Summary Mission #2, Monday 28 March

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Felix Knapp (KIT) discussed the serendipitous observation of the Aeolus laser beam with the Pierre Auger Observatory in Argentina. Remarkably both the main beam (under 35°) and the secondary laser beam (under 55°) from the anti-narcissus reflection are seen. The observation identified a geolocation error of a few km, and even the laser energy per pulse can be retrieved. A 50% loss between 2019 and 2021 points to a loss in the emit path.

Adrien Lacour (Météo-France) discussed the retrievals for the L2A aerosol product for the SCA (standard correct algorithm) and MLE (maximum likelihood estimator). The MLE offers the possibility of a finer horizontal resolution that will be implemented in the next version.

Gert-Jan Marseille (KNMI) discussed the use of ECMWF model for characterizing the Mie spectral non-linearities, which was derived from the nadir pointing instrument calibration. Using the NWP model derived equivalent improves the bias of the Mie cloudy winds by removing a wind-speed dependent “wiggling”.

Michael Rennie (ECMWF) discussed the temporal evolution of the Mie cloudy and Rayleigh clear quality (bias, random error) as derived from ECMWF monitoring. He discussed further the reduction of the Rayleigh random error by increasing the on-board accumulation length of the ACCD detector – so called N/P setting. A new N/P setting is planned to come in operation on Monday April 4.

The session discussed the continuous monitoring and improvements of the data quality for L1B, L2A and L2B by the Aeolus DISC, which gives also some good confidence in the retrieval algorithms relevant for Aeolus-2.