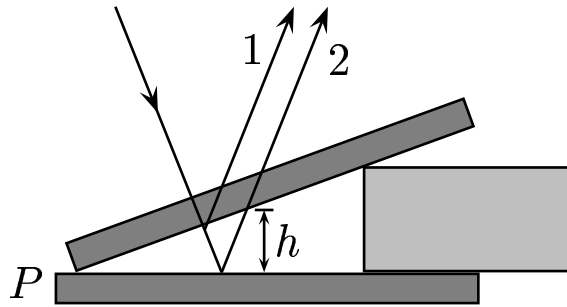


Air film is formed by two glass plates. Inference pattern is due to two rays as shown. (The sketch is not drawn to scale. The angle between the two plates should be very small.)



Near the contact point  $P$ , should it be close to a maximum or a minimum?

- A) Maximum
- B) Minimum

$$\phi = \phi_{path} + \phi_{refl1} - \phi_{refl2}.$$

This expression leads to

$$\phi = 2h \frac{2\pi}{\lambda} + |0 - \pi|.$$

Near  $h = 0$ ,  $\phi \approx \pi$ , so the intensity is close to a minimum.

Answer **B**.

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