INSTRUMENT Species
ACVT subgroup: CH₄, N₂O, and CO SCIAMACHY

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CH₄, N₂O, and CO columns from balloons measurements compared to SCIAMACHY columns

Only one balloon data set available!

- IASI-balloon measurements (C. Camy-Peyret, G. Dufour, V. Ferreira, S. Payan, Y. Té, P. Jeseck)
Balloon trajectory around Kiruna (05/08/2002)
Retrieved N₂O columns along the trajectory (in the CH₄ window)
$N_2O$ total columns measured by SCIA in the IR1 band

![Graph showing $N_2O$ total columns measured by SCIA in the IR1 band.](image)

*Longitude* vs. *Latitude* with various concentration levels indicated by color codes.
SCIAMACHY measurement location

- IASI-Balloon mean column measured at (67.66N, 19.74E)
- SCIAMACHY column from IR 1
Retrieved $\text{CH}_4$ columns along the trajectory

$\text{CH}_4$ (window: 1240-1320 cm$^{-1}$)
CH$_4$ total columns measured by SCIA in the IR2 band
SCIAMACHY measurement location

IASI-Balloon mean column measured at (67.66N,19.74E)

SCIAMACHY column from IR 1

SCIAMACHY column from IR 2
CO total column (iasi-balloon, 67°N 20°E)
Conclusions

Comparison of balloon columns with SCIAMACHY columns

(limited number of correlative measurements)

- **CH\(_4\)**
  - Significant differences between SCIAMACHY IR1 and IR2
  - IR1 results seem more consistent than IR2 but have a negative bias
  - Product not yet mature enough for precise comparisons

- **N\(_2\)O**
  - Unrealistic variations of the columns
  - SCIAMACHY columns are too low
  - Product not yet mature enough for precise comparisons

- **CO**
  - For one case 6 out of 7 coincident columns of SCIAMACHY were negative