dock at 8^h 40^m. The distance traversed was 2,222 miles, giving an average of 151 miles per day for the 14.7 days of the trip.

The marked change and improvement in the methods, instruments, and equipment provided for ocean observations since the cruise of the *Galilee* sixteen years ago is extremely gratifying. The *Galilee* made the passage from San Diego to Honolulu in 12 days during the year 1905, covering much the same region as the *Carnegie* covered this time. Thirteen stations were occupied then as contrasted to 40 on the *Carnegie's* trip.

LETTERS TO EDITOR

MAGNETIC DISTURBANCES OF DECEMBER 4-5, 1920, AT CHELTENHAM OBSERVATORY, MARYLAND.¹

A magnetic disturbance with a sudden beginning in *H*, and a fairly well pronounced beginning in *D* and *Z*, began December 4, 1920, at 0^h 03^m, 75th meridian standard time, hence on December 4, at 5^h 03^m, G. M. T. *H* increased from the beginning of the disturbance until 0^h 30^m, the maximum for the day, and returned to its original value at about 1^h 54^m, the increase being 54 γ . *D* and *Z* were only slightly disturbed.

The period of the largest disturbances extended from 18^h to 19^h, there being a decrease in *D* of some 26', a decrease of 70 γ in *H*, and an increase of 17 γ in *Z*. The minimum in *D* occurred at 18^h 22^m; the minimum in *H* at 18^h 18^m; and the maximum in *Z* at 18^h 18^m. *H* was again rather violently disturbed from 14^h on December 5, to 17^h 30^m, with a range of some 60 γ . Except during the intervals stated, the curves were only slightly disturbed. The magnetic disturbance appears to have ended at about 24^h on December 5th.

GEORGE HARTNELL, *Observer-in-Charge*.

MAGNETIC DISTURBANCES DECEMBER 4-6, 1920, AT WATHEROO OBSERVATORY.

Captain Edward Kidson, at the time observer-in-charge at the Watheroo Observatory, reported that a magnetic disturbance commenced suddenly at 13^h 03^m (120th east meridian standard time) on December 4, 1920, and continued as a slight storm throughout December 5 and 6; movements were never very large, but were rapid during the morning of December 6.

¹Communicated by Col. E. Lester Jones, Director United States Coast and Geodetic Survey.