

### Good conversation pieces

**By Vernon Whetstone**

*Amateur Astronomer*

For this session of Astronomy 101 Part II, we are going to discuss the difference between comets, meteors, and asteroids.

First, comets. Comets, contrary to popular belief, do not go whizzing across the sky at great speed.

Now, understand, comets are traveling at great speed, but with the distances involved in space, the human eye will not perceive it as moving fast. Only when we see the comet change locations against the background stars each evening will we see that it is indeed moving.

The tail of a comet sticking out gives the impression that the comet is traveling fast, but some comets do not have tails.

Now here is a tidbit you can insert in your next party conversation; sometimes the tail of a comet extends out in front of the comet (compared to its direction of travel) not behind it.

The tail is just dust, gasses, and water melted off the comet body by the heat of the Sun. The solar wind then pushes the material in the tail out away from the comet body.

Typically the material left behind when a comet passes through the inner solar system is just bits no bigger than a grain of sand. When Earth travels through the stream of debris left by comets we experience what is called a meteor shower.

These, and other larger chunks of rock and iron orbiting the Sun, are called meteoroids.

All those little bits and pieces of comet debris (and the other larger chunks of rock and iron) make significant streaks of light in the upper atmosphere and we enjoy watching a meteor shower.

Probably the best-known shower is the Perseid shower in late July or early August. This year the Perseid shower will peak on the night of August 11/12.

It should be a good shower for viewing as the waxing crescent moon will be out of the way early in the evening leaving a nice, dark sky for comet dust viewing.

A meteor is the streak of light as the meteoroid travels through the atmosphere. When one of the larger chunks survives the fall through the atmosphere and strikes Earth it is called a meteorite.

An asteroid, however, is something else entirely. It is a large chunk of rock and other material (usually iron and other metal) that range in size from what will fit in the palm of your hand to several miles in circumference.

They also orbit the Sun and some have the possibility of not only crossing Earth's orbit, but possibly hitting Earth with potentially devastating consequences.

The asteroid that caused all the damage last week in Siberia is thought to be about the size of half a football field.

SKY WATCH: Third quarter moon, Monday, March 4. Jupiter high overhead after sunset

between the Pleiades and Hyades star clusters. There will be a conjunction of the moon and Saturn on Friday, March 1. The pair will rise in the southeast at about 11 p.m. MST. Saturn will be in our early evening sky in late March and early April. In the “signs in the heavens” department, we know the seasons are passing because the stars tell us. Pegasus, an autumn constellation is setting in the west in the evening, and Leo, a spring constellation is rising in the east.

NEXT WEEK: Astronomy 101 class Part III, the comets are coming and more astronomical blathering.