Our Astronomical Column.

NEW COMET.—Another new comet, 1926*b*, was discovered at Braamfontein on January 16, by Mr. T. E. Blathwayt, who immediately communicated the news to the Union Observatory at Johannesburg, where an observation was secured a few hours later. The comet was then in Declination 30° South, but it was moving rapidly northward, and will be observable in England when the moon approaches new. Observations by Mr. Jeffers at the Lick Observatory, and M. Renaux at Algiers, have come to hand. From these Dr. A. C. D. Crommelin has computed the following orbit:

T 1926 Jan. 3·3481 U.T.
ω 328° 41′ 57″·6
Ω 136 3 58·2 } 1926·0
i 128 22 2·8
log q 0·129327

EPHEMERIS FOR 0^h

	R.A.	Decl.	log r.	log Δ.
Jan. 27	11^h 8^m 26^s	17° 51′ S.	0·1435	9·7418
,, 31	10 31 5	8 54 S.	0·1484	9·6877
Feb. 4	9 46 27	2 33 N.	0·1539	9·6562
,, 8	8 58 19	14 36	0·1600	9·6635
,, 12	8 11 15	24 47 N.	0·1666	9·7062

The magnitude was 11 at discovery; the approach to the earth will probably cause a slight brightening.

PROF. W. H. PICKERING'S WORK ON MARS.—The Draper 11-inch refractor with which Prof. Pickering has observed six apparitions of Mars since 1912 at Mandeville, Jamaica, has now been recalled to Harvard. Though he hopes to observe the next apparition there with another telescope, he thinks it is a good occasion to summarise his results. A paper in *Popular Astronomy* for November 1925 contains his measures of the polar caps. As has previously been noted, the circumpolar regions are veiled with clouds when the cap is forming, which takes place fairly rapidly. Then the clouds disperse, leaving the dazzling snow surface visible.

Owing to the eccentricity of the orbit the southern cap is larger than the northern, but melts more quickly. A great fraction of the total moisture of the planet, which Prof. Pickering estimates as about equal to that in the great American lakes, is concluded to oscillate between the two polar regions, fertilising each hemisphere when it melts.

Prof. Pickering alludes to the results obtained by Drs. Adams and St. John with the Mt. Wilson 60-inch mirror (*Pub. Art. Soc. Pac.*, 1925, 37, 158). They find that the water vapour in Mars' atmosphere is of the order of 5 per cent. of that in our own, and the free oxygen 15 per cent. of that in our own. These facts, combined with the thermopile results indicating a fairly high day temperature, suggest that the conditions for habitability are more favourable than were supposed some years ago.

RECENT SUNSPOTS.—The two large groups of sunspots which were seen during the latter half of December have returned as naked-eye objects. The preceding spot, south of the sun's equator, represented the following of the two spots originally composing the group. The great spot in the northern hemisphere has returned increased in extent, and on January 19 and 20, although much foreshortened near the sun's limb, it was easily seen with the naked eye. This single spot is one of the three largest which have appeared within the last fifty years. Its area on these two days exceeded 3000 millionths of the sun's hemisphere; its length, 8½ degrees of solar longitude, is equivalent to about 60,000 miles.

There have been other spots of minor importance. The large stream of spots, seen on the central meridian on December 16, has returned though much diminished, and the leading spot of an earlier stream (central meridian passage, November 24) has been seen for the third time.

The following table continues the information of naked-eye spots:

No.	Date on Disc, 1926.	Central Meridian Passage.	Latitude.	Maximum Area.
1	Jan. 16–19	Jan. 22·3	21° S.	1/1000
2	Jan. 18–31	Jan. 24·6	22° N.	1/300

(Areas express the proportion covered of the sun's hemisphere.)

AUTOMATIC REGISTRATION OF STAR-TRANSITS.—The problem of making the stars automatically record the time of their transit over the wires of a transit circle is an attractive one, to which many astronomers have devoted some thought since the introduction of photography as an aid to stellar observation. Mr. Bengt Strömgren, son of Prof. E. Strömgren, director of the Copenhagen Observatory, describes in *Astr. Nach.*, No. 5406, some experiments that he has made in this direction, using the very sensitive photo-electric cell which is now widely employed for stellar photometry. The current through the cell is so weak that amplification of the order of 10^9 is necessary to operate a chronograph. The widespread use of wireless telephony has gradually brought about improved methods of amplification. Broad occulting bars in the focal plane of the telescope take the place of spider lines; the disappearance and reappearance of a star is automatically recorded.

Successful experiments have already been made on α Arietis (mag. 2·2) and the theoretical feasibility of the method is thus demonstrated; but it is doubtful whether it could be carried below magnitude 5. Moreover, there would seem to be a danger of re-introducing magnitude equation, which has been practically eliminated by the use of the travelling-wire micrometer.

MEASUREMENTS OF RADIATION IN THE SOLAR CORONA.—An important series of measurements of solar corona radiation were taken during the total eclipse of January 24, 1925, by E. Pettit and S. B. Nicholson, who describe their work in the *Astrophysical Journal*, vol. 62, p. 202. The instrument used was a thermocouple placed at the focus of a reflector 50·5 cm. in diameter. A rock-salt window was used for the thermocouple, but observations point conclusively to the fact that there is no appreciable radiation of longer wave-length than 5·5 μ from the corona, so that, in the future, quartz or glass windows may be used without loss. Photometric measurements of direct photographs of the corona were also made, with the object of investigating the distribution and total amount of the radiation. These results were calibrated and expressed in absolute units by comparison with the radiometer measures at selected points. The total light from the corona as measured in this manner was found to be $11{\cdot}2 \times 10^{-7}$ that from the whole sun, or 0·52 of the light received from the full moon at mean distance; one-half of this light coming from a zone extending only 3′ from the limb of the sun. There seems to be very little hope of detecting the corona by radiometer measures without an eclipse, unless the amount of scattered sky-radiation can be reduced to at least 1 per cent. of its value, as observed on Mount Wilson.