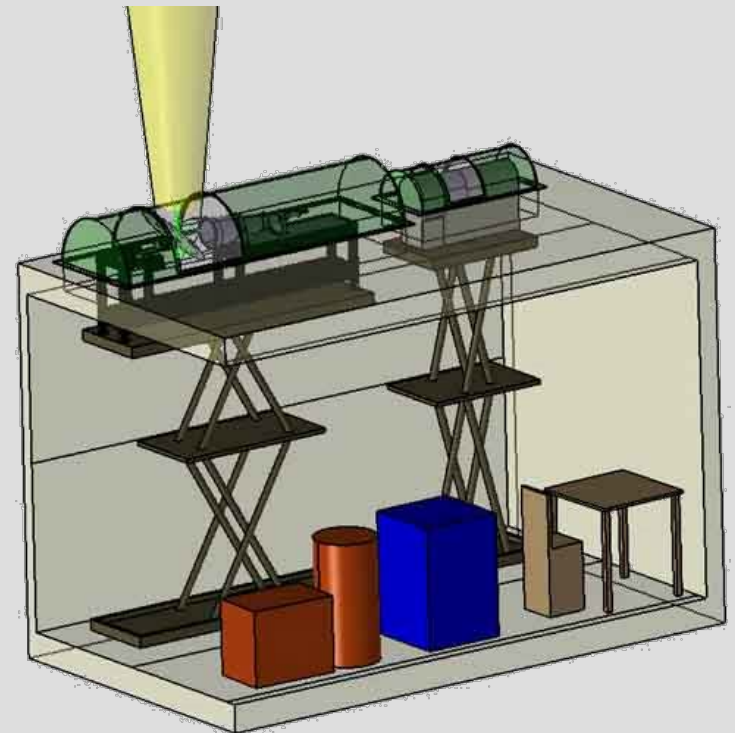
# Future water vapour projects

- **Instrument for the Reunion Island NDACC Site**

- Microwave and mechanical design being completed
- First tests scheduled in 2007

- **Dual Instrument in Antarctica**

- **To be installed in Concordia station (Dome C)**
  - alt 3200m
  - Extremely dry place
- **Tropospheric MW profiler**
  - Channels in the 20 GHz – 60 GHz band
  - Liquid / Vapour / temperature profiling
  - Ground to 10 km altitude / 500m resolution
  - Commercially available (Radiometrics or RPG)
  - Beginning of operation 2008
- **Stratospheric MW Radiometer**
  - Copy of the Reunion island instrument
  - To be installed in 2009



# Collaborations

- **ONERA** (France, tropospheric profiler, microwaves lab, material characterisation setups)
- **CNES** (French space institute, microwaves lab)
- **IPEV** (French polar institute)
- **ENEA** (Italia, Radiosounding data over antarctica)
- **IAP-MW** Bern
- **Chalmers University**

