

## COMPLETE PHOTOABSORPTION LINELIST FOR CO AND ITS ISOTOPOLOGUES BETWEEN 101 AND 115 NM

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The photoabsorbing bands of CO and its isotopologues appearing between 101 and 115 nm provide more than half of its photodissociative potential in the interstellar medium and planetary atmospheres, and are responsible for the well-known fractionation of C and O isotopes due to self-shielding.

An experimental study of this region over several years using the undulator radiation source and vacuum-ultraviolet Fourier-transform spectroscopy facilities at the SOLEIL synchrotron [1] is complete. Line frequencies [2] and oscillator strengths [3], and widths [in prep.] are deduced, and in some cases extrapolated, to provide updated and reliable cross sections over a range of temperatures, including for the rare  $^{17}\text{O}$  isotopologues.

- 1 N. de Oliveira et al. (2016). The high-resolution absorption spectroscopy branch on the VUV beamline DESIRS at SOLEIL. *J. Synchrotron Radiat.* 23:887.
- 2 J.L. Lemaire et al. (2018). Atlas of new and revised high-resolution spectroscopy of six CO isotopologues in the 101-115 nm range. *Astron. Astrophys.* (accepted)
- 3 G. Stark et al. (2014). High-resolution oscillator strength measurements of the  $v=0,1$  bands of the B-X, C-X, and E-X systems in five isotopologues of carbon monoxide. *Astrophys. J.* 788:68