

Abstract Submitted  
for the DAMOP06 Meeting of  
The American Physical Society

**Microwave Ionization of Sodium at High Scaled Frequency**<sup>1</sup> XI-AODONG ZHANG, THOMAS GALLAGHER, University of Virginia — Microwave ionization at high-scaled frequency ( $n^3\omega$ ) is very interesting because it is the connection between field ionization via MPI (Multi-photon Ionization) to photoionization. We measure the ionization rates for sodium with 12.54GHz and 25.15GHz linearly polarized microwave. With a stray field presented we can only go scaled frequency up to 20 with different field amplitudes and microwave pulse lengths. In general the 50% ionization fields increase with the scaled frequency. There are some persistent structures at scaled-frequency around 7, and the thresholds no longer decrease monotonically with binding energy. These measurements will help us to understand the basic mechanism of microwave ionization at high scaled-frequency.

<sup>1</sup>Supported by NSF.

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Date submitted: 30 Jan 2006

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