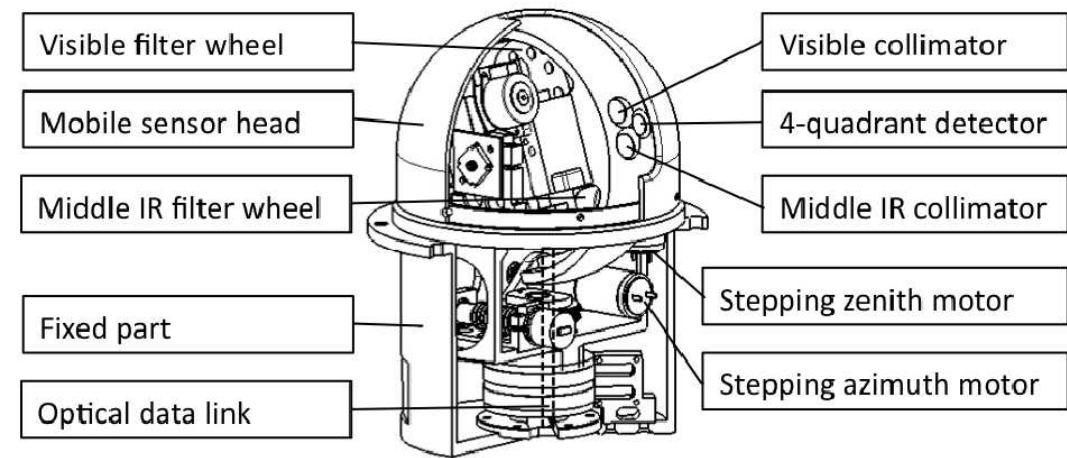


# Plasma in Charmex

B.Torres

16th September 2013

# What is PLASMA?



- ① A 15-channel airborne sun tracking photometer designed by LOA<sup>1</sup>.
- ② Provides aerosol optical depths over a wide spectral range (0.34–2.25  $\mu m$ )
- ③ It has been tested in previous campaigns:
  - Airborne campaigns: Dakar 2013, technical flights...
  - Car: Dragon 2011, test-trips...

<sup>1</sup> Airborne sunphotometer PLASMA: concept, measurements, comparison of aerosol extinction vertical profile with lidar. Karol et al., AMT, 2013.



## PLASMA in CHARMEX

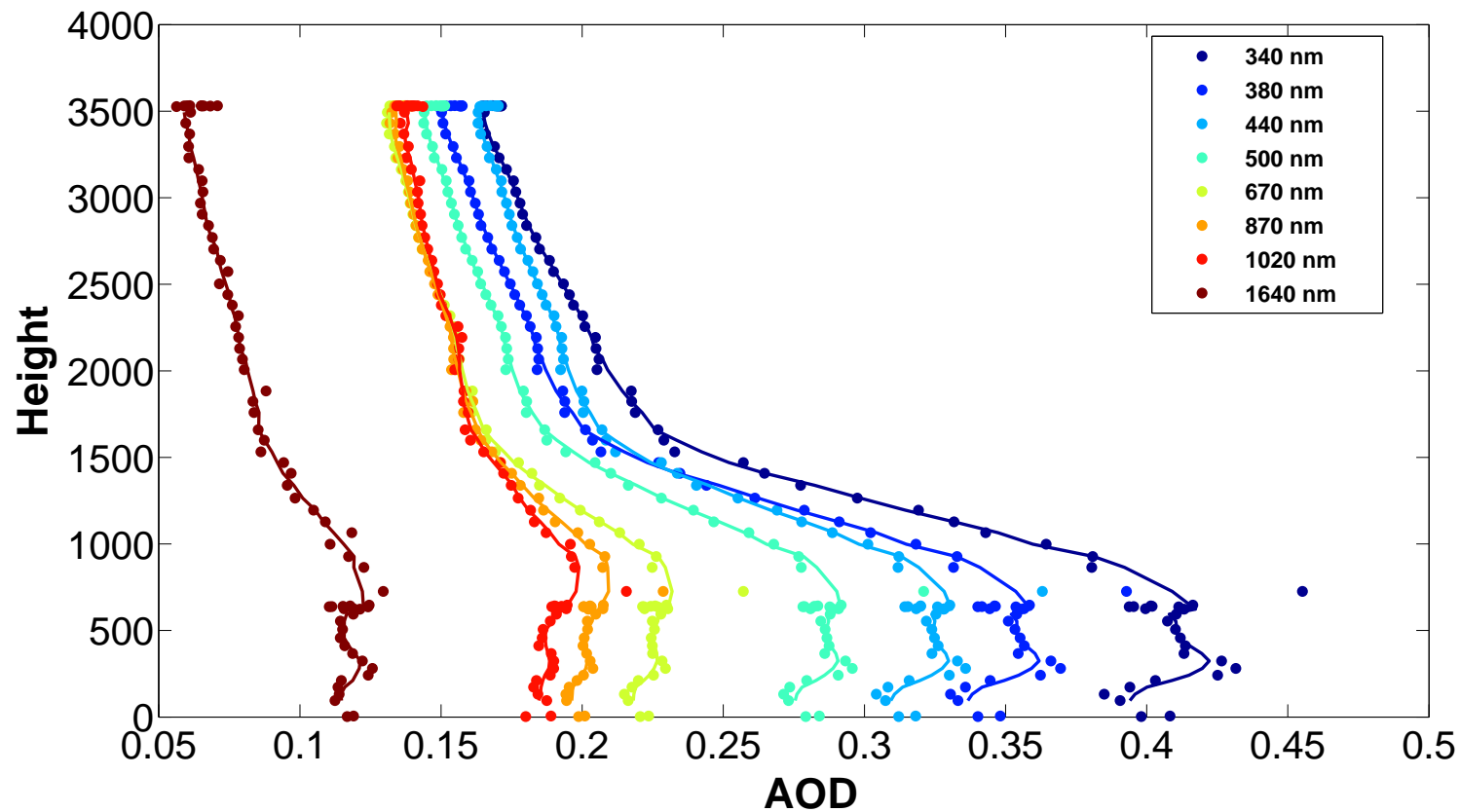
- 1 Plasma was integrated in ATR
- 2 It participated in all the flights: 13 (+1 test).

