allude to is the destruction of Dr. Sibthorpe's papers, and, I fear, with them, of all those of the older Botanists belonging to the Oxford Garden. This, I the rather notice, not only inasmuch as my so doing may serve as a warning, and because the papers in question were in a measure connected with the present volume, but as affording an opportunity of clearing the late Dr. Williams from blame in the transaction. Mr. Upcott had mentioned to me, that he had found upon a druggist's counter at Oxford, sundry letters written by Sibthorpe, Dillenius, &c. and that the druggist had told him they were a portion of a large quantity he had bought from the Botanic Garden; so large that, after keeping what he wanted for himself, sufficient remained to be worth sending to a neighbouring paper-mill. Dr. Daubeny, the present Professor of Botany, to whom I mentioned the circumstance, was kind enough to investigate it, and to write to me as follows: 'The fact is, that, on the pulling down by the street-commissioners of the house belonging to the Professor of Botany, various papers, for which there could not have been room in the only apartments that then remained attached to the garden (the present lecture-room,) were removed to Dr. Sibthorpe's private dwelling-house, which, on the death of the son, and afterwards of the father, fell into the hands of Lady Sewell, daughter of the latter, and sister of the author of the *Flora Græca*. On the decease of that lady some years back, the effects were sold, and amongst them was the lump of old papers you mentioned. With regard to the share which my predecessor, Dr. Williams, had in the transaction, all the information I have been able to obtain, leads me to conclude that, at the time of the sale, he was not aware of such papers being put up to auction. On the contrary, I have been told that, he had several times made application to the Sibthorpe family for the restitution of the books or papers belonging to the garden in their possession; but that they never attended to his request; and that at the sale he actually purchased and restored to the garden several volumes that he had reason to consider as public property.' "

J. RAMSBOTTOM.
British Museum (Natural History),
London, S.W.7.
July 25.

Points from Foregoing Letters

OBSERVATIONS are recorded by Prof. Laby and his colleagues which lead them to conclude that *all* atmospherics are reflected at the ionosphere and lightning is an oscillatory discharge. (In a previous letter to NATURE evidence was given that *some* atmospherics are so reflected.) In principle, this means it is possible to infer from one oscillogram of an atmospheric the height of the ionosphere, and the distance of the lightning from which the atmospheric was radiated. The latter is of considerable practical importance to meteorology and aviation.

A logarithmic time scale was suggested by de Sitter in 1933, and Milne has used two time scales connected by a logarithmic expression. Prof. H. S. Allen points out the similarity between this expression and Boltzmann's formula connecting entropy and probability. Atomic time may be interpreted as a probability, and consequently time as measured by an astronomer or physicist may be regarded as a statistical quantity.

Further numerical relations between fundamental atomic constants and the universal gravitation constant, which coincide roughly with values ascribed to the number of particles in, and radii of, the galaxy and the universe are pointed out by Dr. D. S. Kothari.

Sir C. V. Raman and K. Subbaramiah submit photographs of Liesegang rings of silver chromate, showing an interference pattern with characteristic difference of phase of half a wave-length on either side of a line of zero disturbance.

A chemical investigation of a nitrogenous anthocyanin pigment obtained from the yellow Iceland poppy, and of other new anthocyanin pigments from certain young fern fronds and other plants, is announced by J. R. Price, V. C. Sturgess, Prof. R. Robinson and G. M. Robinson.

Prof. G. M. Bennett and Dr. P. V. Youle find that in the nitration of nitrobenzene and other aromatic compounds with a meta-directive group, hydroxy acids (for example, styphnic acid) are produced in appreciable quantities.

Dr. S. Ochoa and Prof. R. A. Peters have determined by an enzymic method the cocarboxylase and vitamin B_1 (or monophosphate) content of animal tissues and obtained independently similar results to those of Westenbrink and Goudsmit, except for muscle and brain; it is suggested that the differences may lie in the methods. Liver (both slices and extracts) synthesizes cocarboxylase from vitamin B_1 *in vitro*.

A graph showing the ratio of multiple conceptions (twins and triplets) per 1,000 of single conceptions at different seasons of the year is submitted by J. Edwards. It shows a peak around mid-February and another around the middle of August to September.

Diagrams of cell nuclei from the fruit fly, *Drosophila funebris*, showing the distal end of the chromocentre passing over into the 'euchromatin' region of the *X*-chromosome, are submitted by S. Frolova to illustrate the development of inert regions in the chromosome.

From the consideration of autosomes, as distinct from sex chromosomes, Dr. H. D. Slack finds difference in chromosome numbers in *Cimex*, which suggests that polyploidy has played a part in the evolution of the present karyotypes.

Dr. F. W. Sansome considers that more genetical evidence is needed before Mather's view that crossing-over begins near the centromere can be accepted.

Observations by D. R. Barber made with a photoelectric photometer of the brightness of the zenith sky throughout the progress of the storm over south-west England on August 4 indicate that, during the most severe phase, the sky light was reduced to less than one thousandth part of that normally received from an overcast sky at summer noon.