

# Ground based Alpha-lidar capabilities of EarthCARE data products evaluation

Livio Belegante, Doina Nicolae, Razvan Pirloaga, Anca Nemuc

National Institute of R&D for Optoelectronics – INOE, Magurele, Romania; [livio@inoe.ro](mailto:livio@inoe.ro)

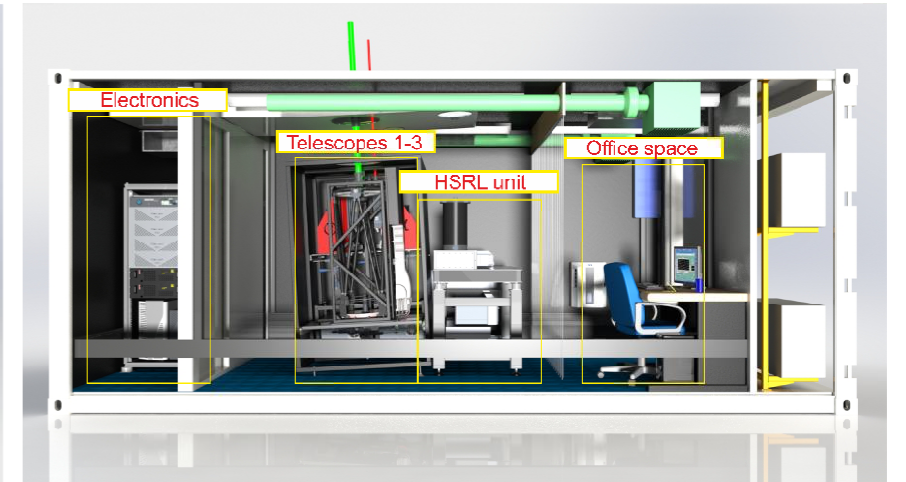
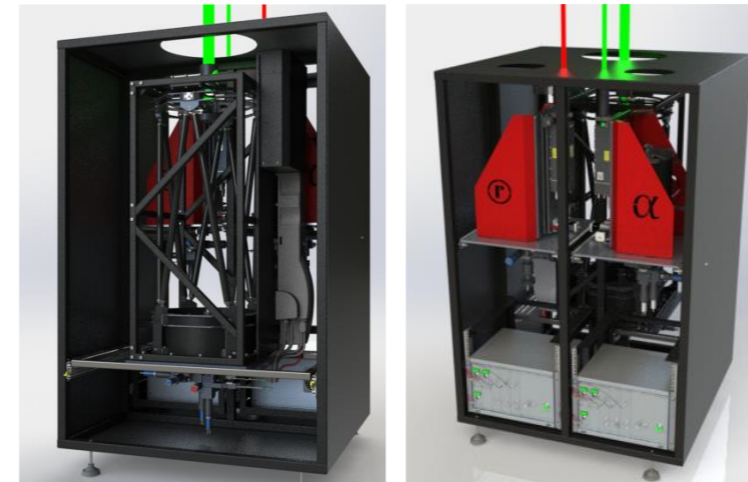
## Instrument

**Table 1.** Emission wavelength and detection channels for each telescope part of the Alpha-lidar instrument.

Telescope1:	355nm	355nmRR	408nm	387nm	532nm	532nmRR	607nm	1064nm	1064nmRR
Telescope2:	355nmP	355nmS	532nmP	532nmS					
Telescope3:	1064nmP	1064nmS							
Telescope4:	532nm HSRL total		532nm HSRL molecular						

## Products:

Three backscatter, two daytime extinction, one HSRL, two nighttime extinction and three depolarization products, 1 water vapor.



