

Our Night Sky for August 2015

We have now lost Venus and Jupiter in the evening sky, but they have given us tremendous pleasure during the past months. Saturn continues to be a night object low in the southern sky, but he is drawing ever closer to the South west and will be setting soon after the Sun in the next few months.

As for the spacecraft, where shall I begin? Perhaps with New Horizons which swept past the planet Pluto last month at over 36,000 mph, but not without giving the space scientists some heart stopping moments, when it went into 'safe mode' on July 4th, apparently because it was being asked to do too much, and its computers threw a wobbly and packed up. After a 4 hour sulk, during which the scientists decided what the problem was, New Horizons came back to life and, as of this moment (8th July) all seems to be working well, with new images being sent back on a daily basis. When you consider it takes 4.5 hours for a signal, travelling at 186,000 miles per second to reach the spacecraft from Earth, it gives you some idea of the vast distances involved, and how extraordinary it is that such a weak signal being transmitted from the spacecraft should be picked up on Earth, and translated into images of a planet more than 3000 million miles away. I hope to give you more details in the next magazine.

Meanwhile, the good news from The Rosetta mission is that the Philae lander on the Comet 67P has woken up, and has started to transmit data again. It was always hoped that when the comet came closer to the Sun, more light would fall on Philae's solar cells, not only providing the energy needed to power the lander, but also to warm it above the -45°C for it to work properly. Scientists say that the long hibernation in the shadow of the cliff where Philae landed up has probably protected it against the increasing heat which would have caused it to fail, and allowed it to survive long enough to monitor the comet during its closest approach to the Sun in August, and also as it continue back into the depths of space. This is the first time a comet has been observed from close quarters for so long, and the information being collected is priceless.

Finally, the Dawn mission to Ceres, the dwarf planet being visited following the successful mission to Vesta, continues to send incredible images to scientists, who are still unable to explain the bright spots on the surface. NASA Scientists say "The closer we get to Ceres, the more intriguing it becomes. New images of Ceres from NASA's Dawn spacecraft provide more clues about its mysterious bright spots, and also reveal a pyramid-shaped peak towering over a relatively flat landscape.

"The surface of Ceres has revealed many interesting and unique features. For example, icy moons in the outer solar system have craters with central pits, but on Ceres central pits in large craters are much more common. These and other features will allow us to understand the inner structure of Ceres that we cannot sense directly". I hope to keep you informed of all the latest data coming from these three brilliant spacecraft in later magazines.

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