

France, have been heard ; but those from Annapolis (NNS), Washington, have not been heard. The International Bureau of the Hour, Paris, and the Naval Observatory, Washington, issue bulletins every month giving the exact times of their radio time-signals.

Longitude.—The reception of the Bordeaux time-signals at the Observatory will provide a means of determining the longitude of this Observatory by direct connection with Greenwich. The adopted longitude of this Observatory is that determined by the use of the electric cable some years ago, and it is now desirable that a direct check should be obtained on the former observations. The matter has received the serious attention of the Bureau des Longitudes, Paris, which in the course of its studies has drawn up two principal documents—in March, 1919, a report entitled “Determination d'un Réseau Mondial de Longitudes,” and in March, 1921, a second, entitled “Projet sommaire d'Établissement d'un nouveau Canevas des Positions géographiques des Points principaux de la Surface de la Terre.”

The proposal is to determine with the highest attainable accuracy the positions (latitudes and longitudes) of the following fundamental points : Greenwich, Paris, Algiers, Shanghai, San Francisco, and Wellington in 1923–24. It will be seen that Wellington is the only point selected in the Southern Hemisphere, and, being nearly at the antipodes of Greenwich, its position as a fundamental point is unique. It is expected that, in addition to the main investigations, much useful information will be gained on the mode of propagation of the radio-waves round the earth, and that possibly the influence of the earth's rotation on these waves may be detected.

Publications.—The following Observatory bulletins have been published :—

- No. 36, “The Spiral Nebulae,” by A. C. Gifford (July, 1921.)
- No. 37, “Ephemeris of a Comet,” by C. E. Adams.
- No. 38, “Brief Notes on the Theory of New Zealand Earthquakes,” by G. Hogben.
- No. 39, “Earthquake-origins in the South-west Pacific in 1910,” by G. Hogben.
- No. 40, “Notes on some Recent Earthquakes in New Zealand,” by G. Hogben.
- No. 41, “A Note on East Coast Earthquakes (N.Z.), 1914–17,” by G. Hogben.
- No. 42, “Earthquakes in New Zealand,” by C. E. Adams.
- No. 43, “On the Variations in Size of a Comet's Head,” by A. C. Gifford.
- No. 44, “Annual Report of Government Astronomer and Seismologist for 1921.”
- No. 45, “Wireless Time Signals,” by C. E. Adams.

As in past years, the Observatory is again indebted to individuals and to institutions for valuable gifts of publications. Some of these are presented in exchange for the Observatory bulletins.

Seismology.—The Milne Seismograph No. 20 has been in use during the year. The new Milne-Shaw seismograph, No. 13, was received in September, 1921. It is a much improved instrument, well designed and well made. It is the standard instrument recommended by the Seismological Committee of the British Association for the Advancement of Science. It is expected that this instrument will be installed at an early date.

WAR FUNDS.

During the year the policy of amalgamating the funds held by the various approved patriotic organizations throughout the Dominion with the incorporated provincial associations was followed, as a preliminary to the ultimate administration of war funds by the National Council, in accordance with the provisions of the War Funds Act. As a result, but 111 of the 983 organizations active at the time of the Armistice remain, thirty-two of which are now in course of being merged into the incorporated funds which number thirty-three.

At the close of the financial year ended 31st March, 1922, balances held by approved funds were as under :—

	£
Incorporated societies	1,048,735
Local administering societies	9,049
Collecting societies	6,645
Red Cross organizations	211,017
Social funds	3,567
Returned soldiers building funds	11,066
Memorial Park funds	3,335
Blinded soldiers funds	3,779
Navy relief funds	5,524
Maori organizations	2,807
Crippled Soldiers' and Sailors' Hostel	3,774
Total held by approved war funds	1,309,298
National War Funds Council	127,623
New Zealand War Relief Fund	661
Convalescent Home Account	1,280
War Expenses Account	1,437
New Zealand Comforts Fund Account	1,475
Sundry small accounts	86
High Commissioner	9,657
	£1,451,517