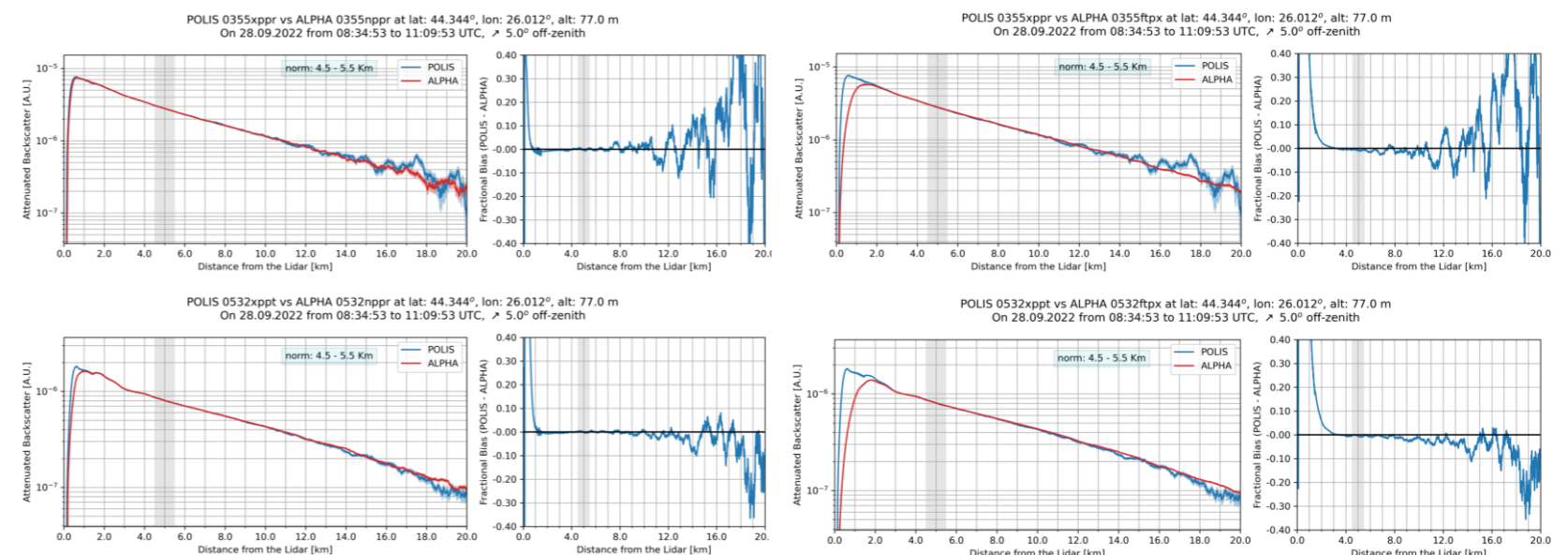
## Inter-comparison with reference lidar



