PHYS 212, Honors Section – Review Material

Chapter 37: Wave Optics

- Young's double-slit experiment: The main idea of the experiment, and its significance. The need for coherent light in any interference experiment.
- Interference pattern: The condition for constructive interference, giving bright interference fringes on a screen, is

$$d \sin\theta = m\lambda \ , \quad \text{with} \quad m = 0, \pm 1, \pm 2, \ldots$$

- Interference in thin films: The general idea, why one sees differently-colored areas.

The rest of the chapter was not covered [except for a brief mention of interferometers later, in Chapter 39].

Note: You are not required to know the topics and equations inside square brackets.

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