in their manifestations. They are quite capable of giving surprises. More meteors may now precede the cometary nucleus than the number there a generation ago, though the period is a comparatively short one, and comprises only one revolution of the swarm. There is one highly favouring circumstance this year, and that is the absence of moonlight. If the atmosphere is also free from cloud, the nights following the 14th and 15th will afford a splendid opportunity both for the visual observer and the photographic manipulator. I believe the night of the 14th will turn out the most productive, and especially the latter part of it forming the few hours before sunrise on the 15th.

Ordinary observers, while watching the meteors, will be usefully employed in determining, as accurately as possible, the time when the maximum in point of numbers is reached. The meteors should be counted at short intervals, and the horary rates of apparition during the night ascertained. The position of the radiant point is already well known; a mean of seventy values places it at R.A. 149° 28′, Dec. 22° 52′+, so that it is centrally within the curve of the "Sickle" of Leo, and close to the star α Leonis (Mag. 5·7) of Bode or Piazzi IX. 230.

It is especially to be hoped that attempts to obtain determinations of the radiant point by photography will be successful. The want of success in previous efforts has been very disappointing. Thus Mr. W. H. Pickering writes in *Popular Astronomy*, that on November 13, 1897, though he exposed eighty-one plates, only two meteor trails were secured. No doubt there are difficulties to be overcome; but as soon as the photographic method can be successfully utilised on a great meteoric shower, and a sufficient number of trails obtained to indicate a really good radiant, the visual method will have to be abandoned in its favour. It will be a long time hence, if ever, that the photographic plate will supersede the eye in ordinary meteoric observation; but in the case of a display such as the Leonids can furnish, the new method seems to promise well as regards the great accuracy of its records, though hitherto the latter have been exceedingly meagre.

W. F. DENNING.

MR. LATIMER CLARK, F.R.S.

ON Sunday, October 30, Mr. Latimer Clark, F.R.S., died very suddenly at his residence at Kensington, in his seventy-sixth year. His loss will be keenly felt by the various learned societies of which he was a member; especially by the Institution of Electrical Engineers, who claimed him as a founder and past-president. The name of Latimer Clark is familiar to all who during the past half-century have watched the various phases of progress in the science and practice of electrical engineering. Submarine cable engineers associate it with inventions that relate to every branch of their profession, from the process of sheathing the "core," to the last refinements of testing; and the constructors of land-lines still recognise the "Latimer Clark" double-bell insulator as a type universally accepted. His book, written in conjunction with the late Robert Sabine, on "Electrical Tables and Formulae," is to be found in every electrician's library, and in every cable-factory and telegraph testing-station in the world; his "approximate method" of fault-testing on submarine cables, by applying two successive potential differences, was an important step in the development of the modern empirical but nevertheless remarkably exact system of testing by two applications of different battery power; and his test of the electrical condition of "joints" in cable core is, under the name of "the accumulation method," still in daily use at cable works and on board ship. Another of his valuable contributions to telegraph progress is his study of the errors due to the inductive action of a galvanometer-needle upon its own coil when using shunts of different values, in a series of comparative "discharges." To this must be added his important modification of Poggendorff's method of comparing electro-motive forces, and the introduction, with this test, of the well-known potentiometer that bears his name. This instrument is perhaps associated in our minds rather with the laboratory than with the cable-testing room; and, moreover, it is here in the physical laboratory that we discover what is undoubtedly the best-known of Mr. Latimer Clark's inventions: the zinc-mercury standard cell. The vast amount of work that has been done, the modifications suggested, and the pages written in regard to this small apparatus, might well lead the uninitiated to suppose that it contains some potent *talia azman* to which electricians are for ever looking for revelation and mysteries. It happens to be merely the electricians' practical standard of potential-difference; but to those who care to study such things, it is still full of the mystery of the origin and meaning of contact electro-motive force.

The written and legendary history of the early days of electric telegraphs, over land and under sea, shows how closely Mr. Latimer Clark was associated with this work, both at home and abroad. Success did not always reward the efforts of the telegraph engineer, even in those times; for although commercial competition did not then exist to its present extent, there were all the difficulties of inexperience to be fought against. Success as regards the technical details of construction and working, came sooner than financial success. Estimating the cost of land-lines was beset with the almost insurmountable difficulties of transport and commissariat in countries savage and unexplored. Mr. Latimer Clark, in those pioneer days, was one upon whom the brunt of these reverses at first fell somewhat heavily. All honour to him and to his comrades; they fought for the greatest achievement in the world's history.

