

Introduction

A telescope that uses a pair of lenses is called a _____

A telescope that uses a mirror as the objective is called a _____

The lens farthest from the observer is the _____ and the other lens is called the _____ . Telescopes can also focus

other forms of EM radiations such as _____ and _____

What is the difference between the following

Magnifying power - _____

Light-gathering power - _____

Resolving power - _____

Slide 1 – Low Magnifying Power (Jupiter)

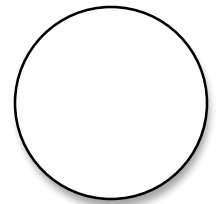
What is the focal length? _____

If the focal length of the objective is 150mm and the focal length of the eyepiece is 30mm, what is the magnifying power of the telescope? _____

Slide 2 – High Magnifying Power (Jupiter)

Near the lower left edge of Jupiter is the _____,

which is a storm in Jupiter's atmosphere. Draw Jupiter to the right, Show the shadows of the two moons on its surface. Use colored pencil.



Slide 3 – Low Light-Gathering Power (Pleiades)

The diameter of a telescope is called its _____ and the bigger this diameter the _____ the stars look. Use the grid (it helps to make clear what stars you counted and did not count) to count the stars _____

Slide 4 – High Light-Gathering Power (Pleiades)

Is the magnification in this slide the same as in slide 3? _____. The light gathering power of a telescope increases as the _____ of the aperture of the objective. A telescope with a 16-centimeter aperture has _____ times the light-gathering power of a telescope with an 8-centimeter objective.

Slide 5 Low Resolving Power (Andromeda Galaxy)

The individual stars in this slide are found in the _____ Galaxy. The Andromeda Galaxy is about _____ light years away. The low resolving power of this telescope means that the detail of the Andromeda Galaxy cannot be seen.

Slide 6 High Resolving Power (Andromeda Galaxy)

The resolving power of a telescope depends on both the _____ and the _____ of its objective. The resolving power of earth-bound telescopes is also limited by Earth's _____. A mass of dust and gas in space is called a _____.

Slide 7 X-Ray Telescopes (Sun)

This image of the _____ was taken from a telescope on _____ in 1973 as it orbited the Earth. Radiation with high energies such as _____ and _____ cannot be focused by ordinary reflecting telescopes.

Slide 8 Spectrographs

In 1666 _____ found that sunlight can be separated into its component colors. The dark vertical lines are caused by light that is absorbed by the cooler _____ of the star.