

## News and Views.

THE King's birthday honours list, publication of which was delayed on account of the General Strike, was issued on July 3. It includes the following distinctions conferred in recognition of scientific services or association with scientific work:—*Privy Councillor*: Sir Halford Mackinder—chairman of the Imperial Shipping and Imperial Economic Committees and first Principal of University College, Reading, now the University of Reading. *K.B.E.*: Sir Frank W. Dyson, Astronomer Royal; Prof. W. Somerville, late Sibthorpean professor of rural economy, University of Oxford. *D.B.E.*: Dr. Mary A. D. Scharlieb, consulting gynaecologist, Royal Free Hospital. *Knights*: Colonel H. G. Lyons, Director and Secretary of the Science Museum; Dr. Brajendra Nath Seal, Vice-Chancellor of the University of Mysore. *C.B. (Civil Division)*: Dr. G. C. Simpson, Director of the Meteorological Office; Mr. F. E. Smith, Director of Scientific Research, Admiralty. *C.M.G.*: Dr. A. W. Hill, Director, Royal Botanic Gardens, Kew; Mr. J. O. Shircore, Director of Medical and Sanitary Services, Tanganyika Territory. *C.B.E.*: Mr. A. Abbott, Chief Inspector of Technical and Continuation Schools, Board of Education. *O.B.E.*: Mr. E. W. Wallis, secretary of the Royal Sanitary Institute. *I.S.O.*: Mr. D. d'E. de Charmoy, Assistant Director and Entomologist, Agricultural Department, Mauritius; Mr. A. R. Wright, assistant comptroller, Patent Office.

THE Commonwealth House of Representatives has passed two Bills dealing with the reconstitution of the Institute of Science and Industry. The Bills received the hearty approval of members on all sides of the House, the sole complaint from the Opposition (Labour) being that their introduction had been unduly delayed. The first Bill outlines the scheme of reorganisation, which abolishes the former directorship and provides for a central council composed of three members appointed by the Governor-General (who will constitute an executive committee and exercise all the powers of the council between meetings), the chairman of the six State advisory committees, and such other members as the council may desire to co-opt on account of special scientific knowledge. A sum of 250,000*l.* is appropriated for the purposes of the council, and this will ensure that for the first few years its programme will not be subject to yearly modification to accord with the exigencies of the Treasury. The name "Institute of Science and Industry" has been discarded, and the body will in future be known as the "Council for Scientific and Industrial Research," which is more in accord with British and Canadian practice. The second Bill establishes a Trust Fund of 100,000*l.*, the income from which is to provide assistance (a) to persons engaged in scientific research, and (b) in the training of students in scientific research. Considerable progress has already been made by the executive committee in the preparation of proposals for the first session of the new council, which will commence on June 22. It is hoped to establish very close relations with the

British Department for Scientific and Industrial Research, and to that end the chairman of the executive committee (Mr. G. A. Julius) will visit Britain towards the end of this year.

THE Mellon Institute of Industrial Research is a good example of what can be done by the co-operation of enlightened manufacturers and by able administration. Its system of industrial fellowship was initiated in 1906, and although this remained in the experimental stage for nine years, since 1915 it has been in a strong position both financially and administratively. Dr. E. R. Weidlein, the director, states in his recent report that fifty-four of these fellowships, employing ninety-four research chemists and engineers, were held in the Institute during the year ended February 28, 1926, and that more than 125,000*l.* was contributed for their maintenance by the fellowship donors. The total sum of about 775,000*l.* has been received from companies and associations during the last fifteen years. In a separate document the Institute issues a list of the contributions made to scientific literature and of patents taken out during 1925. This list is of formidable length, but what strikes one most is the exceedingly practical nature of the majority of the investigations pursued and their great diversity. Problems relating to coal, coke, and petroleum are, perhaps, most conspicuous, but there is also a goodly array of contributions relating to metallurgy, refractories, laundering, and foodstuffs.

DR. WEIDLEIN has also written an essay entitled "The Administration of Industrial Research" (*Industrial and Engineering Chemistry*, January 1926), in which he discusses the various factors that make for success in the conduct of a research organisation, such as the selection of research workers, organisation, co-ordination of effort, and the virtues of team work. The principles involved in the management of a research laboratory are set out on the lines of Taylor's "Principles of Scientific Management," and "the functions of laboratory organisation" are analysed in detail. The essay may be recommended for perusal by directors of research; it will interest them, although they may not find it entirely convincing. Many of the 'principles' and 'functions' enumerated appear to be obvious, not to say platitudinous, and one is left with the impression that an organisation in which every entity and activity, physical, moral and intellectual, is dissected, described, catalogued, charted and labelled, is scarcely the place where the free spirit of scientific adventure can dwell with patience or good will.

