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BY

W. G. MILNE

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# Bibliography of Seismology

July to December, 1947

6505. ADAMS, Leason H., "Some Unsolved Problems of Geophysics", *Transactions, American Geophysical Union*, Vol. 28, No. 5, 673-679, Washington, Oct., 1947.
6506. AECCKERLEIN, G., "Die Erforschung des Erdinnern durch Emanationsmessung", *Physikalische Zeitschrift*, Vol. 38, No. 10, 362-370, 2 fig., Berlin, 1937.  
The above paper is listed as No. 8830, p. 329, of *Bibliographie Géodésique Internationale*, reported as No. 6671 of this list.
6507. ALCOCK, E. D., and WATERS, K. H., "A Shooting Method for Areas of Difficult Drilling", *Geophysics*, Vol. 12, No. 4, 576-589, 10 fig., bib., Menasha, Oct., 1947.
- ATANASOFF, J. V., SNAVELY, B. L., BROWN, John, BEECHER, D. W., KOLSRUD, E. R., LESLIE, C. B., and ROBINSON, A. Z., "A New Horizontal Component Seismograph Used for Project Helgoland" (abstract), *Earthquake Notes*. See No. 6654 of this list.
- BAILEY, Ralph, HODGSON, E. A., and LANGFORD, George B., "Report on Laboratory Tests of Microseismic Method for Detecting Critical Rock Pressures". See No. 6596 of this list.
6508. BARRIO, D. Martinez, "Consideraciones sobre la historia sismica de la Republica Dominicana", *Publications, Universidad Santo Domingo*, Vol. 44, 38 pp., Santo Domingo, 1946.
6509. BARTON, Donald C., "Review of Studies of Geophysical Methods, 1928-1929, by L. Gilchrist, J. B. Mawdsley and Others", *Economic Geology*, Vol. 27, No. 3, p. 309, Urbana, 1932.  
The above paper is listed as No. 5098, p. 353, of *Bibliographie Géodésique Internationale*, reported as No. 6671 of this list.
6510. BARTON, Donald C., and BUHLER SUMMERS, E., "Review of the Geophysical Methods of Prospecting", *Geographical Review*, Vol. 20, No. 2, 288-300, New York, 1930.  
The above paper is listed as No. 5097, p. 352, of *Bibliographie Géodésique Internationale*, reported as No. 6671 of this list.
6511. BARTON, Donald C., and HICKEY, Maude, "The Continental Margin of the Texas-Louisiana Gulf Coast", *Transactions, American Geophysical Union*, 14th Annual Meeting, 16-20, 4 fig., Washington, 1933.  
The above paper is listed as No. 5099, p. 353, of *Bibliographie Géodésique Internationale*, reported as No. 6671 of this list.
- BEECHER, D. W., KOLSRUD, E. R., LESLIE, C. B., ROBINSON, A. Z., ATANASOFF, J. V., SNAVELY, B. L., and BROWN, John, "A New Horizontal Component Seismograph Used for Project Helgoland" (abstract), *Earthquake Notes*. See No. 6654 of this list.
6512. BELJ, K. Hilding, "Earthquakes, June to September, 1947", *Transactions, American Geophysical Union*, Vol. 28, No. 5, p. 814, 1 tab., Washington, Oct., 1947.
6513. BELLAMY, Ethel F., "Index Catalogue of Epicentres for 1931-1935: A Geographical Index to the International Seismological Summary", 20 pp., 2 maps, Newport, April 17, 1947.

6514. BENNDORF, H., "Alfred Wegener" (obituary), *Gerlands Beiträge Geophysik*, Vol. 31, 337-377, 1 fig., Leipzig, 1931.  
The above paper is listed as No. 2216, p. 23, of *Bibliographie Géodésique Internationale*, reported as No. 6671 of this list.
6515. BERLAGE, H. P., Jr., "The Earthquake in the Flores Sea on June 29, 1934, with a Focal Depth of Nearly 700 km.", *Handelingen Nederlandsch-Indië Natuurwet. Congress, Batavia, October 25-26, 1935*, Vol. 7, 658-665, Batavia, 1937. J.F.S.
6516. BERLAGE, H. P., Jr., "Aardbevingen in de Oost Archipel waargenomen gedurende het jaar 1937 (Earthquakes in the East Indian Archipel Observed during the Year 1939)", *Natuurkundig Tijdschrift voor Nederlandsch-Indië*, Vol. 99, 101-103, Batavia, 1939.  
An abstract appears in *Tijdschrift van het Koninklijk Nederlandsch Aardrijkskundig Genootschap*, No. 2, p. 6, Leiden, 1939; and in *Nederlandsche Jaarboek Min. u.s.w.*, No. 2, pp. 388, 897, 1940. J.F.S.
6517. BERLAGE, H. P., Jr., "Note on the Deep Focus Earthquake of April 4, 1938", *Natuurkundig Tijdschrift voor Nederlandsch-Indië*, Vol. 99, 136-137, Batavia, 1939.  
An abstract appears in *Nederlandsche Jaarboek Min. u.s.w.*, No. 2, p. 389, 1940. J.F.S.
6518. BERLAGE, H. P., Jr., "Aardbevingen in de Oost-Indische Archipel waargenomen gedurende het jaar 1938 (Earthquakes in the East Indian Archipelago Observed during the Year 1938)", *Natuurkundig Tijdschrift voor Nederlandsch-Indië*, Vol. 100, 38-75, Batavia, 1940.  
An abstract appears in *Nederlandsche Jaarboek Min. u.s.w.*, No. 2, p. 389, 1940. J.F.S.
6519. BERLAGE, H. P., Jr., "Een ongewoon epicentrum van een aardbeving (An Unusual Epicentre of an Earthquake)", *Natuurkundig Tijdschrift voor Nederlandsch-Indië*, Vol. 100, 36-37, Batavia, 1940.  
An abstract appears in *Nederlandsche Jaarboek f. Mein. u.s.w.*, No. 2, p. 390, 1940. J.F.S.
6520. BERLAGE, H. P., Jr., "Aardbevingen in Nederlands-Indië waargenomen gedurende het jaar 1939 (Earthquakes in the Netherlands East Indies Observed during the Year 1939)", *Natuurkundig Tijdschrift voor Nederlandsch-Indië*, Vol. 101, 140-143, Batavia, 1941.
- BERLAGE, H. P., and VAN BEMMELLEN, R. W., "Versuch einer mathematischen Behandlung geotektonischer Bewegungen unter besonderer Berücksichtigung der Undationstheorie". See No. 6718 of this list.
6521. BERNARD, Pierre, "Remarque sur l'amplitude de l'agitation microséismique au cours d'un bombardement éloigné", *Annales de Géophysique*, Tome 1, Fasc. 3, 278-279, 2 fig., Paris, Dec., 1945.
- BEYER, G. L., Jr., and SHEPARD, Ward, Jr., "A Recording Six-Trace Cathode-Ray Oscillograph". See No. 6694 of this list.
6522. BIRKENHAUER, Henry F., S.J., "Note on the Japanese Earthquake of December 20, 1946", *Bulletin, Seismological Society of America*, Vol. 37, No. 4, 287-288, Berkeley, Oct., 1947.

