ons as have been the information natural or astro-

Elevatio above rine Rail datum.
Feet.
100.00
96.00
96 · 13
96.68
96.52
96.00
95.98
95.33
89.00
70.76
52.59
47 20

ove figures, that reat, it has been ne bay, occur in The extreme end he water is thus mains at a level gly, the highest range at spring irally list, are as ugs 48, neaps 40

47.00

The observations in Cumberland Basin are more detailed, and they now include the levels of extreme High Waters in recent years, as above given. From all the material thus available, we obtain the following results:—

From the lowest level of Low Water which occurred during the four months of continuous observation, to the level of the highest tide ever known, which flooded the country in October, 1869, during a severe storm; the extreme difference of level is fifty-three feet.

Maximum range at spring tides apart from storm disturbance; from the lowest observed Low Water, to the highest undisturbed High Water, in different years, 49 68 for

From the continuous observations from August to December, above referred to. It is probable that this series of observations includes the day tides only; but at this season these are higher than the night tides. These tides are therefore the highest in the course of the year; and the moon's perigee and apogee then corresponded closely with full and change. Average range of the tides during four consecutive months:—

Range of Spring Tides, near the time of the moon's perigee. 47.58 feet
moon's apogee... 37.20 m
Range of Neap tides; general average in the above period. 31.00 m

(For the proportional range in Noel Bay, see note on page 26.)

Level of the Top of the Dykes.—These dykes are built to reclaim the extensive 'marshes' or hay lands between Amherst and Sackville, on Cumberland Basin, Bay of Fundy. The elevation given in each case is the average level of several points on the dyke. The relation of the dyke level to extreme High Water will be seen on comparing these levels with the table already given.

	Description of the Dykes.	Elevation above Marine Railway datum.
1		Feet.
Dyke on east side of Missiquash River, at its mouth.  "west side of Missiquash River, at crossing of Intercolonial Railway.  "east side of Aulae River, at Aulae Station, Intercolonial Railway.  Orest obstarden on which Intercolonial Railway rosses Aulae River.  Dyke on west side of Aulae River, at same locality.  "north side of Aulae River, at same locality.  "north side of Tantramar River, half a mile east of railway bridge.  "at same locality, protecting railway track (about nine inches higher than other dykes).  Dykes in same vicinity, general level to horizon.  Dyke on north side Tantramar River, at crossing of Intercolonial Railway.  Dykes on tantramar River, opposite Sackville, general level to horizon.		97 26 97 14 97 13 97 33 97 31 97 35 97 64 (98 38) 97 82 97 56 97 44
General average level	of top of dykes (omitting the special dyke along railway)	97 38

We may note with regard to these dykes the great uniformity in level throughout the stretch of nine miles in extent. This can only have been arrived at from the level of the water itself when standing at high tide. The level as now determined will be valuable for future reference, and also in establishing the relation of the dyke level to extreme High Water.

As a check on the accuracy of the levels themselves as now taken, we may note the close correspondence of the elevation of the exceptional high water of last spring, at Fort Lawrence Dock and Sackville; as it comes out within \(\frac{1}{4}\) inch of the same elevation at these two extremes of the line which was run.