

Father Fenyi gives also a very exhaustive table, or rather diagram, of all the minor disturbances at this time, showing how they were situated with respect to the axis of the sun at the time of the eclipse.

THE OBSERVATORY OF YALE UNIVERSITY.—Dr. Elkin reports as follows to the Board of Managers of the Observatory of Yale University:—"The work with the heliometer has been carried forward during the past year in the directions outlined in my last report. We have examined so far fifty-one stars of large proper motion making in general three sets of measures at each parallax maximum. We have not, however, been able to keep the reductions quite up to date, so that I cannot at this moment give any definite results of our search for large parallaxes. I have also continued the series of parallax measures on the first magnitude stars—Aldebaran, Procyon, Regulus, Arcturus, and Vega having been followed up this year. Dr. Chase has continued the work on Algol, and has commenced a series on  $\beta$  Cygni to test the large parallax deduced by Mr. Jacoby from the Rutherford photographic plates. He has also been engaged upon and nearly completed the reduction of his measurements in Coma Berenices. Miss Palmer has been mainly occupied with the computations of our series on Jupiter's satellites, a work of considerable extent." The record is one which Dr. Elkin must regard with the satisfaction that comes to all who make a good use of time.

ASTRONOMISCHEN GESELLSCHAFT.—The following are the articles contributed to the first and second parts of the *Vierteljahrsschrift der Astronomischen Gesellschaft* for 1893:—H. Gylden, "Untersuchungen über die Convergenz der Reihen welche zur Darstellung der Co-ordinaten der Planeten angewendet werden," and "Nouvelles recherches sur les séries employé dans les Théories des planètes;" E. Anding, Lambert's Photometric, "Photometria sive de mensura et gradibus luminis, colorum et umbræ;" Robert Grant, Second Glasgow Catalogue of 2156 Stars for the Epoch 1890; J. G. Porter, a Catalogue of 1340 Proper Motion Stars; and Charles Pritchard, Researches in Stellar Parallax by the Aid of Photography. There is a list also of all the planet discoveries and comet appearances of the year 1892.

#### GEOGRAPHICAL NOTES.

DR. H. R. MILL has recently made a systematic bathymetrical survey of the larger lakes of Cumberland and Lancashire, the cost being defrayed by a grant from the council of the Royal Geographical Society. The soundings designed to delineate the general configuration of the various lake basins, were made at close intervals along a series of lines crossing the lake at right angles to its axis, and never more than half a mile apart. These transverse sections were connected by oblique sections, along which the soundings were more widely spaced, and in addition longitudinal sections were made whenever it was practicable to do so. In Derwentwater the greatest depth found was 72 feet, but the surface of the lake was much below its usual level, being lower, probably, than has ever previously been recorded. Bassenthwaite Lake, though simpler in configuration, was found to have about the same maximum depth. Ullswater, the largest lake in England except Windermere, was found to have a depth of 208 feet, but it is quite possible that deeper soundings might be obtained. This lake was remarkably interesting on account of its division into a series of deep basins separated from each other by wide bars, from the most pronounced of which a rocky islet rises showing the characteristic marks of ice-erosion very clearly. Coniston Lake is simpler, being one practically straight deep trough, the deepest part of which is at least 184 feet below the surface. Wastwater was similar in configuration, though of much greater depth, an area one mile long and a quarter of a mile wide being deeper than 250 feet. The flatness of the floor of this depression may be judged by the fact that 258 feet was the greatest depth found in it. Samples of the deposit from different parts of each lake were secured, and will be examined by a specialist. Temperature observations were also made. It is probable that a similar survey of Windermere will be undertaken in the beginning of September.

MR. F. G. JACKSON sailed last week with a complete equipment for Nova Zembla, where he intends to spend next winter alone, exploring the island and thus gaining practical experience

to aid him in his ultimate attempt to reach the North Pole by Franz Josef Land.

THE Paris Geographical Society promotes the study of geography amongst its members by conversational meetings for the discussion of various geographical problems. There are three groups of subjects: (1) mathematical and physical geography; (2) ethnography, anthropology, and the geographical distribution of plants and animals; and (3) historical and economic geography. Those willing to read papers or take part in the discussions at any group enter their names, and are notified of the meetings of their particular section by the general secretary. The importance of this method of promoting an active interest in geography is very considerable, and might well be introduced in this country, where the advantages of informal discussion are rarely recognised.

THE authorities of Owen's College, Manchester, have decided that Mr. Yule Oldham may continue his duties there concurrently with those of the lectureship of geography at Cambridge University to which he was recently appointed.

#### CELEBRATION OF THE ROTHAMSTED JUBILEE.

THE weather fortunately permitted the celebration on July 29 to take place, as originally intended, in the open air. The lawn in front of the laboratory was filled by the subscribers to the jubilee fund, while, on the common adjoining, a large crowd of spectators was assembled.

The memorial erected in front of the laboratory consists of a natural boulder of Shap granite, weighing nearly eight tons, standing on a rough granite base. On one side of the boulder a part of the surface has been dressed and polished, and bears the following inscription:—

To commemorate  
the completion of  
Fifty years  
of continuous experiments  
(the first of their kind)  
in Agriculture  
conducted at  
Rothamsted  
by  
Sir John Bennet Lawes  
and  
Joseph Henry Gilbert  
A.D. MDCCCXCIII.

The chair was taken by the Right Hon. Herbert Gardner, M.P., Minister of Agriculture, at 3 p.m.

The Secretary of the Jubilee Committee, Mr. Ernest Clarke, then read a list of names of persons who had sent letters or telegrams regretting their absence on the occasion. The list was a long one, and included H.R.H. the Prince of Wales, H.R.H. Prince Christian, the Marquis of Salisbury, Lord Kelvin, Mr. Chaplin, Sir G. Stokes, Prof. Huxley, L. Pasteur, P. Dehérain, E. Tisserand, E. Wolff, F. Nobbe, the Association of Agricultural Colleges and Experiment Stations in the United States, and many others.

The Chairman said they had met to do honour, as far as lay in their power, in the name of agriculture and of the agricultural classes, to two distinguished men, who had rendered invaluable services to our great national industry, and to dedicate that day an outward and enduring memorial of the admiration which the agricultural world felt for the work which they had accomplished. Nothing could be more appropriate for such a purpose than the massive granite boulder which they saw before them. It had already witnessed many of the experiments of nature; they hoped it might stand for many generations to come, as an outward and visible sign of the manner in which the life-long work of Lawes and Gilbert had been appreciated by the men of their time.

He believed, although Sir John Lawes commenced the work of his life as far back as about 1834, it was only in 1843 that the actual field experiments, on which our reliable records were founded, were begun, and in which he was joined by Dr. Gilbert, who had since been the partner of the labours of his life; they were, therefore, commemorating the jubilee of both gentlemen. It must be interesting to all at such a