News and Views.

GENERAL satisfaction will be felt at the fact that the Board of Trade has appointed to the Comptrollership of the Patent Office a man who is qualified for the post by definite scientific training. Mr. W. S. Jarratt, the new Comptroller, after becoming an Associate of the Royal College of Science spent some time in research under Sir Norman Lockyer. He next went to Trinity College, Cambridge, as a scholar, became a wrangler, and also obtained a first class in the Natural Sciences Tripos. He then entered the Patent Office as an assistant examiner, and eventually was appointed Assistant Comptroller for Trade Marks. He was called to the Bar in 1910. This is the first time that a Comptroller having scientific qualifications has ever been appointed. Since it became known twelve months ago that ill health was likely to compel the retirement of Mr. Temple Franks, who has done so much by the soundness of his judicial decisions to raise the legal status of the Patent Office to a high level, the problem of the selection of a successor has caused considerable anxiety in circles representing applied science and invention.

THE importance for industry of the principle that the head of the Patent Office should be a scientific man was pointed out some time ago in our columns, and much public interest in the whole question has been aroused. It is believed that the wise step taken by the Board of Trade has given widespread satisfaction, for although strong pleas have been put forward for the policy of raising the salary of the Comptrollership to a substantial figure and throwing the appointment open to general competition, the present demand for public economy must have precluded the adoption of such a plan, and the Treasury may be considered singularly fortunate to have obtained by more conservative measures a man with such excellent qualifications for the post. The position of the new Comptroller is not likely to prove a bed of roses, for there is an urgent demand for various reforms in the patent system, and it will fall to him to advise the Government as to any new legislation which may be necessary in this connexion. It seems safe to assure him, however, of the sympathy and support of the scientific world in handling the intricate and difficult problems which confront him.

FOLLOWING the application of the surgeon's knife to the excessively swollen capital of the British Dyestuffs Corporation, Ltd., the patient is beginning to show signs of convalescence and new energy. On February 26 it was officially announced that the Corporation had acquired a majority of the share capital of Scottish Dyes, Ltd., and that the management of the latter company would continue in the same hands, Mr. James Morton remaining chairman and Dr. J. Thomas, managing director. The board of the Corporation, which was recently strengthened by the appointment of Dr. A. Rée, will now receive the expert assistance of Mr. Morton; and the accession of Sir William Pope to the board of Scottish Dyes, Ltd., will be hailed with satisfaction by the many who believe that no board of this kind is complete unless science is adequately represented upon it. It is also announced that in future the manufacture of vat dyestuffs will be concentrated at the works of Scottish Dyes, at Grangemouth.

THE process of aggregating brains and capital and of segregating manufacture to chosen works, which seems to be the policy of the British Dyestuffs Corporation, Ltd., is familiar to us from the history of the *Interessengemeinschaft*, and we see no reason why its success in Germany should not find a parallel in Great Britain. During the War, Mr. James Morton showed great enterprise in embarking upon the perilous sea of dyestuff manufacture, and by successfully specialising in the production of 'shades,' he acquired a well-deserved reputation. Since then he has initiated and developed the manufacture of vat dyes at Grangemouth; in fact, his policy has been almost the reverse of that pursued by the Government-aided corporation, which, in its endeavour to monopolise the home industry, entered indiscriminately upon the manufacture of a host of products, with the result that it brought few of them to a state of perfection. At the time when demand greatly outran supply, the latter policy was intelligible, but now that dye-producing capacity is everywhere in excess of consumers' needs, the only way of salvation is to concentrate upon quality, low production costs, and efficient salesmanship.

IN August last, a gentleman who desired to remain anonymous, called at the London Hospital and stated that he wished to make a gift for some charitable purpose and asked advice as to the best way of doing so. Eventually it was agreed that most good could be done by endowing medical research in connexion with the Hospital. It was explained to the donor that such research is badly handicapped in that there is little possibility of a man taking it up as a life-work unless he has means of his own. Finally a trust deed was agreed on stating that the income should be spent in salaries, and not on 'bricks and mortar' or laboratory equipment, which it was thought the Hospital itself ought to provide. Later, the donor presented 50,000*l.* and the fund has been named the Freedom Research Fund. Its working is managed by a small committee consisting of a nominee of the donor, the head of the Clinical Laboratory, and the House Governor of the Hospital. Provision has been made for an annual scholarship in pathology of 100*l.* open to students of Oxford and Cambridge, a research studentship of 400*l.* a year for three years, to which Mr. L. Hewitt has been appointed, and the remainder of the fund between two senior pathologists to enable them to devote their whole time to research. Dr. S. P. Bedson, of the Lister Institute, and Dr. W. Howard Florey, of the University of Cambridge, have been appointed for this latter purpose. These workers will have the advantages that they will be engaged entirely on research work, but shoulder to shoulder with the Hospital Laboratory

staff doing the routine investigation work of the Hospital; they will be in touch with the clinical work of the Hospital and especially with the Medical Unit; and they will be working in a centre where unlimited clinical material is available. It is hoped to enlarge this fund.