6523. BLANK, Horace R., "A Landslide Near Georgetown, Texas, and Its Relation to Valley Development", *American Journal of Science*, Vol. 245, No. 6, 380-387, 4 fig., bib., New Haven, June, 1947.
- BOBROFF, D. L., COX, E. F., ELBOURN, R. D., IRISH, G. R., PERKINS, B., Jr., and POMERANTZ, J., "Preliminary Seismic Results on Project Helgoland" (abstract), *Earthquake Notes*. See No. 6654 of this list.
6524. BOWIE, William,
- (1) "Zones of Weakness in the Earth's Crust", *Sciences*, No. 1825, Vol. 70, 589-592, Lancaster, 1929.
- (2) "Approximate Value of the Depth of Compensation from Japanese Gravity Data", *American Journal of Science*, Series 5, Vol. 20, No. 117, 220-222, New Haven, 1930.
- The above papers are listed as Nos. 5039 and 5040, p. 346, of *Bibliographie Géodésique Internationale*, reported as No. 6671 of this list.
6525. BREST VAN KEMPEN, C. P., "Aardbevingen (Earthquakes)", *Natuurkundig Tijdschrift voor Nederlandsch-Indië*, Vol. 102, 1-9, Batavia, 1942. J.F.S.
6526. BRIDGMAN, P. W., "Reply to 'Remarks on Compressive and Tensile Strengths'", *Journal of Applied Physics*, Vol. 18, No. 8, p. 782, Lancaster, Aug., 1947.
6527. BRINKLEY, Stuart R., Jr., and KIRKWOOD, John G., "Theory of the Propagation of Shock Waves from Infinite Cylinders of Explosive", *Physical Review*, Vol. 72, No. 11, 1109-1113, Lancaster, Dec. 1, 1947.
- BROSSARD, Leo, and KOULOMZINE, T., "The Use of Geophysics in Prospecting for Gold and Base Metals in Canada". See No. 6617 of this list.
- BROWN, John, BEECHER, D. W., KOLSRUD, E. R., LESLIE, C. B., ROBINSON, A. Z., ATANASOFF, J. V., and SNAVELY, B. L., "A New Horizontal Component Seismograph Used for Project Helgoland" (abstract), *Earthquake Notes*. See No. 6654 of this list.
- BUHLER SUMMERS, E., and BARTON, Donald C., "Review of the Geophysical Methods of Prospecting". See No. 6510 of this list.
6528. BULL, A. J., "The Pattern of a Contracting Earth", *Geological Magazine*, Vol. 69, 73-75. 1 pl., Hertford, Feb., 1932.
- The above paper is listed as No. 4936, p. 334, of *Bibliographie Géodésique Internationale*, reported as No. 6671 of this list.
6529. BULLARD, E. C., "The Time Necessary for a Bore Hole to Attain Temperature Equilibrium", *Monthly Notices of the Royal Astronomical Society, Geophysical Supplement*, Vol. 5, No. 5, 127-130, 2 fig., bib., London, 1947.
6530. BULLARD, Fred M., "The Story of El Parícutin", *Scientific Monthly*, Vol. 65, No. 5, 357-371, 6 fig., 2 maps, Washington, Nov., 1947.
- BULLEN, K. E., and JEFFREYS, Harold, "Seismological Tables". See No. 6610 of this list.
6531. BURRARD, Sydney, "Movements of the Ground Level in Bengal", *The Royal Engineers Journal*, London, June, 1933.
- The above paper is listed as No. 5432, p. 390, of *Bibliographie Géodésique Internationale*, reported as No. 6671 of this list.



6532. BÜSS, E.,
- (1) "Das Schwarzmeer-Suchum'er Erdbeben vom 19.1.1935", *Académie des Sciences de la RSS de Géorgie, Institut de Physique et Géophysique*, Vol. 11, No. 2, 41-63, German Abst., bib., Tiflis, April-June, 1938.
  - (2) "Das Schwarzmeerbeben AM 21.10.1905 und Einige Bemerkungen über die Makroseismische Bestimmung der Herdtiefe", *Ibid.*, Vol. 11, No. 4, German Abst., Oct.-Dec., 1938.
6533. BÜSS, E., and GHIGHINEISHVILI, V., "Leninakan-Earthquakes on the 22.10.1926", *Académie des Sciences de la RSS de Géorgie, Institut de Physique et Géophysique*, Vol. 12, No. 2, English abst., bib., Tiflis, April-June, 1939.
6534. BÜSS, E., LEBEDEWA, T., and ZCHAKAIA, A., "Das Erdbeben von Adshikend AM 21.12.1938", *Académie des Sciences de la RSS Géorgie, Institut de Physique et Géophysique*, Vol. 11, No. 1, Tiflis, January-March, 1938.
6535. BÜSS, E., and ZCHAKAIA, "The Tabazkuri Earthquake on the Night of May 7-8, 1940, According to Macroseismic Observations", *Académie des Sciences de la RSS de Géorgie, Institut de Physique et Géophysique*, English abst., Tiflis, 1945.
6536. BYERLY, Perry, "The Periods of Local Earthquake Waves in Central California", *Bulletin, Seismological Society of America*, Vol. 37, No. 4, 291-297, 2 fig., 3 tab., bib., Berkeley, Oct., 1947.
6537. CALOI, Pietro,
- (1) "Nuovo metodo per calcolare le profondità ipocentrali", *La Ricerca Scientifica*, Vol. 4, No. 1, Rome, 1937.
  - (2) "Calcolo delle profondità ipocentrali in funzione della distanza epicentrale e dell'angolo di emergenza delle onde Pg", *Ibid.*, Vol. 5, 1943.
6538. CALOI, Pietro, "Attività sismica in Italia", *Reale Accademia d'Italia*, Vol. 9, 137 pp., 48 fig., tab., bib., maps, Firenze, 1942.
- This paper lists all the earthquakes in Italy between the years 1930-1939. It gives maps showing the regions damaged by the quakes listed. There is a general discussion about the seismicity of Italy and a complete bibliography of the works published on this subject.
6539. CALOI, P., "On the Internal Friction in the Earth's Crust", *Ricerca Scientifica*, Vol. 14, 4-7, Rome, 1943.
- An abstract is given on p. 253 of *Physics Abstract*, Sec. A, No. 597, Vol. 50, Sept., 1947.
- CARDER, D. S., "A Compound Pendulum as a Strong Motion Seismometer" (abstract), *Earthquake Notes*. See No. 6654 of this list.
- CARDER, D. S., ISAACKS, W. H., and GREENWOOD, W. P., "Earthquakes and Reservoir Loading near Hoover, Shasta, and Grand Coulee Dams" (abstract), *Earthquake Notes*. See No. 6654 of this list.
- CARDER, D. S., and PERKINS, B., "Structure of the Snake River Lava Plains near Arco, Idaho, from Seismic Investigations of Large Explosions" (abstract), *Earthquake Notes*. See No. 6654 of this list.
- CARRIER, A., TARDI, P., and PERRIER, Georges,
- (1) "Bibliographie Géodésique Internationale".
  - (2) "Bibliographie Géodésique Internationale".
- See No. 6671 of this list.

