

## General Laser Control Measures

Operating instructions for a specific laser are found in the manual for that laser.

There are several procedures that will reduce the potential for exposure to laser beams.

1. The beam from Class IIIB and Class IV lasers should be terminated in highly absorbent, non specular reflecting materials wherever possible.
2. Keeping the beam well above or below eye level will greatly reduce the chances of getting the beam in the eye.
3. Remove all unnecessary reflective objects from areas near the beam's path. Tools and other instruments may cause specular reflections and may accidentally direct a hazardous beam in the wrong direction.
4. Cover all doors and windows in a laser controlled area so that the nominal hazard zone (NHZ) is not able to escape the controlled area.
5. Appropriate laser protective eyewear should be provided to and worn by all personnel within the laser controlled area when practical.
6. Entry into a laser area of any non-involved personnel requires approval by the PI or other responsible person.
7. All personnel shall follow applicable administrative and procedural controls.
8. For all uses of lasers and laser systems, it is recommended that the minimum laser radiation required for the application be used.
9. Reflective jewelry should not be worn when working with lasers.
10. All personnel involved with or near laser operations should be trained to recognize hazardous situations and to observe the laser safety rules and procedures.
11. Protective eyewear is important for anyone who works around a laser nominal hazard zone. Protective eyewear should be used that is specific to the wavelength of the beam in use. In a multi-laser environment, appropriate eyewear to protect against all dangerous beams is often impractical, and therefore great care must be used to avoid eye damage.
12. The laboratory must be fully secured and locked when authorized personnel are not present to prevent unauthorized or accidental use of lasers.
13. Windows must be covered with laser-barrier curtains or other materials.
14. The alignment of beams into a specific experiment is potentially very dangerous. Make sure this procedure is carried out with the lowest laser power necessary, and that other laboratory personnel are clear of the area and aware of what you are doing.
15. Beams passing from one table to another should be roped off, or in another way indicated, so that other personnel are made aware of the danger.