

ment chemist under the Sudan Government—The Controller, Sudan Government London Office, Wellington House, Buckingham Gate, S.W.1 (July 14). A glass-blower for the Egyptian University, Cairo—The Director, Egyptian Educational Office, 39 Victoria Street, S.W.1 (July 14). A junior scientific officer for the Air Ministry Scientific Research Staff, primarily for research work in the aerodynamics department of the Royal Aircraft Establishment—The Chief Superintendent, R.A.E., South Farnborough, Hants (July 16, quoting A.180). A zoologist and a hydrologist for the *Discovery* Expedition—The Private Secretary (Appointments), Colonial Office, 38 Old Queen Street, S.W.1 (July 16). A research entomologist at the Long Ashton Fruit Research Station—Registrar,

University, Bristol (July 16). An assistant lecturer in geology—Registrar, University, Manchester (July 16). A live-stock officer and an assistant agricultural officer for the department of agriculture, Kenya Colony—The Private Secretary (Appointments), Colonial Office, 38 Old Queen Street, S.W.1 (July 31). A lecturer in physics at University College, London—The Assistant Secretary, University College, Gower Street, W.C.1. An assistant teacher in the engineering department of the Woolwich Polytechnic—The Principal, Woolwich Polytechnic, S.E.18. Laboratory attendant for botanical department of University College, Leicester—Dr. E. N. Miles Thomas, 8 Inglewood Mansions, West End Lane, London, N.W.6.

Our Astronomical Column.

COMETS.—Comet Pons - Winnecke, 1927c, is now very near the earth ; on the night of June 26-27 it will approach within about 3½ million miles, which is closer than any cometary approach within living memory. Since, according to Mr. B. M. Peek, the nucleus is well-defined, it is worth while to take carefully timed photographs with the view of determining the solar parallax. The comet should be faintly visible to the naked eye as a large ill-defined area of faint luminosity. Its apparent motion will be as rapid as that of the moon in apogee.

Mr. B. Strömrgren has revised the orbit, using observations up to June 10, and obtains :

$$\begin{aligned} T &= 1927 \text{ June } 21.064 \text{ U.T.} \\ \omega &= 170^\circ 22' 35.0'' \\ \Omega &= 98 \quad 8 \quad 34.3 \\ i &= 18 \quad 56 \quad 25.9 \end{aligned} \left. \vphantom{\begin{aligned} T \\ \omega \\ \Omega \\ i \end{aligned}} \right\} 1927.0$$

$$\begin{aligned} \log e &= 9.836076 \\ \log a &= 0.519227 \\ \log q &= 0.016698 \end{aligned}$$

EPHEMERIS FOR 0^h U.T.

	R.A.	Decl.	log r.	log Δ.
June 23.	19 ^h 16.6 ^m	37° 41' N	0.0169	8.699
25.	20 10.1	24 21	0.0173	8.623
27.	21 3.7	5 54 N	0.0181	8.591
29.	21 52.2	12 2 S	0.0192	8.633

On June 23 the comet is some 7° east of Vega ; on June 24, 5° north-east of β Cygni ; on June 26, in the diamond formed by the bright stars of Delphinus ; on June 27, near α Equulei. It then runs rapidly southward and quickly passes out of our reach, but it will be followed in Australia and South Africa. Perturbations by the earth will have to be applied in further researches on its motion :

CONTINUATION OF THE EPHEMERIS OF COMET 1927d (STEARNS) FOR 0^h (Pop. Ast., June-July).

	R.A.	N. Decl.	log r.	log Δ.
June 24.	14 ^h 1 ^m 21 ^s	22° 55'	0.577	0.530
July 2.	13 59 40	23 34	0.579	0.547
10.	13 59 10	24 0	0.581	0.563
18.	13 59 47	24 19	0.584	0.579

Magnitude 10 to 11.

CONTINUATION OF THE EPHEMERIS OF COMET 1927e (GRIGG-SKJELLERUP) FOR 0^h.

	R.A.	N. Decl.	log r.	log Δ.
June 25.	16 ^h 33 ^m 30 ^s	50° 40'		9.462
29.	16 53 40	46 30	0.0548	9.502
July 3.	17 10 30	42 21		9.541
7.	17 23 0	38 43	0.0679	9.579
11.	17 33 0	35 28		9.616

Magnitude about 11.

A FIREBALL ON JUNE 10.—Mr. W. F. Denning writes that "a fireball, estimated to be twice as

bright as Venus, was observed from Boscombe in the strong twilight on June 10 at 9^h 3^m P.M. G.M.T. It passed from about 20° below the Polar Star towards the east through the stars in the lower part of Cygnus, its path slightly falling during the five seconds the object remained in view. It left a short trail, and was apparently directed from a radiant point in the western sky. The fireball must have been a very brilliant object as seen from the central and eastern counties of England, but no report of its appearance has been received from those parts.

"It is hoped that further descriptions of its flight amongst the stars will be communicated, for the fireball was one of the most interesting and conspicuous kind, though the prevailing twilight must have considerably moderated its brilliancy."

PHOTOGRAPHS OF MARS.—Lick Observatory Bulletin 387 contains a series of photographs of Mars taken in 1924 by R. J. Trumpler. Yellow and red screens were used on the 36-inch refractor, and the plates were bathed in pina verdol. The plates were used to determine the diameter and polar flattening ; the diameter was got both from limb measures and from measures of markings on the disc at different times, the rate of rotation being well known.

The limb measures gave (for unit distance) :

	Yellow Screen.	Red Screen.
Equatorial diameter	9".41	9".33
Polar diameter	9".32	9".24
Polar flattening		1/96

The measures of disc markings gave :

	Yellow Screen.
Equatorial diameter	9".178
Polar diameter	9".075
Polar flattening	1/89

It is concluded that the flattening exceeds the value 1/190 deduced by H. Struve from the Satellites.

RARE ASTRONOMICAL BOOKS.—A sale catalogue of more than usual interest just issued by Henry Sotheran and Co. includes the library of the late Dr. Dreyer. There is an extensive collection of books by Sir Isaac Newton, and by others relating to his work. A specially interesting work is the copy of Euclid's elements used by Newton when he commenced the study of geometry as a sub-sizar at Trinity College. This contains numerous MS. notes of his, which are said to have been written at various periods of his life ; they express many of the propositions in algebraic notation. This work is valued at £500. Copies of the first edition of the "Principia" (first and second issues) are valued at £35 and £42 respectively. The second edition is only £2 : 5s.