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Generalized Oscillator Strengths for Multipole Transitions in I^- and Si^{-1} L.V. CHERNYSHEVA, A. F. Ioffe Physical-Technical Institute, Russia, M. YA. AMUSIA, The Hebrew University, Israel, Z. FELFLI, A.Z. MSEZANE, Clark Atlanta University — Generalized oscillator strengths for monopole, dipole and quadrupole transitions in the negative ions I^- and Si^- are investigated using the one-electron Hartree-Fock approximation and with many-electron correlations taken into account through the random phase approximation with exchange. Results are obtained for values of the momentum transfer q varying from 0.1 to 2 *a.u.* and energy transfer ω from 0 through 8 Ry. We find that correlations are particularly significant in the monopole and dipole transitions, impacting both the magnitude and shape of the characteristic maxima as well as their positions relative to those obtained in the HF approximation.

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