



11 years of IASI CO retrievals

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Carbon monoxide (CO) is an important trace gas for understanding air quality and atmospheric composition. It is a good tracer of pollution plumes and atmospheric dynamics.

With three IASI instruments flying on the Metop-A, Metop-B and Metop-C satellites, any location on Earth is now observed at least six times per day in the infrared spectral range. All cloud free observations are analysed in near real time mode.

IASI CO concentrations are retrieved from the radiance data using the Fast Operational Retrievals on Layers for IASI (FORLI) algorithm, based on the Optimal Estimation theory. The operational production is performed at EUMETSAT and the products are distributed in NRT via EUMETCast under the AC SAF auspices.

We present here an analysis of 11 years of global distributions of CO. Comparison with MOPITT CO data ($v7T/v8T$, record starting in 2000) will be shown. IASI and MOPITT data are jointly assimilated in the Copernicus Atmospheric Monitoring Service (CAMS) to generate CO pollution forecasts. We will also focus on the pollution event that occurred in Europe in October 2017, where dust from Sahara and smoke from Portugal/Spain wildfires were transported by hurricane Ophelia across Europe. 3D observations by ground-based, aircraft, and satellite data compared with CAMS atmospheric composition analyses will be presented.