MOLECULAR SPECTROSCOPY FOR THE EARTH'S ATMOSPHERE

J. ORPHAL, *Laboratoire de Photophysique Moléculaire, Centre National de la Recherche Scientifique, Bât. 350, Centre d'Orsay, 91405 Orsay Cedex, France*.

For more than 100 years, spectroscopy has been one of the most important tools for studying the Earth's atmosphere. Recently, the need for monitoring atmospheric concentrations of many trace gases on a global scale has led to an increasing interest in spectroscopic remote-sensing using satellite-borne instruments. At the same time, new routes have opened for performing highly sensitive *in-situ* measurements, an issue that is particularly important for local air pollution monitoring. Laboratory spectroscopy is indispensable to provide accurate reference data for these techniques, and is essential to understand photochemical reactions of atmospheric species and to determine relevant molecular properties. In this talk, current trends and future directions will be presented and illustrated with recent examples.