



Atmospheric Boundary Layer temperature and humidity from new-generation Raman lidar

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Mixing ratio and temperature data, obtained with EPFL Raman lidar during the TABLE-08 experiment are presented. The processing methods will be discussed along with fundamental physics. An independent calibration is performed at different distances along the laser beam, demonstrating that the multi-telescopes design of the lidar system is reliable for field application. The maximum achievable distance as a function of time and/or space averaging will also be discussed. During the TABLE-08 experiment, different type of lidar measurements have been obtained including: horizontal and vertical time series, as well as boundary layer "cuts", during day and night. The high resolution data, 1s in time and 1.25 m in space, are used to understand the response of the atmosphere to variations in surface variability.