

# Our Sky in May 2012

We lose Venus in the North West after 2300, but hasn't she given us a wonderful display this spring? By this time, Mars will be still well up in the South West, while Saturn dominates the South. Now is the time to start looking for Noctilucent clouds which can sometimes be seen on the northern horizon after dark; they are unmistakable, shining with a pearly blue light, lit by the sun just below the horizon, and might make their appearance any time between now and the end of July.

We are now off to the depths of our Galaxy, and this month we look at the stars that inhabit it - 200,000 million at the last count! If the Galaxy was a zoo, and the stars animals, a visitor would not be disappointed by the sheer variety; our own star, the Sun, is a very ordinary 'animal', which is just as well for us. It could have been a Blue Giant with a surface temperature of about 30,000 degrees C, instead of the nice comfortable 6000° C of our Sun. There again, our Sun will one day become a Red Giant, whose outer atmosphere will envelop the Earth, so we had better use the next 4.5 billion years to find somewhere cooler to live! Then we have the giant stars that gobble up their Hydrogen fuel as greedily as a starving man and, when they have used it all up and converted as much as they can to other elements which keep them alive, they end up with iron which needs heat rather than giving it out during its nuclear fusion, and the stars, with no energy to sustain them, collapse under their own gravity onto their cores, rebounding with a gigantic explosion as Supernovae. It is in a Supernova that all the other heavier elements are produced, and which are then scattered throughout space to form the seeds of other stars, solar systems and planets possibly inhabited by other creatures like you and me. Without Supernovae, we would not exist since we are literally made of stardust.

These are the exciting stars, but there are many other types, from the very large to some as small as Jupiter which are called Brown Dwarves, and which might make up much of the hidden mass of the Galaxy since they are so hard to detect.

Next month, we will look at the centre of our Galaxy and what lurks there; be afraid – be Very afraid!

Bill Turnill