

Welcome to
PHYSICS 157!

This is me →



- UBC undergrad
in math/physics

- Research in
string theory,
quantum gravity, black holes, cosmology

Mark Van Raamsdonk

- Not scary

Some things I like (apart from physics)

- Music (I play saxophone)
- Being outdoors (hiking, running, biking, swimming, etc...)
- Being outdoors at night
- Cooking (eating)



Comet Neowise from Pemberton, July 2020

Your lecture TA:

Tim Tuschen

(will answer questions in chat)

What is this course about?

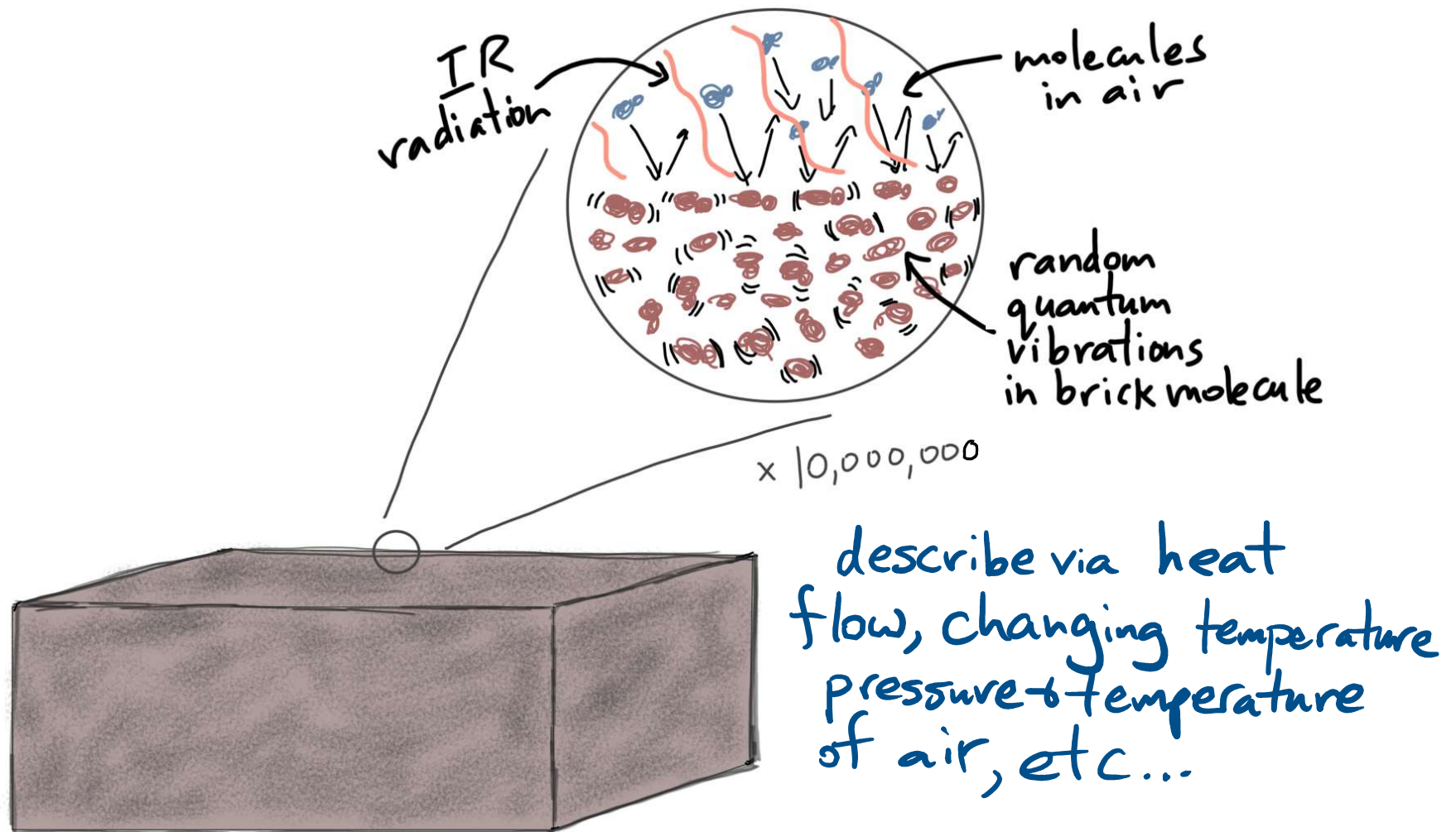
Let's start with a demo.

