

Abstract Submitted  
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**Absolute and ratio measurements of the polarizability of Na, K, and Rb with an atom interferometer**<sup>1</sup> WILLIAM HOLMGREN, MELISSA REVELLE, VINCENT LONIJ, ALEXANDER CRONIN, University of Arizona, Department of Physics — We present absolute and ratio measurements of the ground state electric dipole polarizability of sodium, potassium, and rubidium using a Mach-Zehnder atom interferometer with an electric field gradient. The uncertainty of each absolute measurement is less than 1.0% and the uncertainty of each ratio measurement is 0.3%. Our measurements serve as improved tests of atomic structure calculations.

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