

TABLE 2.—Instrumental seismological report, January, 1920—Con.

CANADA. Dominion Meteorological Service. Victoria—Continued.

1920.							
Jan. 14	P.....	15 02 25				4,120	Mexico?
	S.....	15 08 19					
	L.....	15 19 08					
	M.....	15 27 29			*400		
	F.....	17 03 53					
15	L.....	12 28 04					
	M.....	12 32 29			*100		
	F.....	12 39 52					
21	M.....	6 30 47			*50		
	F.....	6 42 41					
22	P.....	21 42 00					Probably Mexico?
	S.....	21 48 08				4,330	
	L.....	21 55 46					
	M.....	22 03 22			*500		
	F.....	22 43 29					
24	P.....	7 09 16				35	Probably under Strait of Georgia and northeast of Victoria.
	M.....	7 09 20			*2,000		
	F.....	7 24 01					
30	P.....	7 09 16	VERTI- CAL.	1		35	
	L.....	7 09 18		2			
	M.....	7 09 20		3	214		
	F.....	7 11 30					
	P.....	18 44 23					3,620?
30	S.....	18 49 48					
	L.....	18 54 42					
	M.....	19 12 30			*500		
	F.....	19 24 00					
	M.....	20 13 01			*400		
F.....	20 21 25						

\* Trace amplitude.

The following stations recorded no earthquakes during January, 1920:

ALASKA. U. S. C. & G. S. Magnetic Observatory, Sitka.

Reports for January, 1920, have not been received from the following stations:

Massachusetts. Harvard University, Cambridge.

New York. Canisius College, Buffalo; Cornell University, Ithaca; Fordham University, New York.

Canal Zone. Department of Operation and Maintenance, Panama Canal.

SEISMOLOGICAL DISPATCHES.<sup>1</sup>

México City, Mexico, January 3.—One of the earth shocks that are not uncommon here was felt at 10 o'clock to-night. The shock was more severe than that of December 17, but did not cause as much apprehension as the December seismic disturbance, which came on the date of a groundless prediction of a cataclysm from astronomical causes. Incomplete press reports indicate that the State of Vera Cruz suffered more than any other section, although seismic disturbances were felt throughout the entire Republic. Advices from Cordoba say that 30 dead have already been accounted for in the village of San Juan Coscomatepec, where many houses were destroyed. There are unconfirmed reports of a similar catastrophe in the village of Huatusco. At Jalapa, farther north, 50 victims of the earthquake have been counted, including numerous dead. Lack of communication with the other small towns and villages in the theater of disturbance makes even approximate esti-

mates of the casualties impossible. The earthquake caused great alarm in the large cities. Marine disturbances have occurred off Vera Cruz city, and there were some casualties there, although the number is not known, with considerable destruction of property. Late reports received here say that the death list in San Juan Coscomatepec was augmented as a result of the collapse of the church tower, which crashed in upon the crowds gathered inside the edifice to pray, following the first shock. Vera Cruz city is without water, while the lighting systems of Orizaba and Jalapa are out of commission. The villages of Teocelo and Couztlan, in the State of Vera Cruz, were virtually destroyed by the earthquake last night, and heavy casualties have resulted, according to late press reports received here.—(A)

Mexico City, Mexico, January 5.—Reports received up to 11 o'clock last night indicated the center of the seismic convulsion was in the neighborhood of Mount Orizaba, a volcano situated about 70 miles west of Vera Cruz on the line between the States of Vera Cruz and Puebla. It was in this neighborhood that the most serious damage was done. Teocelo, a village 35 miles northeast of the volcano, has been virtually destroyed, and a similar fate befell Couztlan, a small hamlet in that neighborhood. Wires have been torn down by the violence of the tremor, and only fragmentary reports have reached this city, but it is stated that there were many casualties in both towns. Many houses and churches in Jalapa, a city 50 miles northwest of Vera Cruz, were damaged, while reports from Orizaba, a city 10 miles south of the volcano, state that several business blocks and churches near the center of the town were cracked. In the suburbs of Orizaba the shock was very severe, many persons being reported killed beneath their wrecked houses. Fifteen shocks were experienced at Cordoba, a city 10 miles east of Orizaba, where 11 were distinctly felt. First reports received here stated that the tremor centered at Acambaro, a town near Toluca, about 25 miles southwest of Mexico City, but more recent advices state the shocks were not severe there.—(A)

Mexico City, Mexico, January 8.—A violent volcanic eruption has been caused by the recent earthquake near Cordoba, where Cero de San Miguel, a small and apparently extinct volcano, has been burst in twain. The new crater is throwing out smoke, ashes, and flame, while lava is flooding the near-by territory in a stream more than 200 yards wide, resulting in not less than 200 deaths.—(A)

