

Abstract Submitted
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Development of a Pulse-Burst Laser System for Fast Thomson Scattering on the MST RFP¹ D.J. DEN HARTOG, University of Wisconsin-Madison — A “pulse-burst” laser system is being developed for addition to the Thomson scattering diagnostic on the MST RFP. This laser will produce a burst of up to 200 approximately 1 J Q-switched pulses at repetition frequencies 5-250 kHz. The planned laser system will operate at 1064 nm and is based on existing Nd:YAG systems used to study fluid dynamics [Brian Thurow et al., Appl. Opt. 43, 5064 (2004)]. The burst train of laser pulses will enable the study of Te and ne dynamics in a single MST shot, and with ensembling, will enable correlation of Te and ne fluctuations with other fluctuating quantities.

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