

Dear First Three Minutes Class,

I hope your week and holiday passed quietly. The link to our class is here (same one as last week):

<https://zoom.us/j/91367940095?pwd=WWNGVGJ4NU9FS1JLRW1haUNEUUiQT09>

Announcements

- Assignment: Read Chapter I of Weinberg
- I've linked a paper on the website (<http://tinyurl.com/firstthreeminutes>) by Weinberg on the state of particle theory that came out last week
- Last week and since, I've had several questions about adding up waves to make a light pulse and how that relates to photons. This is not needed for the course, but I wrote a memo and put it on the website for those that are interested.

Agenda for Tomorrow

This week and next, we will talk about measuring distances in astronomy A LOT.

1. Chapter I: Weinberg lays out a roadmap for the book and we will look at an extended roadmap for our course. I will present everything Einstein did for relativity and cosmology on one slide.

5 m Break

2. Before “The First Three Minutes”: Chapter II will be about the expansion of the universe which Edwin Hubble established in 1927. We will start with The Great Debate, which took place in 1920 and led to Hubble’s measurement of the distance to Andromeda, based on the work of Henrietta Swan Leavitt on variable stars. We will also talk about the redshift for light by moving emitters.