

Take-Home Project

DUE: Thursday, November 21 at 5:00 PM

This project is worth the equivalent of four quizzes.

The central region of a distant galaxy is observed. Hence, the galaxy's rotation rate does not play a role. In observing the galaxy, it is noticed that one of the visible spectral lines of *lithium* has an **observed wavelength of 704.6 nm**. Using the various techniques that we have covered in this course, determine the distance to this galaxy in units of light-years.

Explain all your work, in arriving at your answer, in a short paper of no less than 500 words. Submit the paper as a PDF (not Word or txt, etc.) to bwoodahl@purdue.edu. Make sure you include your full name, the due date is Thursday, November 21 at 5:00 PM. I will send a reply email stating I have received your submittal. If you do not receive an email from me, I have not received your submittal. (Submittals after 5:00 PM will be ignored.)