

Astro-Madness

Problem Situations

Based on your research, assist the following astronomers by making a recommendation as to what telescope and instrument should be used for the project.

1. Starr Brite, a graduate student in astronomy at the University of Luminosity, is doing her dissertation on a group of stars in the constellation Libra. She estimates that the wavelengths coming from this group to be around 0.9 micrometers. Spectra are what Ms. Brite needs to complete her research.



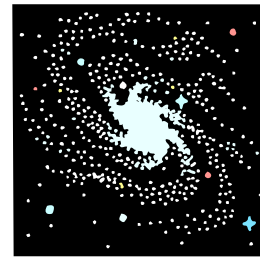
2. Dr. Hugo Tomars of the Olympus Mons Consortium is researching nearby stars, like Sirius and Procyon. He will need to take several images for later comparison. He needs to make many images very rapidly to search for small changes in light intensity.



3. Dr. Ima Stronomer from Antarctica State University is looking for ammonia gas on the planet Jupiter. Ammonia shows up around 1-1.5 micrometers. She hopes to find out more about Jupiter's atmosphere with an assortment of spectrographs.

4. Amateur astronomer Mr. Cal Q. Laater's quest in life is to find a tenth planet in our solar system. He likes to take pictures of large areas of the sky. He then compares the pictures to each other to see what things in the pictures change. Being able to survey areas at least the size of our moon is important to Mr. Laater's project.

5. Dr. Usee Themun from the Lunar Research Institute is interested in discovering planets around other stars. To do this, he needs to spread the spectra of the candidate stars so that he needs very large resolution.



6. For her master's thesis, Ms. Sol Faraway is monitoring how fast some galaxies are rotating. Some of her objects are very faint, with magnitudes near 20. She would like some spectra of several of these galaxies, so a spectrograph that can look at multiple objects would be helpful.