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High-resolution spectroscopy in the near-infrared for atmospheric applications

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This talk presents recent results of high-resolution molecular spectroscopy in the near-infrared for atmospheric applications, in particular concerning reactive molecules or radicals involved in ozone chemistry (HOBr, NO_2, HO_2), water vapour H_2O and its isotopes (^{18}O, ^{2}D), and NH_3, using Fourier-transform and external-cavity diode-laser spectroscopy.

We will also show very recent results from broad-band cavity-enhanced spectroscopy using a high-resolution Fourier-transform spectrometer [1, 2].

(1) A. A. Ruth, J. Orphal, and S. Fiedler, "Fourier-transform cavity-enhanced absorption spectroscopy using an incoherent broad-band light source", *Applied Optics* **46**, 3611-3617, 2007.
(2) A. A. Ruth and J. Orphal, "High-resolution Fourier-Transform Cavity-Enhanced Absorption Spectroscopy (FT-CEAS) in the near-infrared spectral region", *Applied Optics*, submitted.