

Analysis of Chlorine Reservoir Partitioning in the Polar Stratosphere observed with ILAS and HALOE data

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The newest retrieval algorithm (version 6.0) of the Improved Limb Atmospheric Spectrometer (ILAS) successfully derives chlorine nitrate (ClONO_2) profiles. The ClONO_2 mixing ratios indicated significant increase in March over polar Northern Hemisphere. The data analysis combined with HCl from HALOE indicates activation and deactivation. Though the limited measurements of ILAS did not reveal ClONO_2 evolution during the whole polar ozone depletion period, the recovery phase of active chlorines over the Antarctica indicated deactivation to HCl rather than ClONO_2 .