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# DEPARTMENT OF THE INTERIOR CANADA

HON. THOMAS G. MURPHY, Minister

H. H. ROWATT, Deputy Minister

### **PUBLICATIONS**

OF THE

# Dominion Observatory OTTAWA

R. MELDRUM STEWART, Director

Vol. X

# Bibliography of Seismology

No. 13

JANUARY, FEBRUARY, MARCH, 1932

BY

ERNEST A. HODGSON

OTTAWA
F. A. ACLAND
PRINTER TO THE KING'S MOST EXCELLENT MAJESTY
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With this issue, the Bibliography enters its seventh year of publication, a three-year series in the Bulletin of the Seismological Society of America and a three-year series in the Publications of the Dominion Observatory having already appeared. The co-operation of seismologists in many parts of the world has slowly but steadily increased. The editor wishes to voice his appreciation of this continued co-operation and to express the hope that it may continue to be extended. For the convenience of those willing to collaborate, report forms have been prepared which will be sent on request. These forms also tend to ensure that reports will meet the requirements of this publication as to completeness of detail and absence of abbreviations. Correspondence regarding the Bibliography should be addressed to the editor at the Dominion Observatory, Ottawa, Canada.

- 1201. Авканам, Henri, "Peut-on maintenir une salle à température constante?" Comptes rendus, 193, No. 26, 1402-1404, Paris, December 28, 1931.
- 1202. Adams, L. H. and Williamson, E. D., "The Compressibility of Minerals and Rocks at High Pressures," Journal of the Franklin Institute, 195, 475-529, Philadelphia, April, 1923.
- 1203. AGAMENNONE, G., "I fenomeni sismici al Vesuvio dal 1892 al 1906," Bolletino della Società Sismologica Italiana, 23, 64 pages in reprint, Rome, 1922.
- 1204. Agamennone, G., "Il recente periodo sismico di Rivodutri (Rieti)," Terra Sabina, 8 pages in reprint, Rome, December, 1924.
- 1205. AGAMENNONE, G., "Frane, sprofondamenti e scosse sul Vesuvio dal 1906 al 1917," Bollettino della Società Sismologica Italiana, 29, No. 5, 141-164, 1 illustration, Rome, 1931.
- 1206. American Askania Corporation, "Three Component Vibrograph," Instruments, 5, No. 1, page 21, 1 figure, Pittsburgh, January, 1932.
- 1207. Arnot, Walther, "Der Kreis Landeshut als Schauplatz von Erdbeben," Landeshuter Tageblatt, Supplement 1 to No. 289, December 8, 1928.

In addition to reports of general Silesian earthquakes since 1011, together with literature dealing with them, the author makes special reference to recorded earthquakes which occurred in the vicinity of Landeshut from September 15, 1590 to January 10, 1901.

- 1208. Atlas Powder Company, "Geophysical Prospecting with Explosives and the Seismograph." A pamphlet of 40 pages, 8 plates, Wilmington, 1931.
- 1209. BEERS, Roland F., "Trends in Geophysical Prospecting with Explosives," The Explosives Engineer, 9, No. 8, 288-289, 2 illustrations, Wilmington, August, 1931.

1210. Benioff, Hugo, "The Operating Frequency of Regenerative Oscillatory Systems," Proceedings of the Institute of Radio Engineers, 19, No. 7, 1274-1277, July, 1931.

The author's summary reads: "The operating frequency of regenerative oscillatory systems is quantitatively derived in terms of the natural frequency, the damping constant, and the phase of the driving force. As an example the results are used to calculate the change in rate of a pendulum clock due to a given variation in the phase of the driving impulses. Applications to other types of systems are briefly indicated."

- 1211. BLINK, H., "Aardbevingen en seebevingen" (Earthquakes and Seaquakes), Vragen van den dag, 46, No. 3, 186-202, 1 figure, Leiden, March, 1931.

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- 1212. Bodle, Ralph R., "Earthquake Notes." Published by the Eastern Section of the Seismological Society of America, 3, No. 3, 14 pages, 4 text figures, Washington, December, 1931.

