

Cygni is assumed to be 0''·434, which is probably very nearly correct, it will take $7\frac{1}{2}$ (7'464) years for its light to reach the earth, and $7\frac{1}{2}$ (7'499) miles will represent the distance of this star on a scale that gives 1 inch to the distance of the sun from the earth.

JOHN I. PLUMMER.

8 Constitution Hill, Ipswich.

Great Waterfalls.

I SHALL be much obliged to any of your readers who can inform me where I can find descriptions of the waterfalls named below :—

Falls of the Rio Grande near Guadalajara, Mexico, referred to by Miss Kingsley in "South by West."

Falls in the Ala-tau Mountains, Central Asia, stated in the "Universal Geography" as consisting of falls of 600, 350, and 350 feet separated by rapids.

Lattin, in Swedish Lapland, stated in the "Universal Geography" as of the height of 400 feet. It is also mentioned in the "Popular Cyclopædia," but I could hear nothing of any waterfall of that name when travelling in Lapland some few years since.

Aguara-y, in Paraguay, also classed amongst the great waterfalls of the world in the table in the "Universal Geography," as of the height of 409 feet.

Falls of the Pykara, India.

Falls of the Ooma Oya and Badulla Oya, Ceylon.

Any particulars of any of these falls will be most useful.

ARTHUR G. GUILLEMARD.

Eltham, Kent, November 22.

AID TO ASTRONOMICAL RESEARCH.

A CIRCULAR was issued last summer announcing the gift by Miss Bruce of 6000 dollars for aiding astronomical research. No restrictions were made upon its expenditure which seemed likely to limit its usefulness, and astronomers of all countries were invited to make application for portions of it, and suggestions as to the best method of using it. Eighty-four replies have been received, and with the advice of the donor the entire sum has been divided so as to aid the following undertakings :—

(3) Prof. W. W. Payne, Director of the Carleton College Observatory. Illustrations of the *Sidereal Messenger*.

(6) Prof. Simon Newcomb, Superintendent of the *American Nautical Almanac*. Discussion of contact observations of Venus during its transits in 1874 and 1882.

(16) Dr. J. Plassmann, Warendorf. For printing observations of meteors and variable stars.

(23) Prof. H. Bruns, Treasurer of the Astronomische Gesellschaft. To the Astronomische Gesellschaft for the preparation of tables according to Gylden's method for computing the elements of the asteroids.

(27) Prof. J. J. Astrand, Director of the Observatory, Bergen, Norway. Tables for solving Kepler's problem.

(29) Prof. J. C. Adams, Director of the Cambridge Observatory, England. Spectroscope for the 25-inch telescope of the Cambridge Observatory.

(36) Prof. A. Hirsch, Secretary of the International Geodetic Association. To send an expedition to the Sandwich Islands to study the annual variation, if any, in latitude.

(40) Mr. H. H. Turner, Assistant in Greenwich Observatory. Preparing tables for computing star corrections.

(45) Prof. Edward S. Holden, Director of the Lick Observatory. Reduction of meridian observations of Struve stars.

(46) Prof. Lewis Swift, Director of the Warner Observatory. Photographic apparatus for 15-inch telescope.

(54) Prof. Norman Pogson, Director of Madras Observatory. Publication of old observations of variable stars, planets, and asteroids.

(57) Dr. Ludwig Struve, Astronomer at Dorpat Observatory. Reduction of observations of occultations during the lunar eclipse of January 28, 1888, collected by the Pulkowa Observatory.

(60) Dr. David Gill, Director of the Observatory of the Cape of Good Hope. 1. Reduction of heliometer observations of asteroids. 2. Apparatus for engraving star charts of the Southern *Durchmusterung*.

(78) Prof. A. Safarik, Prague. Photometer for measuring variable stars.

(79) Prof. Henry A. Rowland, Johns Hopkins University. Identification of metals in the solar spectrum.

Of the remaining replies many describe wants no less urgent than those named above. Some relate to meteorology or physics rather than to astronomy, some to work already completed, and others were received too late to be included. Two important cases may be specially mentioned. In each of them an appropriation of a part of the sum required would have been made; but in one, in our own country, an active and honoured friend of the science undertakes the whole; and in the other, in France, the generous M. Bischoffsheim, already known as the founder of the great Observatory at Nice, ignoring political boundaries and the comparative selfishness of patriotism, came forward and gave the entire sum required. The same sky overarches us all. It is to be hoped that the above-named, and other foreign institutions, will obtain more important aid from neighbours when these become aware how highly the work of their men of science is appreciated in this country. The replies not enumerated above are confidential, and cannot be mentioned except by the permission of the writers. But they have placed me in possession of important information regarding the present needs of astronomers. In several cases a skilful astronomer is attached to a college which has no money for astronomical investigation. He has planned for years a research in the hope that some day he may be able to carry it out. A few hundred dollars would enable him to do this, and he offers to give his own time, taken from his hours of rest, if only he can carry out his cherished plans.

Such valuable results could be attained by the expenditure of a few thousand dollars, that no opportunity should be missed to secure this end. Fortunately, the number of persons in the United States able and willing to give liberally to aid astronomy is very large. It is hoped that some of them may be inclined to consider the case here presented. The income derived from a gift of one hundred thousand dollars would provide every year for several cases like those named above. A few thousand dollars would provide immediately for the most important of the cases now requiring aid. The results of such a gift would be very far-reaching, and would be attained without delay. Correspondence is invited with those wishing to aid any department of astronomy, either in large or small sums, by direct gift or by bequest.

EDWARD C. PICKERING.

Harvard College Observatory,
Cambridge, Mass., U.S.A., November 11, 1890.

NOTE ON THE DISAPPEARANCE OF THE MOA.¹

MAJOR MAIR, in an interesting paper on the disappearance of the Moa in vol. xxii. of the Transactions of the New Zealand Institute, makes, on p. 71, the statement that he is a "supporter of the belief

¹ Read before the Philosophical Institute of Canterbury, October 2, 1890, by H. O. Forbes, Director of the Canterbury Museum, Christchurch, New Zealand.