



# Astronomy Club, IITK

## Summer Projects 2021



### R.A.D.

**Mentors:** Mohammad Saad, Varun Muralidharan, Mubashshir Uddin

#### Week 2

31<sup>st</sup> May-6<sup>th</sup> June, 2021

**Overview:** As it was mentioned in the discussion hour of the 1st week, this week you will learn about the stellar spectral classes (i.e. O, B, A so on) and also HR Diagrams. After that you will learn about the celestial mechanics which governs how these planets and stars move through the space under the influence of gravitational field.

**Readings:** Following sections from *An Introduction to Modern Astrophysics* by Carroll and Ostlie:

- Chapter 8- Stellar Spectra: Section 8.1 upto page 204, don't miss the table on the next page. Whole of section 8.2. The math won't be required but if you're interested you are free to read the math as well as the portions skipped in 8.1
- Chapter 2- Celestial Mechanics: Sections 2.1 and 2.2 for this week. We will do 2.3 next week. It is actually the analysis of two-body problem which would help you understand binary systems that will you come across next week. The content is much similar to that of PHY102 so I do expect you to cover the math as well. If there's much difficulty, I can take another session to explain the math.