

regret that we are unable to speak favourably of the scheme. The palpi are clumsily represented, but the specimens show no trace of legs, proboscis, or even antennæ, the last deficiency being the most serious and inexcusable of all, especially as they could easily have been imitated in fine wire. We cannot suppose that so incomplete a design can have been executed by, or even submitted to, anyone with the slightest knowledge of entomology. The colouring is fairly good, though in the case of some of the white butterflies it has too greenish a shade.

THE annual report of the Board of Scientific Advice for India for the year 1905-6 has reached us. It will be remembered that the Board is a central authority for the coordination of official scientific inquiry, and the object it has in view is the distribution of the work of research to the best advantage, the prevention of dissipation of energy by the useless duplication of inquiries, and its misdirection by a lack of inter-departmental cooperation. The Board by its advice also aids the Government of India in prosecuting practical research into questions of economic or applied science. During 1906 the Board appears to have held two meetings only, one at Simla in May and the other in December at Calcutta. The greater part of the report, which runs to nearly 200 pages, is made up of contributions by distinguished specialists on scientific work in various directions accomplished in India during the year under review.

OUR ASTRONOMICAL COLUMN.

ASTRONOMICAL OCCURRENCES IN JULY:—

- July 3. 8h. Uranus in opposition to the Sun.
- 6. 3h. Mars in opposition to the Sun.
- 7. 7h. Vesta in conjunction with Moon (Vesta 0° 15' S.).
- 8. 12h. 29m. Minimum of Algol (β Persei).
- 10. 3h. 5m. Sun eclipsed, invisible at Greenwich.
- 11. 9h. 18m. Minimum of Algol (β Persei).
- 13. Saturn's Ring. Major axis = 42"·11, Minor = 1"·72.
- 15. 19h. Jupiter in conjunction with the Sun.
- 20. 11h. 58m. to 12h. 57m. Moon occults θ Libræ (mag. 4·3).
- 24. Partial eclipse of the Moon.
 - 13h. 59m. First contact with the penumbra.
 - 16h. 22m. Middle of the eclipse.
 - 18h. 46m. Last contact with the penumbra.
 Magnitude of the eclipse = 0·620.
 At 16h. 10m. the Moon sets at Greenwich.
- 27-31. Meteors numerous from Aquarius and Perseus.
- 28. 11h. 10m. to 12h. 14m. Moon occults 30 Piscium (mag. 4·7).
- „ 13h. 4m. to 14h. 6m. Moon occults 33 Piscium (mag. 4·6).
- 29. 11h. 23m. to 11h. 55m. Moon occults 20 Ceti (mag. 4·9).
- 31. 10h. 40m. to 11h. 18m. Moon occults ξ² Ceti (mag. 4·3).

COMET 1907d (DANIEL).—The following set of elements and ephemeris for comet 1907d have been computed by Dr. E. Strömgen, and appear in Circular No. 98 of the Kiel Centralstelle:—

Elements.
 T = 1907 Sept. 2·0105 (Berlin M.T.)

$$\begin{aligned} \omega &= 241 \ 59 \cdot 04 \\ \Omega &= 143 \ 41 \cdot 99 \\ i &= 6 \ 14 \cdot 81 \end{aligned} \quad \left. \vphantom{\begin{aligned} \omega \\ \Omega \\ i \end{aligned}} \right\} 1907 \cdot 0$$

log q = 0·11436

Ephemeris 12h. M.T. Berlin.

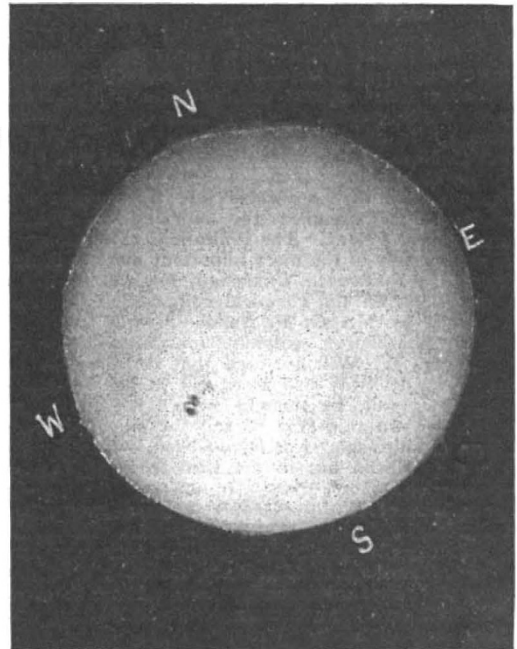
1907	α	δ	Brightness
June 24	... 0° 31'·3	... +2° 25'·9	... 1·37
„ 28	... 0° 44'·1	... +3° 27'·2	... 1·54
July 2	... 0° 57'·4	... +4° 29'·0	... 1·73

The brightness at the time of discovery, given as equal to mag. 11·0, is taken as unity. As will be seen from the above, the comet is brightening considerably, and is

travelling through Pisces, towards Aries, just south of the ecliptic. At present it rises above the eastern horizon about midnight.

Observations by Prof. Hartwig on June 15 gave the magnitude as 9·5, the diameter as 2', and the magnitude of the nucleus as 10·0.

A LARGE SUN-SPOT.—One of the most marked features of the present year has been the large number of sun-spot groups of sufficient magnitude to be seen with the naked eye; according to the Greenwich report, fourteen such groups had been seen on the solar disc up to May 10. The accompanying photograph, taken at 2h. 30m. on June 21, shows the group of spots which appeared on



the eastern limb on Thursday, June 13, and for several days was quite an easy naked-eye object. The latitude of the group was about 17° S., and, as may be seen from the reproduction, its extreme length was about one-tenth of the solar diameter, or about 85,000 miles. The shape of the principal umbra changed considerably during the spot's progress across the disc.

THE VARIABILITY OF ASTEROIDS.—A striking photograph, illustrating apparently rapid changes of brightness in an asteroid, accompanies a paper on the subject published by Mr. Joel Metcalf, of Taunton (Mass.), in No. 4, vol. xxv. (p. 264, May), of the *Astrophysical Journal*. The original negative was produced by making two exposures of equal duration on the same plate, the camera being guided so that the asteroid images are round and the images of the surrounding stars are shown as trails. The similarity of the two star trails for each star is evidence that the rating of the clock and the atmospheric conditions were constant throughout, and yet there is a marked difference in the size and density of the images of the asteroid—in this case 1906 WE. This plate was taken on November 6, 1906, and the two exposures had thirty-five minutes each, with an interval of a minute between them; therefore the asteroid appears to have changed considerably in magnitude during an interval of one hour eleven minutes.

COMET 1907c (GIACOBINI).—A set of elements and a daily ephemeris extending to July 11 are given for comet 1907c by Dr. Strömgen in No. 4183 (p. 128, June 14) of the *Astronomische Nachrichten*. Prof. Millosevich, at Rome, found this a difficult object to observe with the 38 cm. (15 inches) telescope, and, according to the ephemeris, it is decreasing in brightness.