In addition to current notes of interest and the report on earthquake epicenters, this issue contains a preliminary report on the Southwest Texas Earthquake of August 16, 1931, prepared by the Coast and Geodetic Survey, Washington; another on the Western Ohio Earthquake of September 20, 1931, prepared by the same organization; a report on the Travel Times for the Ohio Earthquake, prepared by the Rev. J. S. Joliat, S.J.; and an account of Seismology at the University of California, by Dr. Perry Byerly.

- 1213. Brindley, G. W., "On the Turbulent and Streamline Damping of a Pendulum in Viscous Media," *Philosophical Magazine*, 12, No. 77, 522-534, 2 figures, 2 tables, London, August, 1931.
- 1214. Brockamp, Bernhard, "Seismiche Beobachtungen bei Steinbruchsprengungen," Zeitschrift für Geophysik, 7, Heft 7-8, 295-317, Göttingen, 1931.
- 1215. Brown, J. Coggin, Leicester, P., and Chhibber, H. L., "Note on the Long Distance Wave Speeds of the Pegu Earthquake of May 5th, 1930," Records of the Geological Survey of India, 65, Part 2, 1931.

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- 1216. BYERLY, Perry, "Seismology at the University of California," Earthquake Notes, 3, No. 3, 9-10, Washington, December, 1931.
- —— Синіввен, Н. L., Brown, J. Coggin, and Leicester, P., "Note on the Long Distance Wave Speeds of the Pegu Earthquake of May 5th, 1930." See No. 1215 of this list.
- 1217. DE LURY, Justin S., "Experiments with Model Glaciers," Journal of Geology, 34, No. 3, 266-274, Chicago, April-May, 1926.
- 1218. DE LURY, Justin S., "The Auto-traction Hypothesis of Crustal Evolution," Contributions from the Department of Geology and Mineralogy (1931), University of Manitoba, 21 pages, Winnipeg, 1931.
- 1219. Dennis, Clifford E., "Experiments on Planetary Deformation of Earth," Pan-American Geologist, 55, 241-256, 5 illustrations, Des Moines, May, 1931; and 56, 47-58, Des Moines, August, 1931.

The paper is an experimental study of the effects on the earth's crust of the forces due to the rotation of the earth.

1220. Dore, P., "Indirizzi antichi e recenti nello studio della teoria della propagazione delle onde sismiche," Bollettino del Comitato Nazionale Italiano per la Geodesia e la Geofisica, Second Series, 1, No. 9-10-11, 137-139, Pisa, September-October-November, 1931.

This is the second section of the paper, the first section having been reported as No. 1111 of these lists.

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A review of this book, with the title, "Earthquakes, 'A Classic of Science'," appears in Science News Letter, No. 554, 20, 330-331, 1 illustration, Washington, November 21,

1222. Ertel, Hans, "Zur Analyse der Polfluchtkraft," Gerlands Beiträge zur Geophysik, 32, Köppen-Band I, 38-46, 3 illustrations, Leipzig, 1931.

The author's summary reads: "A new formula for the equatorward forces of Wegener-Köppen's Theory is derived:

$$K_{\varphi} = 2 \ m \ \omega^2 \ \delta n \sin \left( 2\varphi \right) \ \left\{ 1 \ - \frac{3 \ \rho}{4 \ \rho m} \right\}$$
 The different result of Epstein:

$$K_{\varphi} = \frac{3}{2} m \, \omega^2 \, \delta n \, \sin \, (2\varphi)$$

can be explained by a false treatment of the gravitation potential."

1223. Escher, B. G., "De gedaanteveranderingen onser aarde: algemeene geologie," Wereldbibliothek, x + 430 pages. Price 5.25 guilders. Amsterdam, 1916, 1919, and 1927 (three editions).

Chapter XII of the third edition deals with Aardbevingen, Aardbevingsleer of Seismologie (Earthquakes, Seismology): pages 286-312, figures 176-189. J.F.S.