# Products

## ① Aerosol optical depth

- It can be compared with ground based AERONET sun-photometers.
- We have observed some issues and we are going to recalibrate the instrument (Langley-Izaña)

Landing in Cagliari:20/06/2013

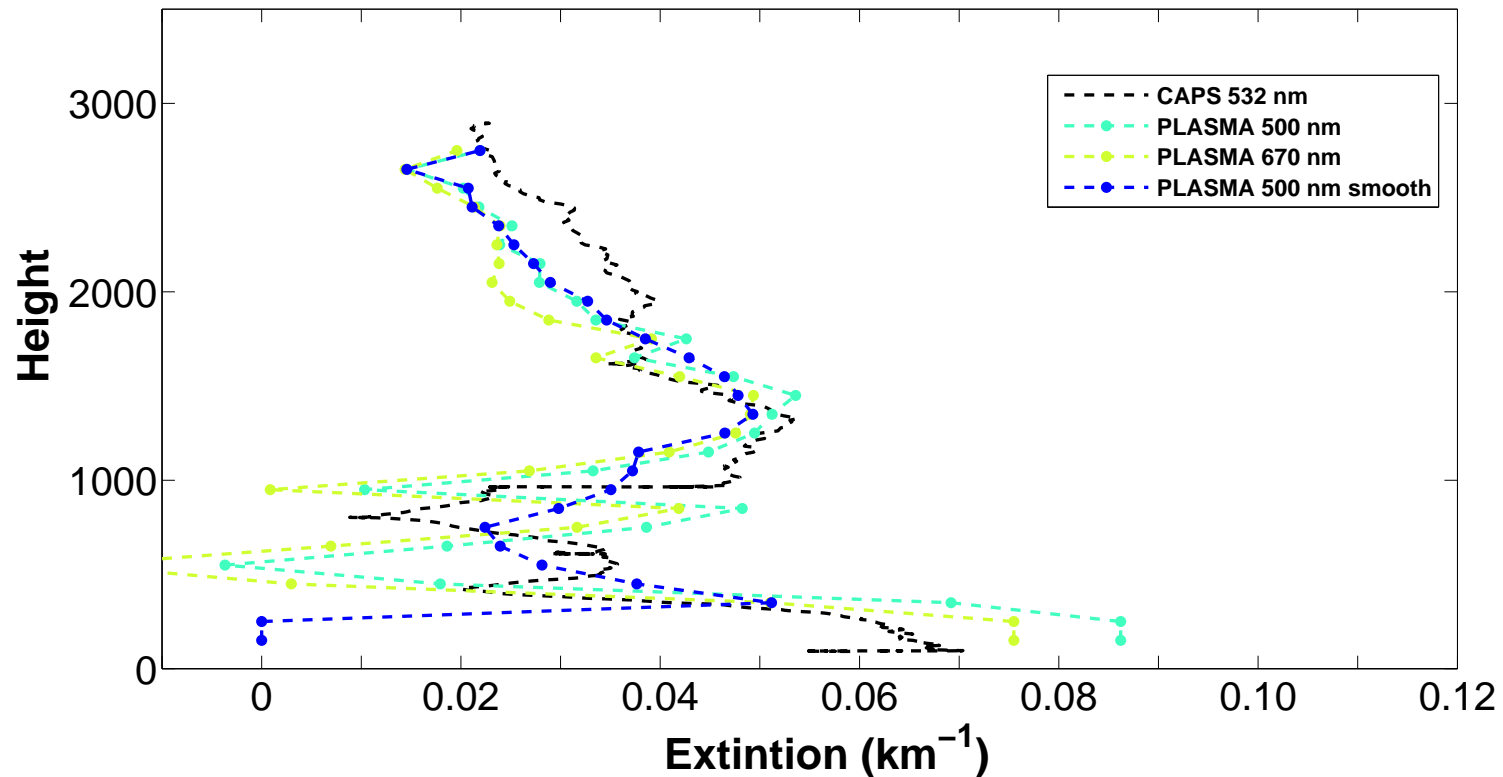


# Products

## 2 Vertical profile of aerosol extinction:

- In vertical profiles and in every taking off and landing.
- It can be compared with CAPs (Cavity Attenuated Phase Shift) extinction measurements on board ...
- ...and with ground based Lidars extinction profiles: Granada

