

Project Possibilities For Physics 107

For your project for PHYS 107N (Astronomy), you can be as creative as you'd like, as long as the project is related to some aspect of astronomy, takes 8 to 10 hours, and is approved by me. All projects must have some sort of written description or explanation.

I don't want to limit your scope on the project, but here are just a few possibilities. You can start early by looking up any of the following in the textbook, at our web site, or at skyandtelescope.com. Always feel free to ask me if there's some other topic you'd like to think about doing a project on.

1. Investigate an ancient astronomy site
2. Measure the motion of planets, the Moon, asteroids, or stars
3. Observe the revolution of the Galilean satellites around Jupiter
4. Try to observe and identify Saturn's moons
5. Estimate the magnitudes and color indices of stars
6. Measure the spectral lines of some stars
7. Take wide-angle photographs of the sky
8. Use our CCD camera to take pictures of planets or deep-space objects
9. Photograph the Moon through all of its phases
10. Try to observe and photograph Venus in the daylight
11. Try to observe and photograph Uranus, Neptune, or Pluto
12. Find and photograph asteroids
13. Measure the rotation of the Sun by observing and photographing sunspots
14. Observe and photograph star clusters
15. Observe and photograph deep-space nebula
16. Photograph other galaxies
17. Observe and photograph an occultation (a solar system objects in front of another or a star)
18. Measure the spectral lines of the Sun
19. Measure the Earth's radius
20. Monitor the change in position of rising/setting of sun or moon over the course of a couple months.
21. Investigate the phenomenon of cratering by doing scale experiments here on Earth.
22. Try to determine the orbit or period of a comet from Earth based observations
23. Try to find a comet using pictures from the SOHO satellite.
24. Observe the changing solar altitude by using noontime shadows
25. Measure the changing brightness of a variable star
26. Use shadows on the moon to measure the height of lunar mountains
27. Other ideas may be found on <http://skyandtelescope.com/observing/objects/>

We also have several computer-based laboratory projects that can be done as background research or if other projects turn out to be impossible.