Highest High Water undisturbed by storms. Occurred on June 17	87 30
Bench-mark established by Commander Tooker. A broad arrow of sheet copper, placed on a pile on the east side of the Government wharf, nearly abreast of the lighthouse.	87.30
A imiralty Low Water datum, defined as 7.60 feet below this Bench-mark	79.70
Lowest Low Water recorded by the gauge during the season of 1901, between the above dates. Occurred on October 30	80.10
Zero of the scale of the tide-gauge	79.90

Sydney, C.B.—The city datum was utilized for the tidal observations. To do this, it was necessary to carry the city levels half a mile further to the site of the gauge, which was placed at the Intercolonial Railway wharf at Battery Point. A Benchmark was cut on the court house, on the corner of Charlotte and Desbarres streets, which is the nearest masonry building to the sight of the gauge. It is cut on the stonework on the south side of the basement doorway, under the main entrance; on the west side of the building.

	T.CCC.
New Bench-mark cut on the court house, as above described. Elevation above the Sydney city datum.	57 · 20
Cap of the wharf at the tide-gauge, Battery Point	10.43
Highest High Water recorded by the gauge during the observations from July 4 to August 6, 1901; occurred on July 17	5.35
Lowest Low Water recorded, in the same period; occurred on July 16	0.10
The Sydney city datum. (Intended for Low Water)	0.00
Zero of the scale of the tide-gauge ; below datum	-1.21

Port aux Basques, Newfoundland.—The point made use of as a Bench-mark, is the top of an iron eye-bolt let into the rock, six feet west of the north-west corner of E. Pike's fish store : at the head of the Government wharf.

Bench-mark as above ; elevation adopted	Feet. 100.00
Highest High Water recorded during the season of 1901, from July 9 to November 1.	93.95
Low Water datum; based upon the average elevation of low water at spring tides, as observed during the season	88.60
Lowest Low Water recorded during the season of 1901; occurred October 29	88.25
Zero of the scale of the gauge	86.13

Comparison of Spring Tides in Northumberland Strait.—In the season of 1901, the moon's perigee nearly coincided with the new moon in May and June; and in June the maximum declination also occurred at n.w moon. In this region the moon's declination is the ruling astronomical factor; as it gives rise to the diurnal inequality which is here so pronounced. In consequence, one of the two tides in the day had an unusual range in June. Conditions favourable to extreme tides did not recur till the autumn, the perigee falling near the full moon in October and November, with high declination. At St. Paul Island th's diurnal inequality is less pronounced; and in consequence the spring tides are more nearly equal throughout the season. But only those at the corressponding dates are given for comparison with the tides in Northumberland strait.

The elevations given for comparison are not referred to the same datum throughout; there being as yet no continuous datum established in Canada. Each set of levels is therefore referred to its own local datum.

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