

## Announcement

# A spectroscopic atlas of atmospheric microwindows in the middle infrared—second edition

This new infrared spectroscopy atlas is available as an IRF (Swedish Institute of Space Physics) Technical Report 048, ISSN 0284-1738, April 2004. It contains 608 pages and a 4.3-gigabyte electronic supplement on DVD. It is aimed at atmospheric remote sensing researchers. The main section of the atlas illustrates and discusses over 250 atmospheric observation windows commonly used or recently suggested for quantifying the abundances of atmospheric constituents by means of high-resolution infrared spectroscopy. Theoretical molecule-by-molecule and line-by-line simulations are compared to observed data from a Swedish FTIR site (Kiruna) in the 700–6500 cm<sup>-1</sup> spectral region. The electronic supplement provides complete single molecule and single isotopomer simulations from 500 to 9000 cm<sup>-1</sup> and all auxiliary data and software used in the creation of the atlas. Extensive appendices compare 5 key observation windows from 15 globally distributed observation sites, discuss special observations from bush-fires, polar stratospheric ice clouds, lunar spectra, and local pollution events and give an insight into solar lines (interfering with terrestrial observations) and on so-called pseudolines for heavy molecules (e.g. freons) as a computing efficient alternative to line-by-line data. The atlas is a hands-on reference for the day-to-day analysis of remote sensing FTIR spectra. It summarises the collective knowledge of many experts in the field, foremost from the infrared working group of the global Network for the Detection of Stratospheric Change (NDSC <http://www.ndsc.ws>). Offset-printed hard copies on acid-free paper are available in a colour or black-and-white edition. For details Arndt Meier may be contacted at [arndt@apollolifesciences.com](mailto:arndt@apollolifesciences.com).

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