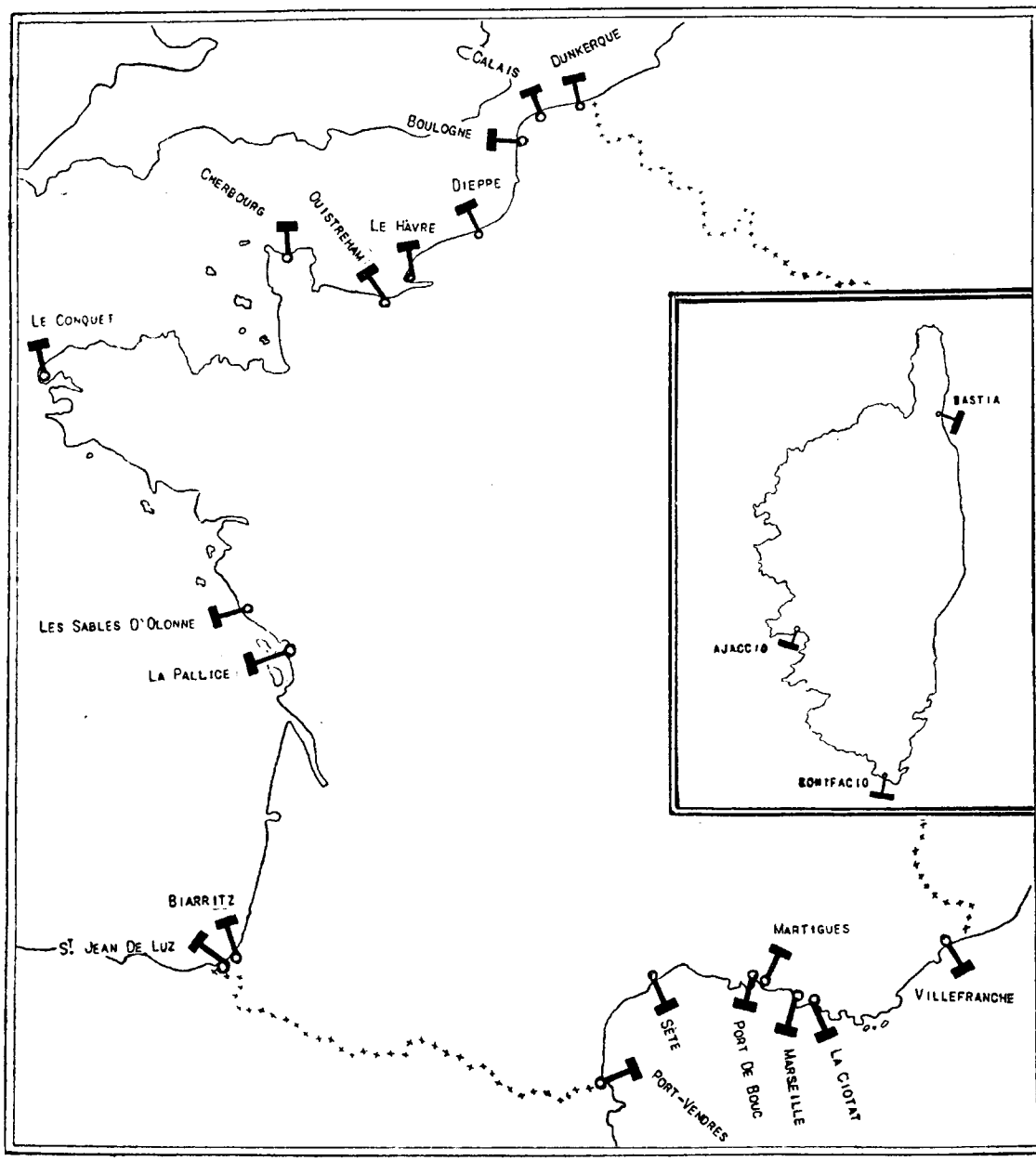
TIDE-GAUGE OBSERVATIONS IN FRANCE

(Extract from the report on the work of the "Service du Nivellement Général de la France", presented at the Fifth General Assembly of the International Geodetic and Geophysical Union, Lisbon, September 1933).

On 31st December 1932, the Service du Nivellement Général de la France was checking the working of a totalising tide-gauge at Marseille and of thirty-six medimaremeters scattered along the coasts of France and Corsica, or set up by the Army Geographical Service or the local Geographical Services in Algeria, Tunisia, Morocco, Syria and Mada-



gascar. The appended charts of France and Corsica show the positions of the instruments on these coasts.