Question 1: What do you see?
Record your observations

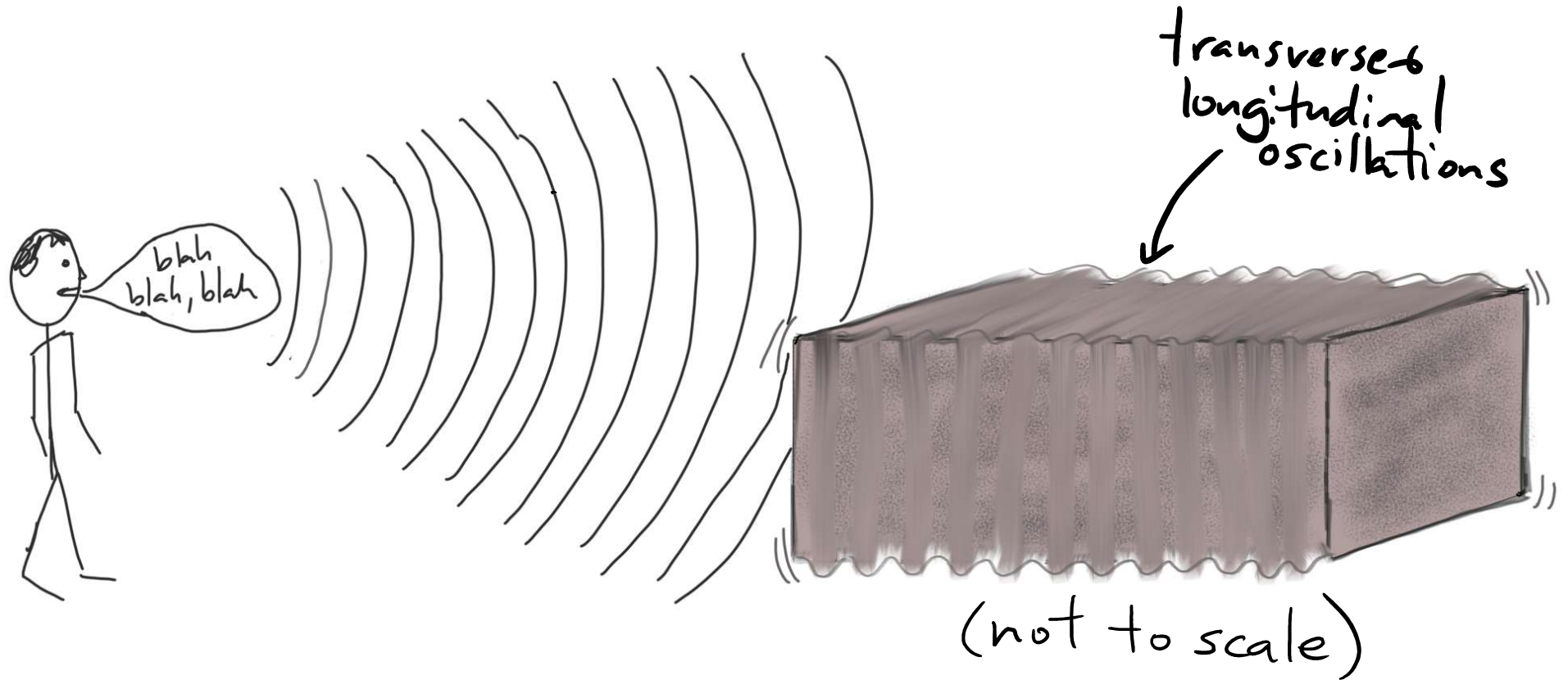
Question 2: What is really
happening here?

Using your knowledge of physics, describe anything that may be occurring / changing here that is not immediately apparent.

Thermodynamics: how to summarize microscopic physics of $10^{23} +$ things.