M. H. PARODI, the chief engineer of the Paris-Orleans Railway Company, read an interesting paper on railway electrification to the Institution of Electrical Engineers on February 18. Since the War, the development of electric railways and the suburban supply of electricity has been very rapid in France. The scheme on which M. Parodi is working is to substitute electric for steam traction on a line where the traffic is very heavy, and to provide a power transmission system for all the districts through which the railway passes. In France, the electrification of the railways forms part of a general network for power supply. This network will be built up gradually by linking together many of the existing distribution systems. The policy adopted by France of co-ordinating the supply of electric power to the railways with the general supply of power is different from that adopted by Germany, Switzerland, Austria and other countries, where the electric traction problem is considered without reference to power supply. If the power transmission lines were to follow the railway from Paris to Toulouse through Orleans, Limoges and Brive, then the great steam power stations of the Paris district could be linked with the hydro-electric stations of the Central Plateau and the Pyrenees. From the electrical point of view the use of very high voltages presents many advantages. Such lines are affected very little if at all by atmospheric phenomena. Whilst the power that can be transmitted varies as the square of the voltage, the first cost only varies directly as the voltage With the pressure of 150 kilovolts now in use, it is possible to transmit economically 50,000 kilowatts from the Central Plateau to Paris, a distance of about 280 miles. It will be of interest to see how the relative cost of generating electricity by water power and by steam in France works out in practice.

DR. C. HAGBERG WRIGHT took for the subject of his discourse delivered at the Royal Institution on February 26 a remarkable but little-known personality in the literary history of France, the Sieur Nicolas Fabri de Peiresc, a gentleman of France, in the early seventeenth century. Peiresc, whose fame has suffered from the modesty of his character, was satisfied to minister to the needs of his brother authors and scientific workers, without desiring personal reward. Accordingly he gave, lent and borrowed books for his friends, and kept two bookbinders and an engraver continually employed. He had also in his household an astronomer named Garrat, having built an observatory where he carried on astronomical observations by the aid of a telescope constructed by Galileo himself. His studies took a wide range, including astronomy, numismatics, ancient inscriptions and monuments, optics, music and horticulture. Without being, strictly speaking, a pioneer in any of these subjects, it was through his efforts that many aids to science were brought into France, and also valuable manuscripts obtained from Egypt, Cyprus and Syria. Through him the microscope found its way from Holland, where it was invented, into France. In optics his observations were in advance of his contemporaries, and he is said to have been the first to observe the phenomena of negative and positive after-images. In astronomy he co-operated with Gassendi during several years. Towards the end of Peiresc's comparatively short life his love of botany and horticulture became his supreme pleasure. His correspondence with l'Escluse, the great Dutch botanist, remains to testify to his ardour in this direction. Incidentally, Peiresc is believed to have introduced the tulip into France, after it had been brought from Constantinople by an Austrian diplomat, named Busbecq, in 1562, and by l'Escluse carried to Holland, whence Peiresc obtained it. After fifty-seven years of untiring activities Peiresc succumbed to the ill-health which had accompanied him through life.

DR. H. T. CALVERT, of the Ministry of Health, delivered a Chadwick Public Lecture on February 26, taking as his subject, "The Activated Sludge Process of Sewage Treatment." He stated that no aspect of the sewage purification problem has been so much discussed since the War. The process has been developed from the older methods including land irrigation and treatment in contact beds or percolating filters; the activated sludge is obtained from the sewage itself by means of aeration and is then used for the purification of further quantities of sewage. Various methods of applying the process have been invented, all of which aim at oxidising the organic matter of sewage, by means of air and micro-organisms, in the most efficient manner and at the lowest possible cost. As compared with ordinary sludge, activated sludge is of higher manurial value, but the difficulty of removing the water which adheres to the sludge will no doubt stand in the way of a general adoption of the process and a full utilisation of activated sludge as a manure. The capital expenditure to which local authorities in Great Britain are already committed for applying the activated sludge process amounts to approximately one million pounds sterling and a larger amount has already been spent on the process in the United States. Dr. Calvert concluded by asking for more extended scientific investigations of the process, with the view of furnishing the necessary information for the design of further works.