6540. CASSEN, B., and STANTON, J., "Theory of Non-Steady Shock Waves" (abstract), *Physical Review*, Vol. 72, No. 2, p. 180, Lancaster, July 15, 1947.
6541. CHARLIER, Ch., "Note rectificative sur l'explosion d'Heligoland", *Comité National de Géodésie et de Géophysique de Belgique*, Série S, No. 3, Supplément, 4 pp., 1 graph, Uccle, June 12, 1947.
6542. CHARLIER, Ch., "A propos des hodographs pour l'Europe N-W", *Publications du Service Sismologique et Gravimétrique*, Série S, No. 3, 2 pp., 1 graph, Uccle, June 20, 1947.
6543. CLEMENTS, Thomas, and EMERY, K. O., "Seismic Activity and Topography of the Sea Floor Off Southern California", *Bulletin, Seismological Society of America*, Vol. 37, No. 4, 307-313, 1 fig., 1 map, bib., Berkeley, Oct., 1947.
6544. CODY, C., and CODY, M., "Seismograph Exploration in Venezuela", *Petroleo Interamericano*, Vol. 4, No. 11, 56-64, Tulsa, 1946.  
An abstract appears as No. 8841, p. 12, of *Geophysical Abstracts 127*, reported as No. 6699 of this list.
- CODY, M., and CODY, C., "Seismograph Exploration in Venezuela". See No. 6544 of this list.
6545. COSTER, H. P., and GERRARD, J. A. F., "A Seismic Investigation on the Outflow of Windermere", *Geological Magazine*, Vol. 84, No. 4, 224-228, 1 fig., bib., Hertford, July-August, 1947.
6546. COULOMB, Jean, "Sur la vitesse de propagation de la rupture dans une faille (On the Velocity of Propagation of a Rupture in a Fault)", *Annales de Géophysique*, Vol. 2, No. 1, p. 86, Paris, 1946.  
An abstract appears as No. 8842, p. 13, of *Geophysical Abstracts 127*, reported as No. 6699 of this list.
6547. COX, Everett F., "Microbarographic Waves at Great Distances from Explosions" (abstract), *Physical Review*, Vol. 72, No. 2, p. 180, bib., Lancaster, July 15, 1947.
- COX, E. F., ELBOURN, R. D., IRISH, G. R., PERKINS, B., JR., POMERANTZ, J., and BOBROFF, D. L., "Preliminary Seismic Results on Project Helgoland" (abstract), *Earthquake Notes*. See No. 6654 of this list.
6548. COX, J. F., "The Doubly Equidistant Projection", *Bulletin Géodésique*, New Series, No. 2, 74-76, 1 fig., Paris, Oct., 1946.
- CROSBY, M. G., "Diversity Combining Circuit" (patent). See No. 6668 of this list.
6549. DAVISON, Charles, "The Relative Seismicity of the Different Regions of the World", *Geological Magazine*, Vol. 71, No. 7, 320-323, 4 tab., London, 1934.  
The above paper is listed as No. 5122, p. 356, of *Bibliographie Géodésique Internationale*, reported as No. 6671 of this list.
6550. DEACON, G. E. R., "Relations Between Sea Waves and Microseisms", *Nature*, No. 4065, Vol. 160, 419-421, 1 fig., bib., London, Sept. 27, 1947.
6551. DE CHAUMONT, L., "Les procédés de prospection du sous-sol. Investigations géologiques et extragéologiques", *Sciences Moderne*, Vol. 6, 466-472, 499-506, Paris, Oct.-Nov., 1929.  
The above paper is listed as No. 5116, p. 355, of *Bibliographie Géodésique Internationale*, reported as No. 6671 of this list.



6552. DELEVSKY, J., "L'âge du monde et l'évolution de la matière", *L'Astronomie*, Vol. 49, 268-274, Paris, June, 1935.

The above paper is listed as No. 8841, p. 330, of *Bibliographie Géodésique Internationale*, reported as No. 6671 of this list.

6553. DE MARCHI, Luigi, "La Scienza della Terra", *Le Scienze*, Vol. 1, 163-201, Brescia, 1932.

An abstract appears as No. 4996, p. 341, of *Bibliographie Géodésique Internationale*, reported as No. 6671 of this list.

- DILLON, Vincent, and LYNCH, William A., "Characteristics of Alaskan Earthquake Records at Distances of 40° to 70°". See No. 6629 of this list.

6554. DOBYNS, D. R., "A Study of Seismic Character and Energy Return from Shooting High- and Low-Velocity Explosives", *Geophysics*, Vol. 12, No. 4, 618-638, 14 fig., 7 tab., bib., Menasha, Oct., 1947.

6555. DORE, Paolo, "Monografie e trattati recenti di Geofisica applicata alla prospezione", *Bollettino del Comitato Nazionale Italiano per la Geodesia e la Geofisica*, Series 2, Vol. 1, No. 4, 51-55, Milan, 1931.

The above paper is listed as No. 5125, p. 356, of *Bibliographie Géodésique Internationale*, reported as No. 6671 of this list.

6556. DURANDIN, P., "La dernière expédition d'Alfred Wegener au Groenland. Sa mort", *La Géographie, Terre, Air, Mer*, Vol. 59, No. 1, 69-73, Paris, 1933.

The above paper is listed as No. 2217, p. 23, of *Bibliographie Géodésique Internationale*, reported as No. 6671 of this list.

6557. EARDLEY, A. J., "Paleozoic Cordilleran Geosyncline and Related Orogeny", *Journal of Geology*, Vol. 55, No. 4, 309-342, 9 fig., 1 tab., bib., Chicago, July, 1947.

6558. EDGE, Broughton B., "Geophysical Methods of Prospecting", *Journal of the Royal Society of Arts*, Vol. 80, 553-579, 13 fig., London, April 22, 1932.

The above paper is listed as No. 5128, p. 356, of *Bibliographie Géodésique Internationale*, reported as No. 6671 of this list.

6559. EINAUDI, Renato, "Una nuova interpretazione delle onde sismiche", *Reale Accademia delle Scienze di Torino*, Vol. 71, 1-13, Torino, 1936.

- ELBOURN, R. D., IRISH, G. R., PERKINS, B., Jr., POMERANTZ, J., BOBROFF, D. L., and COX, E. F., "Preliminary Seismic Results on Project Helgoland" (abstract), *Earthquake Notes*. See No. 6654 of this list.

- ELKINS, Thomas A., and NETTLETON, L. L., "Geologic Models Made from Granular Materials". See No. 6653 of this list.

- EMERY, K. O., and CLEMENTS, Thomas, "Seismic Activity and Topography of the Sea Floor Off Southern California". See No. 6543 of this list.

6560. ENGINEERING NEWS-RECORD.

Brief items of interest to seismologists have appeared in the above periodical (Vol. 139, New York, 1947), as follows:

- (1) "Earthquakes and Building Codes", No. 4, p. 62, July 24.
- (2) "Seismological Committee to Help Engineers", No. 10, p. 156, Sept. 4.
- (3) "A Study in Earthquakes", No. 20, p. 151, Nov. 13.
- (4) "Earthquakes in New York", No. 22, p. 70, Nov. 27.

6561. EREMEEV, A. N., "Seismic Station" (in Russian), *Razvedka Nedr*, Vol. 13, No. 3, 36-39, Leipsig, 1947. H.E.L.
6562. ESCHER, B. G., "On the Relation between the Volcanic Activity in the Netherlands East Indies and the Belt of Negative Gravity Anomalies Discovered by Vening Meinsz", *Koninklijke Akademie van Wetenschappen te Amsterdam*, Vol. 36, 677-684, Amsterdam, 1933.  
The above paper is listed as No. 5129, p. 356, of *Bibliographie Géodésique Internationale*, reported as No. 6671 of this list.
6563. FAESSLER, Carl, "Cross-index to the Maps and Illustrations of the Geological Survey and the Mines Branch of Canada, 1843-1946", Department of Geology, Faculty of Science, 2 volumes, 525 pp. Price \$10.00. Quebec, 1947.
6564. FAGE, A., and SARGENT, R. F., "Shock-wave and Boundary-layer Phenomena near a Flat Surface", *Proceedings of the Royal Society*, No. 1020, Vol. 190, 1-20, 14 fig., 2 tab., bib., London, June 17, 1947.
6565. FILLIAS, A.,  
(1) "La dilatation du Globe, cause des raz de marée et des tremblements de terre", Picart, 35 pp. Pricé 10 fr. Paris, 1935.  
(2) "Les preuves de la dilatation du Globe. La cause véritable des raz de marée, des tremblements de terre et du volcanisme", Jouve, 39 pp. Price 10 fr. Paris, 1935.  
The above papers are listed as Nos. 8845 and 8846, p. 330, of *Bibliographie Géodésique Internationale*, reported as No. 6671 of this list.
6566. FINCH, R. H., "Kilauea in 1790 and 1823", *The Volcano Letter*, No. 496, 1-2, bib., Honolulu, April-June, 1947.
6567. FLEMING, J. A., "Minutes, General Assembly and Sections, Twenty-Eighth Annual Meeting (1947)", *Transactions, American Geophysical Union*, Vol. 28, No. 3, 495-502, Washington, June, 1947.
6568. FLEMING, J. A.,  
(1) "Marine Seismic Prospecting", *Transactions, American Geophysical Union*, Vol. 28, No. 4, p. 656, Washington, Aug., 1947.  
(2) "Earthquakes, February to June, 1947", *Ibid.*, 657-658, 1 tab.
- FOGG, R. E., "Blasting Explosive Assembly" (patent). See No. 6667 of this list.
6569. FU, C. Y., "On Seismic Rays and Waves (Part One)", *Bulletin, Seismological Society of America*, Vol. 37, No. 4, 331-346, bib., Berkeley, Oct., 1947.
6570. GABY, Phil. P., "Grading System for Seismic Reflections and Correlations", *Geophysics*, Vol. 12, No. 4, 590-617, 10 fig., Menasha, Oct., 1947.
- GERRARD, J. A. F., and COSTER, H. P., "A Seismic Investigation on the Outflow of Windermere". See No. 6545 of this list.
6571. GEYER, R. L., "Combined Surface and Seismic Exploration Party", *Bulletin, American Association of Petroleum Geologists*, Vol. 29, No. 12, 1781-1782, Tulsa, 1946.  
An abstract appears as No. 8370, p. 15, of *Geophysical Abstracts 124*, reported as No. 6699 of this list.

