

4.237 The production of 20+ year height-resolved ozone data from GOME-class instruments for ESA-CCI and C3S.

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Abstract:

RAL's ozone profile retrieval scheme for the GOME-class of solar uv/vis backscatter spectrometer has unique sensitivity to tropospheric ozone, which led to its selection for nadir ozone profile retrieval from this class of sensor in ESA's Climate Change Initiative (CCI) and inclusion in the Tropospheric Ozone Assessment Report (TOAR). The JASMIN computing facility at RAL has enabled the production of full-mission global data sets from GOME-1, SCIAMACHY, OMI and GOME-2A & 2B, resulting in over 20 years of height-resolved dataset for ozone from 1995-2016, spanning both stratosphere and troposphere. A reprocessing of data has been enabled under the Copernicus Climate Change (C3S) project and work is underway to reconcile these data time series. We present some of the retrieval scheme advancements and highlights of the latest version of the dataset, including comparisons with coupled chemistry climate models, chemical transport models and MACC/CAMS analyses.