

11th Department of Energy Laser Safety Officer Workshop



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Contributing Causes and Lessons Learned from 2015 Laser Eye Injury at National Renewable Energy Laboratory

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Summary

In May of 2015 a post-doctoral researcher was injured at the National Renewable Energy Laboratory while aligning a Class 4 titanium sapphire repetitively-pulsed laser beam during system setup for transient absorption experiments. As with most laser accidents, multiple failures occurred in implementing effective control measures prior to this incident. This presentation will detail the contributing causes that were unique to this incident, and will also point out some of the causal factors that are common to other laser accidents observed across the DOE Lab Complex. The presenter intends to shed light on risks associated with retroreflector optics used in this laser experiment. One factor that is often overlooked as a contributing cause in laser accidents is the safety culture within an organization. Details of how safety culture may have contributed to this incident will be presented as well.

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