

Abstract Submitted
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Near-threshold electronic excitation of N₂¹ SUBHENDU MONDAL, TYLER RAESIDE, STAN NEWMAN, JULIAN LOWER, STEPHEN BUCKMAN, Centre for Antimatter-Matter Studies, Australian National University, Canberra, and Flinders University, Adelaide — Absolute cross sections for the electron impact excitation of low lying electronic states of N₂ are measured using a position sensitive, time-of-flight technique. This technique employs a pulsed, monochromatic electron beam and a large area channelplate detector and delay-line anode which can detect all scattered electrons, elastic and inelastic, over an angular range of $\sim 20^\circ$. The transmission of the detector is uniform in energy and the absolute cross sections for inelastic processes are obtained directly from the measurement of the elastic to inelastic scattering ratio and the well-known absolute elastic scattering cross sections. The incident energy range of interest is 10-15 eV.

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Stephen Buckman
Centre for Antimatter-Matter Studies, Australian National University

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