

CLEA Photometry

The Do-At-Home-Version

- Note that doing this Lab at home will take LONGER since
- You will not work together with other partners,
 - You have to figure out problems on your own,
 - You have to do all sections including the Extra Credit Options.

Do the Pre-Lab;
Hand it in together with the Main Lab.
Instructions on back

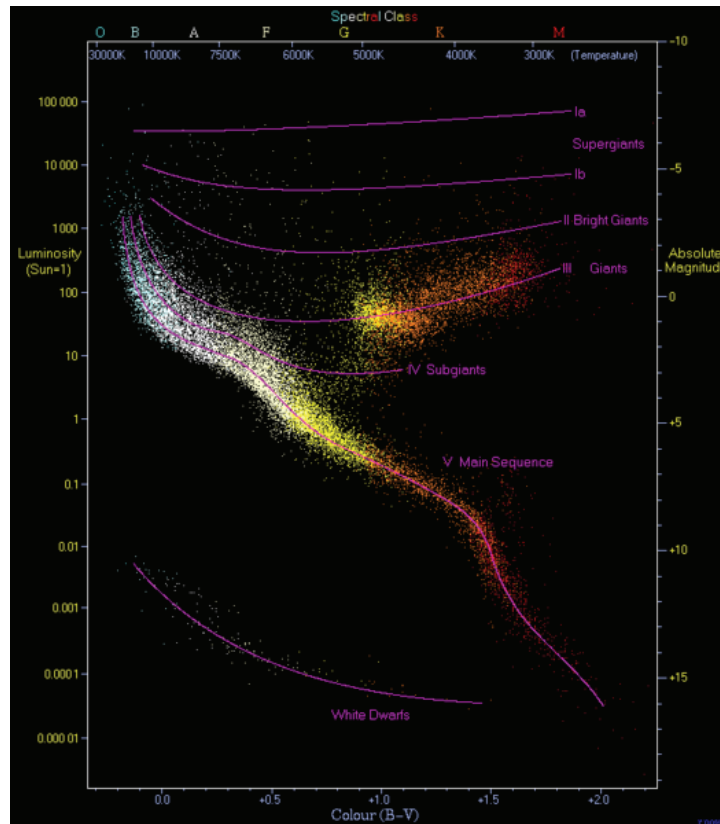


Image taken from Wikipedia at http://en.wikipedia.org/wiki/Hertzsprung-Russell_diagram

This Lab is a continuation of the previous lab on the Photometry of the stars in the Pleiades. In the previous lab, you determined the magnitudes of stars by measuring the diameters of the stellar images and correlating them to the magnitudes of standard stars, and following that, you plotted a Hertzsprung-Russell-Diagram. In principle, you will do the same type of exercise again, but with three major differences. The computer will give you a sense of using a telescope to obtain your data; it will measure the diameters of the stars for you and convert that to apparent magnitudes. So all the tedious work will be done for you! Guess what this means — you'll have more time to think about the data, do some real science and come up with clever interpretations.

Instructions

Basics:

The Photometry Lab is a computer exercise.

You can use any computers and even do this exercise at home!

But you need the software to do the computer exercise.

Either get a CD with all CLEA programs from your instructor or follow the instructions below.

Do the PreLab and hand it in **together** with the main Lab!

Get a copy of the Photometry2 lab-write-up and follow all the instructions.

Here is how to get the CLEA software:

Create a new subdirectory on you computer called “CLEA Programs”.

Go to the <http://www3.gettysburg.edu/~marschal/clea/pleilab.html> website;

(Note you can also get there by going to <http://www3.gettysburg.edu/~marschal/clea/CLEAhome.html>

and then click on “Software” and follow this by

clicking on the “Photoelectric Photometry of Pleiades” icon.)

On the CLEA Photometry website click on “PhotoLab.exe”.

In the window that pops up, do not say “run”, instead click on “save”.

Save that file onto your computer into the “CLEA Programs” subdirectory.

To run the program double-click on “PhotoLab.exe”,

Finally follow the instructions in the Photometry-Lab-Write-Up.

Here is how to get the Photometry-Excel-Spreadsheet:

Downloading and using the Photometry-Excel-Spreadsheet is optional.

But ask your instructor first if he or she wants you to use the Photometry-Excel-Spreadsheet.

This exercise can easily also be done by hand.

If the program is not available on the ComPADRE website

Go to <http://cosmos.phy.tufts.edu/~zirbel/laboratories/index.html>

and click on the icon for Photometry2/CLEA spreadsheet.

A new window will pop up, do not click on “open”, instead click on “save”,

and save the file “called Photometry-empty.xls” in the CLEA programs subdirectory.

To open that the Photometry-empty.xls double click on it.

Should you come across a problem, do the following:

Download and read the original “user’s manual”.

To do that, go to <http://www3.gettysburg.edu/~marschal/clea/pleilab.html>,

Click on “User’s Guide” and the PDF file should show up in your browser window.

Click on “save a copy” in your browser and save the file into the CLEA programs subdirectory.

If the PDF file does not open in your browser you will need to download

the “Adobe Acrobat Reader” from <http://www.adobe.com/>.

Alternatively, if the link still works, you can also go directly to

http://www.adobe.com/products/acrobat/readstep2.html?ogn=EN_US-gntray_dl_get_reader,

and follow the instructions to install Adobe Acrobat Reader.

And now

Have Fun!!!