Mexico City, Mexico, January 13.—San Joaquin, a village of 3,000 inhabitants in the Jalapa district, State of Vera Cruz, was destroyed this morning by an earthquake, according to advices given out by the department of agriculture, which gave no details as to casualties. Shocks were detected at the astronomical observatory near this city at 5:18 o'clock this morning.—(A)

Mexico City, Mexico, January 22.—Strong earthquake shocks were felt in the city of Vera Cruz from 3 to 5 o'clock this morning. There were no casualties, although some residences were damaged. Reports from Vera Cruz state the tremors demolished at Couztlan all structures which were not destroyed in the earthquake of January 6, while shocks lasting 20 minutes caused further damage at Salmoral and San Francisco de las Penas.—(A)

<sup>1</sup> Reported by the organization indicated and collected by the seismological station at Georgetown University, Washington, D. C. [(A) indicates Associated Press.]

Paris, January 23.—Earth shocks along the coast of the Sea of Marmora are reported in a Havas dispatch from Constantinople under date of January 19.—(A)

Seattle, Wash., January 24.—Three distinct earthquake shocks were felt here at 11:08 o'clock last night. The tremors extended through Washington and British Columbia. At Bellingham, Wash., windows were broken and brick walls cracked. At Vancouver, B. C., people fled from buildings in alarm, but the only damage reported was to telephone lines. Victoria, B. C., and numerous towns in northwest Washington felt the quake. No damage was reported in Seattle.

Madrid, Spain, January 25.—The observatory at Toledo has issued a communique stating that at 5 o'clock Saturday afternoon (Jan. 24) the instruments at the observatory recorded a seismic disturbance at an estimated distance of approximately 275 miles.—(A)

Buenos Aires, Argentina, February 2.—Dispatches from the State of Minas Geraes, Brazil, report that an earthquake Sunday shook down a number of houses in the country districts, creating great panic among the inhabitants. The dispatches say that in intensity the earth shock is without precedent in that region.—(A)

LATE REPORTS (INSTRUMENTAL).

KANSAS. University of Kansas, Lawrence.

1919.		H. m. s.	Sec.	$\mu$	$\mu$	Km.	
June 29	eP <sub>N</sub> ...	23 19 38			*500		
	eS <sub>N</sub> ? ..	23 24 23			*2,000		
	eL <sub>N</sub> ...	23 29 00			*2,000		
	F <sub>N</sub> ...	23 59					
July 6	eP <sub>N</sub> ...	7 09 24			*1,000		S and L not distinct.
	eP <sub>N</sub> ...	7 09 25		*300			
	S <sub>N</sub> ? ..	7 11 41?					
	eL <sub>N</sub> ? ..	7 13 27			*1,500		
	L <sub>N</sub> ? ..	7 13 30		*2,000			
	F <sub>N</sub> ...	7 30 17					
	F <sub>N</sub> ? ..	7 20 40					
9	eP <sub>N</sub> ...	19 24 41				25 30	
	eP <sub>N</sub> ...	19 24 42					
	eS <sub>N</sub> ...	19 28 48					
	eS <sub>N</sub> ...	19 28 54					
	L <sub>N</sub> ...	19 31 57					
	L <sub>N</sub> ...	19 31 59					
	M <sub>N</sub> ...	19 32 15			*3,600		
	M <sub>N</sub> ...	19 32 15		*1,900			
	F <sub>N</sub> ...	19 56					
	F <sub>N</sub> ...	20 00					
22	eP <sub>N</sub> ...	22 03 09					Extremely minute record; phases obscure.
	eP <sub>N</sub> ...	22 03 11					
	L <sub>N</sub> ? ..	22 07 42?			*500		
	L <sub>N</sub> ? ..	22 07 41?		*400			
	F <sub>N</sub> ...	22 17?					
Sept. 15	eP <sub>N</sub> ...	17 34 51					N-S component shows only L.
	eL <sub>N</sub> ...	17 40 49					
	L <sub>N</sub> ? ..	17 41 03			*1,500		
	M <sub>N</sub> ...	17 41 28		*4,000			
	F <sub>N</sub> ...	17 47?					
	F <sub>N</sub> ...	17 49					
Dec. 18	eP <sub>N</sub> ...	1 25 02					No record by N-S component.
	eL <sub>N</sub> ...	1 31 52		*900			
	F <sub>N</sub> ...	1 38 10					

\* Trace amplitude.