

Mr. D. L. Hutchinson. Table II is similar to Table I, except that it is calculated from the less reliable results obtained during windy weather. The following are the more important points brought out by these tables :

(1) *The Time of High Water at Springhill.* Just at high water or low water at any place the level changes very slowly. Hence it is difficult to be quite certain of the exact moment of change. Remembering that this remark applies to both the St. John and the Springhill records, the close agreement among the results of column 5, which gives the interval between high water at Springhill and high water at St. John, must be considered very satisfactory. The mean interval is nine hours and twenty minutes, the greatest divergence from the mean is ten minutes, and the next greatest five minutes. The "probable error" is only one and a half inches. The second series being made in windy weather, do not agree so well among one another, but give a mean of nine hours and sixteen minutes, differing by less than one per cent from the preceding. The mean tidal range at St. John was twenty feet in Series I and sixteen feet in Series II. Hence the former results may be taken as fairly representative of spring tides and the latter as neap tides. The mean tidal range is twenty-five per cent greater in Series I than in Series II, and yet the time of passage of high water from St. John differs by less than one per cent. We seem justified in concluding that the interval between high water at St. John and high water at Springhill is practically independent of the tidal range. This should be remembered in connection with the results obtained at other points on the river.

(2) *Amount of Tide at Springhill.* From Series I we see that when the mean range of tide at St. John is twenty feet, that at Springhill is four inches or 1.63 per cent or about one-sixtieth of the range at St. John. Moreover, the range at Springhill is (allowing for wind disturbances) proportional to that at St. John. This is otherwise evident from the principle of the superposition of small motions.