- GHIGHINEISHVILI, V., and BÜSS, E., "Leninakan-Earthquakes on the 22.10.1926". See No. 6533 of this list.
6572. GLAESSNER, M. F., and TEICHERT, C., "Geosynclines: A Fundamental Concept in Geology", *American Journal of Science*, Vol. 245, No. 8, 465-482, New Haven, Aug., 1947.
6573. GODDARD, L. S., "Methods of Mathematical Physics", *Philosophical Magazine*, Vol. 38, No. 278, p. 226, London, March, 1947.  
The above is a review of the book of the same title by Harold Jeffreys and Bertha Swirles Jeffreys, reported as No. 6410 of this list.
6574. GOGOLADZE, V.,  
(1) "On Rayleigh Boundary Waves", *Comptes Rendus de l'Académie des Sciences de l'Union des Républiques Soviétiques Socialistes*, Vol. 49, No. 6, 400-403, Moscow, 1945.  
An abstract appears as No. 8845, p. 14, of *Geophysical Abstracts 127*, reported as No. 6699 of this list.  
(2) "General Formulae for the Reflection and Refraction of Non-Stationary Elastic Waves", *Ibid.*, No. 7, 479-481.  
An abstract appears as No. 8846, p. 14, of *Geophysical Abstracts 127*, reported as No. 6699 of this list.
6575. GORSHKOV, G. P., and LEVITSKAYA, A. J., "Certain Questions Bearing upon the Seismic Tectonics of the Crimea", *Académie des Sciences de l'Union des Républiques Soviétiques Socialistes*, Vol. 53, No. 3, Moscow, 1946. H.E.L.
6576. GORTANI, M., "Teorie ed ipotesi sull'origine delle montagne", *Scientia*, Vol. 43, 298-308, Bologna, May, 1928.  
The above paper is listed as No. 4952, p. 336, of *Bibliographie Géodésique Internationale*, reported as No. 6671 of this list.
- GRANT, U. S., and TAYLOR, Angus E., "Effects of a Vertically Moving Surface on Spirit Leveling". See No. 6709 of this list.
- GREENWOOD, W. P., CARDER, D. S., and ISAACKS, W. H., "Earthquakes and Reservoir Loading near Hoover, Shasta, and Grand Coulee Dams" (abstract), *Earthquake Notes*. See No. 6654 of this list.
6577. GRENET, Gaston, "L'étalonnage des séismographes électromagnétiques modernes". *Annales de Géophysique*, Vol. 2, 329-338, Paris, 1946.
- GROENENDYKE, G. M., and SHIMEK, E. J., "Gain-controlling System for Seismographs" (patent). See No. 6668 of this list.
6578. GUELKE, R. W., and SCHOULTE-VANNECK, C. A., "The Measurement of Sea-water Velocities by Electromagnetic Induction", *Journal, Institute of Electrical Engineers*, Part 2, Vol. 94, 71-75, London, 1947.
6579. GULATEE, B. L., "Figure of the Earth", *Gerlands Beiträge zur Geophysik*, Vol. 38, p. 426, Leipzig, 1929.  
The above paper is listed as No. 4951, p. 336, of *Bibliographie Géodésique Internationale*, reported as No. 6671 of this list.

- GULMON, G. W., and SMITH, N. J., "Geophysical History, Lake St. John Field, Concordia and Texas Parishes, Louisiana". See No. 6702 of this list.
6580. GUTENBERG, B., and RICHTER, C. F., "Earthquake Study in Southern California, 1946", *Transactions, American Geophysical Union*, Vol. 28, No. 4, 633-634, 1 tab., bib., Washington, Aug., 1947.
6581. HAALCK, H., "Über die Größe der Elastizitätskonstanten und die Fortpflanzungsgeschwindigkeit der elastischen Raumwellen im Innern des Erdkerns", *Zeitschrift für Geophysik*, Vol. 18, 27-32, Braunschweig, 1943-44. H.W.H.
6582. HAALCK, H., "Das Innere der Erde", *Umschau*, 35th Annual, 949-952, Frankfurt, 1931.  
The above paper is listed as No. 4961, p. 338, of *Bibliographie Géodésique Internationale*, reported as No. 6671 of this list.
6583. HAARMANN, Erich,  
(1) "Bemerkungen zur Aussprache über die Oszillationstheorie", *Zeitschrift der Deutschen Geologischen Gesellschaft*, Vol. 83, No. 5, 368-388, Berlin, 1931.  
(2) "Die Zeitlichkeit der Erdkrustenbewegungen", E. Schweizerbart, 42 pp., 2 fig., Stuttgart, 1933.  
The above papers are listed as Nos. 4958 and 4959 respectively, pp. 337-338, of *Bibliographie Géodésique Internationale*, reported as No. 6671 of this list.
6584. HAHN, O., "Das Alter der Erde", *Naturwissenschaft*, 18th Annual, 1013-1019, Berlin, 1930.  
The above article is listed as No. 4962, p. 338, of *Bibliographie Géodésique Internationale*, reported as No. 6671 of this list.
6585. HALVERSON, R. R., "A Photographic Method of Measuring the Peak Pressure and Duration of the Shock Wave from an Underwater Explosion" (abstract), *Physical Review*, Vol. 72, No. 2, p. 179, Lancaster, July 15, 1947.
6586. HAMON, A., "Sur un microséismoscope permettant de mesurer la déviation de la verticale", *Bulletin Société Astronomique de France*, Vol. 46, No. 1, 44-46, Paris, 1932.  
The above paper is listed as No. 5229, p. 367, of *Bibliographie Géodésique Internationale*, reported as No. 6671 of this list.
6587. HARDTWIG, Erwin,  
(1) "Über die Wellenausbreitung in einem visko-elastischen Medium", *Zeitschrift für Geophysik*, Vol. 18, Heft 2-3, 1-20, bib., Braunschweig, 1943.  
(2) "Über die Eintauchtiefe von Rayleigh-Wellen", *Ibid.*, 150-163, 1943-44.  
(3) "Zur Theorie der Rayleigh-Wellen", *Ibid.*, 164-180, 1943-44. H.W.H.
6588. HARRIS, Sidon, "West Texas Modern Refraction Seismic Exploration", *Oil Weekly*, Vol. 123, No. 7, 53-55, Houston, 1946.  
An abstract appears as No. 8848, p. 15, of *Geophysical Abstracts 127*, reported as No. 6699 of this list.
6589. HARTMAN, H. C., "Terreinsveranderingen in Zuid Limburg en de Rijksdriehoeksmeting (Mouvements du terrain dans le Limbourg méridional et Triangulation néerlandaise)", *Tijdschrift voor Kadaster en Landmeetkunde*, Vol. 48, 65-74, 1 map, Utrecht, 1932.  
The above paper is listed as No. 5443, p. 391, of *Bibliographie Géodésique Internationale*, reported as No. 6671 of this list.



