

Abstract Submitted
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Excitation of atmospheric species by electron impact¹ PAUL V. JOHNSON, Jet Propulsion Laboratory, XIANMING LIU, Space Environment Technologies, CHARLES P. MALONE, JEFFREY D. HEIN, Jet Propulsion Laboratory, MURTADHA A. KHAKOO, Cal State Fullerton — Electron collisions with atmospherically relevant neutral molecular targets, such as H₂ and N₂, have been investigated. Resulting fluorescence was probed using various monochromator-detector combinations, such that photon intensities were investigated as a function of wavelength and incident electron energy. In addition, electron energy-loss spectroscopy (EELS) was utilized such that differential cross sections (DCSs) and integral cross sections (ICSs) were obtained. The measured emission cross sections, DCSs, and ICSs, as well as calculations of spectroscopic parameters, for these atmospheric species will be presented.

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