Abstract Submitted
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Absolute angle-differential cross sections for near-threshold electron-impact excitation of neon[1] MICHAEL ALLAN, University of Fribourg, KAI FRANZ, HARTMUT HOTOP, University of Kaiserslautern, OLEG ZATSARINNY, KLAUS BARTSCHAT, Drake University — Absolute angle-differential cross sections for excitation of neon atoms to the four ($2p^5 3s$) and selected ($2p^5 3p$) and ($2p^5 3d$) levels have been determined as a function of electron energy up to 3.5 eV above threshold at scattering angles of 0°, 45°, 90°, 135° and 180°. Some cross sections were also recorded as function of scattering angle from 0° to 180°, which was possible through the use of a "magnetic angle changer". Comparison of the experimental data with theoretical predictions based on Breit-Pauli B-spline R-matrix calculations shows overall good agreement regarding both the absolute values and the details of numerous resonant features. Some discrepancies remain, however, whose possible origin will be discussed at the conference.

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