6590. HECK, N. H., "List of Seismic Sea Waves", *Bulletin, Seismological Society of America*, Vol. 37, No. 4, 269-286, bib., Berkeley, Oct., 1947.

6591. HEINRICH, ROSS R., "The Ozark Earthquake of October 8, 1946", *Transactions, American Geophysical Union*, Vol. 28, No. 5, 687-690, 1 fig., 2 tab., bib., Washington, October, 1947.

6592. HEISKANEN, V. A., "Maan muoto ja isostaattinem reduktio (La figure de la Terre et la compensation isostatique)", *Maanmittaus*, Vol. 5, No. 2, 63-73, 7 fig., Helsinki, 1930.

The above paper is listed as No. 5057, p. 348, of *Bibliographie Géodésique Internationale*, reported as No. 6671 of this list.

6593. HEISKANEN, W.,

(1) "Isostasie und Erddimensionen", *Petermanns Mitteilungen*, Vol. 77, 122-127, 1 fig., Gotha, 1931.

(2) "Isostasy and the Figure of the Earth", *American Journal of Science*, Series 5, Vol. 21, No. 121, 39-49, 1 fig., New Haven, 1931.

The above papers are listed as Nos. 5058 and 5059, p. 348, of *Bibliographie Géodésique Internationale*, reported as No. 6671 of this list.

— HICKEY, Maude, and BARTON, Donald C., "The Continental Margin of the Texas-Louisiana Gulf Coast". See No. 6511 of this list.

6594. HINKS, Arthur R., "A Graphical Discussion of the Figure of the Earth", *Geographical Journal*, Vol. 69, No. 6, 557-575, 9 graphs, London, 1927.

A review appears as No. 4921, p. 332, of *Bibliographie Géodésique Internationale*, reported as No. 6671 of this list.

6595. HOBBS, W. H., "Alfred Wegener" (obituary), *Geographical Review*, Vol. 21, No. 3, 501-502, New York, 1931.

The above article is listed as No. 2219, p. 23, of *Bibliographie Géodésique Internationale*, reported as No. 6671 of this list.

6596. HODGSON, E. A., LANGFORD, George B., and BAILEY, Ralph, "Report on Laboratory Tests of Microseismic Method for Detecting Critical Rock Pressures", Dominion Observatory, mimeographed report, Ottawa, March, 1947.

6597. HODGSON, John H., "An Investigation into the Value of the Seismic Methods in Delineating Structure in Southwestern Ontario", *Ontario Department of Mines Annual Report*, Vol. 61, Part 4, 32 + iv pp., 7 fig., 4 tab., bib., Toronto, 1947.

6598. HOL, Jacoba B. L., "Oude en nieuwe theoriën over gebergtevorming (Théories anciennes et nouvelles sur la formation des montagnes)", *Tijdschrift van het Koninklijk Nederlandsch Aardrijkskundig Genootschap*, Series 2, Vol. 49, 370-393, Amsterdam, 1932.

The above paper is listed as No. 5151, p. 359, of *Bibliographie Géodésique Internationale*, reported as No. 6671 of this list.

— HOLLIS, Edward P., and ULRICH, Franklin P., "Progress Report of Seismological Work by the United States Coast and Geodetic Survey in Western United States during 1945". See No. 6713 of this list.



6599. HOLTEDAHL, O., "A New Example of a Submarine Fault Line along a Continental Border", *Det Kongelige Norske Videnskabers Selskabs Skrifter*, Vol. 8, No. 27, 91-93, Trondheim, 1935.

The above paper is listed as No. 9081, p. 355, of *Bibliographie Géodésique Internationale*, reported as No. 6671 of this list.

— HOOVER, H., Jr., "Seismometer" (patent). See No. 6667 of this list.

6600. HOPKINS, Oliver B., "The Search for Oil in Canada", *Canadian Mining and Metallurgical Bulletin*, No. 426, 456-459, 2 fig., Montreal, Oct., 1947.

6601. HOUSNER, George W., "Ground Displacement Computed from Strong-motion Accelerograms", *Bulletin, Seismological Society of America*, Vol. 37, No. 4, 299-305, 5 fig., bib., Berkeley, Oct., 1947.

6602. HUBBERT, M. King, "Minutes of Annual Meeting of 1947, Section of Tectonophysics, American Geophysical Union", *Transactions, American Geophysical Union*, Vol. 28, No. 3, p. 514, Washington, June, 1947.

6603. HUELIN, G. S., "La determinacion de la figura de la terra y el teorema de Stokes (Determination of the Form of the Earth and the Theorem of Stokes)", *Revista de Geofísica*, Vol. 4, 227-241, Madrid, April-June, 1945.

An abstract appears as No. 8813, p. 4, of *Geophysical Abstracts 127*, reported as No. 6699 of this list.

6604. HUGHES, D. S., "Response Characteristics of Seismograph at the University of Texas", *Transactions, American Geophysical Union*, Vol. 28, No. 5, 691-695, 6 fig., Washington, Oct., 1947.

6605. INGLADA, Vincente, "Los ciclones y la agitación microsísmica", *Revista de Geofísica*, Vol. 5, 413-432, Madrid, 1946.

— IRISH, G. R., PERKINS, B., Jr., POMERANTZ, J., BOBROFF, D. L., COX, E. F., and ELBOURN, R. D., "Preliminary Seismic Results on Project Helgoland" (abstract), *Earthquake Notes*. See No. 6654 of this list.

— ISAACKS, W. H., GREENWOOD, W. P., and CARDER, D. S., "Earthquakes and Reservoir Loading near Hoover, Shasta, and Grand Coulee Dams" (abstract), *Earthquake Notes*. See No. 6654 of this list.

6606. IWANISI, Tadasasu, "Earthquakes in Kii Province", *Disin*, Vol. 3, 257-270, Tokyo, 1931.

The above paper is listed as No. 5469, p. 394, of *Bibliographie Géodésique Internationale*, reported as No. 6671 of this list.

6607. JAKOSKY, J. J., "Whither Exploration", *Geophysics*, Vol. 12, No. 3, 361-368, bib., Menasha, July, 1947.

6608. JANSSEN, Raymond E., "Crumbling Rocks", *Scientific Monthly*, Vol. 65, No. 2, 103-114, 9 fig., Washington, Aug., 1947.

6609. JEFFREYS, Harold,

(1) "On the Burton-on-Trent Explosion of 1944 November 27", *Monthly Notices of the Royal Astronomical Society, Geophysical Supplement*, Vol. 5, No. 5, 100-104, bib., London, 1947.

(2) "Seismic Waves in Western and Central Europe", *Ibid.*, 105-119, tab., bib.

6610. JEFFREYS, Harold, and BULLEN, K. E., "Seismological Tables", *British Association for the Advancement of Science*, 48 pp., 5 fig., numerous tables, bib., London, 1940.

The above is a set of revised travel time tables for both local and distant earthquakes.

- JENNEMANN, Vincent F., "Some Measurements of Seismic Wave Velocities from Blasts" (abstract), *Earthquake Notes*. See No. 6654 of this list.

6611. JERSEY, N. J. de, "Seismological Evidence Bearing on Crustal Thickness in the South-West Pacific", *University of Queensland Papers*, Vol. 3, No. 2, 4 fig., bib., Brisbane, 1946.

6612. JONES, Austin E., "The Earthquake and Seismic Sea Wave of April 1, 1946", *Transactions, American Geophysical Union*, Vol. 28, No. 3, p. 478, Washington, June, 1947.

