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The IASI mission after 2020: what to expect for atmospheric composition monitoring

Cathy Clerbaux, Cyril Crevoisier, Thierry Phulpin, Pierre coheur, and and the Meninge Team
CNRS - Univ Paris 6 - LATMOS/IPSL, LATMOS, Paris, France (cathy.clerbaux@latmos.ipsl.fr)

In terms of Earth observing capability, the horizon is shrinking as only a few new satellite missions have been approved and will be financed in the coming years. This is particularly true for polar-orbiting nadir viewing instruments using the thermal radiation emitted by the Earth's surface to probe the troposphere. After 2020 there should be an unprecedented combination of more frequent observation from the geostationary orbit (Meteosat Third Generation (MTG)/Sentinel 4 program) with more precise measurements from the polar orbit (MetOp-Second Generation satellites as part of the EPS-Second Generation/Sentinel 5 program). Along with several other instruments, the latter should embark the IASI-New Generation (IASI-NG) mission.

The IASI-NG mission is a versatile mission that builds on the legacy of IASI and fulfills the needs of three different communities: numerical weather forecast, climate research and atmospheric composition monitoring. The instrument is currently designed by CNES and both the spectral resolution and the signal/noise ratio should be improved by at least a factor of two. In order to converge on the design of such an instrument all three communities had to make "reasonable accommodations". The presentation will describe what to expect in terms of products, accuracy and vertical resolution.