These various instruments have, as a rule, functioned regularly, and the only remarks of note about them are the following:

In accordance with the resolution adopted by the International Geodetic and Geophysical Union, in 1930, at the general assembly at Stockholm, five new medimaremeters were installed in the course of the years 1931 and 1932 along the North Sea and Channel coasts, in the ports of Calais, Boulogne, Dieppe, Le Hâvre and Ouistreham. Those at Boulogne and Dieppe, which started work at the end of 1932, have been functioning for too short a time to make the results worth reporting.

The medimaremeter of St. Jean de Luz, which had been progressively silting up since 1929, was restored in May 1932; since then it has been working satisfactorily.

Finally, in Madagascar, the Geographical Service installed in 1931 a new medimaremeter at Majunga, additional to the one erected at Tamatave in December 1929 and mentioned in the report presented at Stockholm in 1930.

The following tables show the heights of mean sea level on the coasts of France, Algeria and Tunisia. These heights are computed from readings of the various appliances inspected by the Service du Nivellement Général de la France, from the time of starting work to the time of shutting down, or up to 1st January 1933 in the case of those that were still working at that date. In the case of the medimaremeters, a correction has been made for the systematic error due to the removal by the dip-rod of a few drops of water on each occasion of reading.

HEIGHTS OF MEAN SEA LEVEL ON THE COASTS OF FRANCE, ALGERIA AND TUNISIA

(Compiled on 1st January 1933 for the instruments in use at that date)

I. FRANCE

Observation Stations	*Rational heights* (1) *reduced to the zero of the general levelling of France*	*Dates of installation of the instruments in use (and period of use of the instruments removed* (2)	*Number of years of normal working*
	Centimetres		
I. NORTH SEA			
Dunkirk	+ 35	1923	9 years
Calais	+ 14	1932	1 »
II. ENGLISH CHANNEL			
Boulogne (3)	—	1932	—
Dieppe (3)	—	1932	—
Le Havre	— 4	1931	2 »
Ouistreham	+ 19	1932	1 »
Cherbourg	— 9	1891	42 »

(1) *Heights computed from a simultaneous compensation of the 1st- and 2nd-order networks.*

(2) *Instruments no longer in use are shown in italics.*

(3) *Instruments installed too recently to make the results worth reporting.*

1. FRANCE (*cont.*)

	Centimetres		
III. ATLANTIC			
Camaret	+ 3	*1890 to 1927*	*36* »
Le Conquet	+ 8	1928	5 »
Quiberon	+ 3	*1889 to 1917*	*22* »
Les Sables d'Olonne	+ 5	1892	33 »
La Pallice	+ 16	1891	24 »
Biarritz	+ 17	1889	41 »
Saint-Jean-de-Luz	+ 18	1890	40 »
IV. MEDITERRANEAN			
Villefranche	— 2	1913	19 »
Nice	— 5	*1888 to 1910*	*22* »
La Ciotat	+ 4	1893	39 »
Marseille (Port-Vieux)	+ 5	1890	43 »
Marseille (Anse Calvo) :			
Tide Gauge	+ 3	1885	48 »
Medimaremeter N° 1	+ 3	*1885 to 1905*	*20* »
Medimaremeter N° 2	+ 3	1890	42 »
Martigues	+ 3	1894	38 »
Port-de-Bouc	+ 2	1894	36 »
Sète	— 2	1888	45 »
Port Vendres	0	1888	45 »

2. ALGERIA AND TUNISIA

Observation Stations	*Heights reduced to the Tunisian zero*	*Dates of installation of the instruments (all in use)*	*Number of years of normal working*
Oran	— 8	1890	38 years
Algiers	— 2	1904	28 »
Bona	+ 14	1889	42 »
La Goulette	— 3	1889	42 »
Sousse	— 9	1910	22 »
Sfax	— 12	1910	22 »

The other medimaremeters in use, supervised by the Nivellement Général de la France on 31st December 1932, were installed in the following countries and at the following places :–

CORSICA : Ajaccio, Bastia, Bonifacio.
MOROCCO : Casablanca, Mogador, Port Say.
SYRIA : Alexandretta, Beyrouth.
MADAGASCAR : Majunga, Tamatave.

When the fundamental levellings in course of execution in these countries have been completed, and the instruments have been linked to them, the observations taken will enable the relative heights of the mean sea levels in the different ports of a single country to be determined, and will thus serve as a basis on which to make a logical choice of a datum level of altitude O.