The above is a discussion of a paper of the same title by Ralph Bodle which appeared in the *Transactions*, Vol. 26, 464-465, 1946, and which was reported as No. 6161 of the *Bibliography*.

- JONES, E. T., "Automatic Volume Control in Voice Frequency Circuits" (patent). See No. 6667 of this list.

6613. JONES, W. M., "Tables of Geographical Distances", *Department of Scientific and Industrial Research, Dominion Observatory Bulletin*, No. S-83, 32 pp., Wellington, 1947.

The above is a reprint from the *New Zealand Journal of Science and Technology*, Vol. 27, No. 2, 163-166, Wellington, 1945.

6614. JONES, W. M., "Additional Table of Direction-cosines for Latitudes 41°-90°", *Dominion Observatory Bulletin*, No. S-82, 292-295, 1 tab., bib., Wellington, 1947.

The above is an extract from the *New Zealand Journal of Science and Technology*, Vol. 28, No. 5, Sec. B, 292-295, 1947.

- KERR, R. B., SHOOK, E. M., and OLSON, R. W., "Combination of Amplitude and Frequency Modulation for Communication in Seismograph Exploration for Petroleum Reservoirs". See No. 6696 of this list.

- KIRKWOOD, John G., and BRINKLEY, Stuart R., Jr., "Theory of the Propagation of Shock Waves from Infinite Cylinders of Explosive". See No. 6527 of this list.

6615. KOHLSCHUTTER, E.,

(1) "Nachruf auf Alfred Wegener", *Zeitschrift für Geophysik*, Vol. 8, No. 5-6, 213-218, Brunswick, 1931.

(2) "Alfred Wegener zum Gedächtnis", *Zeitschrift der Gesellschaft für Erdkunde*, 84-95, Berlin, 1932.

The above papers are listed as Nos. 2220 and 2221 respectively, p. 23, of *Bibliographie Géodésique Internationale*, reported as No. 6671 of this list.

6616. KOLACEK, F., "Remarques pour l'étude des tremblements de terre en Tchécoslovaquie", *Spisy Přírodovědecké Fakulty Masarykovy University*, No. 228, 3-5, 1 fig., Brno, 1936.

The above paper is listed as No. 9104, p. 357, of *Bibliographie Géodésique Internationale*, reported as No. 6671 of this list.

- KOLSRUD, E. R., LESLIE, C. B., ROBINSON, A. Z., ATANASOFF, J. V., SNAVELY, B. L., BROWN, John, and BEECHER, D. W., "A New Horizontal Component Seismograph Used for Project Helgoland" (abstract), *Earthquake Notes*. See No. 6654 of this list.

6617. KOULOMZINE, T., and BROSSARD, Leo, "The Use of Geophysics in Prospecting for Gold and Base Metals in Canada", *Geophysics*, Vol. 12, No. 4, 651-662, 6 fig., Menasha, Oct., 1947.
6618. KRAHMANN, R., "The Theory of Rock Bursts and the Possibilities of Geophysical Methods in Predicting Rock Bursts on the Producing Mines of the Witwatersrand", *Journal of the Chemical Metallurgical, and Mining Society of South Africa*.  
 (1) Vol. 38, 273-329, 383, 467-471, 491-505, 562-570, Johannesburg, 1938.  
 (2) Vol. 39, 56-57, 1939.  
 (3) Vol. 40, 188-197, 1939.
6619. KRIGE, L. J., "The Swaziland and Fauresmith Earthquakes of January, 1936", *Transactions, Geological Society of South Africa*, Vol. 39, 429-440, Johannesburg, 1937.
6620. KRIGE, L. J., and VENTER, F. A., "The Zululand Earthquake of the 31st December, 1932", *Transactions, Geological Society of South Africa*, Vol. 36, 101-112, Johannesburg, 1934.
6621. KUHN, W., "The Homogeneity of the Earth's Interior", *Experientia*, Vol. 2, No. 10, 391-397, Basle, 1946.  
 A brief abstract appears on p. 143, No. 1370, of *Physics Abstracts*, Vol. 50, No. 593, London, May, 1947.
6622. LADER, Lawrence, "Fordham's Quake Catcher", *Coronet*, Vol. 22, No. 6, 46-50, New York, Oct., 1947. H.E.L.
- LANGFORD, George B., BAILEY, Ralph, and HODGSON, E. A., "Report on Laboratory Tests of Microseismic Method for Detecting Critical Rock Pressures". See No. 6596 of this list.
6623. LEBEDEWA, T., "Le tremblement de terre d'Ambrolouri 26.9.1940", *Académie des Sciences de la RSS de Géorgie, Institut de Physique et Géophysique*, Vol. 11, No. 3, German Abst., bib., Tiflis, July-September, 1938.
- LEBEDEWA, T., ZCHAKAIA, A., and BÜSS, E., "Das Erdbeben von Adshikend AM 21.12. 1938". See No. 6534 of this list.
6624. LEET, L. Don, "Microseisms in New England—Case History of a Storm", *Geophysics*, Vol. 12, No. 4, 639-650, 7 fig., 2 tab., bib., Menasha, Oct., 1947.
6625. LEKKERKERKER, G., "Gebergtevorming en vulkanisme in het licht van Vening Meinesz' ontdekking (La formation des montagnes et le volcanisme d'après les découvertes de Vening Meinesz)", *Tijdschrift van het Koninklijk Nederlandsch Aardrijkskundig Genootschap*, Series 2, Vol. 69, 244-248, 1 fig., 1 map, Amsterdam, 1932.  
 The above paper is listed as No. 5171, p. 361, of *Bibliographie Géodésique Internationale*, reported as No. 6671 of this list.
- LESLIE, C. B., ROBINSON, A. Z., ATANASOFF, J. V., SNAVELY, B. L., BROWN, John, BEECHER, D. W., and KOLSRUD, E. R., "A New Horizontal Component Seismograph Used for Project Helgoland" (abstract), *Earthquake Notes*. See No. 6654 of this list.
- LEVITSKAYA, A. J., and GORSHKOV, G. P., "Certain Questions Bearing upon the Seismic Tectonics of the Crimea". See No. 6575 of this list.

6626. LEYPOLDT, Harry, "Effect of Sea Level Variation on Long Beach, California, Subsidence", *Bulletin, Seismological Society of America*, Vol. 37, No. 4, 289-290, 1 fig., Berkeley, Oct., 1947.
6627. LISIUTIN, A. Ia., "Determination of Sound Velocity in Oil Wells", *Izvestiia Akademia Nauk SSSR—Seriia Geograficheskaiia i Geofizicheskaiia*, Vol. 11, No. 4, 335-339, English summary, Moscow, 1947. H.E.L.
6628. LITCHKOV, B. L., "Isostasy and Modern Ideas of the Earth's Crustal Movements", *Priroda*, Vol. 17, No. 7-8, 654-684, 2 fig., Leningrad, 1928.  
The above paper is listed as No. 5071, p. 349, of *Bibliographie Géodésique Internationale*, reported as No. 6671 of this list.
- LYNCH, William A., "The Envelope Method of Analysis Applied to Surface Waves" (abstract), *Earthquake Notes*. See No. 6654 of this list.
6629. LYNCH, William A., and DILLON, Vincent, "Characteristics of the Alaskan Earthquake Records at Distances of 40° to 70°", *Bulletin, Seismological Society of America*, Vol. 37, No. 3, 181-195, 1 fig., 8 tab., bib., Berkeley, July, 1947.
6630. MACDOUGALL, D. P., "Experimental Studies of Detonation Velocities in High Explosives" (abstract), *Physical Review*, Vol. 72, No. 2, p. 176, Lancaster, July 15, 1947.
6631. MACELWANE, James B., S.J., "When the Earth Quakes", The Bruce Publishing Company, 288 pp., 251 fig., bib., glossary, index. Price \$5.00. Milwaukee, Aug., 1947.  
This book, written primarily for the lay reader, is one which will long serve also as a reference work for professional seismologists. Dr. Macelwane is recognized as an outstanding authority on seismology. His wide experience has made possible this most interesting discussion of earthquakes and their study.  
Avoiding mathematical details and employing a style which commands continued interest and attention, the subject is treated in all its phases: earthquake effects; descriptions of many large earthquakes which have occurred in various parts of the world since (and including) that of San Francisco in 1906; types of earthquakes; volcanic shocks; earthquake causes; possibilities of prediction; field studies of earthquakes; seismographs explained and types shown; what earthquake records tell us of earth structure; applications of seismometry to engineering; prospecting for oil and minerals; rock strains and rockbursts; microseisms and their use in tracking hurricanes at a distance.  
The book closes with a discussion of rock faulting, an extensive appendix of references and notes; a glossary of geological and seismological terms and a full index. These, together with the lavish use of illustrations and diagrams, make the book readily understandable to anyone who wishes to have on hand an authentic, up-to-date, ready reference to all phases of earthquake study. E.A.H.
- MAILLET, R., "Geophysical Prospecting" (patent). See No. 6668 of this list.
6632. MANSFIELD, Robert H., "Universal Slide Rule for Linear Velocity vs. Depth Calculations", *Geophysics*, Vol. 12, No. 4, 557-575, 9 fig., 1 tab., bib., Menasha, Oct., 1947.
6633. MAREE, B. D., "Geophysical Work in South Africa", *Geophysics*, Vol. 12, No. 4, 681-684, bib., Menasha, Oct., 1947.



