Radiometric Performance of the ALADIN Instrument

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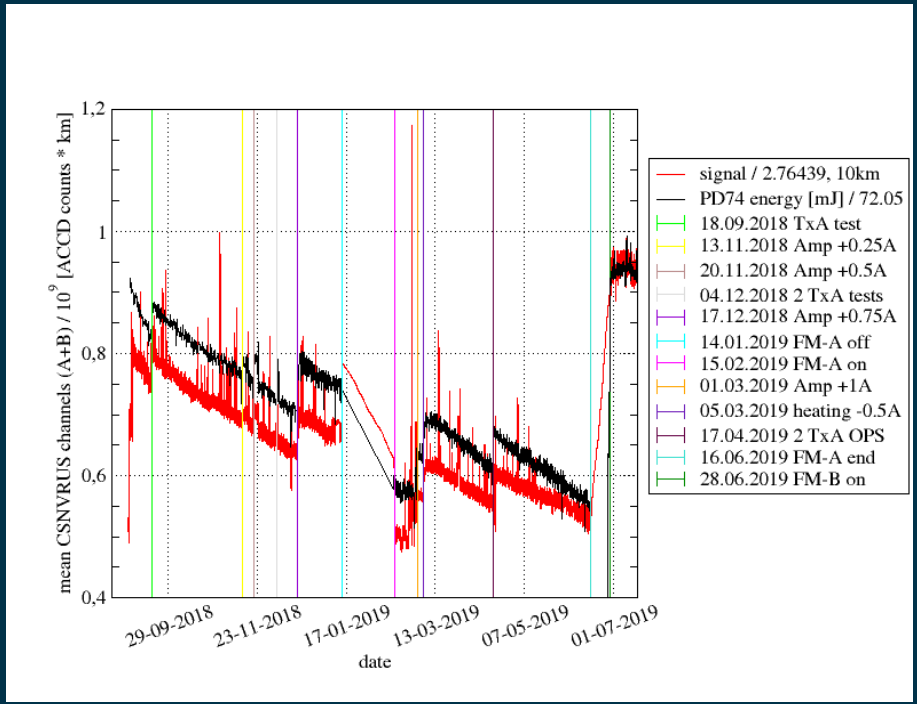
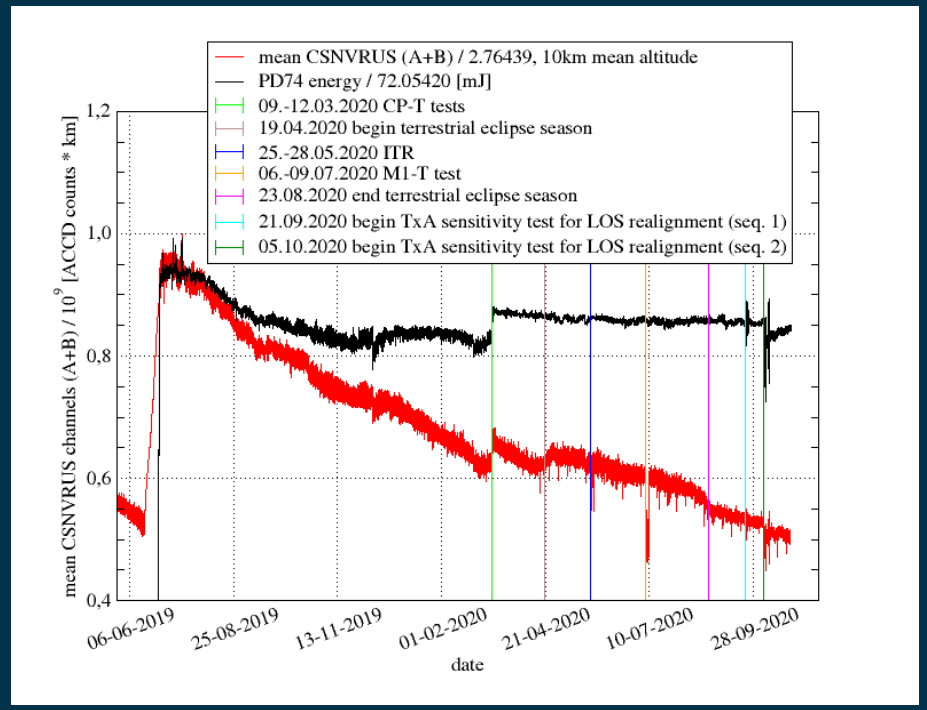
L1B Clear Sky Rayleigh Useful Signals (CSNVRUS)

