Assignment #5: Due March 24

• On our web page are 2 short videos A. Nebula and Star Birth and B. Sun → Red Giant, planetary nebula and White Dwarf. Watch one and write a short paragraph on what was in the video.

• The rest of the assignment uses Stellarium to explore different types of stars. Start up Stellarium at a time of early evening (like 9:00 PM) in mid-March. Turn on the 3 constellation buttons at the bottom including the constellation lines, labels, and art. Move to the north and put the cursor on the North Star Polaris, and left click it. Information about the star should now be shown. Including the name Polaris, the type (pulsating variable star), and Magnitude (1.95) and the Absolute magnitude (-3.66). Recall that with the magnitude scale, the lower the number the brighter the star. You can turn off the info by right clicking your mouse. Move to the constellation Perseus (to the left, or west, of Polaris and just above Cassiopeia). With the art turned on, Perseus is holding the head of Medusa and there is a star at each of her eyes. Click on each star and write down the name, the type, the Magnitude, and the Absolute magnitude. Pick on your own 7 more stars (the other ones in Perseus, or just above in Auriga which includes the bright star Capella are good choices). Make a table with all 10 stars.

• How many of the stars are just simple “stars” like our Sun? How many are variable stars? How many are binary star systems?

• Which star is the brightest in the sky (has the lowest Magnitude)? Which star has the highest absolute luminosity (which means the lowest number for the Absolute magnitude)?