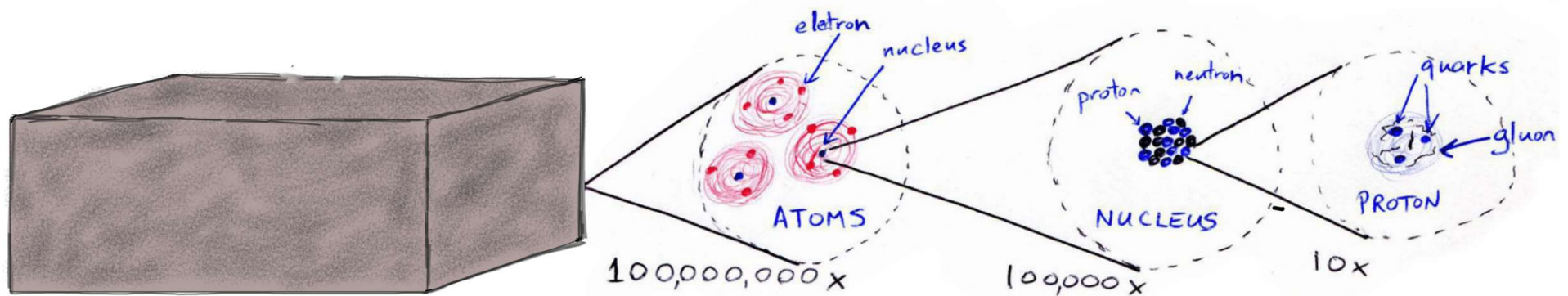
Oscillations + waves: collective motions of macroscopic collections of molecules
(e.g. sound waves, guitar string, ocean waves)

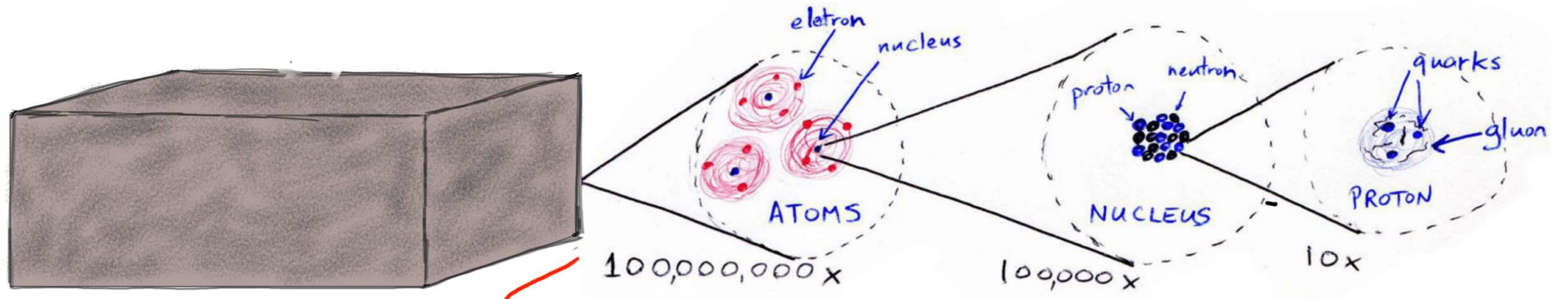


also: more fundamental waves e.g. light, gravitational waves.

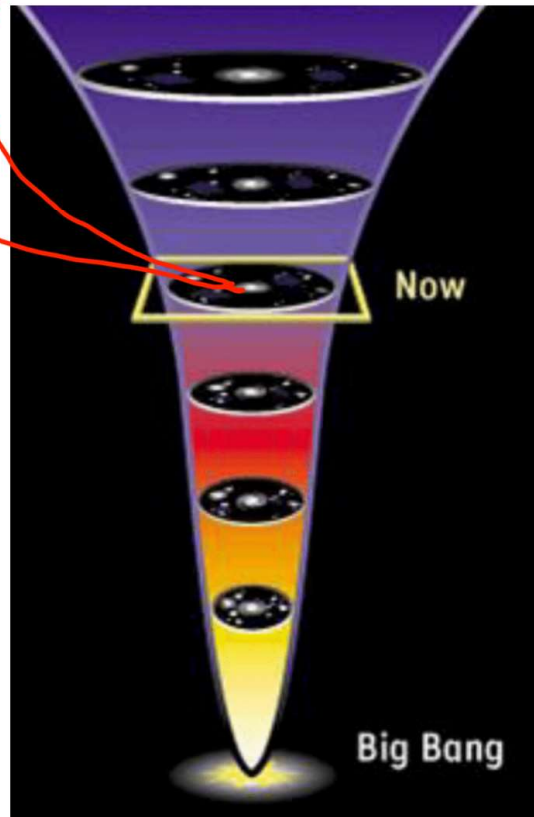
GOAL OF PHYSICS: observe the universe
- understand the rules

we now understand the precise mathematics
that underlies physical phenomena from
100 trillion times smaller than we can see...