1224. Faber, F. J., "Geologie van Nederland," Wereldbibliothek, xiv + 468 pages. Price 6.25 guilders. Amsterdam, 1926.

Chapter XV: Aardbevingen (Earthquakes), pages 195-198, 2 seismograms.

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- 1225. FREEMAN, John R., "Earthquake Engineering," The Technology Review, 34, No. 3, 120-122, 148, 3 illustrations, Cambridge, December, 1931.
- 1226. FRIEDLAENDER, Immanuel, "Vulkanologie und Geophysik," Gerlands Beiträge zur Geophysik, 32, Köppen-Band I, 113-133, Leipzig, 1931.
- 1227. FUKUTOMI, Takaharu, "On the Vibration of the Takeda Building," Bulletin of the Earthquake Research Institute, 9, Part 4, 485-507, 9 figures, 6 tables, 2 plates, Tokyo, December, 1931.

The paper is in Japanese with a lengthy abstract in English. The captions for the illustrations and the entries in the tables are in English as well as Japanese.

- 1228. Gabriel, V. Gavrilovich, "Some Experience in Seismic Prospecting," Gerlands Beiträge zur Geophysik, Ergänzungshefte für angewandte Geophysik, 2, Heft 1, 122-130, 2 tables, 1 plate, Leipzig, 1931.
- --- Gengler, Th., Meisser, O., and Martin, H., "Beobachtungsverfahren und Apparaturen für sehr genaue relative Schwere- und Zeitmessungen." See No. 1259 of this list.

- 1229. Goldstone, F., "Synthetic Earthquakes Find Oil," Shell-Globe (Organ of the Shell Petro-leum Corporation), 1, No. 2, 4-5, 7 illustrations, February, 1931.
- 1230. Gregory, J. W., "Die Oszillationstheorie," Zeitschrift der Deutschen Geologishen Gesellschaft, 83, Heft 5, 299-301, 1931.

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- Guttenstein, H., "Emploi d'un nouveau code international pour l'émission des télégrammes séismologiques." See No. 1275 of this list.
- 1231. Hart, G. E. F., "Interesting Oceanographic Phenomena," The Australian Surveyor, 3, No. 4, 192-198, Sydney, December, 1931.

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- 1232. Hecker, O., "Tätigkeitsbericht der Reichsanstalt für Erdbebenforschung für die Zeit vom April 1930 bis März 1931," Veröffentlichungen der Reichsanstalt für Erdbebenforschung in Jena, Heft 15, 12 pages, Jena, 1931.
- 1233. Hill, A. G., "On the Torsional Oscillations of Iron Wire," Philosophical Magazine, 12, No. 77, 566-572, 1 figure, 3 tables, London, August, 1931.
- 1234. Hoare, F. E., "On the Damping of a Pendulum by Viscous Media," Philosophical Magazine, 12, No. 76, 396-404, 3 figures, 3 tables, London, August, 1931.
- 1235. HOPE-JONES, F., "Electric Clocks," N.A.G. Press, xv + 261 pages. Price 12s. 6d. London, 1931.

  A review by C. V. Boys appears on pages 651-654 of Nature, No. 3233, 128, London October 17, 1931.
- 1236. IMAMURA, Akitune, "The World-shaking Earthquake of August 10, 1931, as Observed with a Three-minute Pendulum," Japanese Journal of Astronomy and Geophysics, 9, No. 1, 73-75, 1 plate, Tokyo, 1931.

  A.I.
- 1237. Imbo, Giuseppe, "Agitazione del mare e microsismica a Catania," Bolettino della Società Sismologica Italiana, 29, No. 5, 165-169, Rome, 1931.
- 1238. IMRAY, J. F., JENKINS, H. D., and ROSSER, W. H., "The Seaman's Guide to the Navigation of the Atlantic Ocean (Atlantic Ocean Pilot)," Imray, Laurie, Novie, and Wilson, Ltd. London, 1884, 1907 (two editions).
  - On pages 963-969 are tables giving the positions of ships which felt earthquakes or noted volcanic activity.

