

—An interesting paper on early magnetic observations, "Die Anfänge der magnetischen Beobachtungen," contributed to the *Zeitschrift der Gesellschaft für Erdkunde* (vol. xxxii. part 2), by Prof. G. Hellmann, has been reprinted and is now published as a separate paper by W. H. Kuhl, Berlin.—Report on the progress of the Survey of Tides and Currents in Canadian Waters, by Mr. W. Bell Dawson. The report contains some valuable tidal data, and also the results of a general examination of the currents in the interior of the Gulf of St. Lawrence and the Straits connecting it with the Atlantic Ocean.

THE additions to the Zoological Society's Gardens during the past week include two Vervet Monkeys (*Cercopithecus lalandii*, ♂ ♀) from South Africa, presented by Mr. J. W. Lincker; a Squirrel Monkey (*Chrysotriscia sciurea*, ♀), a Yellowish Capuchin (*Cebus flavescens*, ♀) from South America, presented by Mr. H. C. Fernando Rohé; a Vervet Monkey (*Cercopithecus lalandii*, ♀) from South Africa, presented by Mr. Alfred Beit; two Common Peafowl (*Pavocristatus*, ♂ ♂) from India, presented by Colonel Stucley; a Rocky Mountain Sheep (*Ovis montana*, ♀) from North America, a Suricate (*Suricata tetradactyla*) from South Africa, two White Ibises (*Eudocimus albus*) from South America, a Pennant's Parrakeet (*Platyercus pennanti*), a Rose Hill Parrakeet (*Platyercus eximius*) from Australia, deposited; two Red Kangaroos (*Macropus rufus*, ♀ ♀), two Peaceful Ground Doves (*Geopelia placida*) from Australia, purchased; a Thar (*Capra jemlaica*, ♀), a Great Kangaroo (*Macropus giganteus*, ♂), a Rufous Rat Kangaroo (*Uropygmus rufescens*, ♀), two Squirrel-like Phalangers (*Petaurus sciureus*), a Short-headed Phalanger (*Petaurus breviceps*), born in the Gardens.

#### OUR ASTRONOMICAL COLUMN.

ROYAL OBSERVATORY, CAPE OF GOOD HOPE.—Dr. Gill, in his report for the year 1896 to the Lords Commissioners of the Admiralty, sums up the work accomplished during the past twelve months. With regard to the McLean telescope, this is expected to be completely installed and in full working order before the end of the present year. During the last few years, Dr. Gill has somewhat necessarily restricted the amount of observational work in order to make more progress in the computation and publication of many arrears, and it is satisfactory, then, to hear that it has now become possible to again resume a programme of activity. Several important publications have been concluded in the last twelve months. Among them may be mentioned Vol. ii., containing a determination of the solar parallax and mass of the moon, from observations of Iris, Victoria, and Sappho, made in the years 1888 and 1889. Vol. i. is also practically complete. The first volume of the Cape Photographic *Durchmusterung* is also ready for distribution, Vol. ii. being in course of printing. The observational work with the transit circle, equatorials, and astro-photographic telescope has been very considerable, and it may be mentioned that all the catalogue plates, with the last-mentioned instrument, have now been obtained. Out of the 230 chart plates, 169 have been satisfactorily exposed. The 7-inch equatorial has also been very busy in the hands of Mr. Innes, and, besides several new variables, 104 new double stars have been discovered. Dr. Gill refers also to the increase in staff and the necessity for a reversible transit circle for refined fundamental work, and mentions that these proposals have been favourably considered by the Lords Commissioners of the Admiralty and of Her Majesty's Treasury.

