

The relations referred to, as noted on the St. Lawrence charts, when put in tabular form, are as follows:—

Tidal Streams in the offing of Localities given.	Flood Stream begins after		Ebb Stream begins after		Duration of Flood Stream.		Duration of Ebb Stream.	
	L. W.		H. W.					
	H.	M.	H.	M.	H.	M.	H.	M.
After low water and high water by the shore—								
Quebec.....	1	10	1	05	5	00	7	30
Ste. Anne de Beaupre.....	0	45	1	00	5	10	7	15
St. Laurent, Orleans Island.....	0	55	1	10	5	00	7	25
Berthier.....	1	10	1	05	5	05	7	20
Grosse Isle.....	1	00	1	05	5	10	7	10
L'Islet.....	0	30	0	30	5	30	6	50
After low water and high water at Orignaux Point—								
In Upper Traverse.....	2	05	1	30	5	25	7	00
In Lower Traverse.....	1	55	1	45	5	45	6	45
Orignaux Point.....	0	30	1	10	5	55	6	30
After low water and high water at Riviere du Loup—								
In Brandy Pot Channel.....	1	05	0	50	6	05	6	20
Green Island.....					6	00	6	24
Tadoussac.....					6	08	6	15
Bic Island.....					5	50	6	34
Port Neuf (north shore, opposite Bic).....					6	07	6	18

Current observations on the St. Lawrence in 1900.—With the object of obtaining further simultaneous comparisons where the currents are strongest, arrangements were made this season for observation of the turn of the current at L'Islet, and in the Upper and Lower Traverse. The current there attains a speed of $7\frac{1}{2}$ knots during spring tides. The pier recently placed at the edge of the channel in the Upper Traverse, was made use of for these observations; and in the Lower Traverse, two miles below, the swing of the light-ship enabled the turn of the current to be noted at both day and night tides. The observers were instructed to take the corresponding moment in the turn of the current at both places. They also noted the swing of the buoys on the opposite side of the channel, so that the turn of the current in mid-channel might be correctly deduced from the double observations.

The chief essential was to obtain correct time for these observations. The observer on the Traverse Pier was provided with a chronometer, and he gave a time signal to the light-ship by lowering a flag at the moment of nine o'clock; as at that hour the direction of the sunlight is the most favourable for seeing the signal from it. To simplify matters for the observer, the face reading of the chronometer was taken without correction throughout the season; and its error was ascertained by time comparisons made at two different dates when the locality was visited by myself or my assistant. The total accumulated error amounted only to $2\frac{1}{2}$ minutes, at the close of the season, which is hardly appreciable in observations of this character, but has nevertheless been allowed for.

The observations of the turn of the current which were secured at the three localities, extended over the following periods:—

L'Islet..... Observer, R. Pelletier... May 14 to October 1, 1900.
Upper Traverse... Observer, A. Fournier... May 16 to September 15.
Lower Traverse... Observer, E. Lebel... May 16 to September 15.

These observations, when brought into relation with the time of high and low water as ascertained by the tidal observations of this season, will evidently afford information of permanent value regarding the turn of the current.