

# RESONANCE INTERFERENCE AND ABSOLUTE CROSS SECTIONS IN NEAR-THRESHOLD ELECTRON-IMPACT EXCITATION OF MULTICHARGED IONS<sup>1</sup>

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Strong resonance features were observed in near-threshold excitation of  $^1S \rightarrow ^3P$  intercombination transitions in  $\text{Si}^{2+}$ ,  $\text{Ar}^{6+}$ , and  $\text{Kr}^{6+}$ . Such resonances are predicted to dominate over direct excitation by more than an order of magnitude in the threshold region. Absolute cross sections were measured by using the merged electron-ion beams energy loss technique. The results are compared with R-matrix close-coupling theory for all of the ions. Several discrepancies in resonance positions and magnitudes exist between experiment and theory for these spin-forbidden transitions.

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1. Abstract of published paper: *Photonic, Electronic, and Atomic Collisions* (World Scientific, Singapore, 1998), p. 335.

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