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- 1239. Inglada Ors, Vicente, "Neuvas fôrmulas para abreviar el câlculo de la profundidad aproximada del foco sismico por el método de Kövesligethy, y su aplicación a algunos temblores de tierra," Talleres del Instituto Geográfico y Estadistico, 61 pages, 1 map, bibliography, Madrid, 1921.
- 1240. Inglada Ors, Vicente, "La corteza terrestre," Talleres del Instituto Geographico, 94 pages, 5 figures, bibliography, Madrid, 1923.
- 1241. Inglada Ors, Vicente, "Orientaciones de la geodesia moderna," Talleres del Deposito de la Guerra, 20 pages, bibliography, Madrid, 1927.

1242. Inglada Ors, Vicente, "Discurso leido en el acto de su recepción por el ilustrisimo Senor D. Vicente Inglada Ors y Contestación de excelentisimo Senor D. Jose Maria de Madariaga," Talleres del Instituto Geográphico y Cadastral, 65 pages, Madrid, 1929.

The above publication reports the reception of Dr. Inglada as a member of Real Academia de Ciencias Exactas, Físicas y Naturales, of Madrid. It quotes the address given by him on his reception and that by Dr. De Madariaga in receiving him. A list of the publications and articles by Dr. Inglada is appended.

- 1243. Inglada Ors, Vicente, "Contribución al estudio del sismo sentido en Melilla el 9 de julio de 1923. Cálculo de las coordenadas focales y de la hora de la sacudida en el foco y en el epicentro," Revista de la Real Academia de Ciencias Exactas, Físicas y Naturales, de Madrid, 25, No. 10, 1930.
- 1244. INGLADA ORS, Vicente, "La labor sismologica de la 4ª. Asamblea General de la Union Internacional de Geodesia y Geofisica." Reprint from La Revista de la Academia de Ciencias de Madrid, Second Series, 28, No. 12, 46 pages, Madrid, 1931. R.R.B.
- 1245. Ізнімото, Mishio, "Caractéristiques des ondes séismiques d'après les enregistrements accélérométriques," Bulletin of the Earthquake Research Institute, 9, Part 4, 473-484, 11 figures, 2 tables, Tokyo, December, 1931.
- 1246. Jeffreys, Harold, "On the Mechanics of Mountains," Geological Magazine, No. 808, 68, 435-442, 4 text figures, London, October, 1931.

The summary reads: "It appears that the geophysical approach to the problems of crustal dynamics leads to a theory of mountain formation that covers the main features of the formation of nappes and is in general agreement with other geological evidence. The chief novelty is in the recognition of the importance of the spreading under their own weight of the rocks uplifted as a result of crustal shortening."

- JENKINS, H. D., ROSSER, W. H., and IMRAY, J. F., "The Seaman's Guide to the Navigation of the Atlantic Ocean." See No. 1238 of this list.
- 1247. Joliat, Joseph S., S.J., "The Ohio Earthquake of September 20, 1931," Earthquake Notes, 3, No. 3, 4-5, 1 diagram, 1 table, Washington, December, 1931.

See also No. 1212 of this list, for a report by the United States Coast and Geodetic Survey on this same earthquake.

1248. Kawasumi, Hirosi, "On the Velocity of the P-wave, with Special Reference to the Discontinuity Recently Suggested by Dr. H. Jeffreys," Japanese Journal of Astronomy and Geophysics, 9, No. 1, 15-22, Tokyo, 1931.

The author's abstract reads: "The velocity of the P-wave in the substratum up to the Wiechert discontinuity was re-estimated by assuming the Rudski-Wiechert formula  $v=a-br^2$ , using the mean travel-times of 85 earthquakes recently obtained by Dr. H. Jeffreys. The depth of the Wiechert discontinuity was also determined. The results coincided within almost one per cent with the previous determination of the author from a near earthquake, and the general accuracy has increased. This good coincidence and the smallness of the residuals show that the velocity formula above determined is sufficient for the present so far as it concerns the accuracy of determining the travel-time. The depth of the Wiechert discontinuity came out very near that of previous determination. Some light has been thrown on the smallness of the focal depth of large earthquakes of normal origins."

