

MATTER AS WAVES

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Supplementary Material for
PHY 3305 (Modern Physics)
Harris, Ch. 3.6, 4.1-4.2

TABLE OF CONTENTS

- Review
- Relevant Dimensions
 - Boat on the water
 - Single-slit diffraction of light
- Double-slit experiment
- Sodium: discrete electron energies

REVIEW

- Discussed properties of waves and particles
- Tried to apply the wave hypothesis of light to
 - blackbody problem
 - photoelectric effect
- Treating light as a particle helped explain these phenomena
- Correspondence Principle
- So which is it?
 - Is light a particle or a wave?