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Simple method for Calculating Electron Affinity: Results for Ca, Sr and Ce[1] Z. FELFLI, A.Z. MSEZANE, Clark Atlanta University, DMITRI SOKOLOVSKI, The Queen's University of Belfast, UK — We have benchmarked the recently developed Regge-pole methodology for electron- atom elastic scattering on the most recent measurement of the electron affinity (EA) of the Ca atom [1]. The predictive power of the methodology is then demonstrated by calculating the binding energy of the ground state of the very complicated Ce^- ion, with a g-orbital attachment, a shape resonance at 0.37 eV and a Ramsauer-Townsend minimum at about 0.09 eV [2]. Our calculated EA for Ce agrees very well with the latest measured value [3], but disagrees with that of Ref. [4]. Low-energy electron scattering partial, total and differential cross sections for e^--Ca, e^--Sr and e^--Ce will be presented and discussed.

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