

Astronomy Talk 26th February 2019

Stellar Evolution - the life cycle of a star

This talk was given by Elizabeth Cunningham, who is a Visiting Research Fellow at the University of Surrey.

Dr Cunningham opened with a basic guide to the construction of nuclear matter - the adding of neutrons and protons to produce differing elements from hydrogen upwards through helium, looking also at the relative masses of the atoms.

She then investigated the basis of all light emissions in the universe, and at nuclear fusion in star formation. She explained the main sequence life of all stars, which is shorter or longer according to their masses, the larger being the least enduring.

She put our Sun into context as a very ordinary star in its middle age with an expected long life leading to its probable future as a red giant. This she followed with the likely prospects for the Earth as the Sun expands as a red giant.

Reference was made to massive stars with greater than 35 solar masses, which appear to behave beyond their initially predicted performance, and also to pulsars and black holes.

Dr Cunningham illustrated her talk with many images from near and deep space.