



Case study of Aerosol parameter day to day variability in autumn 2018 in an Alpine area

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Ground-based measurements of aerosol optical depth and Angstrom parameter with sun photometers at three locations in the Alps are analyzed. The focus of this study is on day to day variability of these parameters. Aerosol optical properties varying over time due to advection and source strength on the one hand and more chemical related processes like coagulation, humidification or gas to particle phase conversion on the other hand. Due to an unusual sunny autumn 2018 in Tyrol, time series with few gaps are available. With a synoptic approach using data from radiosondes, satellites and numerical models, an attempt is made to distinguish between local and cross-regional impact. To reach this goal, it is important to take into account different aerosol regimes within the period studied.