

ASTRONOMICAL EVENTS--2010

January 29th Mars at Opposition

The red planet will be at its closest approach to Earth and its face will be fully illuminated by the Sun. This year's approach will not be quite as close as it was in historic 2003, when Mars was only 34.7 million miles away. But, at only 61.7 million miles, this will be the best time to view and photograph Mars for quite some time to come.

February 16th Conjunction of Jupiter and Venus

These two bright planets will come within half a degree of each other on this evening. Unfortunately, they will be quite close to the Sun and could easily get lost in the glare. Look slightly above and to the left of the setting Sun.

March 20th The Vernal Equinox

The first day of Spring will occur in the northern hemisphere at 17:32 UT. There will be equal amounts of day and night.

March 22nd Saturn at Opposition

The ringed planet will be at its closest approach to Earth. This is the best time to view and photograph Saturn and its moons. But, Saturn's rings will be nearly edge-on this year and will be very difficult to see.

April 21st-22nd Lyrids Meteor Shower

The Lyrids are an average shower, usually producing about 20 meteors per hour at their peak. But, these meteors can produce bright dust trails that last for several seconds. This year's shower should peak on the night of April 21st and the morning of the 22nd, although some meteors could be visible from April 16th-25th. The quarter moon will set early in the evening, leaving a dark sky for the best possible viewing in dark locations. Look for meteors radiating from the constellation of Lyra after midnight.

May 5th-6th Eta Aquarids Meteor Shower

The Eta Aquarids are a light shower, usually producing about 10 meteors per hour at their peak. The shower's peak usually occurs on May 5th & 6th, however viewing should be good on any morning from May 4th – 7th. The radiant point for this shower will be in the constellation Aquarius. Best viewing is usually to the east after midnight.

June 21st The Summer Solstice

The first day of Summer will occur in the northern hemisphere at 11:28 UT. The Sun will be at its highest point in the sky and it will be the longest day of the year.

July 28th-29th Southern Delta Aquarids Meteor Shower

The Delta Aquarids can produce about 20 meteors per hour at their peak. The shower usually peaks on July 28th & 29th, but some meteors can also be seen from July 18th-August 18th. The radiant point for this shower will be in the constellation Aquarius. Best viewing is usually to the east after midnight.

August 12th-13th Perseids Meteor Shower

The Perseids is one of the best meteor showers to observe, producing up to 60 meteors per hour at their peak. This year's shower should peak on the night of August 12 and the morning of the 13th, but you may be able to see some meteors any time from July 23rd-August 22nd. The radiant point for this shower will be in the constellation Perseus. The thin, crescent moon will be out of the way early, setting the stage for a potentially spectacular show. For best viewing, look to the northeast after midnight.

August 13th Triple Conjunction with the Moon

The planets Venus, Mars, and Saturn will all be close to the thin, crescent moon on this evening. Look to the west just after sunset.

September 16th Final Space Shuttle Flight

If all goes according to plan, this day will see the final flight of the Space Shuttle. The orbiter Discovery will depart on mission STS-133 and bring to a close the 30+ year era of space shuttles as the work horses of the United States space program. After this flight, the remaining shuttle orbiters will find their final resting places in museums across the country.

September 21st Jupiter at Opposition

The Solar System's largest planet will be at its closest approach to Earth. This is the best time to view and photograph Jupiter and its moons. The giant planet will be as big and bright as it gets in the night sky. A medium-sized telescope should be able to show you some of the details in Jupiter's cloud bands.

September 23rd The Autumnal Equinox

The first day of Fall will occur in the northern hemisphere at 03:09 UT. There will be equal amounts of day and night.

October 20th Comet Hartley 2

This comet will make its closest approach to Earth, coming within 11.2 million miles. For a few days around October 20th, the comet should be bright enough to view with the naked eye in the early morning sky. You will, however, need to be far away from the glow of city lights. Look to the east just before sunrise. In early November, NASA's Deep Impact spacecraft will observe comet Hartley 2 from a distance of about 600 miles.

October 21st-22nd Orionids Meteor Shower

The Orionids is an average shower producing about 20 meteors per hour at their peak. This shower usually peaks on the 21st, but it is highly irregular. A good show could be experienced on any morning from October 20th-24th, and some meteors may be seen any time from October 17th-25th. Best viewing will be to the east after midnight.

November 17th-18th Leonids Meteor Shower

The Leonids is one of the better meteor showers to observe, producing an average of 40 meteors per hour at their peak. The shower itself has a cyclic peak year every 33 years where hundreds of meteors can be seen each hour. The last of these occurred in 2001. The shower usually peaks on November 17th & 18th, but you may see some meteors from November 13th-20th. Look for the shower radiating from the constellation Leo after midnight.

December 13th-14th Geminids Meteor Shower

Considered by many to be the best meteor shower in the heavens, the Geminids is known for producing up to 60 multicolored meteors per hour at their peak. The peak of the shower this year should occur on the night of December 13th and the morning of the 14th, although some meteors should be visible from December 6th-19th. Some estimates say there could be as many as 120 meteors an hour visible from dark-sky locations. The radiant point for this shower will be in the constellation Gemini. The Moon will set early in the evening setting the sky up for a spectacular show. Best viewing is usually to the east after midnight.

December 21st Total Lunar Eclipse

This eclipse will be visible throughout most of eastern Asia, Australia, the Pacific Ocean, the Americas, and Europe. The eclipse will be visible after midnight in North and South America. Since the Moon will be almost directly overhead from these locations, this should be an excellent chance to view a rare total lunar eclipse.

December 21st The Winter Solstice

This first day of Winter will occur in the northern hemisphere at 23:38 UT. The Sun is at its lowest point in the sky and it will be the shortest day of the year.