6634. MATHEWS, W. H., "Tuyas', Flat-Topped Volcanoes in Northern British Columbia", *American Journal of Science*, Vol. 245, No. 9, 560-570, 3 fig., 1 pl., bib., New Haven, Sept., 1947.
6635. MAURAIN, Ch.,  
 (1) "La Physique du Globe et ses applications", *Revue Scientifique*, Vol. 66, 425-437, 3 graphs, Paris, 1928.  
 (2) "Les études de Physique du Globe", *Annales Université Paris*, Vol. 3, No. 1, 18-30, Paris, 1928.  
 The above papers are listed as Nos. 4999 and 4950 respectively, p. 341, of *Bibliographie Géodésique Internationale*, reported as No. 6671 of this list.
6636. McINTOSH, D. S., "The Acadian-Newfoundland Earthquake", *Transactions, Nova Scotian Institute of Science*, Vol. 17, Part 4, 213-222, 2 maps, bib., Halifax, 1930.
6637. MEINESZ, F. A. Vening,  
 (1) "The Indirect Isostatic or Bowie Reduction and the Equilibrium Figure of the Earth", *Bulletin Géodésique*, New Series, No. 1, 33-107, 26 tab., 4 maps, bib., Paris, 1946.  
 A complete summary appears at the first of this important paper.  
 (2) "Tables bidimensionnelles pour la réduction isostatique selon l'hypothèse d'Airy avec  $T=30$  km.", *Ibid.*, No. 2, 55-73, 5 fig., 4 tab., bib., Oct., 1946.
6638. MEINZER, O. E., "Suggestions as to Future Research in Ground-Water Hydrology", *Transactions, American Geophysical Union*, Vol. 28, No. 3, 418-420, Washington, June, 1947.
6639. MEISSER, O., "Ein Einfaches Rollbandgelenkpendel, Dessen Schwingungsdauer auch bei Grösseren Amplituden und bei Geringen Bandlängen Annähernd Konstant Bleibt", *Geofisica Pura e Applicata*, Vol. 10, Fasc. 3-4, 3 fig., 2 tab., bib., Milan, 1947.
6640. MENZEL, H., "Dispersion von seismischen Oberflächenwellen nach Registrierungen in Kopenhagen und Gross-Raune", *Gerlands Beiträge zur Geophysik*, Vol. 54, 348-369, Leipzig, 1939.  
 An abstract appears on p. 82 of *Zentralblatt für Geophysik, Meteorologie und Geodäsie*, Vol. 5, Stuttgart, 1940. H.W.H.
6641. MERINO Y CORONADO, J., "Notes on a New Type of Electronic Earthquake Recorder", *Servicio Meteorologico Nacional*, mimeographed report, 4 pp., San Jose, 1945.  
 An abstract appears as No. 8854, p. 17, of *Geophysical Abstracts 127*, reported as No. 6699 of this list.
6642. MIHAILOVIĆ, Jelenko, "Les secousses séismiques dans le Quarnero", *Bulletin de l'Académie des Sciences Mathématiques et Naturelles*, Sec. B, No. 6, 57-63, 8 fig., 2 maps, bib., Belgrade, 1940.
6643. MILLAR, F. Graham, "Microseisms and Storm Tides", *Journal of Meteorology*, Vol. 4, 73-74, Lancaster, 1947.
6644. MITCHELL, Dugald, and PATERSON, Stewart, "Spread of Detonation in High Explosives", *Nature*, No. 4065, Vol. 160, 438-439, 4 fig., bib., London, Sept. 27, 1947.



6645. MONTANDON, Frédéric, "Un témoignage sur le séisme du 25 janvier 1946", *Revue pour l'Étude des Calamités*, Vol. 9, No. 24, 64-66, Geneva, 1946.
- MONTANDON, Frédéric, "Die Erdbebenherde in der Umgebung von Zurich" (review). See No. 6724 of this list.
6646. MORELLI, Carlo, "Carte sismica dell'Albania", *Reale Accademia d'Italia*, Vol. 10, 120 pp., 16 fig., 2 maps, bib., Firenze, 1942.
6647. MORELLI, Carlo, "Nuovi fondamenti per l'assicurazione sismica", *Istituto Geofisico*, Pub. No. 177, 15 pp., 2 tab., 1 map, Trieste, 1946.
6648. MORRIS, Max, "Methods of Mathematical Physics", *Journal of Applied Physics*, Vol. 18, No. 7, p. 684, Lancaster, July, 1947.
- The above article is a review of a book by Harold Jeffreys and Bertha Swirles Jeffreys on "Methods of Mathematical Physics", reported as No. 6410 of this *Bibliography*.
6649. MORRISON, G. K., "The Unsolved Problem of Rock Bursts", *Engineering and Mining Journal*, Vol. 148, No. 4, 80-82, New York, 1947.
6650. MURPHY, L. M.,
- (1) "Minutes of the Annual Meeting of 1947, Section of Seismology, American Geophysical Union", *Transactions, American Geophysical Union*, Vol. 28, No. 3, 506-507, Washington, June, 1947.
  - (2) "Geological Effects on Microseisms in the Caribbean", *Ibid.*, No. 4, 528-533, 5 fig., bib., Aug., 1947.
- MURPHY, L. M., "Status of the World-Wide Microseismic Reporting Program" (abstract), *Earthquake Notes*. See No. 6654 of this list.
6651. NATURE. Brief items of interest to seismologists have appeared in Vol. 160 of the above periodical (London, 1947), as follows:
- (1) "Methods of Mathematical Physics", No. 4057, 139-140, Aug. 2.  
The above article is a very complete review of a book of the same title by Harold Jeffreys and Bertha Swirles Jeffreys which was reported as No. 6410 of this *Bibliography*.
  - (2) "Recordings at Kew of the Brest Explosion", No. 4058, p. 184, Aug. 9.
  - (3) "Seismology at Oxford", No. 4059, p. 220, Aug. 16.
  - (4) "New Seismological Observatories", No. 4068, p. 530, Oct. 18.
  - (5) "Swiss Earthquakes During 1945", No. 4071, p. 636, Nov. 8.
  - (6) "Dominion Observatory, Wellington", No. 4072, p. 669, Nov. 15.
6652. NETTLETON, L. L., "Early Geophysical Papers", Society of Exploration Geophysicists, 848 pp. Price \$6.00. Tulsa, 1947.
- The above book is a collection of early papers taken from issues of *Geophysics*, *Journal of the Society of Petroleum Geophysicists*, and *Bulletin of the American Association of Petroleum Geologists, Physics*.
6653. NETTLETON, L. L., and ELKINS, Thomas A., "Geologic Models Made from Granular Materials", *Transactions, American Geophysical Union*, Vol. 28, No. 3, 451-466, 20 fig., 1 tab., bib., Washington, June, 1947.