$10,000,000,000,000,000,000,000,000 \times$



...up to the size of the visible universe

This is very powerful:

PHYSICS

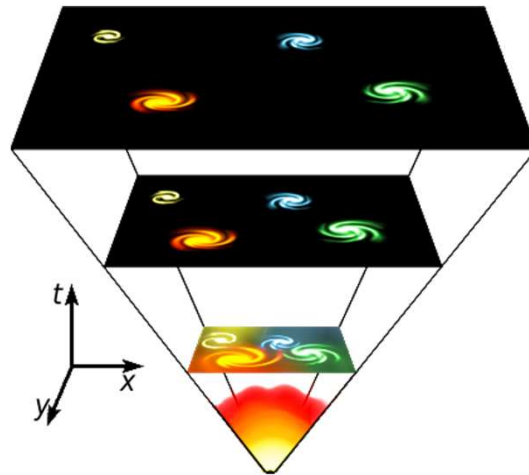
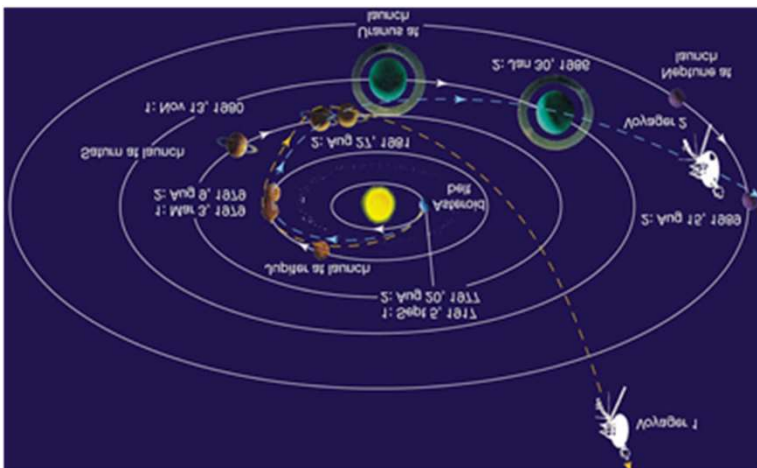
Make better mobile devices



(and other technology)

Predict the future

Understand the past



Course info: Canvas!

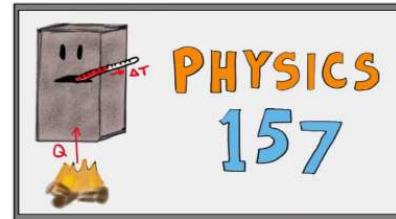
Do Week 1 to Week 2 (to be posted) reading quizzes for Monday.

Start here

- Home
- Assignments
- Grades
- Piazza
- Zoom
- iClicker Sync
- Modules

PHYS 157 ALL SECTIONS 2020W Introductory Physics for Engineers I

Edit



Local Time (Vancouver, Canada)

Wed, 9. Sept 2020

12:02 a.m.

Section 101	Section 102	Section 103
Professor: Mark Van Raamsdonk mav@phas.ubc.ca Lecture time: 9am-10am MWF Section 101 Lecture Link September 9th (classroom opens at 8:30)	Professor: Steve Dierker steve.dierker@ubc.ca Lecture time: 1pm-2pm MWF Section 102 Lecture Link	Professor: Fei Zhou feizhou@phas.ubc.ca Lecture time: 2pm-3:30pm T/Th Section 103 Zoom lecture link

Basic Information:

[Things you need to do: first week \(click here\)](#)

Course Activities	Required Materials	Grading Scheme
Outline/Learning Goals	How to Get Help	Academic Integrity
i-Clicker	Mastering Physics/e-text	Text Ch. 17

Course content:

Week 1	Sept 8-11
Week 2	Sept 14-18

Come introduce yourself!

Office hours:

Before and after class, every class

Friday 3:30-4:30pm (via Zoom link on Canvas page)

Monday 4-5pm and Monday 8-9pm (Zoom link on Canvas page)