

8.43 A perpendicular polarization wave in air is incident upon the surface of a perfect conductor at an incidence angle of 30° . The frequency of the wave is 2 GHz. Use Module 8.1 to determine the location of the nearest electric field maximum from the conductor surface.

Solution: According to Module 8.1, the first maximum of \mathbf{E} is at $\lambda_{1z}/4$ and $\lambda_{1z} = 17.32$ cm. Hence,

$$\text{location of 1st } \mathbf{E} \text{ max} = \frac{17.32}{4} = 4.33 \text{ cm.}$$