SOME interesting suggestions are put forward by a correspondent in the *Times* of February 24, relative to the origin of the type of the Amenhetep temple at Beisan in Palestine. This temple was one of four of different dates, three being superimposed, discovered during 1925 by the expedition of the University Museum, Philadelphia. It belongs to the Amarna period, in itself a matter of considerable interest, and is very similar in style to the tomb chapels found at El-Amarna. At the same time the cult objects found

in the temples of Seti I. and Rameses II. at Beisan show a resemblance to cult objects from the temple of Ishtar at Assur, in which the cult-room is not so much Assyrian as comparable in type with that of temples at Bogazkeui, the Hittite capital. The existence of an Assyrian colony in Anatolia at the end of the third millennium B.C. appears to supply a link, and the suggestion is thrown out that the temple of Amenhetep at Beisan, which has a certain similarity to the cult-room, may have been built after the model of a Hittite temple and itself have influenced the form of the Amarna tomb-chapels. This latter somewhat unexpected and, some may think, improbable suggestion will give an added interest to the results of further excavation.

DR. T. W. GANN, in the course of a series of articles contributed to the *Morning Post* in the issues of February 22 and the two succeeding days, chronicles one of the most important finds of recent years for the history and chronology of the Maya in Central America. He has found in the Territory of Quintana Roo, Yucatan, a stele with an inscription which contains the Maya Initial Series Date, 9.8.0.0.0.5. Ahan, 3 Chen, or October 26, A.D. 333. This date is more than 300 years earlier than that appearing on the oldest of the stelæ previously found, and is one of only four such Initial Series Dates found among all the Maya ruins in Yucatan. In view of the importance of fixing the date when the Maya first established themselves in Yucatan, this discovery, as Dr. Gann points out, "may cause a complete reversion of the ideas generally held as to their first immigration into this peninsula and their foundation of what is known as the New Empire."

THE forty-eighth annual general meeting of the Institute of Chemistry was held on March 1, Prof. G. G. Henderson, president, in the chair. The Meldola Medal was presented to Dr. Henry Phillips. In moving the adoption of the annual report, which showed that the roll of the Institute now numbers nearly 5000 fellows and associates, the president referred to the decrease in unemployment in the profession, and mentioned that there are indications that not only those industries which are strictly chemical in character but many others are also finding that well-trained research and analytical chemists are necessary to combat the effects of industrial depression. To some extent, the situation has been relieved by members passing into other work and also owing to the fact that the output of chemists from the universities has been less during the last two or three years. The Committee of the Institute has been concerned with matters affecting fertilisers and feeding stuffs, in which valuable assistance was rendered to the Ministry of Agriculture and Fisheries; with the Royal Commission on National Health Insurance, on which the Council represented the views of public analysts responsible for the examination of drugs under the Sale of Food and Drugs Acts; with the Labour Party on the subject of Government scientific publications; and also with the Director of Public Prosecutions. The local sections of the Institute have become increasingly active. The problem of seeking statutory powers of registration for professional, consulting and analytical chemists has been under the earnest consideration of the Council. Prof. G. G. Henderson was re-elected president of the Institute.

THE second Italian National Congress of Pure and Applied Chemistry, to be held in Palermo, opens with a reception in the Botanic Garden on May 22 next and closes on June 2. Many well-known chemists have already made known their intention to be present, and a large attendance is expected. In addition to meetings of the Congress and of its various sections, and visits to works and to places of interest in the neighbourhood of Palermo, the provisional programme comprises a five-days' tour, during which opportunities will be afforded to see Girgenti and its temples, mines and industrial establishments, Syracuse, the asphalt deposits of Ragusa, Catania and its sulphur refineries, Etna, Taormina, Messina, etc. The meetings of the Congress are divided into three groups, dealing with (1) questions of scientific or industrial importance, (2) communications to several sections jointly, and (3) papers and discussions relating to different chemical industries and to branches of pure chemistry. Any chemist wishing to read a paper before Group 1 of the Congress is requested to furnish the General Secretary, Via IV Novembre 154, Rome 1, with a summary of his communication not later than April 30, while for Group 3 the Secretary should be informed of the title by April 30 and should be supplied with the text, together with a résumé, by May 10. Fifteen minutes will be allotted to the reading of each paper, and not more than forty minutes to a discussion of general interest.

