

Calculating Laser System Hazards Agenda

Day 1

1. Introduction
2. Background
 - a. Damage Mechanisms: What are we protecting from?
 - b. Laser Beams
 - c. Radiometric Quantities
3. Introduction to the MPEs
 - a. Overview of the Tables
 - b. Section 8: Criteria for Exposures of Eye and Skin
4. Direct Viewing of Lasers
 - a. Examples
 - i. Computing the MPE
 - ii. Converting the MPE to different units
5. Comparing the MPE to actual exposure
 - a. Power through an aperture
 - b. The “safety factor”

Day 2

1. Homework Review
2. The Nominal Ocular Hazard Distance
 - a. Laser beam propagation
 - b. Computing the NOHD
3. Optical Density and LEP
 - a. Computing the required OD
4. Viewing Diffuse Reflections
 - c. Apparent Size
 - d. Examples
 - i. Computing the MPE
 - ii. Converting the MPE to different units
5. The Nominal Hazard Zone
 - a. Viewing diffuse reflections at a distance
6. Multiple-Pulse Exposures
 - a. Three rule system
 - b. Examples
 - i. Computing the MPE

Day 3

1. Homework Review
2. Laser Classification
 - a. The Accessible Emission Limit (AEL)
 - b. The classification levels
 - c. Determining the laser classification