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# Comparison of satellite and ground-based Measurements of Noctilucent Cloud Particle Sizes

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SCIAMACHY, the Scanning Imaging Absorption spectroMeter for Atmospheric CHartographY, provides measurements of limb-scattered solar radiation in the 220 nm to 2380 nm wavelength range since summer 2002. Measurements in the UV spectral range are well suited for the retrieval of particle sizes of Noctilucent clouds (NLCs) in the northern hemisphere, and have been used to compile the largest existing satellite data base of NLC particle sizes. In this contribution we compare SCIAMACHY NLC size retrievals with the extensive NLC size data set based on ground-based LIDAR measurements operated at the ALOMAR Observatory (69N, 16E) for the northern hemisphere NLC seasons 2002 to 2007. For the NLC particle size retrievals we use spherical and non-spherical particles and mono-modal normal or log-normal particle size distributions. The NLC sizes retrieved from SCIAMACHY and the LIDAR are in good general agreement. The combined dataset allows to investigate vertical and horizontal structures of particle properties on small and planetary scales.