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Electron collisions with Ar and N_2 J.A. YOUNG, P.V. JOHNSON, C.P. MALONE, I. KANIK, Jet Propulsion Laboratory, B. AJDARI, R. AL BURAIDI, S. KHAKOO, M.A. KHAKOO, California State University, Fullerton — Understanding electron collisions with common species such as Ar and N_2 is important for diagnosing plasma processes both in the laboratory setting and in the upper atmosphere. Vacuum ultraviolet emissions, such as the Lyman-Birge-Hopfield band of N_2, provide important observables, which can be combined with other indicators to infer parameters such as temperature, neutral density, mean electron energy, and electron flux. In this paper, we present a number of revised electron impact excitation cross sections for Ar and N_2 based on recent measurements. Comparisons with previous studies and general implications will be discussed.

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