Landing in Minorca:17/06/2013

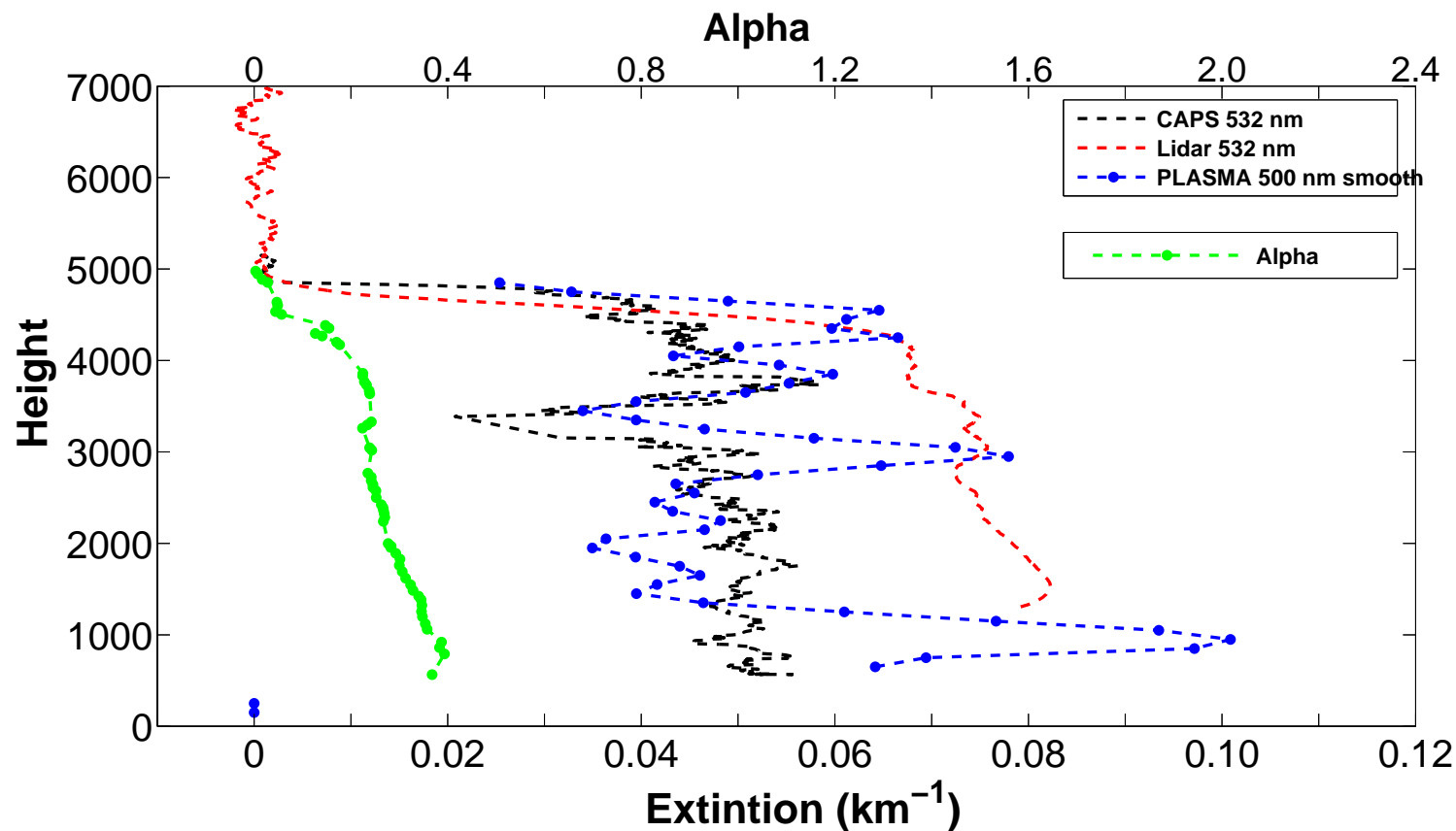


# Products

## 2 Vertical profile of aerosol extinction:

- In vertical profiles and in every taking off and landing.
- It can be compared with CAPs (Cavity Attenuated Phase Shift) extinction measurements on board ...
- ...and with ground based Lidars extinction profiles: i.e. Granada