- Continuous monitoring important for Rayleigh wind data quality
- In general signal decrease for FM-A and FM-B, signal increase after switch from FM-A to FM-B due to larger emitted UV energy (photodiode PD74) of FM-B, currently signal level below that at the end of FM-A period
- Rayleigh signals followed mainly the UV energy only for FM-A, thus the reasons of the signal decrease are different for FM-A and FM-B, root cause analysis is ongoing

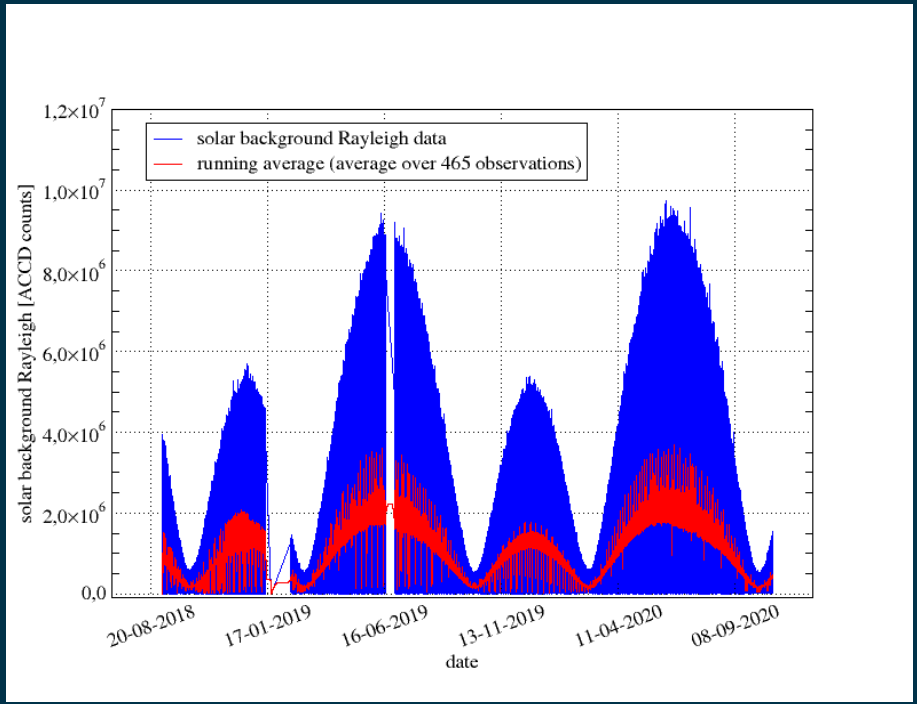


- Rayleigh signal evolution at 10km mean altitude for FM-A (left) and FM-B (right, red line) in comparison with the UV laser energy (black line)
- vertical lines indicate specific laser or alignment tests and eclipse season



L1B Rayleigh and Mie Useful Signals for Solar Background

- Continuous monitoring important for assessment of wind random error evolution
- Solar background signals show an oscillating behaviour along an orbit due to the changing sun illumination
- Maxima of solar background signals show a yearly oscillating behaviour with main maximum in June, secondary maximum in December, and minima in March and October, caused by the Earth's orbit around the sun, year-to-year differences in the solar background signals are small



Rayleigh (left) and Mie (right) solar background signal evolution for FM-A and FM-B