Abstract Submitted
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Electron collisions with CO: Elastic and vibrational excitation cross sections[1] MICHAEL ALLAN, University of Fribourg — The present work [1] was motivated by the data need for simulations of the upper atmospheres of Venus and Mars and cometary comae [2]. Absolute differential elastic and vibrational excitation cross sections up to $v = 11$ were measured. Integral cross sections were derived by integrating under the angular distributions. The sum of the elastic and inelastic integral cross sections agrees very well with the available transmission measurements of the grand total cross section, thus validating the present measurements. The present elastic differential and integral cross sections are in excellent agreement with the best available measurement [3], but the $v = 1$ inelastic cross section is about 25% higher. This could have consequences for simulations of cometary and planetary atmospheres.

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