

ies of each comet by independent observers three to four. Since it has been abolished the discoveries of comets have not averaged over three per annum, and the independent simultaneous discoveries of the same comet have become exceedingly rare.

THE UNITED STATES COAST SURVEY.

The progress of this magnificent work has furnished, as usual, many valuable results in Science since the preceding meeting of the Association; the following abstracts of the Papers read will shew how great credit is due both to the energy and skill of the conductors of this undertaking, and to the wise liberality of the Government which supports it.

"The Distribution of Terrestrial Magnetism in the United States," by Prof. Bache and J. D. Hilgard.

The magnetic observations made in connection with the Survey were scattered, at 160 different stations, along the entire sea coast, and the data were reduced to the common period of the year 1850. The line of no variation, or that passing through all the places where the magnetic needle points to the true north, intersects the coast near Ocracoke, between Cape Hatteras and Cape Fear, in a N.N.W. direction, curving gradually to the North, and passing through the middle of Lake Erie.

To the north and east of this line the declination (or variation of the compass) is to the west of north, being 6° near New York, 10° near Boston, and 16° in the eastern part of Maine. To the south and west of the line of no variation it is east of north, being 8° east along a line running directly south a little to the west of St. Louis and New Orleans, 13° near San Diego, and 21° near Cape Flattery on the western coast. The dip of the needle varies from 75° in the North eastern States to 60° along the northern shore of the Gulf of Mexico, and the horizontal force from 3.5 to 6.0 in the same regions.

SUPPLEMENT TO THE PAPER PUBLISHED IN THE PROVIDENCE PROCEEDINGS, ON THE SECULAR VARIATION IN MAGNETIC DECLINATION IN THE ATLANTIC AND GULF COAST OF THE UNITED STATES, FROM OBSERVATIONS IN THE SEVENTEENTH, EIGHTEENTH AND NINETEENTH CENTURIES, UNDER PERMISSION OF THE SUPERINTENDENT. BY CHAS. A. SCHOTT.

In a paper communicated to the Association at the Providence meeting the secular change of the magnetic declination was investigated by Mr. Schott. In the course of last summer he made some additional observations by direction of the Superintendent of the Coast Survey, and in the paper now presented the results are combined with those previously obtained. The former deductions have gained considerably in accuracy, and have received important additions. The number of stations is increased from ten to thirteen. The recent observations appear to show a slight diminution in the rate of increase of westerly declination, leading to the supposition that the inflexion in the curve representing the secular variation corresponds to about 1850. All the observations concur in placing the minimum about 1800. The present rate of increase of westerly declination is about five minutes annually along the Atlantic coast.

DISCUSSION OF THE SECULAR VARIATION OF MAGNETIC INCLINATION IN THE NORTHEASTERN STATES. COMMUNICATED, UNDER PERMISSION OF THE SUPERINTENDENT AND AUTHORITY OF THE TREASURY DEPARTMENT, BY CHARLES A. SCHOTT.

The results are confined to the limits of 38° and 44° of North latitude, there being too few observations in the southern part of the United States to permit