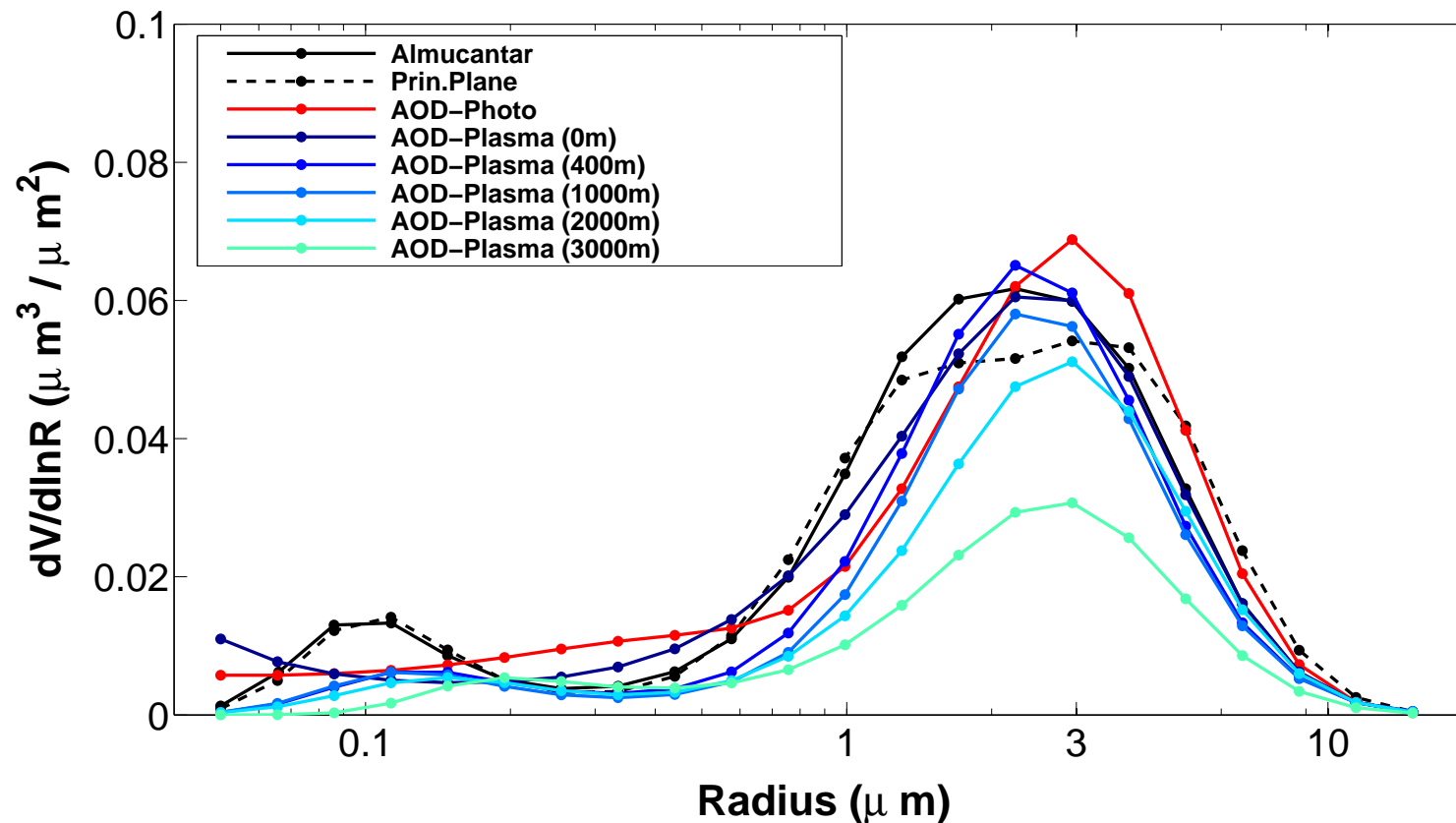
Landing in Granada:16/06/2013



# Future

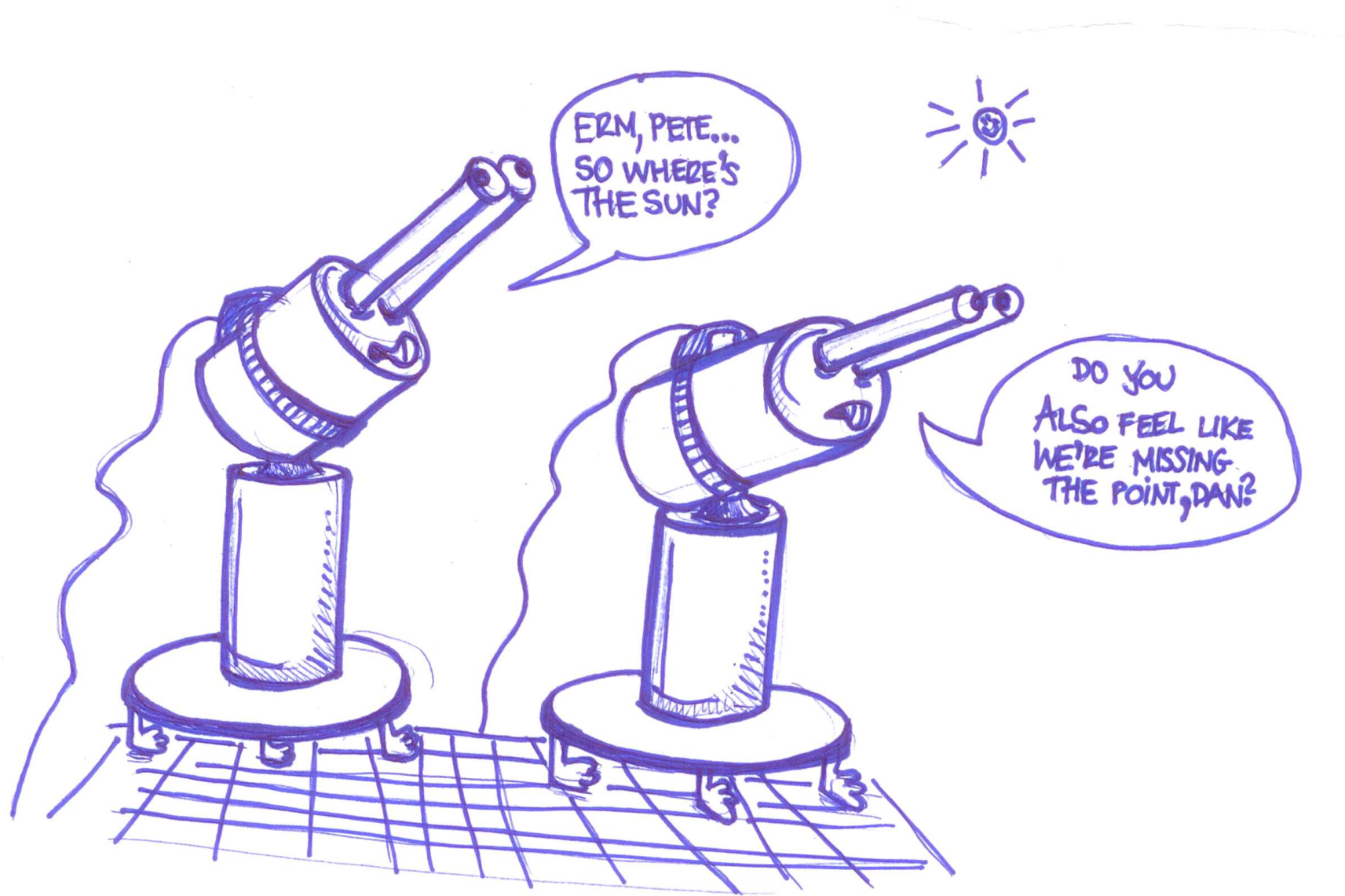
- ① Comparison with other lidar instruments: Lampedusa, Minorca...
- ② AOD inversion to derive aerosol size distribution at different heights
- ③ ... ??

Example: Dakar 28th March



# Gracias

Merci!



hew