Beyond the Solar System. Deep Sky Objects.

MESSIER CATALOGUE

A Famous list of 110 objects compiled by Charles Messier in the 18th century with a small telescope while searching for comets. Because they are brighter objects they are still popular today. Example M57

STARS

All are simply smaller or larger versions of our sun whose distance is measured in Light Years. The distance that light will travel in one year or 6 trillion miles. Bright stars on star charts are identified with a proper name and by Greek alphabets within a section of sky or Constellation. Because of the stars great distances, telescopes only show them as brighter points of light. Color of a star gives a clue to it's temperature.

MILKY WAY

All of the stars that you see at night make up our Milky Way galaxy. Huge clouds of light are concentrated along the plane of the galaxy and form the familiar band that stretches across the sky from horizon to horizon. That glow contains the light from distant stars that number in the billions. The overall length is estimated to be 100,000 light years. The center of the Milky Way lies in the direction of Sagittarius.

MULTIPLE STARS

Most of the stars that make up our galaxy are multiple stars. That is, more than one sun per solar system. Double or Binary stars are the most common. Many can appear to the unaided eye as one star but split into two components when viewed through the telescope. Some have contrasting color to add to the view.

VARIABLE STARS

Change their brightness over some period of time. Some change over a long period of time while others over very short periods. Some changes are very dramatic. There are a number of specific types depending on what causes the change in brightness.

GLOBULAR STAR CLUSTERS

These massive groups of stars are located around the galactic center of the Milky Way. Hundreds of thousands of stars are packed into the shape of a sphere. These are some of the most distant objects that can be viewed in our galaxy. Most only glow but some closer ones can be resolved into individual stars.

GALACTIC or OPEN STAR CLUSTERS

Are loose groups of stars located along the arms of our Milky Way. They move together as they slowly rotate around the center of our galaxy. They number from only a dozen stars, up to a few thousand.

EMISSION NEBULA

The most common of all nebulas. They are often large clouds of gas and dust. All glow from a reaction caused by hot stars imbedded within it. Most have an irregular shape and look like a dim cloud. Some of the brighter ones show a little color.

REFLECTION NEBULA

Are irregular clouds of dust that are illuminated by the reflected light of foreground stars.

DARK NEBULA

Are dense areas of gas and dust that block out the light of bright nebula or background stars behind them.

PLANETARY NEBULA

Most are small and disk shaped. They are formed when the outer layers of a star are thrown off into space as the star expands. The expanding shell of gas is illuminated by the star that formed it. Some show a blue color.

SUPERNOVA REMNANT

These are the remains of large stars that go through the most violent of all explosions in the galaxy. The Supernova. The Crab Nebula, M1, is an example of these very rare expanding shells of star stuff.

GALAXIES

Are separate islands of stars like our own Milky Way. There are large numbers of them all at millions of light years from us. Most group together into giant clusters. Most appear like dim colorless clouds and come in a variety of shapes. The majority are seen in a direction away from our galactic plane where there is a clearer view of deep space.