



Supplement of

Analyzing the atmospheric boundary layer using high-order moments obtained from multiwavelength lidar data: impact of wavelength choice

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The figures C1 and C2 represent the height plot of *RCS* to 355 nm and 1064 nm, respectively, obtained during the Case Study I.

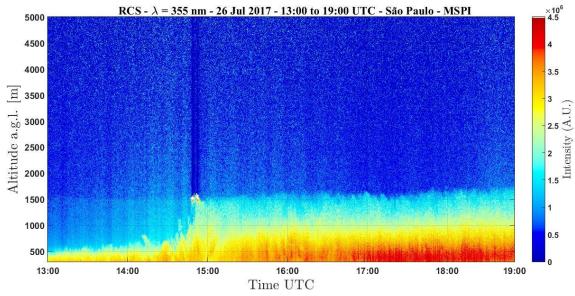


Figure C1. Time Height plot of RCS_{355}

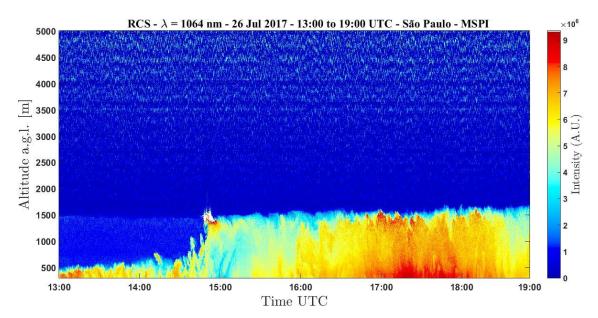


Figure C2. Time Height plot of RCS_{1064}

In the figure C3 are presented the backscatter, extinction and Lidar Ratio (LR) profile for 19^{th} July 2018. The LR oscillate around the mean lidar ratio of 53 ± 7 sr, which is a strong indication that there is no changes in the aerosol optical properties during the turbulence analysis period. In agreement with the premises adopted to generate the equation 2.

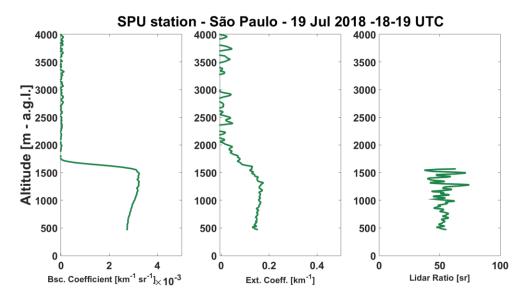


Figure C3. Bac3kscatter, extinction and Lidar ratio profile retrieved using Rotational Raman lidar analysis for 19 of July 2018.