

in Massachusetts Bay, Mr. Rotch proposed an investigation by means of kites, flown from on board ship, of the meteorological conditions above the trades and the doldrums, a project which has received the approval of the International Aeronautical Congress, and of other scientific bodies.

The 'Effect of Meteorological Conditions upon Audibility' under various conditions at Blue Hill was observed during the year 1901, and the results are discussed by Mr. Rotch on pages 156-163. The source of sound was a steam whistle in the town of Hyde Park, the whistle being 4,400 meters northwest of and about 170 meters below the observatory. Investigations upon the electrification of, and upon the quantity of carbon dioxide contained in the air were conducted at the observatory by Mr. G. W. Pickard. Appendix D (pp. 215-239) is a discussion of 'Kites and Instruments Employed in the Exploration of the Air, at Blue Hill Observatory, 1897-1902,' by S. P. Fergusson, which will be found useful by any persons who are undertaking scientific kite construction. Of special interest are the sections which concern kite meteorographs, in devising and constructing which Mr. Fergusson has shown the greatest skill, ingenuity and patience.

Since Blue Hill Observatory first began its pioneer work in kite meteorology there has been a remarkably rapid development of similar work in Europe and elsewhere, but there is no reason to fear that the Blue Hill results will suffer in any way by comparison with those obtained abroad.

R. DEC. W.

*Vorlesungen ueber theoretische und physikalische Chemie, drittes Heft, Beziehungen zwischen Eigenschaften und Zusammensetzung.* Second edition. By J. H. VAN'T HOFF. Braunschweig, Vieweg. 1903. 8vo. Pp. x+155.

This is the third and concluding part of the second edition of Professor van't Hoff's 'Lectures.' Since the German, French and English versions of the first edition were noticed in SCIENCE, it is sufficient to say that in the present edition the subdivision and treatment of the subject are the same as in the first. There are a few verbal changes and some

slight additions amounting to ten pages. The value of the book is immensely increased, however, by the fact that an index to the whole work has been furnished. The book is so familiar to chemists as a masterpiece of its kind that further commendation would be superfluous.

ALEXANDER SMITH.

#### SCIENTIFIC JOURNALS AND ARTICLES.

*The Journal of Comparative Neurology and Psychology* for July contains in addition to editorial and review matter, a paper of 67 pages by Miss Jessie Allen, entitled, 'The Association Process of the Guinea Pig, A Study of the Psychical Development of an Animal with a Nervous System well Medullated at Birth.' This research forms an excellent control to the similar one recently published by Dr. J. B. Watson on the white rat, the nervous system of which is entirely non-medullated at birth. The rat comes to psychical maturity at about the twenty-third day; the guinea pig, on the other hand, reaches psychical maturity on the third day, but even in the adult lacks almost entirely that ingenuity which is so characteristic of the rat's method of overcoming obstacles in order to reach food. Histological examination of the developing guinea pig's brain reveals differences from the developing rat's brain which can be closely correlated with the differences in psychical development.

A QUARTERLY journal entitled 'Ophthalmology' will begin publication on October 1, with Dr. H. D. Wurdeman as editor and publisher. The associate editors include Drs. Chas. H. May, New York City; Casey A. Wood, Chicago; Chas. A. Oliver, Philadelphia; Blencowe E. Fryer, Kansas City; Albert B. Hale, Chicago; Edmond E. Blaauw, Buffalo; Chas. Zimmermann, Milwaukee; Dr. Wm. Zentmayer, Philadelphia; J. Guttman, New York City; and Frank Allport, Chicago.

#### SOCIETIES AND ACADEMIES.

##### THE BIOLOGICAL SOCIETY OF ST. LOUIS.

IN an earlier number of this journal, August 14, 1903, there appeared a brief notice of the organization of the Biological Society of St. Louis. Since that time a more formal