DR. WEIDLEIN is undoubtedly on strong ground when he pleads for a proper business foundation for every institution devoted to industrial research, but we foresee trouble if, as he advises, the activities of a research department are "adjusted constantly to suit the needs of the concern," or if the research worker becomes too intent on "keeping in line with psychological laws." Some of the author's *obiter dicta* are also open to question. We can, for example, hear

Candide and the initiators of gas-warfare chuckle when they read: "If a scientist is productive in his investigations, his work must result for the good of humanity"; and we do not think that Schiller, who wrote that "talent is formed in quietude, character in the current of the world," would have agreed with the assertion that "The character of virtue is best seen in the life of a scientist devoted to the service of research."

ON Thursday last, July 1, unfortunately too late for insertion in our issue of July 3, we received the following telegram from Prof. W. H. Keesom, of the University of Leyden: "Helium solidified under a pressure of 150 atmospheres at the temperature of its boiling-point and under 28 atmospheres at  $1.5^{\circ}$  Abs. Solid helium forms transparent mass." This achievement thus rounds off the work of the late Prof. H. Kamerlingh Onnes, begun more than thirty years ago. By his extraordinary energy and organising ability Kamerlingh Onnes built up his cryogenic laboratory in Leyden, and in 1904 was able to obtain supplies of liquid air. By 1906 he was liquefying hydrogen on a large scale, and in 1908 he succeeded in liquefying helium. This enabled him to obtain a temperature of  $4.22^{\circ}$  Abs., and by reducing the pressure the temperature was further reduced to  $0.9^{\circ}$  Abs. Attempts were made with the pressure so low as 0.2 mm. to solidify helium but without success, and it has remained for Prof. Keesom, apparently using an increased pressure method, to complete the work which 'the master' left unfinished.

To all interested in navigation the problem of the issuing of suitable signals at danger spots in the ocean or near the coast is of the greatest interest. There are many spots where it is too expensive to provide a keeper to attend to the light and fog signals; where also, on account of the rocky bottom, strong tides, and ships' anchors, it is impracticable to maintain a submarine cable connexion. It is interesting to hear, therefore, that the Marconi Company has established an unattended fog-signal station on Rosneath Beacon on the Firth of Clyde. It was installed last January and its working has proved very satisfactory. The control is by radio waves, and we see no reason why the same method should not be applied to control other kinds of mechanical apparatus acting at a distance. Rosneath Patch is a sandbank in mid-channel at the mouth of the Clyde between Gourrock and the opposite Argyllshire coast. A reinforced concrete beacon marks the Patch. Automatic apparatus has now been installed which gives signals by exploding a mixture of air and acetylene gas. Once started, the 'guns' continue giving explosions until they are switched off or until the acetylene gas is exhausted. These guns are the only automatic signals at present in use, being cheap to install and maintain. At Rosneath Beacon they get their supply of acetylene gas from a carbide-to-water plant. A radio receiving apparatus is fitted and is synchronised with the transmitting set on Gourrock Pier,  $1\frac{1}{4}$  miles from the Beacon. When fog is observed, the transmitting apparatus is put into operation and the

radio impulses act on the receiving apparatus. The signals being periodic prevent atmospheric acting on the receiving set. When the fog clears, another set of periodic impulses having a different period is transmitted and stops the signals. The annoyance to the neighbourhood is thus reduced to a minimum. The essential features of the sending apparatus are a pendulum and mercury break, a spark coil and a quenched spark transmitter.

THE Cretan earthquake on June 26 has been followed by others in various parts of the world, on June 28 in Sumatra and Rhineland, on June 29 in southern California and at Salisbury in southern Rhodesia, and on June 30 by another in Sumatra. In a letter published in the *Times* of June 30, Prof. Turner places the epicentre of the Cretan earthquake in  $35^{\circ} 0' N. lat.$ ,  $24^{\circ} 0' E. long.$ , or just south of Crete, the same spot having been the seat of seven smaller earthquakes between 1913 and 1922. The damage at Candia and in some of the surrounding villages was considerable, including injury to many of the remains from Knossos collected in the Candia museum. A telegram from Rome, dated June 28, states that more than two thousand houses have been destroyed by earthquake-shocks in several villages in the province of Foggia in southern Italy, but these shocks can scarcely be connected with the Cretan earthquake, even if they occurred on the same day. The earthquake in Rhineland at 11 P.M. on June 28 was evidently felt over a wide area, at Cologne, Freiburg and other places in Germany, at Basel and Bern in Switzerland, and at Strasbourg, Epinal and Belfort in France. Though few details are as yet known of the Sumatra earthquake of June 28, it was clearly one of great strength, for many villages have been destroyed, and the railway and main roads near Padang have been much damaged. One of the most interesting of the recent earthquakes was that in southern California on June 29. At Santa Barbara it was strong enough to cause some very slight damage. It was probably an after-shock of the destructive earthquake in the same district on June 29, 1925 (*NATURE*, 1925, July 11, p. 56, and August 29, p. 324).

