Our Night Sky in March 2016

I have an apology to make for last month's Sky, in that I did not alert you to the planetary line-up that the media advertised at great length, much to my embarrassment! Because I use a star chart for the middle of the month, I failed to notice the great event at the beginning of the month, but I hope that those of you who have a good easterly horizon, were able to see it. In March, we have three planets in the night sky – Jupiter being due south at midnight, and Mars and Saturn rising in the South East about 0100. Orion and Sirius will still be very obvious after dark, as they begin to sink towards the South west with the approach of Spring.

The Dawn spacecraft has now reached its lowest altitude above the dwarf planet Ceres, and has begun to return amazing images. Dawn's other instruments also began studying Ceres intensively in mid-December. The visible and infrared mapping spectrometer is examining how various wavelengths of light are reflected by Ceres, which will help identify minerals present on its surface. Kupalo Crater, one of the youngest craters on Ceres has bright material exposed on its rim, which could be salts, and its flat floor probably formed from impact melt and debris. Researchers will be looking closely at whether this material is related to the "bright spots" of Occator Crater.

A 20-mile (32-kilometer) crater west of Dantu is covered in steep slopes, called scarps, and ridges. These features probably formed when the crater partly collapsed during the formation process.

Dawn's low vantage point also captured the dense network of fractures on the floor of 78-mile-wide (126-kilometer-wide) Dantu Crater. One of the youngest large craters on Earth's moon, called Tycho, has similar fractures. This cracking might have resulted from the cooling of impact melt, or when the crater floor was uplifted after the crater formed.

The spacecraft will remain at its current altitude for the rest of its mission, and indefinitely afterward. The end of the prime mission will be June 30, 2016, and I will try to keep you informed of future developments. Meanwhile, do visit the NASA website relating to Ceres, and see the incredible images that are being returned.

Bill Turnill