

# Class 20



PHY 232  
Spring 2003  
Prof. S. Billinge

# Announcements

## Exam #3

- Thursday Nov. 6<sup>th</sup>, next week!
- Similar to Exam #2 in format
- Covers Chs. 22 through 25, homeworks 7 and 8
- You will need: Single 8.5x11 handwritten crib-sheet, calculator, ID, #2 pencil

4<sup>th</sup> Midterm, Th. 20<sup>th</sup> Nov.

Final Exam, Monday 8<sup>th</sup> Dec.,  
5:45-7:45pm

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# Concepts

## Interference and Diffraction (Ch 24)

- Constructive and destructive interference of light
- Single slit diffraction
- Double slit diffraction/interference
- Polarization

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A black Ford Explorer with darkened windows is driving towards you. Holding your hand at arms length you can block light from the headlights from reaching your eyes but this doesn't stop the boom boom booming high octane hip hop from reaching your ears because:

1. Light is a beam and cannot go round corners but sound is a wave and can
2. Light and sound are waves but EM waves behave differently than pressure waves of the air
3. The wavelength of light is much shorter than the wavelength of sound
4. The coolest moosic just cannot be stopped

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