

MAGNETIC DISTURBANCES DURING THE
LATE TOTAL ECLIPSE

IN the list of papers read before the Paris Academy of Sciences, which was given in last week's NATURE, I noticed one on the magnetic perturbations observed at Alençon during the late total eclipse. Now it would at first sight appear reasonable to expect that any effect produced on the magnetic needle at Alençon by a phenomenon whose maximum phase was as far removed as India or Australia, should have nearly equal effect on the needle in England, and in all countries adjoining France. It has moreover been established by frequent comparisons of carefully measured photographic records, taken at different magnetic observatories, that any disturbance of the earth's magnetic force is felt almost simultaneously at stations differing several hundred miles in both latitude and longitude. I was, therefore, justified in supposing that I should find some indications on our photo-magnetic records of a disturbance corresponding to the perturbations of the needle at Alençon, alluded to by M. Lion in his note to the Academy. The result of my examination of the records is, that there is not the slightest trace of a disturbance on either the vertical or horizontal curves, and that the declination magnet has been more than usually quiet, although on the two previous days it happened to have been somewhat disturbed about the hour at which the totality of December 11 occurred.

Accidental causes influence too largely the readings of a declination magnet for much reliance to be placed on them, however careful the observer, when they are in open contradiction to the photo-records of instruments whose diurnal corrections are sensibly constant.

Stonyhurst Observatory, Jan. 28

S. J. PERRY

SCHOLARSHIPS AND EXHIBITIONS FOR
NATURAL SCIENCE IN CAMBRIDGE, 1872

THE following is a list of the Scholarships and Exhibitions for proficiency in Natural Science to be offered in Cambridge during the present year:—

TRINITY COLLEGE.—One or two of the value of about 80*l.* per annum. The examination will be on April 5, and will be open to all undergraduates of Cambridge and Oxford, and to persons under twenty who are not members of the Universities. Further information may be obtained from the Rev. E. Blore, Tutor of Trinity College.

ST. JOHN'S COLLEGE.—One of the value of 50*l.* per annum. The examination (in Chemistry, Physics, and Physiology, with Geology, Anatomy, and Botany) will be on the 12th of April, and will be open to all persons who are not entered at the University, as well to all who have entered and have not completed one term of residence. Natural Science is made one of the subjects of the annual College Examination of its students at the end of its academical year, in May; and Exhibitions and Foundation Scholarships will be awarded to students who show an amount of knowledge equivalent to that which in Classics or Mathematics usually gains an Exhibition or Scholarship in the College. In short, Natural Science is on the same footing with Classics and Mathematics, both as regards teaching and rewards.

CHRIST'S COLLEGE.—One or more, in value from 30*l.* to 70*l.*, according to the number and merits of the candidates, tenable for three-and-a-half years, and for three years longer by those who reside during that period at the College. The examination will be on March 19, and will be open to the undergraduates of this College; to non-collegiate undergraduates of Cambridge; to all undergraduates of Oxford; and to any students who are not members of either University. The candidates may select their own subjects for examination. There are

other Exhibitions which are distributed annually among the most deserving students of the College.

CAIUS COLLEGE.—One of the value of 60*l.* per annum. The examination will be on March 19 in Chemistry and Experimental Physics, Zoology with Comparative Anatomy and Physiology, and Botany with Vegetable Anatomy and Physiology; it will be open to students who have not commenced residence in the University. There is no limitation as to age.—Scholarships of the value of 20*l.* each, or more if the candidates are unusually good, are offered for Anatomy and Physiology to members of the College.—Gentlemen elected to the Tancred Medical Studentships are required to enter at this College; these Studentships are four in number, and the annual value of each is 113*l.* Information respecting these may be obtained from Mr. B. J. L. Frere, 28, Lincoln's Inn Fields, London.

CLARE COLLEGE.—One or more of the value of 50*l.* per annum. The examination (in Chemistry, Chemical Physics, Comparative Anatomy and Physiology, and Geology) will be on March 19, and will be open to students intending to begin residence in October.

DOWNING COLLEGE.—One or more of the value of 40*l.* per annum. The examination (in Chemistry, Comparative Anatomy, and Physiology) will be early in April, and will be open to all students not members of the University, as well as to all undergraduates in their first term.

SIDNEY COLLEGE.—Two of the value of 40*l.* per annum. The examination (in Heat, Electricity, Chemistry, Geology, Physiology, Botany) will be in October, and will be open to all students who may enter on the College boards before October 1.

EMMANUEL COLLEGE.—One or more of the value of 40*l.* to 60*l.* per annum. The examination on March 19 will be open to students who have not commenced residence.

PEMBROKE COLLEGE.—One or more of the value of 20*l.* to 60*l.*, according to merit. The examination in June (in Chemistry, Physics, and other subjects), will be open to students under twenty years of age.

ST. PETER'S COLLEGE.—One from 50*l.* to 80*l.* per annum, according to merit. The examination, on April 4 (in Chemistry, Comparative Anatomy and Physiology, and Botany), will be open to students who will be under twenty-one years of age on October 1, 1872, and who have not commenced residence.

Although several subjects for examination are in each instance given, this is rather to afford the option of one or more to the candidates than to induce them to present a superficial knowledge of several. Indeed, it is expressly stated by some of the Colleges that good clear knowledge of one or two subjects will be more esteemed than a general knowledge of several.

Candidates, especially those who are not members of the University, will, in most instances, be required to show a fair knowledge of Classics and Mathematics, such, for example, as would enable them to pass the Previous Examination.

There is no restriction on the ground of religious denomination in the case of these or of any of the Scholarships or Exhibitions in the Colleges or in the University. Further information may be obtained from the tutors of the respective Colleges.

It may be added that Trinity College will give a Fellowship for Natural Science once, at least, in three years; and that most of the Colleges are understood to be willing to award Fellowships for merit in Natural Science equivalent to that for which they are in the habit of giving them for Classics and Mathematics.

The following lectures in Natural Sciences will be delivered at Trinity, St. John's, and Sidney Sussex Colleges during Lent Term, 1872:—