ZODIACAL RADIANTS OF FIREBALLS.—A remarkable feature about the appearance of slow-moving fireballs is that, as Mr. Denning has pointed out, they are directed from radiants in the western half of the sky and in the neighbourhood of the horizon. A further communication by him to the *Monthly Notices* for May, tells us that not only the most prominent, but the majority of the radiant points determined by observation are found to apparently congregate in a line approximately coinciding with the position of the ecliptic. Although there are a few exceptions to this law, Mr. Denning is nevertheless confident that there is sufficient weight of evidence which is of a suggestive and significant kind. In favour of this view, he

gives a table of the observed facts which strikingly corroborate the idea advanced. He draws attention to the importance of accurately recording the directions of flight, and apparent paths among the stars of these bodies when they become visible, and of accumulating data which are necessary for trustworthy results to be based on them. All of us are aware of the great difficulty of accurately observing these strangers in our atmosphere, which come and go at generally most unexpected moments. They are, nevertheless, worthy of special study, and it would be very interesting if they were found to be revolving not only in direct orbits, but in orbits with small inclinations like the Jovian family of comets, as is suggested by Mr. Denning.

#### THE ROYAL SOCIETY CONVERSAZIONE.

THE second soirée this year took place on June 16. It was very numerously attended, and was more than usually brilliant, as, in accordance with a suggestion made by the President, the officers and many of the fellows appeared in academic or levée dress, to show respect to the Queen's guests who had been invited. The chief exhibits were as follows:—

Electrical effects of uranium: Lord Kelvin, G.C.V.O., F.R.S.

Experiments on kathode rays and some analogous rays: Prof. Silvanus P. Thompson, F.R.S.

Signalling by Hertz waves, as practised by Dr. Oliver Lodge, in 1894, with a Branly tube of filings as receiver, and now adapted to a Kelvin recorder: Dr. Alex. Muirhead.

(1) A selection of dried plants from Tibet, collected by Captain Deasy and Mr. Arnold Pike, Captain Wellby and Lieut. Malcolm; (2) views near the lake, and in the Queen's Cottage Grounds, Kew, by Monsieur and Madame de l'Aubinière: The Director, Royal Gardens, Kew.

(1) Experiments with Röntgen X-rays; (2) experiments with kathode rays; (3) Experiments with oscillatory electrical discharges: Mr. A. A. C. Swinton.

Experiments illustrating a new method of controlling the electric arc in its application to photo-micrography: Mr. T. A. B. Carver, and Mr. J. E. Barnard.

Living specimens of *Proteus anguinus*, Laurenti.—(1) Male and female; (2) pigmented individual from cave; (3) young specimen to show the eyes: Mr. E. J. Bles.

Pelagic animals from the west coast of Ireland: Mr. E. T. Browne.

Specimens of electric figures: Lord Armstrong, C.B., F.R.S. Stress effects produced by convective electric discharges: Mr. J. W. Swan, F.R.S.

Crystals of diamond, separated from carburised iron: Prof. Roberts-Austen, C.B., F.R.S.

Commensalism amongst marine animals: The Marine Biological Association.

Microscopic image, formed exclusively by diffracted light: Dr. G. Johnstone Stoney, F.R.S.

Examples of animal-forms peculiar to Lake Tanganyika: Mr. J. E. S. Moore.

Microscopic sections of teeth of fossil reptiles: Prof. H. G. Seeley, F.R.S.

Illustrations of the absorption of Röntgen rays by certain elements and their compounds: Dr. J. H. Gladstone, F.R.S., and Mr. Walter Hibbert.

Ancient Egyptian knives and lance-head of flint: Sir John Evans, K.C.B., Treas. F.R.S.

Models of orchids, by Miss Emmet, from plants grown in the Royal Gardens: The Director, Royal Gardens, Kew.

(1) New species of British Mymaridæ (egg parasites) or "Fairy Flies"; (2) aquatic and terrestrial specimens, living: Mr. F. Enock.

Medal struck in gold, silver, and bronze, to commemorate the sixtieth year of the reign of her Majesty the Queen: Mr. Horace Seymour, Deputy Master of the Mint.

Two induction coil contact makers and breakers: Sir David Salomons, Bart.

Demonstration of apparatus for exciting high vacuum tubes for X-ray work: Dr. John Macintyre.

There were the following demonstrations with experiments, and lantern illustrations:—

Signalling through space without wires: Mr. W. H. Preece, C.B., F.R.S.

Photographs illustrating the arrangements of the 1896 eclipse expeditions at Kiö and Novaya Zemlya: Mr. J. Norman Lockyer, C.B., F.R.S.