

the types of features, and their nomenclature, seen on the solid bodies of the Solar System was given in *Sky & Telescope*¹⁵. There are now 3400 approved names on 20 bodies representing 35 types of features. The *Journal of Chemical Education* run a series of articles relating the use of chemistry in everyday life, with the idea of providing material for class use, or for student interest. In one, there is a synopsis of the use of X-ray and γ -ray spectrometry for the remote analysis of the lunar surface¹⁶.

... AND STARS: variable stars and the brightest

Bertout reviews the main aspects of the T Tauri class of variable stars, covering their optical properties and their environments¹⁷. T Tauri variables are thought to be young stars, of low mass, still contracting under gravity. They usually have an associated cloud of dust, mainly of silicates, which may be a relict of their formation. A study of Taurus-Auriga cloud members¹⁸ gave ages of T Tauri stars in the range 10^5 to 3×10^6 years; Jet-like nebulosities have been detected in some T Tauri or related objects¹⁹.

The discovery of a 9.4 magnitude star having the properties of a cataclysmic variable has been reported²⁰. Observations at several wavelengths have confirmed that it is similar to UX UMa. The star is CPD -48° 1577, at RA 08^h 13^m.8, dec. -49° 04' (1950), and at a magnitude varying between 9.4 and 9.9; it is the brightest of all known cataclysmic variables. Radial velocity studies of the dwarf nova T Leonis reveals an orbital period of 84.7 minutes²¹, which is the shortest known for any U Gem type variable. The ZZ Ceti class of variables have been the subject of many investigations²². They are all white dwarfs pulsing in a non-radial manner. There is a correlation between the amplitude and complexity of the light curve—the lower amplitudes having simple sinusoidal curves. The maximum amplitude observed is about 0.3m and their periods are short, ranging from 100 sec. to 1200 sec.

Finally, there is a recent review²³ of the most luminous stars. The two most luminous stars in the solar neighbourhood are HD 93129 A and η Car, both associated with the Carina nebula NGC 3372, having luminosities some 5×10^6 times that of the Sun. Eta Carinae became 'famous' in 1836 when it underwent a prolonged outburst, lasting until 1858. In 1843 it was the second brightest star in the sky. Between 1858 and 1870 it faded significantly and remained

fairly constant in visual brightness until 1940 when it began to brighten. Eta Carinae is now surrounded by a small nebula of dust and gas. The mass of the ejected material may approach the mass of the Sun; it is responsible for the fading between 1858 and 1870 and now absorbs most of the star's visual and ultraviolet light. Another well-known luminous star is P Cygni, which has a total luminosity of 10^6 times that of the Sun. Several very luminous stars are known in other galaxies, these include S Doradus in the Large Magellanic Cloud. HD 38268, or R136a, the central object of the 30 Doradus nebula in the Large Magellanic Cloud is thought to be a supermassive star, about 2000 times the mass of the Sun, whose luminosity exceeds that of η Car by a factor of 10 or more. However, there have been suggestions that R136a may be a compact group of luminous stars. Even so it is still an extreme object.

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Obituary

FRANK WILSENHAM HYDE: 1909–1984

Frank Hyde, who was briefly Editor of our *Journal*, died on 1984 March 22. He began his interest in radio-astronomy while an engineer with Crompton-Parkinson in

Chelmsford, and in 1950 set up a radioastronomy observatory in a Martello tower near Clacton. He was the author of two books as well as many popular and technical articles. Among his other interests were airships and parasceience. He had not attended a BAA Meeting for many years, but older members will remember his talks and his pleasant personality.

Patrick Moore