

Introduction

Welcome to Physics 312 lab. This lab manual is meant to compliment the Physics 311 manual. Physics 312 covers different astronomical subjects than 311; the labs here will reflect the material from 312. If you have interest in basic astronomical observation or in the solar system, you should take 311 and the corresponding lab.

In the 311 lab, you have the opportunity to do nighttime observation with the department telescopes. During the course of the 312 lab, you will be doing some daytime observations including solar studies with special filters and telescopes. You will be given at least one opportunity to do night observing. Of course you cannot depend on clear weather every time lab meets, so many of the labs in the manual will be done indoors.

Although this manual was written to coincide with the 312 course as well as possible, the work you do in lab may be on a subject matter not yet covered in class, or have been covered a while back. The labs will hopefully stimulate your interest and increase your understanding of the concepts introduced in your coursework. Most of the information you need to complete the labs will be given to you. Sometimes, you may need to reference your text or the Internet. Also, you will be using computers and computer software in many labs. If you need help understanding any of the labs or concepts therein, please talk to your lab instructor about attending his or her office hour or setting up a separate time to meet.

Grading

As in the 311 lab, grading for this lab class is based on a total number of points. Once you have all of your points, you can choose to be done with lab. Feel free to complete more labs to enhance your understanding of the 312 subject areas or to participate in telescope observation. Grades are as follows:

110 points	= A
100 points	= B
90 points	= C
80 points	= D
Less than 80 points	= fail lab

It will be very easy for you to get an A in this lab. Each lab is worth ten points, unless you complete the extra credit that follows some of the labs. The points given to you for the extra credit is determined by your lab instructor. If you do well on your labs for just twelve weeks, you'll have an A.

Unlike the 311 lab, there are no required labs for 312. You choose the labs you would rather complete. Each week during your lab meeting, your instructor will choose one lab to teach, usually the one corresponding to material the course instructor is currently covering. The smoothest way to get your A is to come each week to lab, and do the lab the instructor is teaching. Some of the labs in the manual will be impossible to do on your own, but many of them will be doable whenever you choose. Hopefully this will give you enough flexibility to gain exactly what you want from the laboratory work.