Set optical bench at (lecturer's) left end of lecture table, with source end of bench away from students. Set source at O, and adjust for approximately parallel light.

Place opaque screen with hole (1/2" to 1" diameter) as close to source as convenient, converging lens (f = + 17 cm) at approximately 37°, polarizing glass plate mount at 60°, and ground glass screen at 115°. Orient polarizing glass plates to polarizing angle (incident beam parallel to red line on top of plate mount), and orient optical bench table so reflected beam is on lecture room screen and transmitted beam is visible to students on ground glass screen. Adjust lens for approximate focus of the two images.

Place 3 1/2" polaroid disk in holder attached to polarizing glass plate mount, swing disk into reflected beam, and show that this beam is almost completely polarized. Now swing polaroid disk into refracted beam and show that this beam is partially polarized.

With the polaroid disk set for extinction (or transmission) in one beam, swing disk into the other beam and note that one obtains transmission (or extinction). Thus the two beams are polarized at right angles to one another.

With the polaroid disk in the reflected beam, orient the polarizing glass plates and show that the reflected beam is in general only partially polarized. It is completely polarized only for one particular angle of incidence.