THE Royal Air Force display, such as was seen at Hendon on July 3, is more spectacular than the old *Kaisermanöver* and more exacting than Fleet exercises, and sums up from year to year the visible progress in design, operation, and discipline. A hundred and thirty aeroplanes in the air during the day, with half-a-dozen out of action for minor causes, is a remarkable achievement of design and maintenance. Types ranged from the 700 h.p. single-seat fighter, with corresponding speed and climb, to the eight-ton twin-engine bomber (900 h.p.), and the three-engine 20-seat commercial aeroplane (1000 h.p.). 'Aerobatics' by individual pilots, squadron drill with nine aeroplanes, orders being given by radio telephony, and group drill with six squadrons, stirred the layman to loud applause and the expert to deep appreciation. The Hill tailless aeroplane and the first British-built Cierva autogyro might be considered as outward signs of the work of the Director of Research, which

also lies less directly and visibly behind all manner of detail advances in standard equipment. From this pageant and from day to day work we may judge soberly that the British Air Service is holding its own in a keenly competitive world.

SIR FLINDERS PETRIE, in a letter to the *Times* of July 2, reports on the work of the British School of Archaeology in Egypt during the past season. The investigations of Mr. R. S. Sandford on the history of the Nile during the pluvial period, carried out in the region between Thebes and Sohag, have linked the gravels carried down from the eastern granite mountains with palæolithic man. Starting from a gravel terrace at 150 ft., the 100-ft. terrace was laid down during the Chellean and early Acheulean period, the 50-ft. terrace in Acheulean times, while the latest gravel terrace at 10 ft. above river level contains Mousterian implements. Miss Thompson, continuing her work in the Fayum, has found, in addition to crude pottery and a large number of flint arrow heads and knives, a new feature in the form of granaries situated at a higher level. These are about 3 ft. across and sunk in the gravel. They are lined with coiled straw rope. The grain was mostly emmer and barley, but also included true wheat. Investigation of the tumuli on the island of Bahrein in the Persian Gulf by Mr. Mackay produced scanty results; but a bronze spearhead indicates a date of 1200-1500 B.C., which is supported by the character of the pottery. The forms of the pottery include Mesopotamian types, but the greater part is entirely independent. The work on the back of an ivory statuette is like nothing known elsewhere.

THE weather for the second quarter of the year, April-June, was generally wet, cool, and dull in the British Isles. Warm and bright weather at this season is so essential for vegetation that a few facts gathered from the Greenwich weather observations, which represent the south-east of England, may help to show the absence of fair conditions. The rainfall was in excess of the average in each month, yielding an excess of 3.66 in. for the three months ending June. April was mild, but the latter part of the month was colder than the early part; April 25 and 26 had maximum day temperatures below 50°, and for seven days from April 20-26 the maximum day temperature was below 54°, the normal maximum for the month being 57°. May was unusually cold for the first 20 days, and during this period the maximum temperature was only above 60° on 4 days; the highest day temperature was 63°. Warmer weather set in after the third week, which brought the mean temperature for the month to 52°.5, which is only 1°.5 below the normal. In June only 8 days at Greenwich were above the average, and 22 days were below the average temperature. The absence of bright sunshine was evidently the cause of the continued cool weather. April had sunshine for 101 hours, which is 3.37 hours a day, or 1.65 hours a day less than the normal; there were only 11 days with more than 5 hours' sunshine, and in all, only 6.4 hours' sunshine in the last 11 days of April.

May had 149 hours' sunshine, which is 4.81 hours a day, or 1.66 hours a day less than the normal. In June the total sunshine was 180 hours, or 5.99 hours a day, which is 0.71 hours a day less than the normal.