1249. Kindle, E. M., "Sea-bottom Samples from the Cabot Strait Earthquake Zone," Bulleun of the Geological Society of America, 42, 557-574, 2 figures, New York, 1931.

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- 1250. Kiro T., "Liste des tremblements de terre ressentis pendant les années 1917-1927," Tremblements de terre en Bulgarie, Nos. 18-28, 164 pages, Central Meteorological Institute, Sofia, 1931.
- 1251. Kunitomi, S. I., "Note on the North Tango Earthquake of March 7, 1927," Geophysical Magazine, 2, No. 1, 65-89, 13 text figures, Tokyo, March, 1929.
- 1252. Landsberg, H., "Der Erdbebenschwarm von Gross-Gerau, 1869-1871," Gerlands Beiträge zur Geophysik, 34, 367-392, 5 tables, 10 figures, Leipzig, 1931.

The author's English summary reads: "Based on unpublished diaries the earthquakes of Gross-Gerau are investigated. There happened, during the time of October 1869 to February 1871, 2,067 shocks, 190 of which were of intensity IV Mercalli-Sieberg, or above; 92 shocks spread over a greater area. The spread of the quakes in connection with the tectonic structure of the country is discussed. The statistic investigation shows in the diurnal variation a clear maximum during the night. In comparison other distribution curves of frequency from the Mayence district and a similar curve from New Zealand are given. Connections with meteorological elements and lunar phases in the distribution of frequency are discussed."

- —— LA Rue, Wilton W. and McCollum, Burton, "Utilization of Existing Wells in Seismograph Work." See No. 1257 of this list.
- 1253. Lee, Frederick W., "Geophysical Abstracts," United States Bureau of Mines, No. 31 (Circular 6575), 273-303, November; No. 32 (Circular 6583), 304-330, December, Washington, 1931.

  F.W.L.
- 1254. Lehr, Ernst, "Schwingungstechnik, ein Handbuch für Ingenieure," Julius Springer, 295 pages, 187 illustrations. Price RM 24 unbound, or RM 25.50 bound. Berlin, 1930.
- —— Leicester, P., Chhibber, H. L., and Brown, J. Coggin, "Note on the Long Distance Wave Speeds of the Pegu Earthquake of May 5th, 1930." See No. 1215 of this list.
- 1255. Loos, P. A., "Über die Beziehungen zwischen dem katastrophalen Erdbeben von San Rafael vom 30. Mai 1929 einerseits und den zerstörenden Beben vom 14. April 1927 und 1.-2. December 1928 andererseits," Gerlands Beiträge zur Geophysik, 32, Köppen-Band I, 208-222, 1 map, Leipzig, 1931.
- 1256. Lorié, J., "Aardbevingen in Nederland (Earthquakes in the Netherlands)," Handelingen van het negende Nederlandsch Natuur- en Geneeskundig Congres, 9, 409-416, Haarlem, 1903.

A historical sketch, covering the period 217-1883.

- Martin, H., Gengler, Th., and Meisser, O., "Beobachtungsverfahren und Apparaturen für sehr genaue relative Schwere- und Zeitmessungen." See No. 1259 of this list.
- 1257. McCollum, Burton and La Rue, Wilton W., "Utilization of Existing Wells in Seismograph Work," Bulletin of the American Association of Petroleum Geologists, 15, No. 12, 1409-1417, 6 figures, Tulsa, December, 1931.

1258. McDermott, Eugene, "Application of Seismography to Geological Problems," Bulletin of the American Association of Petroleum Geologists, 15, No. 11, 1311-1334, 12 illustrations, discussion, Tulsa, November, 1931.

The author's abstract reads: "This paper contains an outline of the principles and methods of applied seismography. The science of seismography is predicated on the elastic properties of earth materials. The refraction and reflection of elastic waves and the conditions governing these are considered. These two phenomena are closely related. The application of the seismic method to salt-dome exploration on the Gulf Coast and the development of the refraction method for general structure determination is followed by an explanation of the reflection method. Several actual reflection records indicate the method of identifying reflections."

