

THE following officers and members of council of the Röntgen Society have been elected for the session 1922-1923: *President*: Sir Humphry Rolleston; *Vice-Presidents*: Sir W. H. Bragg, Sir Ernest Rutherford, and Dr. A. E. Barclay; *Hon. Treasurer*: Mr. Pearce; *Hon. Secretaries*: Dr. E. A. Owen and Mr. R. J. Reynolds; *Hon. Editor*: Dr. G. W. C. Kaye; *Council*: Mr. C. Andrews, Dr. G. B. Batten, Mr. A. E. Dean, Mr. K. Edgcumbe, Mr. N. S. Finzi, Dr. F. L. Hopwood, Dr. F. H. Johnson, Mr. C. E. S. Phillips, Prof. A. W. Porter, Prof. A. O. Rankine, Sir Archibald D. Reid, and Dr. R. W. A. Salmond.

REFERRING to a paragraph in NATURE of June 10, p. 755, Dr. Marie C. Stopes writes:—"May I correct the impression your paragraph creates that the Clinic and the *Birth Control News* are activities of the Malthusian League, as this is not the case? The Society for Constructive Birth Control and Racial Progress, with which the clinic and news are associated,

is a distinct society with a different basis. The policy of the Clinic and the *Birth Control News* is that of *constructive* and scientific control, as distinct from what is commonly understood as Malthusianism."

WE have received from Messrs. C. F. Elwell, Ltd. (Craven House, Kingsway) a handsomely produced catalogue relating to apparatus for wireless communication. A readable introduction deals with the immensity of the field of wireless telegraphy and the superiority of the continuous wave over the spark system of transmission. The most interesting portion is that dealing with the Elwell arc equipment on the Poulsen system, such as the company has supplied to several well-known long-distance stations, including Horsea, Eiffel Tower, Lyons, Rome, and the initial station of the Imperial Chain at Leafield. This apparatus is listed up to 700 amp. in the arc. Interesting details are also given of steel and wooden lattice aerial towers, ship receiving sets, and various accessories.

Our Astronomical Column.

THE METEORS OF PONS-WINNECKE'S COMET.—Mr. W. F. Denning writes that he regards it as highly probable there may occur a meteoric shower on about June 28. It will be a return of the display which he witnessed on June 28, 1916. If the meteors of this stream are connected with the comet of Pons-Winnecke, they will have a period approximating six years; and as the particles appear to be distributed abundantly along a lengthy section of the orbit, a repetition of the phenomenon of 1916 may be expected. It is true that the cometary meteors were not seen at many stations last year, although the conditions appeared promising, but in Japan a considerable number seem to have been recorded. In any event it is desirable carefully to watch the heavens, at the end of June, for further evidence of this interesting display. There will be no moonlight, and the radiant point in Quadrans or Draco will be favourably placed in the earlier hours of the night.

THE SEARCH FOR NEW STARS.—The period of the year is now approaching when the Milky Way will be very favourably placed for observation in northern latitudes, especially towards the end of June, and in July. The constellations Cygnus, Aquila, Ophiuchus, and Scorpio have been fruitful in Novæ in past years, and they offer the prospect of further discoveries. When the moon is not bright the sky in the regions indicated should be scanned carefully for new objects. The best time to conduct the work will be near midnight, when the summer twilight will not seriously interfere.

An observer who is not familiar with a large number of the naked-eye stars, should compare the heavens with a star atlas, and this method, often repeated, will soon enable him to dispense with the atlas. Certain new stars are very quick in their rise to brilliancy, and a vast difference in their magnitude often occurs in a few hours, so that it is really essential to repeat the search several times in the course of a night. Wherever the galaxy runs the observer's eyes should diligently pursue the quest, and other quarters of the sky should occasionally receive attention.

Though twelve new stars visible to the naked eye

burst into view between 1848 and 1921, not one appears to have been recognised during the previous 158 years; but this was probably due, not so much to the dearth of such objects, as to the want of capable observers.

COLOURS OF BINARY STARS.—The giant and dwarf theory of star-development gave a solution to an astronomical enigma of long standing. This was the frequency with which the fainter component of a binary tends to blue, while the brighter component is red or orange. On the old view this implied that the component was of earlier type than the bright star, and hence had developed more slowly. Some suggested, as a way of escape, that the blue of these stars might possibly not correspond with that associated with spectral type A or B. It was, however, found possible to obtain spectrograms of some of these blue components, which did not indicate that they differed from other blue stars. As soon as the giant and dwarf theory was mooted, it became clear that for giant stars the blue stage was in fact later than the red or yellow one.

Mr. Peter Doig examines the question from this point of view in Mon. Not. R.A.S. of April, and finds that it gives much the same line of demarcation between the giant and dwarf binaries as that given by the absolute magnitudes, based on all available parallaxes, including the spectroscopic ones. He gives 33 pairs in which the stars are giants, and 75 in which both are dwarfs. The former list includes Polaris, Regulus, Antares, β Cygni, ξ Bootis, etc.; the latter includes Castor and α Centauri. Mr. Doig notes that in some cases of great difference of mass the companion might have become a dwarf of a redder type than the primary, while the latter was still a giant. He then ventures to extend the principle to give estimated parallaxes for some systems not on the list. For example, α Librae is given as a dwarf, with parallax $0.045''$; the parallax of Praesepe is estimated as $0.010''$. The paper makes an appeal for the substitution of other terms for "early" and "late" as applied to spectral types, which are misleading in the case of giants. Prof. Turner suggested the terms "hotter" and "cooler" as preferable.