

The second point of vantage is Chicago. As economic interests are more seriously affected by the geographic change at that point than elsewhere, it is desirable to determine directly, by comparison with Port Huron, the rate at which the lake is encroaching on the land.

A third point of prime importance is the Strait of Mackinac. Although the equilibrium levels of the surfaces of the two lakes are the same, there are considerable periods when their equilibrium is disturbed, and during such periods a current flows in one direction or the other through the strait. Only when this current is nil is the whole water body in perfect equilibrium, and it is essential to precise leveling through the water surface either that times of equilibrium be chosen or

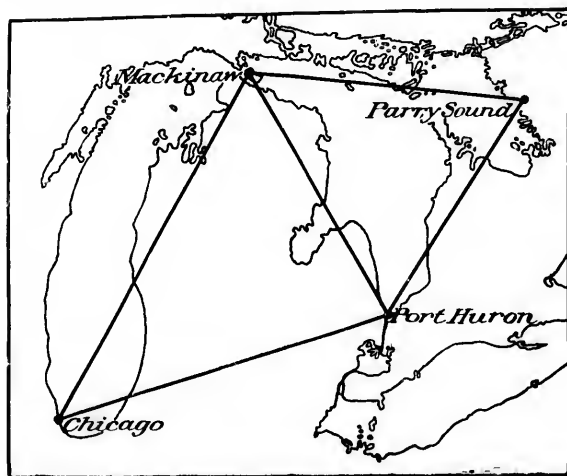


FIG. 101.—Proposed systems of stations for the precise measurement of earth movements.

that due allowance be made for the gradients associated with flow. Observations must therefore be made on the current in the strait, and it is best to connect them with the work of a complete station.

As appears by the annexed diagram (fig. 101), the triangle formed by these three stations is well conditioned as to size and form; the lengths of its sides are approximately 225, 275, and 310 miles, and its smallest angle is about 45 degrees.

While the proper use of these three stations will give answer to the questions of greatest economic and scientific importance, there will be material scientific advantage in adding a fourth station to the system. It should be placed somewhere on the north shore of Georgian Bay, and