

ASTRONOMICAL NOTES

Planets during November 1939.—Mercury will be an evening star in the early part of the month and on November 8 attains greatest elongation ($23^{\circ} 10'$); on November 18 it is stationary and passes inferior conjunction with the Sun on November 28. Venus also will be an evening star; and on November 18 is in conjunction with Mercury, the angular distance between the two planets at the time being only about a degree and a half. Mars continues to be visible near the meridian at about sunset; on November 29 it will be in quadrature with the Sun. The planet is gradually becoming fainter the stellar magnitude being +0.2 at the end of the month. Both Jupiter and Saturn will be on the meridian in the early hours of the night and are favourably situated for observation. The former will be at one of the stationary points of its geocentric orbit on November 25. Uranus which is about 3° south of the fifth magnitude star ζ Arietis will be in opposition to the Sun on November 13. There will be a close conjunction of the planet with the Moon on November 25.

Comets.—Information has been received of the re-discovery of Periodic Comet Tuttle on August 12 by Jeffers and Moore (*U.A.I. Circ.*, 790). The comet was detected very close to its computed position. It is moving in a south-easterly direction and, early in November will be situated in the constellations Sextans and Hydra. It is rapidly approaching the earth and is likely to become bright enough to be seen with some simple optical aid. The Comet is the most interesting member of the Saturn family; and its period is 13.6 years.

Two of the principal meteoric showers will occur in November—the Leonids, November 13-15 and the Andromedes, November 17-27.

Variable Star.—The well-known eclipsing binary Algol (β Persei) is well placed for observation practically throughout the night during the month. The period of light variation is 2.867 days and the range between magnitudes 2.3 and 3.5; the change in light is most easily noticeable about an hour and a half before and after the times of primary minima, one of which will occur at 8 p.m. on November 2. T. P. B.

Magnetic Notes for August and September, 1939

DAILY CHARACTERS.*—The magnetic activity during the months of August and September 1939 was less than that during July 1939. There were 2 days of moderate disturbance in each of the two months. August had 2 days of great disturbance while September had none. The number of slightly disturbed days during the two months were 16 and 17 respectively. Quiet days numbered 11 during each of the months of August and September.

During these months the days on which the magnetic conditions were quietest were August 2nd and September 24th. The most disturbed day during August was the 22nd and that in September was the 17th. Of these two days, the intensity of disturbance on August 22nd

sudden commencements' in the H, D and Z magnetograms of the Alibag Magnetic Observatory. In September, two storms of moderate intensity with gradual beginnings were recorded by the magnetographs. The number of storms recorded during the corresponding months of the year 1938, were three (all moderate) and four (one great and three moderate) respectively.

Other Magnetic Phenomena.—On September 29th, the H, D and Z magnetograms showed a perturbation between $08^{\text{h}} 00^{\text{m}}$ and $08^{\text{h}} 13^{\text{m}}$ G.M.T. The All-India Radio authorities in Bombay observed an unusual fading of short-wave reception signals from 1-30 p.m. Indian Standard Time, on this day, the fading continu-

Dates 1939	Quiet days	Disturbed days		
		Slight	Moderate	Great
August	1, 2, 4-7, 15, 27, 29-31	3, 8-11, 13, 14, 17-21, 24-26, 28	16, 23	12, 22
September	1, 5, 7, 8, 16, 22-24, 27-29	2-4, 6, 10-15, 18-21, 25, 25, 26, 30	9, 17	Nil

was much larger than that on September 17th. The table gives the distribution of all days in the two months classified according to the magnetic character of the days.

Magnetic Storms.—During August 1939, there were three storms (two of great intensity and one moderate). The beginnings of the great disturbances were marked by conspicuous

ing for a long time. The GMT of beginning of the perturbation referred to corresponds to the time of beginning of the radio fade out.

Monthly Characters.—The characters based on the International scheme of classification give the mean monthly values for August and September as 0.77 and 0.70. The figures for the corresponding months during 1938 are 0.81 and 1.03.

* The daily magnetic characters are determined in accordance with the procedure explained in para 1, of "Magnetic Notes for July 1939", in *Curr. Sci.*, 8, No. 9, p. 434.