Abstract Submitted
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Polarizability of Pb III from spectroscopy of high-L Rydberg states of Pb II[1] MARK E. HANNI, STEPHEN R. LUNDEEN, Colorado State University, WILLIAM G. STURRUS, Youngstown State University, CHARLES W. FEHRENBACH, Kansas State University, RESIS COLLABORATION — Using the Resonant Excitation Stark Ionization Spectroscopy technique[1], we measured resolved fine structure components of the n=20 to n'=52 transition in Pb^+, and determined the polarizability of Pb^{2+}. A critical part of the measurement consists of the determination of the L-value of one or more of the resolved excitation peaks. These measurements were motivated by a discrepancy between previous polarizability determinations based on contrasting methods[2]. [1] S.R. Lundeen and C.W. Fehrenbach, Phys. Rev. A 75, 032523 (2007)[2] Nicholas Reshetnikov, et. al., Physica Scripta 77, 015301 (2008).

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