Abstract Submitted
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Signature of Ericson Fluctuations in helium inelastic scattering cross sections near the double ionization threshold[1] JUNLIANG XU, ANH THU LE, Kansas State University, TORU MORISHITA, University of Electro-Communications, Tokyo, Japan, CHII-DONG LIN, Kansas State University — We calculated the inelastic electron impact excitation cross sections of He^+ by electrons for a model helium atom to examine the onset of the signature of quantum chaotic scattering in this simple system. We find Ericson fluctuations (EF) in the calculated inelastic scattering cross sections only when the impact energies lie within about 0.25 eV below the double ionization threshold. We also discuss the stringent requirements and the proper methods for analyzing the inelastic scattering cross sections in order to observe EF experimentally.

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