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Observation of Arctic stratospheric ozone loss during winter/spring 2007/08

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We present the ozone loss of the recent winter in the Arctic stratosphere as observed by the millimeter wave radiometer KIMRA operated continuously at IRF Kiruna (67.8 N and 20.4 E). From the measurements we derive ozone profiles between 15 and 60 km and column densities for this altitude region. As groundbased observations KIMRA data describe vortex averaged Arctic winter ozone loss. Therefore we take only those measurements into account that have been taken while Kiruna was located well inside the polar vortex as defined by the 'Equivalent Latitude' method. This method is more flexible in the definition of the vortex than a strict PVU number and allows for more data points for the ozone loss estimation during the course of the winter. Besides inside/outside vortex situations the observations may be affected by dynamic effects such as subsidence of air masses inside the vortex. We corrected the data for this effect by using N2O data from the Odin satellite.