WV-DIAL Processed data

The 24-hour (day-long) processed files are stored as NetCDF files.

The profiles are calculated on a 30 sec time grid with a temporal smoothing/resolution of:
60 sec for the relative backscatter and 5 min for water vapor in g m^{-3}

For the water vapor, vertical smoothing/resolution was applied 150 m < 1.5 km, 300 m 1.5 to 2.5 km, 600 m > 2.5 km

The NetCDF files contain the following variables

time, (days since January 0, 0000)
time_unix, 'unix time', (seconds since 00:00:00 UTC, January 1, 1970)
time, (seconds since 0000 UTC on <file date>)
range, (meters)
N_avg, 'water_vapor_number_density', (molecules/cm^3)
Absolute_Humidity (g/m^3)
N_error, 'water_vapor_number_density_error', (molecules/cm^3)
Absolute_Humidity_std (g/m^3)
P ,'pressure', (atm)
Pressure (atm)
T, 'temperature', (K)
Temperature (K)
RB, 'relative_backscatter', (arbitrary_units)
Offline_Temp_Spatial_Avg, 'offline counts', (counts)
Online_Temp_Spatial_Avg, 'online counts', (counts)
lambda, 'online wavelength', (nm)
lambda_off, 'offline wavelength', (nm)

WV-DIAL Project summary

Perdigão

a. unit #1 in field container, NF not used
b. Vale do Cobrão, Portugal (39°42'49.33"N, 7°44'11.48"W)
c. 24-Apr to 17-Jun 2017 (55 days)