



## **GLORIA chemistry-mode observations during the Arctic winter 2015/16 POLSTRACC campaign**

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The Arctic winter 2015/16 was characterized by possibly record-breaking low stratospheric temperatures in December and January resulting in strong chlorine activation and denitrification of the polar vortex air. In this situation, the POLSTRACC (Polar Stratosphere in a Changing Climate) aircraft mission took place from Oberpfaffenhofen and Kiruna with the aim to investigate chemical and dynamical processes in the transition region at the lowest part of the stratospheric vortex. We will present first results from measurements obtained by the GLORIA (Gimballed Limb Observer for Radiance Imaging of the Atmosphere) that has been operated on the HALO (High Altitude and Long Distance) research aircraft during POLSTRACC. Emphasis will be laid on retrievals of 2-dimensional trace-species distributions derived from the so-called chemistry mode, i.e. high-spectral resolution, GLORIA observations. Targeted gases are, amongst others,  $O_3$ ,  $HNO_3$ ,  $ClONO_2$ ,  $H_2O$ , and various CFCs.