

Physics 1311
Spring 2020
Homework/Study 10 (two-sided)

Chapter 14

1. What are the three major parts of the Milky Way?
2. What property of pulsating variable stars (Cepheid, RR Lyrae) makes them Standard Candles and therefore so valuable for distance determination?
3. What wrong assumptions misled Herschel (and other star counters) in trying to map the Milky Way?
4. What is the best explanation so far for the existence of spiral arms?
5. Why is 21 cm radiation from hydrogen so important in mapping the Milky Way?
6. What can you see in a photograph of a galaxy that indicates where star formation is occurring?
7. Roughly what is the diameter of the Milky Way?

8. In simple terms, what is "dark matter?"

9. If we can't see it in any wavelength, how is the presence of dark matter detected?

10. In what part of the Milky Way are most of the M dwarf stars found?

11. What determines the orbital speed of a galactic object?