THE Wilde memorial lecture of the Manchester Literary and Philosophical Society is to be delivered by Prof. G. Elliot Smith on "Brains of Apes and Men," at 4 o'clock on Tuesday, March 9.

THE recent issue of the index parts of the Physics and Electrical Engineering Sections of Volume 28 completes *Science Abstracts* for 1925. The Physics Section has viii + 1045 pages, of which 41 are devoted to a name index, and 98 to a subject index. The number of abstracts of papers is 2808, and their average length 0·32 of a page. The Electrical Engineering Section has viii + 692 pages, with 23 for name and 51 for subject indexes, and 1811 abstracts of average length 0·34 of a page. As compared with last year the Physics Section has decreased by nearly 200 pages, and the Electrical Engineering Section increased by 40 pages. In both sections there has been a decrease in the average length of an abstract, which in the previous year was 0·36 of a page. So far as we have been able to judge during our use of the abstracts, this decrease of length has not been accompanied by a decrease of value, but is rather a proof of the increased skill of the abstracting staff. To the regular user of *Science Abstracts*, the attitude of the physicist or electrical engineer who regards it as unnecessary is difficult to understand—it seems like prospecting without a pick and shovel.

THE second issue of the *Journal of the Royal Technical College* (Glasgow) is of interest from more than one point of view. In the first place, it demonstrates the high standard of research which is being carried out in the College, and, secondly, it represents a serious attempt to add another to the list of well-recognised periodicals in which research work may find the light. The fifteen original pieces of work published are very much more than merely students' contributions, and the names of Profs. Caven, Wilson, Andrew, Kerr, Mellanby and Ellis are all found among the contributors to this single number; this is in addition to other work they may have published elsewhere. The general standard of papers is undoubtedly high. As an indication of the ground covered it is sufficient to enumerate the individual contributions: The magnetic properties of permalloy; the measurement of rapidly fluctuating temperatures; the production of hydrogen by steam in a hot boiler tube; the presence of air in pure and alkaline water; the pseudo-alums; additions to our knowledge of azoxy compounds; reactions of semicarbazides; some acyl derivatives of hydrazine; the separation of the components of petroleum; the crystalline structure of metals; specific volume determinations of carbon and chromium steels; the evaporative condenser (a paper of 38 pages); a note on blade stresses in nozzle controlled turbines; compression losses in divergent jets, and an investigation into the cause of the blackening of the sand in parts of the Clyde estuary. The issue, like the previous one, is excellently printed and illustrated. Every one interested in the progress of science, especially perhaps in its more practical applications, will join in wishing this, the latest among the scientific journals devoted to the publication of the results of original work, a very long and prosperous career.

THE Barclay Memorial Medal for 1925 of the Asiatic Society of Bengal has been awarded to Lieut.-Col. J. Stephenson, lecturer in natural history in the University of Edinburgh, in recognition of his work as a biologist and as the founder of the School of Zoology in Lahore.

THE ninth Silvanus Thompson memorial lecture of the Röntgen Society will be given on Tuesday, March 30, in the Barnes Hall of the Royal Society of Medicine, by Sir John Thomson-Walker, who will take as his subject "Radiology in Urinary Surgery."

DURING the last five or six years there has been a slight renewal of activity in the well-known earthquake centre at Comrie in Perthshire, and a shock was recorded on February 21 at 4.24 A.M. The tremor was evidently slight, lasted only a few seconds, and was accompanied by the usual sound resembling muffled thunder or an explosion.

AT the annual meeting of the Geological Society of London, on Friday, February 19, the following officers were elected: *President*, Dr. F. A. Bather; *Vice-Presidents*, Dr. J. W. Evans, Sir Thomas Holland, Mr. H. W. Monckton, Sir Arthur Smith Woodward; *Secretaries*, Mr. W. Campbell Smith, Dr. J. A. Douglas; *Foreign Secretary*, Prof. J. E. Marr; *Treasurer*, Mr. R. S. Herries.

THE second Italian National Congress of Pure and Applied Chemistry, to be held in Palermo on May 22-June 2 next, will be made the occasion of the celebration of the centenary of the birth of Stanislao Cannizzaro, which occurred in Palermo on July 13, 1826. On May 24, the body of the great Italian chemist is to be conveyed to the Pantheon, and this ceremony will be followed by the inauguration of the monument erected to his memory.