- 1259. Meisser, O., Martin, H., and Gengler, Th., "Beobachtungsverfahren und Apparaturen für sehr genaue relative Schwere- und Zeitmessungen," Veröffentlichungen der Reichsanstalt für Erdbebenforschung in Jena, Heft 17, 177 pages, 15 figures, bibliography. Reprinted from Gerlands Beiträge zur Geophysik, Ergänzungshefte für Angewandte Geophysik, 2, Heft 2-3, Leipzig, 1931.
- 1260. MIYABE, Naomi, "Blocks in the Earth's Crust and Their Movements, Part II (Postseismic Crustal Movements in Boso Peninsula)," Bulletin of the Earthquake Research Institute, 9, Part 4, 407-422, 6 figures, 3 tables, Tokyo, December, 1931.
- 1261. Моновоvičić, A., "Neue Phasen im Anfange des Bildes eines Bebens," Bulletin des Travaux de la Classe des Sciences mathematiques et naturelles de l'Académie des Sciences et des Arts des Slaves du Sud de Zagreb (Agram, Croatie), No. 4, 65-86, Zagreb, 1915.
- 1262. Моновочіčіć, А., "Hodographen der longitudinalen und transversalen Wellen eines Bebens (undae primae et undae secundae) I Hodographen," Rad, Académie des Sciences et des Arts des Slaves du Sud de Zagreb, 226, 16 pages in reprint (German text), Zagreb, 1922.
- 1263. Nasu, N., "Comparative Studies of Earthquake Motions Above-ground and in a Tunnel (Part I)," Bulletin of the Earthquake Research Institute, 9, Part 4, 454-472, 9 figures, 4 tables, 5 plates, Tokyo, December, 1931.
- 1264. Nasu, N. and Yasuda, Ch., "Seismometrical Report, April 1-June 30, 1931," Bulletin of the Earthquake Research Institute, 9, Part 4, 509-513, 2 figures, 5 plates, Tokyo, December, 1931.
- 1265. NAVARRO NEUMANN, Manuel Ma. S., S.J., "Notas sismolôgicas del año 1930," *Ibérica*, No. 878, 14 pages in reprint, 14 illustrations, Barcelona, May 16, 1931.
- 1266. NAVARRO NEUMANN, Manuel Ma. S., S.J., "Registro de una turbonada por meteorógrafos y sismógrafos," *Ibérica*, No. 895, 184-187, 3 illustrations, Barcelona, September 26, 1931.
- 1267. Navarro Neumann, Manuel Ma. S., S.J., "La previsión de las olas anormales en las costas de nuestras Posesiones y Protectorado de Marruecos," *Ibérica*, No. 900, 3 pages in reprint, 4 illustrations, Barcelona October 31, 1931.
- 1268. Neumann, Frank, "Principles Underlying the Interpretation of Seismograms." Mimeographed pamphlet, 31 pages, 5 plates, distributed to those interested by the United States Coast and Geodetic Survey, Washington, 1931.

- 1269. Oddone, Emilio, "Sul terremoto della provincia di Ancona e Pesaro avvenuto addi 30 ottobre 1930," Bolletino della Società Sismologica Italiana, 29, No. 5, 115-140, 3 illustrations, Rome, 1931.
- 1270. Oxford University, "The International Seismological Summary for 1927, October, November, December," 365-472, Oxford, May 15, 1931.
- 1271. Pastor, Alfonso Rey, "El sismo de la Rioja baja del 18 de febrero de 1929," Boletin de la Sociedad Española de Historia Natural, 31, 467-474, Madrid, 1931. w.w.d.
- 1272. Pastor, Alfonso Rey, "Nuevas orientaciones de la sismologia pura," *Ibérica*, No. 891, 9 pages in reprint, Barcelona, August, 1931. w.w.d.
- 1273. Reinhold, Th., "Over recente bodembewegingen en verschuivingen in Suid-Limburg (On recent movements of the ground and on faults in Southern Limburg)," Tijdschrift van het Koninklijk Nederlandsch Aardrijkskundig Genootschap, Second Series, 37, 176-180, 1 figure, Leiden, 1920.

