VESUVIUS, see NAPLES

VICTORIA. BRITISH COLUMBIA, CANADA

Meteorological Observatory, Gonzales Heights, seismologic service inaugurated (at present site) in April, 1914.
F. Napier Denison, Director.
Dominion Meteorological Service, Department of Marine.

Postal address: Meteorological Observatory, Victoria, B. C., Canada.

$\varphi = 48°24'50''$ N., $\lambda = 123°19'28''$ W., h = ca. 67.6 m.

Lithologic foundation: cement piers, free of the floor, through a "cushion" of sand (18 inches thick) to igneous rock.

Equipment: Milne seismograph, older type, E comp. $T_o = 18$ sec.
Wiechert vertical-motion seismograph, mass 80 kg., V = 70, $T_o = 5$ sec.
Milne-Shaw seismographs to be installed (before end of 1920).

Time service: time is determined by astronomical observations and kept to an accuracy of 0.1 sec. Hourly time eclipses are made on the Milne record by a watch, and minute time marks are made electromagnetically on the Wiechert record by a good contact pendulum clock which has a steady rate (1 sec. per day).

*VIENNA, AUSTRIA

Zentralanstalt für Meteorologie und Geodynamik, seismologic service inaugurated in 1905.
Prof. Dr. Exner, Director.

Postal address: Zentralanstalt für Meteorologie und Geodynamik, Wien, Österreich.

$\varphi = 48°14'53''$ N., $\lambda = 16°21'42''$ E., h = ca. 200 m.

Lithologic foundation: concrete piers in a cellar on alluvium.

Equipment: Wiechert inverted pendulum, mass 1,000 kg.
Wiechert vertical-motion seismograph, mass 1,300 kg.
Vicentini seismograph, three comp.

VIEQUES, PORTO RICO

Porto Rico Magnetic Observatory, seismologic service inaugurated in September, 1903.
Magnetic Observer, in charge, W. W. Merrymon, present incumbent.
U. S. Coast and Geodetic Survey.

Postal address: Porto Rico Magnetic Observatory, Vieques, Porto Rico, or U. S. Coast and Geodetic Survey, Washington, D. C.

$\varphi = 18°08'50''$ N., $\lambda = 65°26'50''$ W., h = 19.08 m.

Lithologic foundation: granitic rock overlaid with a few feet of heavy clay loam.

Equipment: Bosch-Omori seismograph, mass 10 kg., two comp. N and E.
Constants: V = 10, $T_{o_N} = 19$ sec., $T_{o_E} = 17$ sec., 15 mm. = 1 minute.

Time service: two box chronometers, corrections and rates determined by solar observations 3 or 4 times a month. The times of starting and stopping the record are noted daily by one of the chronometers and also the time of a mark made about the middle of a day's record. The seismograph clock, which makes a mark each minute on the smoked paper (1 minute = 15 mm.), is not of high grade, but when in good adjustment has a fairly uniform rate, so that the times of the minute marks are probably uncertain by not more than 5 sec.

*VLADIVOSTOK, RUSSIA

A seismologic station of the first class of the Russian service was projected here.

VOLCANO HOUSE, T. H.

Hawaiian Volcano Observatory, seismologic service inaugurated in August, 1912.
Dr. T. A. Jaggar, Volcanologist, in charge.
U. S. Weather Bureau.

Postal address: Hawaiian Volcano Observatory, Volcano House, T. H. or U. S. Weather Bureau, Washington, D. C.

$\varphi = 19°25'54.2''$ N., $\lambda = 155°15'39.2''$ W., h = 1214.6 m.

Lithologic foundation: concrete piers on basalt.

Equipment: Bosch-Omori horizontal pendulums (re-built at the station) both registering on one speeded drum (12 hour record), mass 100 kg., two comp. N and E, adjusted to register local shocks.
Constants: V = 116, $T_o = 7$ sec., aperiodic (oil-damping), $r/T_o^2 = 0.03$.
Romberg-Omori horizontal pendulum, optical registration, 24-hour record, viscous (oil) coupling, oil damping, silk-fibre mirror suspension, wire suspension of steady mass, adjusted for teleseismic registration.
Constants: V = 124, $T_o = 18.4$ sec., $K_o = 0.45$ (Cf. Bull. Seis. Soc. Am., IX, 4, 136).

A special vertical-component pendulum, optical registration, is set up but not finished.