DURING the month of March, Miss Elizabeth Keith will exhibit at the Royal Anthropological Institute a number of her water-colour sketches of natives of Japan, Korea, China, and the Philippines and of the Ainu. Although in some cases, especially as regards the natives of the Philippines, it is permissible to doubt the purity of some of her types, Miss Keith has on the whole been happy in her choice of subjects, the Ainu, not unnaturally, being the most interesting and possibly the most picturesque. Admission to the exhibition is free.

IT is interesting to note that Sir John Marshall, in his further account of explorations on prehistoric sites in the Punjab and Sind in the *Times* of Feb. 26, records the occurrence of a similar chalcolithic culture at Nal, some 250 miles south of Quetta, in the Jhalawar country of Baluchistan. Polychrome pottery, analogous to that found at Mohenjo-Daro and Harappa, as well as copper implements, grindstones, and other small objects, have been found in a burial-ground in which the dead are buried in sun-dried brick graves or directly in the ground. This marks a distinction from the Mohenjo-Daro and Harappa sites, where at this early period the dead were cremated. The complete skeletons found at Mohenjo-Daro, it is said, are probably to be attributed to the beginning of the Christian era.

WE learn from a recent issue of the *Weekly News Bulletin* of the U.S.S.R. Society of Cultural Relations with Foreign Countries, that at the first meeting of the Academy of Sciences at Leningrad in 1926 a number of new honorary members were elected. The list includes: Prof. A. Svante Arrhenius (Stockholm); Prof. H. A. Lorentz (Leyden); Prof. Max Planck (Berlin); and Prof. Vito Volterro (Rome) The list of correspondents elected includes: Prof A. Sommerfeld (Munich); Prof. Emil Abderhalden (Halle); Prof. G. Urbain (Paris).

AN Easter tour to the Valley of the Dordogne, lasting from April 1 until April 15, has been arranged by Prof. Patrick Geddes. The headquarters of the party will be Les Eyzies and, afterwards, at Domme. From Les Eyzies visits will be paid to all the more important caves and sites of prehistoric discovery in the neighbourhood. By permission of the Ministry of Public Instruction, M. Peyrony, Conservateur du Musee Archéologique, the well-known French archæologist will act as guide and will also demonstrate the important collections in his museum. From Domme a series of daily excursions devoted to the regional survey of the geography and history of the most

attractive part of the Dordogne Valley will be conducted by M. Paul Reclus, formerly professor of geography at Brussels. Full particulars of the tour may be obtained from Miss Jowett, 152 Abbey House, Victoria Street, London, S.W.1.

APPLICATIONS are invited for the following appointments, on or before the date mentioned:—A professor of mechanical and electrical engineering at the Artillery College, Woolwich—The Assistant Commandant, Artillery College, Red Barracks, Woolwich, S.E.18. A research mycologist in the Department of Agricultural and Horticultural Research of the University of Bristol, Long Ashton—The Registrar of the University (March 22).

Our Astronomical Column.

A LARGE SUNSPOT.—A spot now on the sun's disc has been seen with the naked eye, thus making the fifth of its kind to be recorded since the beginning of the year. The spot is of recent origin, as no trace of it was seen on February 9, when its position would have been near to the receding west limb of the sun. Its shape is somewhat irregular, and its size is about half that of the great spot of last January. Further particulars are as follows:

No.	Date on Disc.	Central Meridian Passage.	Latitude.	Area.
5	Feb. 25-(Mar. 10)	March 3·6	27° S.	1/600

(Area expresses the proportion covered of the sun's hemisphere.)

RECURRENCE OF MAGNETIC 'STORM.'—On February 23, a considerable magnetic disturbance commenced at 16½ hr., reached its greatest intensity between 13 hr. and 19 hr. on February 24, and died away by about 5 hr. on the following morning. The greatest range shown by the declination magnet throughout the disturbance was a little more than 1°. Bright moonlight probably prevented the observation of aurora, which would be a likely phenomenon on the nights of February 23 and 24. The interval between the commencement of this magnetic storm and the preceding one on January 26 is 28·0 days. The sunspot disturbance, with which it is presumably related, is in solar latitude 22° (see NATURE, Feb. 6, p. 208). The time taken for a spot at this latitude to make one complete rotation relative to the earth is, on the average, 27·6 days.

As evidence of the existence of a relationship between sunspots and magnetic disturbances, Mr. E. W. Maunder showed from the Greenwich magnetic and sunspot data that the latter frequently recur at intervals of about 27 days, corresponding to the average period of the sun's rotation relative to the earth as given by sunspots (*Monthly Notices R.A.S.* 65, 2-34, 1904). The last two 'storms' provide an example of such a recurrence.

