

Astronomy Talk 11th May 2021

Fuzzy Blobs – A Guide for the Perplexed

This “Zoom” talk was given by our member Steve Tonkin. There were 76 attendees.

First, Steve talked about emission nebulae, predominantly showing H-alpha. These look busy but are a harder vacuum than anything we can do on Earth. Colours may come from red H-alpha to blue from scattered light: different angles may give us Rayleigh or Mie scattering. These are almost always illuminated by a very bright embedded star.

We then looked at planetary nebulae, the gravestones of Sun-like stars, and supernovae which come from the explosion of more massive stars. The dust these stars recycle into the interstellar medium can then go towards forming the next generation of stars. The Sun itself is probably a third-generation star.

Then we turned to spiral nebulae, and the historical argument about whether they were part of the Milky Way or not, which was resolved by Hubble and Humason using Cepheids that Henrietta Swan Leavitt had discovered.

Lastly, we looked at clusters. Open clusters, e.g. the Pleiades, are small grouping of stars that formed from a single cloud and are generally in the galactic plane where such clouds are found. Globular clusters, aka galactic clusters, have hundreds of thousands of stars, orbit around the Milky Way, and some of which may be the core remnant of small galaxies that were absorbed by the Milky Way. 100 years ago, Harlow Shapley used their distribution to show the Sun is far from the centre of the Milky Way.