

Abstract Submitted  
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**Laser Diagnostics of Energized Atmospheric Air** ANDREA HERRICK<sup>1</sup>, SPS/APS, STEVEN ADAMS — The time dependent behavior of molecular nitrogen ions, following pulsed photoionization of near atmospheric pressure N<sub>2</sub>, has been investigated using multi-photon laser techniques and kinetic modeling. Measured time dependent fluorescence spectra, during and after pulsed laser resonance-enhanced multi-photon ionization of N<sub>2</sub>, together with a coupled rate equation model, allowed for the determination of the absolute densities of N<sub>2</sub><sup>+</sup> and N<sub>4</sub><sup>+</sup> as these species evolved.

<sup>1</sup>Summer REU project, my advisor was the second “author”

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