

Femto-FT-CEAS experiments

D. Golebiowski,^a T. Földes,^a M. Herman,^a G. Di Lonardo,^b and L. Fusina.^b

^a Service de Chimie Quantique et Photophysique, CP 160/09
Université Libre de Bruxelles, 50 av. Roosevelt, B-1050 Brussels, Belgium
dgolebio@ulb.ac.be, tfoldes@ulb.ac.be, mherman@ulb.ac.be

^b Dipartimento di Chimica Fisica e Inorganica, Facoltà di Chimica Industriale,
Università di Bologna, Viale Risorgimento 4, 40136 Bologna, Italy
dilo@ms.fci.unibo.it; fusina@ms.fci.unibo.it

A femto-OPO module, consisting of a Ti:Sa laser (Coherent Chameleon Ultra II) exciting an OPO module (Coherent PP810), is optically interfaced to a Fourier transform interferometer (Bruker IFS 120 HR) as an absorption source to achieve Femto-FT-cavity enhanced absorption spectroscopy (Femto-FT-CEAS) [1]. We have recently improved the sensitivity of the set-up. A new spectral range is now also made available thanks to a new set of mirrors. Various recent results will be illustrated and discussed, including on NH_3 , $\nu_1 + \nu_3$.

[1] X. de Ghellinck d'Elseghem Vaernewijck, D. Golebiowski, M. Herman, *Mol. Phys.* **2012**, *110*, 2735.