

Abstract Submitted
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Molecular Spectroscopy of Diatomic Iodine¹ BRIANA VAMOSI, MATT KELLY, JACOB MCFARLAND, BURCIN BAYRAM, Miami University — We have measured the lifetime of the highly excited state (E') of iodine diatomic molecule by using double-resonance two-photon pump-probe excitation technique. Our laser is a 6-ns tunable dye laser pumped by Nd:YAG solid state laser, operating at the second and the third harmonics simultaneously. Pulsed lasers are counter propagating and the detection is at the right angle to the propagation direction of the lasers. Analysis of the exponential decay of the cascade photons from the E ($v' = 3$) to the B ($v' = 32$) allows us to extract the lifetime and collisional cross section.

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