



CO global distributions from thermal infrared measurements: Comparison of IASI and MOPITT observations

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Carbon monoxide is a reactive toxic gas, mainly produced by the combustion of fossil fuels and vegetation burning. A better understanding of photochemistry and transport of this gas will allow to determinate its impact on pollutants transport and climate change. CO is measured since several years by a number of satellite instruments, allowing a global monitoring of its distributions. The most recent mission dedicated to the observation of the troposphere is IASI (Infrared Atmospheric Sounding Interferometer), launched on October 19, 2006 onboard the MetOp-A satellite. It uses an accurately calibrated FT spectrometer and an associated infrared imager to sound the atmosphere, with a global coverage two times per day and a horizontal resolution of 12 km.

The aim of this study is to compare the CO data values observed by IASI to those observed by MOPITT (Measurements Of Pollution In The Troposphere) instrument, launched in December 1999 onboard the US TERRA satellite, and widely used by the scientific community. We will present systematic comparisons between IASI and MOPITT CO total columns characterized in terms of vertical sensitivity (DOFS) and errors budgets, with examples above specific regions.