

Abstract Submitted  
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**Controlled, Pulsed Frequency Chirped Laser Light at Large Detuning** TRACY PALTOO, TANNER GROGAN, BRIAN KAUFMAN, MATTHEW WRIGHT, Adelphi Univ — We have developed a technique to create pulsed, frequency chirped laser light (1 GHz in 5 ns) at large detuning ( $>7$  GHz). Laser light is passed through an electro-optical phase modulator, where the light is modulated with a 7 GHz carrier signal whose frequency is modulated on the nanosecond time scale. The modulated light is passed into a diode laser which becomes injection locked. The injection-locked laser system amplifies and filters the laser light to create a single frequency chirped laser pulse whose detuning is some multiple of the carrier frequency. We have developed the ability to pulse the laser on timescales less than 3 ns and create an arbitrary frequency chirp shape.

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