

## Our Night Sky in September 2013

Venus continues to hover just by the horizon after sunset, but Jupiter is now making an appearance in the early morning sky from 0100 onwards, and will be rising earlier each evening from now on, to become the most dominant planet during the winter nights.

As nights become darker, and the Sun's activity increases, it is time to start looking for aurora on the northern horizon again. Although you need to be as far north, or south in the southern hemisphere as you can afford, to have the best opportunity of seeing a good display, I have seen an arc of green aurora stretching from the north west horizon to the north east as far south as north Cornwall, so it can be possible to see it in Normandy (Surrey!).

Aurora are not confined to Earth; all planets with an atmosphere and a magnetic field have had aurora detected around their magnetic poles. However, charged particles do not come solely from the Sun. Jupiter's aurora originate from the active moon Io whose volcanoes produce huge amounts of sulphur atoms which are fed down Jupiter's magnetic field lines into the northern and southern magnetic poles to produce aurora, some of which are in the ultra violet part of the spectrum. A similar UV emission has been detected on Saturn's north pole, and is at the end of a magnetic field line connecting Saturn with the active moon Enceladus, along which stream energetic particles originating from Enceladus' geyser-like jets of ice.

Do let me know if you see these "Merry Dancers", whether in our own sky, or on a visit to Scandinavia or Canada where the north magnetic pole is closest. And while you are out in the garden looking for them, take a look above at the beautiful sight of the Milky Way stretching above your head, and use binoculars to enjoy the treasure chest of stars that make it up.

Talking of treasure chests, I have possibly a hundred astronomical magazines seeking a good home – ideal for a youngster, or anyone even remotely interested in what goes on above our heads! (You do not have to take them all!)