



UV-VIS spectral atlas of gaseous molecules: A data base including numerical data and graphical representations

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Over the last ten years, the MPI-photochemistry group established a data base of UV-VIS absorption spectra of gaseous molecules and radicals of atmospheric relevance, e.g. for use in model calculations. It currently contains more than 3800 data files from absorption measurements made in the last 8 decades. This comprehensive collection of spectral data is given as numerical tables, i.e., absorption cross-section vs. wavelength, where the spectral range mainly consists of the near-UV region relevant for atmospheric research. Besides the collection of the numerical data sets for each individual measurement per species, graphical representations are given, which allow comparison of the absorption features obtained by the various research teams. The individual data sets were collected from the original publications, either copied from tabulations, or read from figures in those cases where numerical data could no longer be obtained. Numerous excellent high-resolution spectra were obtained from personal communications with the scientists. We intend to make the “MPI-Mainz UV-VIS Spectral Atlas” available for the scientific community and to install it on the Web in the Spring 2005. The data will be catalogued in well-organized groups of molecules and the available spectra from the various different references presented in appropriate plots. This will involve free access to the data on the www, visualization and extraction of spectral data, and ability to download data sets and plots. We accept all pertinent input from the scientific community to expand our collection.