R. A.

THE TREASURERSHIP OF THE ROYAL SOCIETY.

IN the list of the proposed Council of the Royal Society for the ensuing year will be noticed a change in the Treasurership. Sir John Evans, K.C.B., retires, and the Council proposes to replace him by Mr. Kempe. Concerning this proposal the following letter has appeared in the *Times*:—

Sir,—The list of officers of the Royal Society proposed for election at the general meeting at the end of this month, published in the *Times* of Friday last, will not surprise any Fellow who is acquainted with the inner history of the society during the past few years, but in the change of *personnel* of the treasurership suggested it will astonish the great body of Fellows and may well arouse misgiving, if not anxiety, in the mind of the public—misgiving not to be lessened by the veiled *communiqué*, intended, apparently, to allay apprehension, which appeared in a certain section of the London press on Saturday.

The treasurer of the society is, like the two secretaries, a permanent officer, and these three officers have, therefore, a dominant influence in the affairs of the society, the treasurer having place by custom, at any rate next to the president.

Outside the society, too, in those responsible relationships with the public which the position of the society, as representative of science, engenders these permanent officials have a voice, consultative or executive, for the society. The choice, then, of treasurer is a matter of immediate moment to a wider circle than the Fellows of the society, and the nomination to the office by the present officers and council may therefore be fairly submitted for criticism in the *Times*. It is an open secret that an influential protest failed to arrest it.

Assuredly the roll of the society furnishes in abundance names of Fellows well tried in its work and veterans in the cause of science from which, as heretofore, a selection of treasurer could be made which would not only safeguard the interests of the society but also be a guarantee to the public that the best blood of the society was being devoted to the

services it justly claims. Why, then, should choice fall, as it has fallen, upon a comparatively junior Fellow who, whatever his scientific merit, is unknown as a leader in science? Is there no room at present for another planet in the official firmament? Whatever be the cause, a large number of Fellows view with dismay this departure from the wise tradition which required pre-eminence amongst the eminent in science as the passport to the position of officer in the Royal Society, and to many the nomination, if it be confirmed, will appear a damaging blow to the society's prestige.

It may be that notwithstanding the protest referred to those responsible for the nomination do not realise its full significance and the feeling it has stirred. If this be as strong as it appears there is provided by the constitution of the society at the general meeting on the 30th an opportunity for its expression.

I am, &c., F.R.S.

It may be remarked that on looking back into the history of the Society, we find the last four Treasurers to have been—

General Sabine	1850
Prof. W. A. Miller	1861
Dr. Spottiswoode	1870
Sir John Evans	1878

NOTES.

THE Royal Society's medals have this year been adjudicated as follows:—Copley Medal, Sir William Huggins, F.R.S.; Royal Medals, Rev. John Kerr, F.R.S., Mr. Walter Gardiner, F.R.S.; Rumford Medal, Prof. Oliver Lodge, F.R.S.; Davy Medal, Prof. Johannes Wislicenus, For. Mem. R.S.; Darwin Medal, Prof. Karl Pearson, F.R.S.

AT the anniversary meeting of the Royal Society on November 30, the following names will be recommended for election into the Council of the Society for the year 1899:—President: Lord Lister. Treasurer: Alfred Bray Kempe. Secretaries: Prof. Michael Foster, Prof. Arthur William Rücker. Foreign Secretary: Sir Edward Frankland, K.C.B. Other members of the Council: Prof. Thomas George Bonney, Captain Ettrick William Creak, R.N., Prof. Daniel John Cunningham, Prof. James Dewar, Prof. William Dobinson Halliburton, Prof. William Abbott Herdman, Victor A. H. Horsley, Joseph Larmor, Prof. Nevil Story Maskelyne, Sir Andrew Noble, K.C.B., Prof. Edward Bagnall Poulton, Dr. William James Russell, Prof. Arthur Schuster, Dr. Dukinfield Henry Scott, Dr. George Johnstone Stoney, Prof. Joseph John Thomson.

PROF. OSTWALD will give an address at University College, Gower Street, on Monday next, November 14, at 5 p.m., in the Chemical Theatre. Visitors are invited.

