

## GLOBAL DISTRIBUTION OF BRO AND OCLO BY THE GLOBAL OZONE MONITORING EXPERIMENT, GOME, ON ERS 2.

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Gome data are compared with and validated by a number of groundbased differential optical spectroscopy DOAS experiments observing zenith scattered sunlight at Søndre Strømfjord, SS, Greenland. The ESR2 based Global Ozone Monitoring Experiment, GOME, provides UV-VIS-spectra of nadir scattered sunlight. The DOAS comparison with solar spectra yields absolute slant columns for OC10 and BrO besides those for ozone and NO<sub>2</sub>.

During July/August 1995 BrO, O<sub>3</sub> and NO<sub>2</sub> were measured at SS and GOME was validated during its overpasses. The validation was continued in January 1996 when in the presence of the polar vortex OC10 columns could be measured in addition. Vortex distributions of OC10 can be presented now after proper validation of the GOME data. Examples for the global distribution of BrO and OC10 will be given.

The GOME observations of stratospheric BrO at solar zenith angles of 70° and higher in polar regions are unambiguous because the long optical paths give rise to strong absorptions. Yet even for the equatorial region with shorter optical paths the BrO absorptions could be identified and in average a vertical column of  $(4.0 \pm 1.5) \times 10^{13}$  molec/cm<sup>2</sup> was obtained. Taken a uniform distribution from 15 Km on this column amounts to 21 ppt BrO in the stratosphere.

Keywords: ESA European Space Agency - Agence spatiale européenne, observation de la terre, earth observation, satellite remote sensing, teledetection, geophysique, altimétrie, radar, chimie atmosphérique, geophysics, altimetry, radar, atmospheric chemistry

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