POLIS reference lidar - from Ludwig Maximilian University



ALPHA reference lidar - from INOE

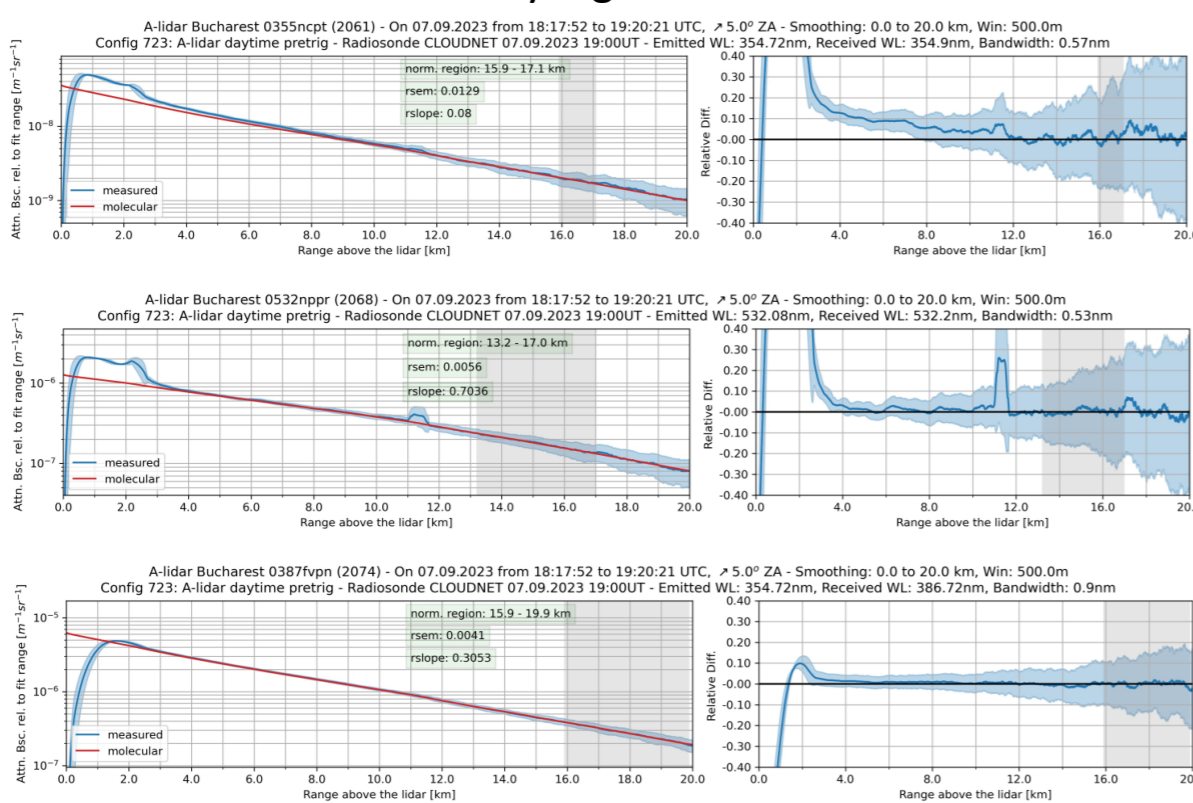


POLIS – ALPHA: near range telescope

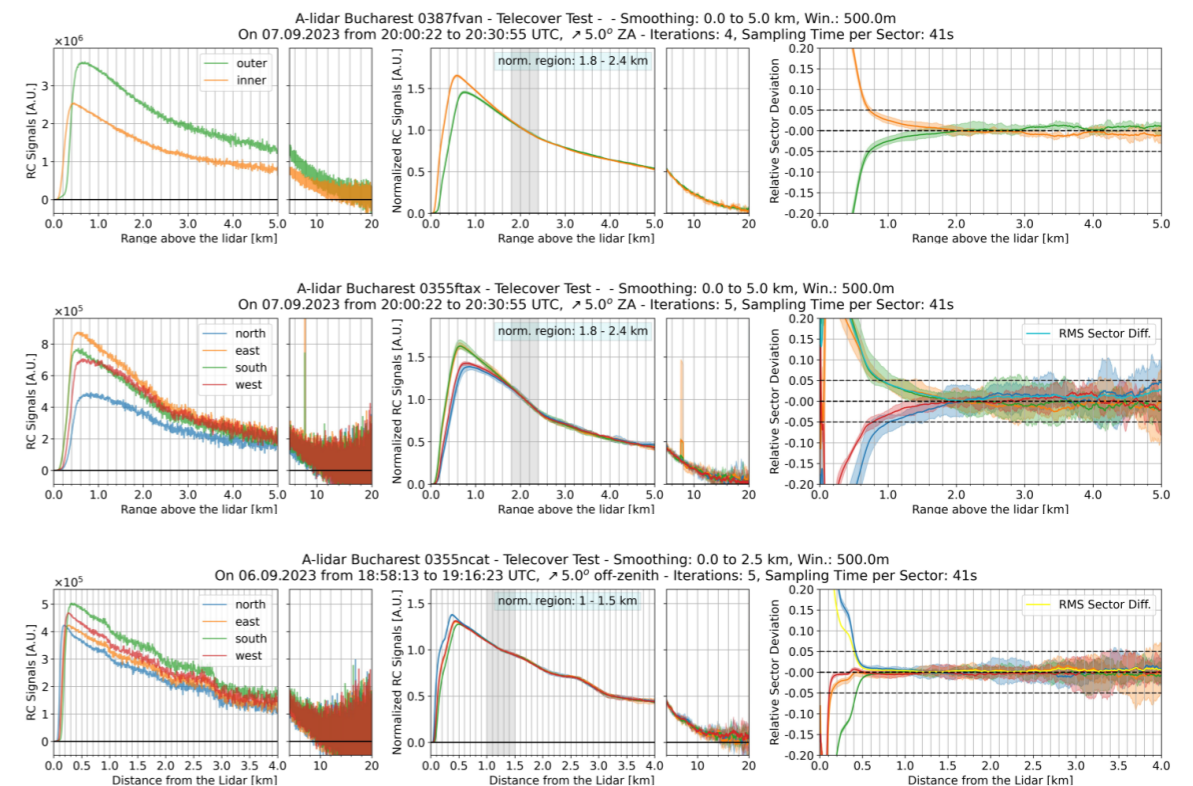
POLIS – ALPHA: far range telescope

## QA in the framework of Actris

### Rayleigh fit test



### Telecover test



## Depolarization calibration

