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## Lidar signatures of volcanic and biomass burning aerosols after long-range transport at the french antarctic base Dumont d'Urville

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In the frame of the NDACC (Network for Atmospheric Composition Changes), lidar time series are routinely acquired at the french antarctic base Dumont d'Urville. Aerosol and cloud profiles are monitored using a 532nm backscatter and depolarization stratospheric lidar system. Combining lidar measurements, microphysical/transport modelling and satellite measurements, we present several case studies involving long-range transport of sulfate or carbonated aerosols among wich evidences of the 2015 calbuco plume signature at the beginning of the Antarctic Polar Stratospheric Cloud season. These records highlight a potential underestimation of the impact of deep transport on the antarctic atmosphere regarding cloud chemistry and ground ice properties through sedimentation.