

for transport purposes. Copies of the report may be obtained from the assistant secretary, British Fire Prevention Committee, 8 Waterloo Place, S.W.

WE have received a copy of an address delivered by Prof. C. Neuberg before the members of the German Zentralstelle für Balneologie, at Schwerin, in September last, entitled "Beziehungen des Lebens zum Licht" (Berlin, Allgemeine Medizinische Verlagsanstalt, pp. 63, price 1.50 marks). This address contains a valuable summary of recent work on the influence of light on living organisms, both from the chemical and biological aspects; in this field Prof. Neuberg has himself been an active worker, and some of the views he develops, regarding the influence of sunlight on health and disease, will be read with considerable interest.

AN illustrated article in *Engineering* for February 14 gives an account of the large Humphrey gas pumps installed at Chingford. There are five sets in all; the first two were started on January 18 and 19, and the third a week ago; the remaining sets will no doubt be at work before the official opening of the Chingford Reservoir by his Majesty the King on March 15 next. No accurate tests have been made as yet, but it is already sufficiently obvious that the guaranteed output is being very substantially exceeded. So carefully have the designs of the pumps been worked out that the only detail altered, as the result of seeing them at work, has been the substitution on certain valve-spindles of a solid nut instead of the split one originally provided. It has required considerable courage to accept a contract, under very stringent penalties, for pumps of this type, 7 ft. in diameter, and developing each between 200 and 300 h.p., on the basis of the experience gained of an experimental pump having an output equivalent to about 35 h.p. only. The results so far have entirely justified Mr. Humphrey's confidence in the capabilities of his remarkable contribution to the progress of mechanical engineering.

OUR ASTRONOMICAL COLUMN.

VARIATION OF LATITUDE: THE KIMURA TERM.—After applying all known corrections to the results obtained by the International Latitude Service, there remains a periodic term, known as the Kimura term, for which many explanations have been suggested. Dr. F. E. Ross now suggests that this term is not real, but is due to our lack of knowledge concerning the method of treating the results. He points out that any one of the suggested explanations is efficient, but argues that there is no need for them, for any periodic error in the system of mean declinations adopted would produce a so-called Kimura term. (*Astronomische Nachrichten*, No. 4630.)

WESTPHAL'S COMET.—Having investigated, by Pontécoulant's method, the perturbations of Westphal's comet (1852iv) for the period 1852–1914, Herr M. Viljev publishes a set of elements and a number of search-ephemerides in No. 4621 of the *Astronomische Nachrichten*. As the time of perihelion passage is still uncertain, he gives a number of

ephemerides, extending to March 12, which cover the period ± 240 days on either side of the computed epoch; the period of the comet is 61.5554 years, and it last passed perihelion on October 12, 1852.

THE OPACITY OF THE ATMOSPHERE IN 1912.—An article in No. 63 of the *Gazette astronomique* directs attention to the general opacity presented by the sky on cloudless nights during the late spring, the summer, and the autumn of 1912. M. de Roy found sixth-magnitude stars invisible to the naked eye, even on moonless nights and at the zenith, while other observers in many parts of the world found a lack of transparency, noticeable in observations of the sun and stars and in the unusual paleness of the blue of the sky. A suggested explanation of the phenomenon is that volcanic eruptions, more especially the one which took place in the Alaskan peninsula and Aleutian archipelago in June, polluted the atmosphere with fine dust, and so reduced its transparency.

A ZOOLOGICAL GARDEN FOR EDINBURGH.

THE council of the Zoological Society of Scotland, in pursuance of its project of raising the necessary funds for the purchase and laying out of the estate of Corstorphine Hill House as a zoological garden and park, as announced in NATURE of January 30, has issued a prospectus giving a brief account of the development of the modern zoological garden of the type the society wishes to establish, together with some suggestions regarding the benefits of such an institution to education, science, and art, and a full description of the site selected for the purpose. The prospectus is illustrated with scenes depicting enclosures and ranges in the New York Zoological Park and in Carl Hagenbeck's menagerie at Stellingen, which, with modifications, will serve as models for the kind of accommodation it is proposed to adopt for the animals in Edinburgh. Finally, there are many beautiful views of the grounds of the above-mentioned estate, which not only testify to the wisdom of the council in its choice of a situation, but suggest that, given the necessary funds for the purchase of stock and the upkeep of the collection, Scotland will be able to claim that it has at least the most picturesque zoological garden in Europe.

The scheme for the establishment of the garden was in some danger, at the time of our recent note on the subject, owing to the approaching expiry of the society's option for the purchase of this fine site, and the doubt whether a sufficiently large amount would be subscribed within the brief period remaining. This danger has been averted by the action of the Edinburgh Town Council, which has agreed to purchase the site, of which the society will have the entire use and control in return for an annual payment of 4 per cent. on the price, the society having the right to redeem the site from the corporation within fifteen years. The society is already assured, by gift and loan, of a large and representative collection of animals, and it is the intention of the council to have a number of them installed and the garden open to the public by the beginning of July, 1913, though operations involving much disturbance of the ground will be deferred until the winter months. Funds are urgently needed, both for the future development of the garden and for the redemption of the site, and donations should be intimated to the honorary treasurer, Mr. T. B. Whitson, C.A., 21 Rutland Street, Edinburgh.