## Abstract Submitted for the DAMOP11 Meeting of The American Physical Society

Noise Characterization of an Injection-locked Ti:Sapphire Laser<sup>1</sup> DANIEL THRASHER, Brigham Young University, MATT BURBIDGE, MIRIAM CONDE, SCOTT BERGESON, Brigham Young University — We report amplitude noise and laser linewidth measurements in an injection-locked ti:sapphire laser system. A low power diode laser is amplified to 1.6 W at 846 nm. Amplitude noise is measured using a high-speed photodiode. Frequency noise is measured relative to a low-noise commercial ti:sapphire laser using an offset lock and heterodyne technique. Under optimal conditions the relative rms amplitude noise is 1%. The linewidth of the injection-locked laser is 360 kHz.

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