The purpose of this week’s lab is to study the expansion of Supernova 1993 J which occurred in another nearby Galaxy M81. Astronomers have been following the evolution of this supernova since its discovery right after the supernova explosion took place.

You need to measure of the diameter of the expanding shell for seven years between 1993 and 2000. Once you complete the plot of the angular size vs the time, then you need to click on the fit button to measure the slope of the plot.

a) Give the value of the slope.

b) Convert the slope to the unit of expansion velocity in km/s. You need to assume a distance of 4 Mega pc (4×10^6 pc) as the distance between us and M81.