Geophysical Research Abstracts, Vol. 7, 06363, 2005
SRef-ID: 1607-7962/gra/EGU05-A-06363

Presentation of the new McMurdo lidar.

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A LIDAR system has been operated in the frame work of an American-Italian collaboration from McMurdo station Antarctica since 1990. The LIDAR is part of the NDSC network and provides aerosol measurements during the Antarctic winters. The principal goal of the measurement is the observation of Polar Stratospheric Clouds (PSC), which are important for the heterogeneous chemistry involving stratospheric ozone.

During the XIXth Antarctic Expedition at the beginning of 2004 a new LIDAR system has been installed at McMurdo, substituting the previous one. Many improvements have been made with respect to the previous system, and the number of observed channels have been increased. Back scatter signals at 532 nm (polarised and depolarised) and 1064 nm, as well as a Raman signal at 607.3 nm are measured by photon counting techniques.

Preliminary results of the 2004 winter will be presented, and a case of possible NAT rock observations will be discussed.