THE evolution controversy in the United States still sends echoes across the Atlantic. The *Forum*, an American periodical for an intelligent but non-specialising public, has in its June issue a reply by Prof. H. Fairfield Osborn to an article attacking the "Fancies of the Evolutionists," by John Roach Straton, which appeared in February last. Prof. Osborn sets out to demonstrate "certain irrefutable facts" constituting the evidence for the geologic antiquity and creative evolution of man. The article is both a summary of present knowledge relating to the origin, evolution, and distribution of mankind, and a history of discovery in this province of research, necessarily in both cases brief and in outline only. The accusation of a conspiracy among evolutionists is met by a statement of the fact that in the case of crucial discoveries, such as that of the Trinil skull or Neanderthal man, the interpretation which assigned them the place in the human evolutionary series which they now hold was not immediately and universally accepted by scientific men. Further, Prof. Osborn points out that the experience of a hundred and fifty years, or on some matters of centuries, has brought the methods of scientific research in this field to such a point that the evidence can be interpreted with certainty and precision. The data are not "blurred or indecipherable documents like the palimpsests of many sacred writings, but are absolutely unchallengeable records as clear as daylight to the man who has learned how to read them"—a statement to which Prof. Osborn's own article may perhaps suggest some slight reservation. The existence of a fact is indisputable, but what of its interpretation? Prof. Osborn himself did not at one time accept the human attribution of the Pilt-down jaw. However, his position is sound, and the main argument is not to be shaken by a minor inconsistency.

MR. HERBERT KRIEGER, of the United States Museum, while on his way to south-eastern Alaska, where he will carry on the work of restoration of the totem poles of that area, has made a survey of the pit-house sites of the old Yakima and Klickitat Indians of the Columbia River region of the State of Washington. This area would appear to have supported one of the densest populations in early America. Mr. Krieger reports the existence of a chain of house-sites stretching for 500 miles along the banks of the Columbia from the Dalles in Oregon to the Canadian border. The river was undoubtedly one of the great trading centres and routes of travel. Eight skeletons and forty-five artefacts were obtained by excavation in a burial ground. The artefacts showed no sign of Hudson Bay Company influence. The skulls exhibited cradle-board deformation similar to that of neighbouring tribes of to-day. Pictographs cut in the basalt cliffs of the river bank showed shields, bows, arrows, goats, big-horn sheep, and

designs suggestive of the rising sun, lightning, and so on. It is perhaps worth mention that Mr. Harlan I. Smith has recently recorded pictographs, which these would appear to resemble, found in a similar position in British Columbia.

THE *Times* of June 29 contains an interesting account of the recent Hokkaido eruption written by its Tokyo correspondent. Like some other Japanese volcanoes, Tokachi has two peaks. One of them has a fairly well-defined crater with its north-east wall denuded or blown away. The other, known as Iwo-dake or sulphur mountain, had a small crater occupied by a lake. On May 7 the mountain, supposed to be extinct, showed some signs of activity: slight rumblings were heard and a small column of steam was emitted. On May 23 the rumblings, which had continued, became more pronounced, and on the following day the crater of Iwo-dake was breached by the rising lava-column, a large portion of the crater-wall fell down the mountain-side, and the water of the lake was released. The resulting destruction and loss of life were caused chiefly by the avalanche of mud, which swept over an area ten miles long with a maximum width of four miles. Its force is shown by the fact that at Kami Furano a mile and a half of the railway line was torn away and twisted like wire. When the water subsided, an area of ten square miles of highly cultivated rice land was left covered by a layer of sandy mud with an average thickness of 18 inches.

WE must all deplore the disappearance of examples of English architecture dating from the Middle Ages and later which is rapidly taking place in our villages owing to economic and social development. The awakening of public interest in this matter is tardy and spreads but slowly among those in whose hands control is vested. Sir Frank Baines's lecture on "The Preservation of Ancient Cottages," delivered before the Royal Society of Arts on May 6 last and now published in that Society's journal, is opportune, and should be made widely known. As he points out, the ancient workman's cottage is not merely a thing of considerable beauty; it is almost the sole piece of tangible evidence we possess of the social and economic position and of the material conditions of life among the peasant population from the Middle Ages up to the seventeenth and early eighteenth centuries. The lecture, as published, is illustrated by photographs of a large number of examples of this class of domestic architecture. Of these, the number which have now disappeared, among them some of the most beautiful and characteristic, is in itself an eloquent argument for the urgent necessity of early action.

