

WE much regret to announce the death, on Dec. 25, of Major P. A. MacMahon, F.R.S., president in 1917-19 of the Royal Astronomical Society, who was formerly Deputy Warden of Standards, Board of Trade, at the age of seventy-five years; also of Major P. H. Hepburn, president in 1920-22 of the British Astronomical Association and treasurer in 1927-28 of the Royal Astronomical Society, on Dec. 25, aged fifty-six years.

THE fourteenth series of "Methods and Problems of Medical Education" has been issued by the Rockefeller Foundation, New York. Methods of keeping records are dealt with in this series, and as models specimens of the following are given: (1) the complete case sheets of a case of fracture, Massachusetts General Hospital, (2) the blank forms used

in a sanitary survey, Peking Union Medical College, and (3) a summary of the records and record system of the Children's Hospital, Cincinnati, Ohio.

APPLICATIONS are invited for the following appointments, on or before the dates mentioned:—A principal of the County Technical College and School of Art, and organiser of evening school work in the Borough of Newark—The Clerk to the Governors, Education Offices, Old Magnus Buildings, Newark (Jan. 14). A principal of the County Technical Institute, Worksop—The Director of Education, Shire Hall, Nottingham (Jan. 25). A lecturer in physical and stratigraphical geology in the Egyptian University, Faculty of Science, Cairo—The Dean of the Faculty of Science, Egyptian University, Cairo (Jan. 31).

Our Astronomical Column.

An Active Region on the Sun.—Although the maximum of the present cycle was reached in 1928, the sun has shown considerable activity during the past three months in the appearance of several large spots (see NATURE, Oct. 19, p. 631, Nov. 9, p. 737, Dec. 7, p. 888, Dec. 28, p. 998). During the latter part of December, another group of spots crossed the disc, covering with its attendant faculae a great extent of the sun's surface. The group (or possibly two separate but allied groups), which consisted of a long stream extending over 18° of longitude or 130,000 miles, occupied the place of the big naked-eye spot, No. 16 of the previous rotation, which also was the return of a complex stream beginning its development on Oct. 30. Notes relating to the early history of this active region are given in the *Observatory* for December last, p. 365.

The present group was observed at Greenwich with the spectrohelioscope presented to the Royal Observatory by Dr. Hale, and it was seen to be associated with extensive bright hydrogen flocculi. Preceding the group, on Dec. 24-26 (the only days when observation was possible), there was a very long, slender, dark filament which represented a prominence of considerable size and activity. Measures taken with the velocity recorder or 'line-shifter' of the spectrohelioscope showed on Dec. 25 a difference of 95 km./sec. in radial velocity between the two ends of the filament, the southern end rising from the sun with a velocity of 25 km./sec. and the northern end falling back with a velocity of 70 km./sec. A detailed account of a similar observation of a dark filament but connected directly with a sunspot is given by Dr. Hale in NATURE of May 14, 1927, p. 711.

The following table completes the list of large sunspots seen during the year 1929.

No.	Date on Disc.	Central Meridian Passage.	Latitude.	Maximum Area.
19	Dec. 21-Jan. 2	Dec. 27.5	16° N.	2000

Comets.—A new comet, 1929*d*, was discovered on Dec. 20 by Mr. Wilk of Cracow Observatory, who will be remembered as one of the discoverers of comet 1925*XI* (Peltier-Wilk). The following positions, of which the first is only approximate, have been transmitted by telegram from the I.A.U. Bureau, Copenhagen:

U.T.	R.A. 1929-0.	N. Decl. 1929-0.	Observer.	Place.
Dec. 20 ^d 17 ^h 45 ^m	18 ^h 8 ^m 35 ^s	36° 19'	Wilk	Cracow
21 17 32.1	18 20 15.67	35 23 30	Wolf	Königstuhl

The magnitude was noted as 7 on Dec. 20, 9 on Dec. 21. The deduced rate of daily motion is +11^m 48^s, -56'. This gives the rough position for the evening of Dec. 28, R.A. 19^h 43^m, N. Decl. 28° 52', which is some 5° east of β Cygni. This is the first comet readily visible with small instruments in European latitudes for nearly two years, and the first orbit likely to prove parabolic since the bright comet 1927*IX* (Skjellerup).

As the comet is approaching the sun, though receding from the earth, it is likely to become somewhat brighter: the following positions were secured by Dr. W. H. Steavenson at Norwood:

			R.A. 1929-0.	N. Decl. 1929-0.
Dec. 25.	18 37.3 U.T.	19 ^h 5 ^m 36.64 ^s	30° 42' 14"	
„ 26.	18 21.0 „	19 15 47.91	29 24 37	

Prof. Banachiewicz, Director of Cracow Observatory, has deduced the following orbit from observations on Dec. 21, 23, 25:

T	1930 Jan. 22.257
ω	157° 8'
Ω	178 41
i	124 31
log q	9.82840

EPHEMERIS FOR 18^h U.T.

	R.A.	N. Decl.	log r.	log Δ.
Jan. 1.	20 ^h 9 ^m 50 ^s	21° 1'	9.9006	9.9789
„ 5.	20 38 1	15 24	9.8783	0.0054
„ 9.	21 1 4	10 8	9.8586	0.0359
„ 13.	21 19 45	5 18	9.8430	0.0679
„ 17.	21 34 51	1 3	9.8328	0.0990

An observation by Dr. A. C. D. Crommelin on Dec. 29, not yet fully reduced, shows that the position was within 1' or 2' of the ephemeris place, so that the elements are probably near the truth: the comet must be looked for in the evening as soon as the sky is dark enough.

Prof. van Biesbroeck followed Forbes's Comet, 1929*c*, at Yerkes Observatory until Nov. 22: on Nov. 5 it was of mag. 15, with a diffused nucleus and a tail on the following side. On Nov. 22 the magnitude was 16.5. He is still following Stearns's Comet, 1927*IV*, with the 24-inch reflector. Its magnitude is 16. Carpenter's reported comet of Nov. 2 may be written off as unconfirmed.