

Abstract Submitted
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QED corrections to E1 amplitudes in heavy and superheavy atoms and ions JACINDA GINGES, The University of Queensland, JOEL BROWN, The University of Sydney — We use the radiative potential method to perform a detailed study of quantum electrodynamic (QED) radiative corrections to electric dipole (E1) transition amplitudes in heavy and superheavy alkali-metal atoms Rb, Cs, Fr, E119 and alkali-metal-like ions Sr^+ , Ba^+ , Ra^+ , and E120^+ . The validity of the method is checked by comparing with the results of rigorous QED in the same atomic potential. We study the effects of core relaxation, polarization of the core by the E1 field, and valence-core correlations.

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