to the inclination of the earth's axis to the plane of the ecliptic, or to altitudes at *noon*. On p. 11 we read:—"By refraction we mean the property of the atmosphere to bend the rays of light from celestial bodies, and so make them appear at a point in the heavens some distance (greater according to the proximity to the horizon) from their true position." Such a statement, to the man in the street, could apply equally as well to a horizontal as a vertical change of position. On p. 19 is written:—". . . solid body of the Sun himself, which is probably a relatively dark body . . ."; for such readers as this book is intended a statement of this nature should have been carefully avoided.

On the same page we must conclude that for most days of the year, especially in years away from sun-spot minimum, the earth is subject to nearly a continuous series of magnetic storms, for "the appearance of spots on the sun is nearly always accompanied by a 'magnetic storm' . . . ." The use here of the term "magnetic storm" is quite unnecessary and misleading.

Enough, perhaps, has been said about the text of this "simple worded treatise," and we leave intending readers to criticise the drawings themselves, their attention being specially directed to those on pp. 6, 25, 36, and 89.

Observations océanographiques et météorologiques dans la Région du Courant de Guinée (1855–1900). (1) Texte et Tableaux. Pp. iv+116. (2) Planches, viii. The Netherlands Meteorological Institute. (Utrecht: Kemink & Zoon, 1904.) Price 5 francs.

THESE volumes contain the results of a discussion of observations recorded by Dutch shipmasters. The area extends from the equator to latitude 25° N., and from the meridian of Greenwich to 40° W. The work is a revised and more complete edition, brought up to date, of "De Guinea—en Equatoriaal Stroomen," published in 1895. Currents, winds, temperature and specific gravity of the sea water, temperature and pressure of the air, frequency of rain days, records of current ripples, flying fish, phosphorescence, and of green, brown, and blue water have been tabulated for each month in spaces of 1° squares, then grouped into 5° squares for each month and the year, also for each of twelve three-monthly periods—December to February, January to March, &c.—and finally, the current and wind results in 5° squares for each month and the year for each octant. So far as they go, the results for the various elements are interesting and valuable. Unfortunately, throughout this long period of thirty-six years Dutch ships kept so very closely within the narrow limits of the recognised outward and homeward routes that the information immediately beyond has been exceedingly sparse; indeed, over an area of about 400,000 square miles in the south-western quarter of the region under discussion not a single observation was available for the four consecutive months August to November, a period of the year when the east-going counter-current would be met with in this locality. We are presented, therefore, with very incomplete results as to the seasonal extension and contraction of this important current. It is admitted that, having failed to devise a wholly satisfactory system of weighting the frequency of winds, a method "subject to some objections" has been followed, so that whether the wind has been logged from the same point once or six times in the day it has been counted as one observation, whereas if logged from six different points in the same interval six observations have been tabulated. Except in table iv., and planches vi. and vii., the absence of current or wind has been ignored.

(1) *Opere matematiche di Francesco Brioschi.* Vol. iii. Pp. x+435. (Milan: U. Hoepli, 1904.) Price 25 lire.

(2) *Opere matematiche di Eugenio Beltrami.* Vol. ii. Pp. 468. (Milan: U. Hoepli, 1904.) Price 25 lire.

THESE are the continuations of series of collected papers of which the previous volumes have already been reviewed in NATURE.

The mathematical papers of Francesco Brioschi are published under the auspices of a committee consisting of Profs. G. Ascoli, V. Cerruti, G. Colombo, L. Cremona, G. Negri, and G. Schiaparelli. Of the papers in the third volume, Nos. 90 to 100 were published in the *Annali di matematica pura ed applicata* from 1887 to 1897, Nos. 101 to 125 in the Lombardy *Rendiconti* between 1867 and 1896, the next two in the *Memorie* of the Modena Society in 1855, and the remainder (Nos. 128 to 144) in the *Atti* of the Lincei Academy between 1870 and 1886. The papers have been revised by Profs. Bianchi, Capelli, Cerruti, Gerbaldi, Loria, Pascal, Pittarelli, and Tonelli; the volume has been edited by Profs. Gerbaldi and Pascal, and the former is mainly responsible for the revision of the proofs.

The second volume of Beltrami's works, like the first, is brought out under the auspices of the faculty of science of the University of Rome, and contains nineteen papers arranged in chronological order, numbered 27 to 45, and published between the years 1867 and 1873. The series is to be completed in five volumes.

The Science Year Book for 1905. Edited by Major B. F. S. Baden-Powell. Pp. iv+393. (London: King, Sell and Olding, 1905.)

A PLACE should be found for this Year-book on the writing table of every astronomer and meteorologist, and the volume should be available for ready reference in laboratories and schools where science is studied. The first section of the work contains an astronomical ephemeris throughout the year, short notes relating to the movements of the earth, particulars as to paths of the principal planets this year, details of eclipses, many useful tables, and maps of constellations. There are also meteorological tables and diagrams, physical and chemical constants, and tables of weights and measures of various kinds. Another section is devoted to particulars of scientific societies at home and in America, and notes on prizes and awards offered for scientific research. This list, which at present occupies only two pages, might be made a very valuable part of the book; for, so far as we are aware, the information does not exist in a convenient form anywhere. Particulars might be given, for instance, of the subjects and values of the prizes offered each year by the Paris Academy of Sciences and many similar bodies. Short articles are contributed on the progress of different branches of pure and applied science last year, and there is a biographical directory which includes the names of fellows of the Royal Society and a few other men of science, but is not complete enough to be of much use as a directory.

The remainder of the volume consists of a diary with pages for every day, for monthly notes, cash account, &c. For each day astronomical particulars are printed at the top of the page, and there are columns in which to enter results of meteorological observations. It is very convenient to have all these matters brought together so handily for reference and record; and we have no hesitation in saying that all who are interested in natural phenomena or concerned with scientific progress will find this Year-book of great service.