THE SPECTRUM OF THE RECENT AURORA.—In a letter received from Prof. L. Vegard, Universitets Fysiske Institut, Oslo, an account is given of the aurora of January 26, which appeared at the time of the magnetic storm noted in NATURE for February 6. Prof. Vegard writes that the striking feature of this aurora was its intense red colour, which spectroscopic analysis showed was mainly due to one single sharp line in the red, about $\lambda = 6323$ Å.U. Spectrograms taken at Oslo and Tromso also showed the characteristic auroral spectrum consisting of the 'auroral line,' 5577 Å.U., and the negative bands of nitrogen. The prominent red line has been recorded on two previous occasions at Tromso in 1923–24, and its mean wave-length deduced from the three observations is 6322·4 Å. Prof. Vegard states that the line, which is of the same character as the 'auroral line,' cannot be due either to hydrogen, helium, oxygen, or the ordinary spectrum of gaseous nitrogen. When, however, solid nitrogen is bombarded with cathode rays, two pairs of narrow bands (N_1N_2) and (N_3N_4) appear in the red and green parts of the spectrum. The relative intensities and character of these bands vary considerably with the magnitude of the nitrogen particles, the properties of the electric discharge, and when an inert gas, such as neon, is introduced (see also NATURE, May 1924, p. 716, for Prof. Vegard's account of his investigations of the auroral spectrum). From these laboratory experiments, Prof. Vegard thinks that this red line, 6323, is to be regarded as the limiting aspect of the band N_3, just as he considers the auroral line, 5577, to be the limiting aspect of N_1. Moreover, the study both of the luminescence spectra of solidified gases and the oscillation band series suggests to him that the changes of colour so frequently observed in auroræ may result from a transformation of the spectrum due to oscillations.

Another letter, received from the Chief of the Polish Maritime Station at Dantzig, gives observations of the same aurora seen at that place and at the Hel peninsula. The colour is described as varying from brick-red to dark carmine and its brightness as being very variable.

Attention may be directed to two other recent contributions to the problem of the auroral spectrum appearing in *Proc. R.S.*, Series A. vol. 106, p. 117 and p. 138, by Lord Rayleigh, and Prof. McLennan and Dr. Shrum, respectively.

COMETS.—Ensor's comet is now well placed for observation in the morning; it is moving north so rapidly that it will soon be observable throughout the night. The following ephemeris is for 6h A.M.:

	R.A.	N. Decl.	log r.	log Δ.
Mar. 4.	21h 2m 48s	21° 4′	9·8124	9·9643
8.	21 13 23	30 33	9·8661	9·9481
12.	21 28 14	40 13	9·9134	9·9419
16.	21 48 56	49 36	9·9552	9·9466
20.	22 17 48	58 12	9·9928	9·9616

Its naked eye visibility during this period is doubtful, but it will probably be an easy telescopic object. On the morning of March 8 it will be ½° east of Zeta Cygni, on March 14 1½° east of Rho Cygni. It then passes through Cepheus and the northern part of Cassiopeia.

Blathwayt's comet has grown fainter, but should still be within reach of moderate apertures. The following ephemeris is for 0h:

	R.A.	N. Decl.	log	log Δ.
Mar. 4.	5h 53m 14s	42° 47′	0·2055	0·0123
8.	5 41 24	43 50	0·2140	0·0620
12.	5 32 35	44 30	0·2225	0·1061
16.	5 26 1	45 3	0·2312	0·1462

The comet is in Auriga, moving nearly parallel to the line joining Beta to Alpha.

Tuttle's comet may be visible with moderate apertures when the moon is absent. The ephemeris for 0h is:

	R.A.	N. Decl.	log r.	log Δ.
Mar. 3.	1h 21·7m	30° 43′	0·1222	0·2249
11.	1 52·1	28 25	0·0991	0·2226
19.	2 22·2	25 49	0·0769	0·2212

Prof. A. Dubiago gives the following hyperbolic elements for Van Biesbroeck's comet, based on observations on Nov. 19, Dec. 4 and 21, Jan. 12.

T	1925 Oct. 3·00066 U.T.	
ω	106° 25′ 13·0″	1925·0
Ω	334 34 29·9	1925·0
i	49 10 38·4	1925·0
log q	0·19500,	
e	1·002442	