

be made to test, by the "current-drag," whether any *underflow* can be shown to exist from either polar basin toward the equatorial region. A suitable locality for such experiments in the North Atlantic would probably be the neighborhood of the Açores, which are in the line of the glacial flow from the North Polar Channel. The guide to the depth at which the current-drag should be suspended will be furnished by the thermometer, especially where there is any abrupt transition between one stratum and another. It would be desirable that not only the rate and direction of surface-drift, but those of the subsurface stratum at (say) 200 fathoms' depth, should be determined at the same time with those of the deep stratum.

Tidal Observations.—No opportunity of making tidal observations should be lost. Careful observations, made by aid of a properly placed tide-pole in any part of the world, will be valuable. Accurate measurements of the sea-level once every hour (best every *lunar* hour, *i. e.*, at intervals of 1^h 2^m of solar time) for a lunar fortnight (the time, of course, being kept) would be very valuable information.

Beach-marks.—In reference to the interesting question of the elevation or subsidence of land, it will be very desirable, when sufficient tidal observations can be obtained to settle the mean level of the sea, that permanent beach-marks should be established, recording the date and height above such mean level. Even recording the height to which the tide rose on a certain day and time would render a comparison possible in future years.

A good determination of the mean sea-level by the simple operation of taking means may be made, in less than two days, with even a moderate number of observations *properly distributed so as to subdivide both solar and lunar days into not less than three equal parts*. Suppose, for example, we choose eight-hour intervals, both solar and lunar. Take a lunar day at 24^h 48^m solar time, which is near enough, and is convenient for division; and choosing any convenient hour for commencement, let the height of the water be observed at the following times, reckoned from the commencement:

Hrs. Min.	Hrs. Min.	Hrs. Min.
0 0	8 0	16 0
8 16	16 16	24 16
16 32	24 32	32 32

The observations may be regarded as forming three groups of three