DR. F. A. BATHER, president of the Geological Society, will unveil a mural tablet to William Smith on July 10 at 29 Pulteney Street, Bath. After the unveiling ceremony, there will be a luncheon at the Guildhall, to be followed, in the afternoon, by an address by Dr. Bather at the Royal Literary Institution on William Smith and his work.

SIR ERNEST RUTHERFORD (Cambridge), Sir Frederick Hopkins (Cambridge), Prof. H. A. Lorentz

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(Haarlem), and Dr. H. L. le Chatelier (Paris), were elected foreign members of the Académie Polonaise des Sciences, Cracow, last year. In conformity with the statutes of the Academy, such elections have to receive the sanction of the president of the Republic of Poland. We are glad to know that this has now been given, and that the elections can be announced.

SIR JAGADIS C. BOSE, founder and director of the Bose Research Institute, Calcutta, who is at present in England lecturing and giving experimental demonstrations on plant stimuli and responses, has been elected president of the Indian Science Congress to be held in Lahore in January next.

ROYALTY has always been credited with the parentage of anecdote, but we hope that this one is genuine. A charming young American, having met the Prince of Wales at a reception, asked him to tell her how he ought to be addressed, as, for example, on an envelope. The Prince—says the story—took her programme and wrote upon it: "To His Royal Highness, The Prince of Wales, K.G., F.R.S."

UNDER the title of "Illumination Research," the Department of Scientific and Industrial Research has issued a pamphlet, which will be supplied gratis on request, in which the work of the Illuminating Research Committee appointed in July 1923 is described. At the present time the following problems are under investigation: The transmission of light by window glass, the effect of the colour of the walls of a room on the light in the room, the use of prismatic glass in the windows, the lighting of picture galleries, the effects of enamel reflectors as used in works, the effect of glare on the eye and the influence of the amount of light on the ease and accuracy with which fine work can be done. The pamphlet does not deal with finance, but there are few who would care to challenge the expenditure of a few thousand pounds in this way in order to determine how best to get value for the millions of pounds spent annually in Great Britain on illumination.

WE have received the "Classified List of Publications of the Carnegie Institution of Washington" dated December 1925. This, with its detailed abstracts, is itself a publication of some value; but it does not appear to indicate clearly those works that have been issued since the distribution of the previous list.

WE have recently received volume 3, for 1924, of the *Publications biologiques de l'École des hautes Études vétérinaires*, Brno. Ten contributions are contained therein; in the index they are paged consecutively, but in the text, pagination commences afresh with each paper, a much less convenient arrangement. Botanical problems of development are dealt with, by Starošík, on the bud of *Ficaria verna* and the influence of external agents on its growth, by Pavlů on the histology of the beet, and by Václavík on correlation between cotyledon and axillary bud in the pea. The other seven papers are zoological or physiological, again with emphasis on the experimental study of development.

APPLICATIONS are invited for the following appointments, on or before the dates mentioned :—A lecturer in experimental physiology in the University of Manchester—The Internal Registrar (July 14). A junior lecturer in mechanical and electrical engineering and a junior lecturer in geography at University College, Nottingham—The Registrar (July 17). An organiser of mining instruction for Derbyshire—Director of Education, County Education Office, S. Mary's Gate, Derby (July 17). A research chemist for work on plasters and other materials used for impressions and models in dentistry—Secretary, Department of Scientific and Industrial Research, 16 Old Queen Street, Westminster, S.W.1 (July 21). An assistant at the Commonwealth of Australia Observatory at Mount Stromlo—The High Commissioner for Australia, Australia House, Strand, W.C.2 (July 22). A temporary assistant chemist at the Naval Ordnance Inspection Depôt, Holton Heath—Secretary of the Admiralty (C.E. Branch), Admiralty, Whitehall, S.W.1 (July 24). An assistant lecturer in pure mathematics at the University College of Wales, Aberystwyth—The Secretary (July 28). Temporary assistant chemists in the Government Laboratory—The Government Chemist, Clement's Inn Passage, Strand, W.C.2 (July 31). An additional zoologist for the

*Discovery Expedition*—The Secretary, *Discovery* Committee, Colonial Office, Downing Street, S.W.1 (July 31). A junior technical officer for the wireless experimental department of the Royal Aircraft Establishment—Superintendent, R.A.E., South Farnborough, Hants (July 31, quoting A.79). A botanist for the agricultural department of the Government of Nigeria—Private Secretary (Appointments), Colonial Office, 38 Old Queen Street, Westminster, S.W.1 (August 15). A director of the Veterinary Laboratory of the Ministry of Agriculture and Fisheries at New Haw, Weybridge—The Secretary, Ministry of Agriculture and Fisheries, 10 Whitehall Place, S.W.1 (November 1). A director of research under the Research Association of British Paint, Colour and Varnish Manufacturers—Mr. J. B. Graham, 8 St. Martin's Place, W.C.2. A man with teaching experience in physics, chemistry and mechanics—Cordwainers' Technical College, St. John's Lane, E.C.1. An assistant at the Darlington Technical College, chiefly for geometrical and engineering drawing, and either engineering science or mathematics—Chief Education Officer, Education Office, Darlington. An advisory agricultural economist at the Midland Agricultural and Dairy College, Sutton Bonington, Loughborough—The Principal.

