

PRECIPITATION.

Map No III graphically shows the month's rain-fall and melted snow. The table in the left-hand corner exhibits the numerical deficiencies and excess.

RELATIVE HUMIDITY.

The relative humidity for the month averages as follows in the various districts: New England, .69; Middle Atlantic States, .66; South Atlantic States, .70; Gulf coast, .74; interior of Gulf States, Lower Mississippi and Ohio valleys, .66; Missouri valley, .61; Lake region, .69, and Minnesota, .77.

PREVAILING WINDS.

As will be seen from Map No. II, the predominant winds were N. W. and N., except west of the lower Mississippi valley, where they were S. E. Some of the maximum movements of wind for the month were as follows: At Alpena, 7,453 miles; Buffalo, 8,136 miles; Cheyenne, 9,215 miles; Cleveland, 8,788 miles; Erie, 10,720 miles; Indianola, 9,097 miles; Sandy Hook, 11,058 miles. Some of the minimum movements were: At Augusta, 2,919 miles; Lynchburg, 2,226 miles; Baltimore, 3,015 miles.

NAVIGATION.

The river-stages are shown by the tabular statement on Map No. III. The heavy rains which occurred from the 22d to the 24th, raised the Ohio and its tributaries from Pittsburgh to Cairo, and also raised the Cumberland and Tennessee, which subsequently affected the Mississippi.

TEMPERATURE OF WATER.

The temperatures of the water, from observations taken at the bottom, are exhibited in the table, on Map No. II.

ATMOSPHERIC ELECTRICITY.

(1.) *Thunder and Lightning.*—There is a marked falling off in this element since October, although it was abundant during the great storm, No. VIII. (See p. 4.) Lightning and thunder occurred at Duluth on the 7th; at Fort Gibson, Indian Territory, on the 6th; at Nashville on the 10th.

(2.) Scarcely any brilliant *auroral* displays were reported for November, which is in very marked contrast with the October record. One brilliant aurora was seen at Trenton, N. J., 27th.

OPTICAL PHENOMENA.

This element of the November meteorology is of special interest, especially if studied in connection with the great cyclone of the 21st to 23d.

(1.) *Solar halos* were reported at Cornish, Me., on the 1st and 8th; at West Charlotte, Vt., on the 3d; at Florida, Mass., on the 5th; at Toledo on the 15th and 19th; Plattsburg Barracks and Troy, N. Y., on the 16th; Troy on the 19th; at Havana, Ill., on the 10th, 13th and 18th; at Carthagena, Ohio, on the 14th and 30th; at Cresco, Iowa, on the 20th and 24th; at Atlanta and Gainesville, Ga., Hennepin, Ill., Rocky Run and Utica, Wis., and Dunbarton, N. H., on the 24th; and at Savannah on the 22d.