The Night Sky

Bright Comet Hangs Low in the Western Evening Sky

As mentioned in last month's Night Sky article, Comet Pan-STARRS may reach naked-eye visibility the 2nd and 3rd weeks of March 2013. This comet was discovered by the Panoramic Survey Telescope and Rapid Response System atop the Haleakala volcano in Hawaii. Astronomers use this 1.8 meter telescope to scan the heavens for Earth-approaching objects, both asteroids and comets, which might pose a danger to our planet. In June 2011 a comet appeared, and it was named "Pan-STARRS" after the acronym for the telescope. On March 5th, the comet will pass about 100 million miles from Earth as it briefly dips inside the orbit of Mercury, however it will be too close to the sun in the sky to be viewable on that date. The best dates to see it from our latitude may be March 12th and 13th when Pan-STARRS emerges in the western sunset sky not far from the crescent moon. A comet and the moon, together, framed by twilight-blue is a rare sight. During this 2nd week of March, comet Pan-STARRS will be less than 10 degrees above the western horizon one-half hour after sunset, so search for a clear western horizon to view this comet. Note that during this week, you will likely only see the coma (or `fuzzy' glow) around the nucleus of the comet; you will need binoculars to see its tail in the bright twilight.

This comet will continue to follow the western horizon slowly moving northward through the later part of March and early April. During this time, the comet will become fainter as it moves through the inner solar system on its outward path from the sun. From April 2nd through the 6th, this comet will appear right next to the great Andromeda galaxy (M31) and will have a similar surface brightness as the galaxy. You will need a very dark sky to see both of these with your naked-eye; however it will make a great sight through binoculars. After these dates, the comet moves higher in the sky to the northeast, though unfortunately, getting fainter as it moves higher in the sky.

Most of the planets still are clustered close to the sun in March, making them very difficult to spot in the evening and morning twilight. Bright Jupiter is still well-placed for viewing in the evening sky near the Hyades star cluster in Taurus. On March 17th, a waxing crescent moon passes very close to Jupiter.

Saturn is in the constellation of Libra and rises around 10 p.m. on March 1st. By the end of the month, Saturn will rise around 8 p.m. It will be highest in the south a few hours after midnight. The rings of Saturn remain magnificent through a telescope in a very "open" configuration.

During the first few weeks of March, should find yourself under a very dark cloudless sky; see if you can spot the zodiacal light jetting out from the western horizon as twilight fades. This faint glow on the sky follows the ecliptic, which marks the plane of the solar system on the sky. The ecliptic tilts highest with respect to the western horizon in mid-northern latitudes during this time of year. The zodiacal light is caused by sunlight scattering off of interplanetary dust deposited by disintegrated short-period (Jupiter-family) comets. I have seen it on numerous occasions in early March as an eerie glow similar in brightness to the Milky Way on the night sky.

Native Americans had a variety of names associated with the full moon of March all associated with the coming of spring. These names include the Full Worm Moon, the Full Crow Moon, and the Full Sap

Moon, among others. This year, the full moon occurs on March 27th at 5:27 a.m. EDT. A week prior to this on March 20th, the sun will be located at the vernal equinox on the celestial sphere at 7:02 a.m. EDT moving from the southern hemisphere into the northern hemisphere of the sky. This marks the beginning of the spring season in the northern hemisphere of the earth. Finally, Daylight Saving Time starts at 2:00 a.m. on March 10th – make sure to move you clocks forward by one hour when you go to bed on the 9th.

Should the sky be clear the night of March 23rd, there will be a free public astronomy open house at the ETSU Powell Observatory from 8 to 10 p.m. Note that this will be the last astronomy open house for the season. At these open houses, the public can view objects in the sky through telescopes and hear talks by faculty of the Physics and Astronomy Department. Note that the open houses are cancelled if the sky is cloudy. Finally note that comet Pan-STARRS will have already set by the time this open house begins. Further information about these open houses and directions to the observatory can be found on the web at http://www.etsu.edu/cas/physics/observatory/starparty.aspx.

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