

January 25, 1872.

Sir JAMES PAGET, Bart., D.C.L., Vice-President, in the Chair.

The following communications were read :—

- I. "The Absolute Direction and Intensity of the Earth's Magnetic Force at Bombay, and its Secular and Annual Variations."
By CHARLES CHAMBERS, F.R.S., Superintendent of the Colaba Observatory. Received October 26, 1871.

(Abstract.)

The observations discussed in this paper were taken at the Colaba Observatory during the years 1867 to 1870, and consist of observations of Dip, Declination, and Horizontal Intensity. The principal results deduced by the author from these observations are shown in the following statement:—

Magnetic element.	Epoch.	Value at epoch.	Value at common epoch, January 1st, 1869.	Secular change. Per annum.	Semiannual inequality. ——— Excess of April to September over mean of year.	Calculated probable error of a single weekly determination.
Declination	April 1, 1868	0° 46' 47" E.	0° 48' 36" E.	+ 2' 5"	+ 1'	+ 20'
Dip	Oct. 1, 1868	19° 4' 2"	19° 4' 7"	+ 1' 9"	+ 0' 3"	+ 0' 25*
Horizontal Force.	April 1, 1869	8.0591	8.0581	+ .0040	.0000	± .0043*
Total Force	Jan. 1, 1869	8.5264	8.5264	+ .0059	+ .0003

In column 2 is entered the mean epoch to which the mean value of each element, entered in column 3, corresponds.

The absolute observations were taken at a height of 38 feet above the ground; and by comparing them with observations taken with differential instruments at a height of 6 feet above the ground, they are shown to indicate distinctly a diminution of terrestrial magnetic action with increase of height, with respect both to secular variation of Declination and Horizontal Force, and to diurnal inequality of Horizontal Force.

- II. "On the Elimination of Alcohol." By A. DUPRÉ, Ph.D., Lecturer on Chemistry at Westminster Hospital. Communicated by W. ODLING, M.B., F.R.S. Received November 16, 1871.

(Abstract.)

Obviously three results may follow the ingestion of alcohol. All the alcohol may be oxidized and none be eliminated, or a portion only may be

* In English units.

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