



University of Dayton

School of
Engineering

Master's Thesis Defense Electro-Optics and Photonics

Tuesday, April 16, 2019

2:00 PM FH 580

All are welcome to attend.

Thulium Mode-Locked Fiber Laser

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Abstract

A Thulium fiber laser ring cavity is built and mode-locked. Four soliton spectrums are observed near 1900 nm. The pulse durations are estimated from the spectrums using a Fourier transform and from the soliton time-bandwidth product. The largest spectrum is near 550 fs in pulse duration. Kelly sidebands are explained and the sideband spacing is used to estimate the total dispersion of the cavity.