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Monitoring and forecast of atmospheric composition with IASI/METOP

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Thermal infrared sounders on-board polar-orbiting platforms are now playing a key role for monitoring the atmospheric composition change. They add to the products available from UV-visible satellite sounders and these altogether contribute in drawing a more complete picture of the tropospheric composition, its changes over space and time, and its impact on the global environment. The IASI instrument developed by CNES and launched by Eumetsat onboard the MetOp satellite series is providing essential inputs for weather forecasting and pollution/climate monitoring. This mission is monitoring the atmospheric composition at cloud-free location two times per day, with an excellent horizontal resolution and coverage, from which global, regional and local distributions of trace gas concentrations can be derived. Thanks to the very good radiometric performance of the instrument a list of 24 climate and chemistry relevant species has been identified in the IASI spectra. This poster will summarize operational near real time applications that are currently being developed, and illustrate the latest results obtain to track pollution plumes coming from different sources in order to monitor and forecast atmospheric composition.