

PHYS273H Honors assignment

1 Assignment

You are to research a topic on a modern application of wave physics, and prepare a 10-15 minute presentation to give to the class on your topic. At least one week before your presentation, you should hand in a paper of approximately four pages in length on your topic. You must cite at least 4 references. These references may include websites, journal/magazine articles, or interviews with people working in the field.

Your presentation may be in Powerpoint, or may be on transparency film. If you are using PowerPoint, please give me the file one day in advance so I can load it on my laptop for presentation. If you are using transparencies, please let me know so I can arrange for an overhead projector. You may use visual aids, demonstrations, or examples.

2 Suggested Topics

Here are a few suggested topics:

- Doppler radar
- Evolution of tsunami waves
- Engineering for earthquake vibrations
- Cell phone technology
- Transmitting information via optical fibers
- Detection of gravitational waves (interferometry)
- Lasik surgery
- Ultrasound and medical imaging techniques
- Sound mixing/engineering
- Applications of Cerenkov radiation (i.e. Babar DIRC, neutrino detection)

These are just some suggestions, you are welcome to propose a topic of your own. Please clear your topic with me before commencing your research. (I don't want more than one presentation on the same topic.)