The publication deals with an earthquake which occurred on May 27, 1918, on a fault of at least 1.5 m. in the region between Sittard and the river Meuse.

J.F.S.

1274. Repetti, W. C., S.J., "Philippine Earthquake Epicenters (1920 to 1929), North of Latitude 14° 30'," Seismological Bulletin, Manila Observatory, 71-85, Manila, 1930.

The author's summary reads: "Three hundred earthquakes are classified in four groups, according to accuracy and agreement of data. Four lines of marine epicenters are found off the west and north coasts of Luzon. In general, they are located on the eastern, the steeper slopes of the Deeps. The Central Cordillera and the Zambales Mountains show considerable seismic activity. As far as conclusions can be drawn from the material of this investigation, we may say that the western half of Luzon, north of Manila, is seismically active. In relation to inhabited localities the most affected were the coast towns from Vigan to Laong, and Baguio in the Central Cordillera."

- ROSSER, W. H., IMRAY, J. F., and JENKINS, H. D., "The Seaman's Guide to the Navigation of the Atlantic Ocean." See No. 1238 of this list.
- 1275. Rothé, E., "Emploi d'un nouveau code international pour l'émission des télégrammes séismologiques," Section of Seismology, International Geodetic and Geophysical Union, Special publication, 25 pages, Strasbourg, 1931.

The report is presented in English and in French, the English translation having been prepared by H. Guttenstein.

- 1276. ROYAL SOCIETY, "Herbert Hall Turner—1861-1930," Proceedings of the Royal Society, Series A, 133, No. A822, i-ix, with portrait, London, October 1, 1931.

  The obituary notice is signed R.A.S.
- 1277. Sabin-Gus, B., "Some Considerations Regarding the Construction of Isochrones of Emergences of Seismic Waves in Surveying Intrusive Deposits (Stockwork)" (In Russian), Bulletin of the Geological and Prospecting Service of the U.S.S.R., 50, No. 14, 173-193, Leningrad, 1931.

A review by A. Ayvazoglou appears on pages 311-312 of Geophysical Abstracts No. 32. See No. 1253 of this list.

- 1278. Science News Letter, "Earthquakes and Volcanoes to be studied at Bottom of Sea,"

  Science News Letter, No. 564, 21, 77, 1 illustration, Washington, January 30, 1932.

  An announcement of gravity investigations to be undertaken in the vicinity of the

  Behave islands by Dr. E. A. Vening Mainesz of Holland and Professor Richard M.
  - Bahama islands by Dr. F. A. Vening Meinesz of Holland and Professor Richard M. Field of Princeton University.
- 1279. Sezawa, Katsutada, "The Plastico-elastic Deformation of a Semi-infinite Solid Body Due to an Internal Force," Bulletin of the Earthquake Research Institute, 9, Part 4, 398-406, 2 figures, Tokyo, December, 1931.
- 1280. Somville, O., "Nouvelles observations sur l'onde *PL*," Gerlands Beiträge zur Geophysik, 33, Köppen-Band II, 31-34, 5 figures, Leipzig, 1931.
- 1281. Suyehiro, K., "The Results of Precise Levellings in Tokyo and the Environs," Bulletin of the Earthquake Research Institute, 9, Part 4, page 508, 1 plate, Tokyo, December, 1931.
- 1282. Takahasi, Ryutaro, "Results of the Precise Levellings Executed in the Tanna Railway Tunnel and the Movement along the Slickenside That Appeared in the Tunnel," Bulletin of the Earthquake Research Institute, 9, Part 4, 435-453, 10 figures, 2 tables, Tokyo, December, 1931.
- 1283. Terada, Torahiko, "Relation between Frequencies of Earthquake and Thunderstorm," Proceedings of the Imperial Academy, 7, No. 9, 341-343, 3 figures, Tokyo, November, 1931.
- 1284. Terada, Torahiko, "Earthquake and Thunderstorm," Bulletin of the Earthquake Research Institute, 9, Part 4, 387-397, 3 figures, Tokyo, December, 1931.
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