Place the laser at the back of the lecture room, darken the room completely (see Note 1), and project diffraction patterns on the screen at the front of the room. (See WARNING.) Place the slide holder (A) in the fitting nearest the laser, and the diverging lens (Q) of 5 cm focal length in the center fitting. Turn the lens so that it will not be in the laser beam. A flashlight is provided to facilitate working in the darkened room.

Slide H contains two small holes (made photographically), the diameter of one being essentially twice that of the other. Place this slide in the holder and carefully adjust the vertical position of the holder and the horizontal position of the slide until first one and then the other hole is centered in the laser beam. (See Note 2.) Observe the circular interference fringes formed by light coming through either hole. Note that the pattern formed by the smaller hole is spread out essentially twice as much as that formed by the larger hole. (The pattern may be more easily seen if enlarged by turning lens (Q) into the beam, preferably in that direction which leaves the lens farthest from the hole. This is particularly true of the pattern formed by the larger hole.)

Note 1: In darkening the room, it is highly advisable to turn out the lights in the halls outside the lecture room. The intensity of the circular fringes is so faint that the fringes can be seen only in a very dark room. This is particularly true for the smaller hole.

Note 2: This positioning is critical. Once the proper vertical position is found for one hole, however, it will be at least essentially correct for the other hole.

WARNING. Never allow the direct beam from the laser to enter the eye. Warn the students that they should not look into the beam.