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Importance of Configuration Interaction for Accurate Atomic Data: Fluorescence Yields of K-Shell Vacancy Lithium-Like Ions[1] M.F. HASOGLU, I. DUMITRIU, T.W. GORCZYCA, Western Michigan University, D.W. SAVIN, Columbia Astrophysics Laboratory, S.T. MANSON, Georgia State University, N.R. BADNELL, University of Strathclyde, UK — We demonstrate that the inclusion of configuration interaction (CI) results in significant values for the K-shell fluorescence yields of Li-like ions, which are zero in a single-configuration approach. Modeling codes for simulating supernova remnants under nonequilibrium ionization conditions or photoionized plasmas such as active galactic nuclei or X-ray binaries need to be updated accordingly. A two-parameter fitting formula for the fluorescence yields has been developed. The generality of important CI effects on atomic calculations is pointed out.

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