THE appointment of a Commission, consisting mainly of scientific experts, to report upon the plague in India, has already been referred to in these columns (vol. lviii. p. 626). We now learn that Dr. Thomas R. Fraser, F.R.S., Professor of Materia Medica and Clinical Medicine at Edinburgh University, has accepted the duty of president, and with him will be associated two other scientific experts, Dr. Wright, Professor of Pathology at the Army Medical School, Netley, and Dr. Rüffer, who has been for some time head of the Egyptian Sanitary Department at Cairo. Two officers of the Indian Civil Service, Mr. J. P. Hewett, and Mr. A. Cumine, both of whom have had much to do with recent plague affairs in India, have also been appointed to the Commission by the Government of India. The scope of the Commissioners' inquiries will include (1) the origin of the different outbreaks of plague; (2) the manner in which the disease is communicated; (3) the effects of certain prophylactic and curvative serums that have been tried or recommended for the disease. The members of the Commission will reach Bombay towards the end of the present month.

MR. CECIL B. CRAMPTON, of the University of Edinburgh, has been appointed to the position of assistant-keeper in the geological department of the Manchester Museum, Owens College, in succession to Mr. Herbert Bolton.

AT the anniversary meeting of the Mineralogical Society, to be held on Tuesday next, November 15, the election of officers and Council will take place. Prof. A. H. Church, F.R.S., has been nominated president, and Prof. G. D. Liveing, F.R.S., and Dr. Hugo Müller, F.R.S., vice-presidents.

WITH reference to Dr. Calmette's gift of 10,000*l.* to the Pasteur Institute at Lille, mentioned last week, the *British Medical Journal* states that, according to the terms of the deed of gift, the money is to be applied provisionally to the defraying of building expenses till the Municipal Council is in a position to vote the sums required for that purpose. The money is then to be employed in the purchase of material for new researches, or for the maintenance of young men of science who wish to make original researches in the laboratory. Dr. Calmette states that the money which he has thus generously bestowed, represents the profits accruing to him from the application of one of his discoveries in a large distillery at Seclin.

THE new session of the Royal Geographical Society will commence on Monday next, November 14, when addresses upon the subject of a British Antarctic expedition will be given by the President and others. At a meeting on November 28, Mr. C. W. Andrews will give an account of a year's work on Christmas Island. Other papers which are announced are the following:—"Exploration in the Caroline Islands," by F. W. Christian; "Lake Rukwa and Central Africa," by L. A. Wallace; "In Search of Mount Hooker and Mount Brown in the Canadian Rockies," by Dr. Norman Collie, F.R.S.; "Oceans and Continents," by Dr. J. W. Gregory; "Atlantic Highlands of the United States," by Prof. W. M. Davis; "Exploration in Sokotra," by Dr. H. O. Forbes.

DR. H. C. SORBY, F.R.S., who last year completed fifty years' connection with the Sheffield Literary and Philosophical Society, during which period he on several occasions filled the presidential chair, has just received a gratifying testimony of the esteem in which he is held locally as well as in the broad world of science. His admirers have had his portrait painted, and presented it to him with an illuminated address on Tuesday in last week. The portrait represents Dr. Sorby seated, and in his scarlet academic gown. The inscription at the foot of the frame is as follows:—"H. Clifton Sorby, LL.D., F.R.S. (1847–1897). This portrait was painted to celebrate Dr. Sorby's fifty years' connection with the Sheffield Literary and Philosophical Society, and to commemorate his world-wide scientific reputation. Funds for the purpose were provided by subscription amongst the proprietors and members of the Society. The artist was Mrs. M. L. Waller, and the presentation was made on behalf of the subscribers by the Lord Mayor of Sheffield on November 1, 1898."

THE first meeting of the new session of the Society of Arts will be held on Wednesday next, November 16, when an address will be delivered by Sir John Wolfe Barry, K.C.B., F.R.S., Chairman of the Council. Among the subjects of papers to be read before Christmas are: "Long Distance Transmission of Electric Power," by Prof. George Forbes, F.R.S.; "Photographic Developers and Development," by Mr. C. H. Bothamley. The papers for meetings after Christmas include: "Tuberculosis in Animals," by Mr. W. Hunting; "Canals and Inland Navigation in the United Kingdom," by Mr. L. F. Vernon-Harcourt; "Preservation of Timber," by Mr. S. B. Boulton; "Electric Traction and its Application to