The projects VALIASI (VALidation of IASI level 2 products, supported by EUMETSAT) and NOVIA (towards a Near Operational Validation of IASI level 2 trace gas products, supported by Spanish Government) will validate the IASI operational atmospheric trace gas products (Level 2): $\text{H}_2\text{O}$ and $\text{O}_3$ profiles as well as total column amounts of $\text{H}_2\text{O}$, $\text{O}_3$, $\text{CH}_4$, $\text{N}_2\text{O}$, $\text{CO}_2$ and CO. For this purpose trace gas data measured by the ground-based FTS (Fourier Transform Spectrometer) technique are used as reference.

**REFERENCES**


**VALIDATION OF IASI OZONE TOTAL COLUMN (OTC) AT IZO: One example within VALIASI**

**Validation Strategy**

**Temporal Criterium:** ±1h

So restrictive due to occasionally significant diurnal OTC variations

**Spatial Criterium:** ±1° around IZO

No significant influence of spatial coincidencia criterium

**FTS Sites**

- FTS OTCs are retrieved with the algorithm PROFFT [Hase et al., 2004] from solar absorption spectra between 1000-1005 cm$^{-1}$. FTS detects four independent ozone partial columns (DOFS~4).
- OTC integrated from ~770 (2.37 km) to 0.005 hPa, with a theoretical precision of <1% [Schneider and Hase, 2008; García et al., 2012]. The ozone partial column between sea level and 2.37 km is 8±2 DU from Electro Chemical Cell sonde climatology (1999-2010) at Tenerife.

**Day-to-Day Intercomparison**

**Monthly Intercomparison**

- FTS is a powerful tool to validate IASI L2 products: high precision, high measurement frequency and good vertical resolution.
- For OTC IASI-FTS intercomparison:
  1) Significant improvement for IASI_L2 OTC v5: IASI underestimates by about 2±4% the FTS OTC.
  2) Good consistency of the OTC annual cycle and the intra-month OTC variability (largest discrepancies in spring): IASI_L2 misses ozone tropospheric contribution.

**FTS**

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