

Queen's University, Belfast (Nov. 20). A senior assistant pathologist to the Pathological, Bacteriological, and Clinical Research Department of the Royal Sussex County Hospital—The Secretary-Superintendent, Royal Sussex County Hospital, Brighton (Nov. 21). Three junior research assistants (a biochemist, a histologist, and a physiologist) in the Animal Genetics department, the University, Edinburgh—The Secretary, The University, Edinburgh (Nov. 22). An assistant lecturer in municipal and sanitary engineering at the Manchester Municipal College of Technology—The Registrar, Municipal College of Technology, Manchester (Nov. 30). A lecturer in economics and statistics in the University of Western Australia—The Agent-General for Western Australia, Savoy House, Strand, W.C.2 (Dec. 18). A test assistant at the Royal Aircraft Establishment to assist in experimental metallurgical work—A, 385, The Chief Superintendent, Royal Aircraft Establishment, South Farnborough, Hants. A junior technical

officer in the Admiralty Technical Pool—The Secretary of the Admiralty (C. E. Branch), Whitehall, London, S.W.1. A geologist on the Geological Survey Staff, Nigeria.—The Private Secretary (Appointments), Colonial Office, 2 Richmond Terrace, Whitehall, S.W.1. An assistant master to teach woodwork, chiefly in the Maidstone Junior Technical School—The Principal, Technical Institute, Maidstone. A junior chemist under the Research Association of British Paint, Colour, and Varnish Manufacturers—The Director, Paint Research Station, Waldegrave Road, Teddington. A demonstrator in agricultural botany in the University of Reading—The Registrar, The University, Reading. Metallurgical research investigators; also a science graduate for the critical examination and abstraction of technical literature in connexion with technical reports, etc., each under the British Non-Ferrous Metals Research Association—The Secretary, British Non-Ferrous Metals Research Association, 71 Temple Row, Birmingham.

Our Astronomical Column.

Recent Solar Activity.—A large, naked-eye sunspot of composite structure was a conspicuous object to those persons who watched the phases of the partial solar eclipse on Nov. 1. The spot crossed the sun's central meridian on Oct. 31.0, and there were disturbed magnetic conditions recorded at Abinger on Nov. 1-4. For some hours after 15h on Nov. 3 the magnetic disturbance reached 'storm' intensity, the range in declination being about 36'. It may be noted that disturbed magnetic conditions occurred on Oct. 7-10, that is, about a solar rotation earlier. Another group of sunspots possibly associated with the recent magnetic storm was a stream which, growing rapidly from small spots on Oct. 30, covered an area of 900 millionths of the sun's hemisphere on Nov. 3. Mr. Newbegin at Worthing observed this group with a spectroscope on Nov. 3 and saw that it was unusually active. There were reversals of lines of sodium and magnesium and a brilliant reversal of the c-line of hydrogen over the centre of the group. A third spot to be noted came into view round the east limb on Nov. 3 and was accompanied by a metallic prominence. This spot will probably be visible to the naked eye and is the return of one designated No. 10 in the list of spots given on p. 631 of NATURE, Oct. 19. The following table continues the tabulation of large sunspots.

No.	Date on Disc.	Central Meridian Passage.	Latitude.	Max. Area.
12	Oct. 24-Nov. 6	Oct. 31.0	10° N.	800
13	Oct. 30-Nov. 9	Nov. 3.7	14° N.	900
14	Nov. 3-Nov. 15	Nov. 9.6	10° S.	500

(Areas in millionths of sun's hemisphere.)

Interesting New Minor Planet.—The discovery of new planets is going on steadily at the rate of more than a hundred per annum. From time to time a discovery of more than usual interest is announced. A planet the provisional designation of which is 1929SA was found photographically by Prof. M. Wolf at Königstuhl on Sept. 26. It attracted special notice from the length of its trail, which indicated that it was moving northwards at the remarkable rate of half a degree per day. *Beob. Zirk.*, No. 38, announces that Dr. G. Stracke of the Berlin Rechen-Institut has computed elliptical elements from observations on Sept. 26, 28, and Oct. 7. He finds that the period is 4.375 years, the eccentricity 0.4648, and the perihelion

distance 1.432, so that the planet comes inside the orbit of Mars. The orbit is of similar type to those of Aethra and Ganymede. The aphelion distance is 3.918, and the inclination 14.9°. The planet was of magnitude 13 when discovered, it being then not far from perihelion. It will probably be too faint to observe when near aphelion.

The same number of *Beob. Zirk.* announces that M. Gussow, of Babelsberg Observatory, has found that the spectroscopic double star Boss 6046, the magnitude of which is 5.13 and its spectral type B3, is an eclipsing variable of Algol type. The light-range is 0.17 mag., and the period of variation 6.067 days; the latter was deduced from the spectroscopic orbit.

The Orbit of γ Centauri.—This is one of the binaries the components of which are nearly equal in magnitude, and approach each other very closely at periastron, so that there is danger of confusing the components when they again become separately visible. Such binaries have generally two possible orbits, one with a short period, high eccentricity, and small inclination, the other with a long period, low eccentricity, and high inclination.

Union Observ. Circ., No. 78, contains a discussion of its orbit by W. H. van den Bos. Dawson had given in *Ast. Jour.* 765, an orbit of the second of the above types (period 200 years, eccentricity 0.3) based on observations from 1852 to 1920. Observations from 1920 to 1928 led van den Bos to conclude that it has a first-type orbit with period 80.4 years, eccentricity 0.86. See had already in 1895 published elements not far from the new ones, but the additional 34 years have greatly strengthened the determination. The components are now too near each other for easy separation, but there is an appeal for spectroscopic observations, which will both check the new orbit and also afford a determination of the star's parallax. This has been estimated as 0.027" using Eddington's curve connecting mass with absolute magnitude. The mass of each star is estimated as three times that of the sun, absolute magnitude of each 0.0 bolometric, 0.3 visual. A larger parallax would give smaller masses. The relative radial velocity at periastron (1930.2) would be 38 km./sec. with the above parallax. The apparent separation of the stars is a minimum, 0.09", at the end of 1930, increasing to 0.42" three years later.