

Answer on Question #47003, Physics, Optics

The critical angle for total internal reflection at an air-water interface is approximately 48 degrees. In which of the following situations will total internal reflection occur?

light incident in water at 40 degrees

light incident in water at 55 degrees

light incident in air at 40 degrees

light incident in air at 55 degrees

All angles larger than the critical angle will cause to total internal reflection. Total internal reflection is possible when light will travel from the medium with lower speed of light to the medium with higher speed of light. So, the only answer is the light incident from water to air at 55 degree.