

LESSONS TO BE LEARNED

Generated from Actual Incidents - Written by EHSO

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Type of Incident: **Laser Injury**

What Happened: A graduate student was performing an alignment procedure on a laser. The student had observed the procedure only once. The student, who was not wearing laser eye protection, received a retinal burn to both eyes when the beam of a Class 4 laser was reflected into the eyes by a mirror.

Immediate Cause: The student did not fully understand the procedure and decided to use a procedure of their own that was inherently unsafe and was not authorized. In addition, the principal investigator (PI) had installed and operated the laser without registration and review by the Laser Safety Officer (LSO) and without required postings and documentations.

Root Causes:

1. Lack of training and compliance with accepted national standards.
2. No recognition of the authority and role of the LSO to grant operational authorization and perform a hazard assessment of the laser operation.
3. Inadequate oversight of laser operations by PI. Lack of recognition of hazards by PI.
4. Lack of laser protective eyewear.

Corrective Actions:

1. All Class 3B and 4 lasers should be registered with the LSO. At UIC, contact Dave Wilson in EHSO at dhw@uic.edu or 3-3708 with quantity and type of laser being used.
2. Personnel using lasers should complete Laser Safety Training, provided by EHSO.
3. Comply with a hazard assessment of laser operations by the LSO and perform corrective action based on safety audits.
4. Always wear appropriate laser protective eyewear when operating a laser.

References: Special Operations Report: Laser Safety, U.S. Department of Energy, Office of Corporate Performance Assessment, SOR 2005-01.