**Our Astronomical Column.**

LARGE SUNSPOTS.—The naked-eye sunspot recently noted in these columns was followed shortly afterwards by the appearance of another which was seen as a naked-eye object from June 26 until July 1. In a small telescope, the spot appeared elongated with a double umbra; there were several small companions near it and others in a cluster following at some distance. Details of position, etc., are given below in the usual tabular form. This latest spot brings the total number of naked-eye spots to eight for the first six months of 1926, as compared with eight for the whole of the preceding year.

No.	Date on Disc.	Central Meridian Passage.	Latitude.	Longitude.	Area.
8	June 23–July 5	June 29.2	21° N.	140°	1/1250

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

PONS-WINNECKE COMET AND METEORS.—MR. W. F. Denning writes: "Announcements emanating from Russia have been published to the effect that a meteoric shower might occur between June 24 and July 1. The fact that the parent cause, Pons-Winnecke's comet, would be situated at a distant point of its orbit, which it occupies twelve months before perihelion, robbed the prediction of any weight that it might otherwise possess. It is true that in 1916 there was a meteoric shower ten months after the comet had passed its perihelion, but there were great doubts as to whether the cometary materials were abundant at a spot so remote in front of it. The result of observation was anticipated, for though June 24-30 proved fairly clear, few meteors could be seen in the brilliantly moon-lit skies of the period.

Meteor observers will anticipate a shower next year with more confidence and with conditions which appear to be favourable. Even in 1928 there may be many meteors seen, judging from the experiences of 1916, which showed that they were distributed far behind the comets. Probably also the stream is spreading out with time, and that even if the ellipse is not at present continuous it will ultimately assume that form.

The brightest meteor lately seen was on June 27, 23<sup>h</sup> 20<sup>m</sup> G.M.T. The meteor was moderately slow and

about equal to Jupiter: duration, 2 sec. The probable radiant was in Sagitta and far from that of the Pons-Winnecke comet. The meteor was also observed by several other persons in Bristol, and they mention it as giving a distinct flash like summer lightning."

NOVÆ.—The *Observatory* for June contains a detailed summary of the paper read by Dr. J. Lunt on Nova Pictoris at the May meeting of the Royal Astronomical Society. The radial velocity indicated by the dark lines gradually increased, being (in km./sec.) -71 in 1925 May, -81 in early June, -92 in late June, -320 July to August, -395 in mid-September, -411 in January, -436 in March. Bands resembling those in  $\eta$  Argus began to appear in October, and gradually became more evident. The nebular bands customary in the later stages of novæ did not appear until March. Dr. Lunt endorses the words of Prof. Hartmann's telegram to *Astr. Nachr.*, "The star swells up and bursts." He considers that the star was discovered at the simmering preparatory stage, and that the explosive ebullition came later. The cause is conjectured to be a release of atomic energy within the star.

F. Pingsdorf of Parana (Argentina) gives a series of measures of brightness of the nova. The following summary gives the magnitude at the beginning of each month: December 4.2<sup>m</sup>, January 4.3<sup>m</sup>, February 4.6<sup>m</sup>, March 5.1<sup>m</sup>, April 5.4<sup>m</sup>, May 5.5<sup>m</sup>. The star thus remained an easy naked-eye object for a year, which is longer than most recent novæ, though less than Tycho's famous star.

*Beobacht. Zirk.* No. 23 contains a note by Prof. M. Wolf on his faint nova in the spiral nebula N.G.C. 4303 (Messier 61). He obtained two photographs on June 1 that show a marked diminution of light since discovery on May 12. Its magnitude was then about 14<sup>m</sup>, and 15<sup>m</sup> on June 1; on the latter date it was 0.2<sup>m</sup> fainter than the star south preceding the nucleus at a distance of 1.3'. This rapid decline makes the American estimate of the star's total light as being 10 million times that of the sun appear somewhat doubtful.