

Abstract Submitted
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Electron-Impact Ionization of the Si Atom¹ S. D. LOCH, M. S. PINDZOLA, Auburn University — Distorted-wave calculations are made for the electron-impact ionization of the $1s^2 2s^2 2p^6 3s^2 3p^2$ ground configuration of the Si atom. Direct ionization of the 3s and 3p subshells contribute to single ionization, while the direct ionization of the 2p subshell contributes to double ionization. The large excitation-autoionization contributions from the $3s \rightarrow 3p$ transition are examined in detail. The $3s^2 3p^2 \rightarrow 3s 3p^3$ $1D, 3S,$ and $1P$ contributions are found to be located just above threshold and are found to be quite large.

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