

Abstract Submitted
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Absolute angle-differential cross sections for electron-impact excitation of neon atoms from threshold to 19.5 eV.¹ MICHAEL ALLAN, Université de Fribourg, Switzerland, KAI FRANZ, HARTMUT HOTOP, Universität Kaiserslautern, Germany, OLEG ZATSARINNY, KLAUS BARTSCHAT, Drake University — Absolute angle-differential cross sections for electron-impact excitation of neon atoms to the four levels with the $(2p^53s)$ configuration have been determined both experimentally and theoretically for incident energies from threshold up to 19.5 eV at scattering angles of 45° , 90° , 135° , and 180° . The latter measurements were possible through the use of a magnetic angle changer of special design. Excellent agreement between the experimental data and theoretical predictions, obtained by a Breit-Pauli B -spline R -matrix method with non-orthogonal orbitals, has been found in terms of both absolute values and the energies and widths of the numerous resonant features.

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