6654. NEUMANN, Frank, "Earthquake Notes", Vol. 18, No. 3 and 4, 16 pp., Washington, March-June, 1947.

The above periodical is the organ of the Eastern Section of the Seismological Society of America. The issue listed contains: Minutes of the Annual Meeting of the Eastern Section, Seismological Society of America, at Fordham University, June 13 and 14, 1947; Structure of the Snake River Lava Plains near Arco, Idaho, from Seismic Investigations of Large Explosions; A Compound Pendulum as a Strong Motion Seismometer; Increase in the Period of Earthquake Surface Waves with Distance; The Envelope Method of Analysis Applied to Surface Waves; The New Seismological Observatory at John Carroll University; Status of the World-Wide Microseismic Reporting Program; The New Seismic Station at Chinchina, Colombia; Earthquakes and Reservoir Loading near Hoover, Shasta, and Grand Coulee Dams; A New Horizontal Component Seismograph used for Project Helgoland; Preliminary Seismic Results on Project Helgoland; Some Measurements of Seismic Wave Velocities from Blasts; Annual Meeting—Seismological Society of America; Committee on Geophysical Sciences of the Research and Development Board; Notes—Precise time of Texas City blast—News of European seismologists—Travel times of seismic sea waves to Honolulu; Observed Travel Times of Seismic Sea Waves from Honolulu; The Tokyo Imperial University Science Department and Earthquake Laboratory; List of Seismograph Manufacturers; Visible recorders to be installed; Further remark on travel time variations in South America; Dr. Beno Gutenberg's Pacific trip; First strong motion accelerograph record in Guatemala; L. Don Leet; Epicenters.

6655. NIMMONS, R. T., "A Year of Volcanic Violence", *Toronto Star Weekly*, p. 5, 1 fig., Toronto, Aug. 30, 1947.

The above is a popular article describing the volcanic and earthquake predictions of the Hawaiian Volcano Research Association.

6656. NISKANEN, E., "On the Deformation of the Earth's Crust under the Weight of a Glacial Ice-Load and Related Phenomena", *Annales Academiae Scientiarum Fennicae*, 59 pp., 2 fig., Helsinki, 1943.

6657. NISHKIAN, L. H., "Vertical Vibration Recorders for the Golden Gate Bridge", *Bulletin, Seismological Society of America*, Vol. 37, No. 2, 81-88, 5 fig., Berkeley, April, 1947.

6658. NORLUND, N. E., "The Figure of the Earth", *Bulletin Géodésique*, No. 55, 193-210, Paris, 1937.

The above paper is listed as No. 8821, p. 328, of *Bibliographie Géodésique Internationale*, reported as No. 6671 of this list.

6659. OBSERVATORY, The,

(1) "English Oil-Fields", *The Observatory*, No. 838, Vol. 67, 95-98, London, June, 1947.

(2) "Mathematical Physics", *Ibid.*, No. 839, 146-148, August, 1947.

The above article is a review of a book "Methods of Mathematical Physics", by Harold Jeffreys and Bertha Swirles Jeffreys, which was reported as No. 6410 of the *Bibliography*.

6660. O'CONNELL, D. J. K., S.J., "Major Shallow Earthquakes, 1909-1911", *Journal and Proceedings of the Royal Society of New South Wales*, Vol. 80, 147-150, 1 tab., bib., Sydney, 1946.

6661. OKS, Meyer, "Metodo de refraction", *Boletin de Informaciones Petroleras*, Vol. 22, No. 254, 249-254, Buenos Aires, 1945.  
An abstract appears as No. 8855, p. 17, of *Geophysical Abstracts 127*, reported as No. 6699 of this list.
- OLSON, R. W., KERR, R. B., and SHOOK, E. M., "Combination of Amplitude and Frequency Modulation for Communication in Seismograph Exploration for Petroleum Reservoirs". See No. 6696 of this list.
6662. OMER, Guy C., Jr., "Differential-Motion Seismographs", *Bulletin, Seismological Society of America*, Vol. 37, No. 3, 197-215, bib., Berkeley, July, 1947.
6663. OTUKA, Yamosuke, "The Geomorphology and Geology of Northern Idu Peninsula, the Earthquake Fissures of November 26, 1930 and the Pre- and Post-seismic Crust Deformations", *Bulletin, Earthquake Research Institute*, Vol. 11, No. 3, 530-574, 44 fig., 6 tab., Tokyo, 1933.  
The above paper is listed as No. 5500, p. 398, of *Bibliographie Géodésique Internationale*, reported as No. 6671 of this list.
6664. OXFORD UNIVERSITY OBSERVATORY,  
(1) "International Seismological Summary, 1936, January, February, March", 1-131, London, February 25, 1946.  
(2) "International Seismological Summary, 1936, April, May, June", 137-329, May 27, 1947.
6665. PANNOCCHIA, G., "Study on the Maximum Phase of a Distant Earthquake", *Ricerca Scientifica*, Vol. 12, 595-610, Rome, May, 1941.  
A brief abstract appears as No. 1983, p. 192, of *Physics Abstracts*, No. 595, Vol. 50, London, July, 1947.
6666. PARSONS, A. B., "Probing Canada's Pre-Cambrian Shield", *Mining and Metallurgy*, No. 489, Vol. 28, 429-430, New York, Sept., 1947.
6667. PATENTS. The following patents of interest to seismologists are listed in *Geophysics*, Vol. 12, No. 3, Menasha, July, 1947.  
(1) SEAVEY, F. R., "Explosives", U.S. No. 2,415,045.  
(2) FOGG, R. E., "Blasting Explosive Assembly", U.S. No. 2,415,422.  
(3) JONES, E. T., "Automatic Volume Control in Voice Frequency Circuits", U.S. No. 2,416,321.  
(4) HOOVER, H., Jr., "Seismometer", U.S. No. 2,417,077.
6668. PATENTS. The following patents of interest to seismologists are listed in *Geophysics*, Vol. 12, No. 4, Menasha, Oct., 1947.  
(1) WENANDER, H. S., "Vibration Device", U.S. No. 2,422,639.  
(2) CROSBY, M. G., "Diversity Combining Circuit", U.S. No. 2,420,868.  
(3) YOUNG, W. W., "Vibration Recorder", U.S. No. 2,420,025.  
(4) SHIMEK, E. J., and GROENENDYKE, G. M., "Gain-Controlling System for Seismographs", U.S. No. 2,420,571.  
(5) MAILLET, R., "Geophysical Prospecting", U.S. No. 2,420,672.  
(6) RAITT, R. W., "Transducing System", U.S. No. 2,418,053.

- PATERSON, Stewart, and MITCHELL, Dugald, "Spread of Detonation in High Explosives". See No. 6644 of this list.
- PERKINS, B., and CARDER, D. S., "Structure of the Snake River Lava Plains near Arco, Idaho, from Seismic Investigations of Large Explosions" (abstract), *Earthquake Notes*. See No. 6654 of this list.
- PERKINS, B., Jr., POMERANTZ, J., BOBROFF, D. L., COX, E. F., ELBOURN, R. D., and IRISH, G. R., "Preliminary Seismic Results on Project Helgoland" (abstract), *Earthquake Notes*. See No. 6654 of this list.
6669. PERRIER, Georges, "Alfred Wegener (1880-1931)" (obituary), *Bulletin Géodésique*, No. 30, 165-169, Paris, 1931.  
The above paper is listed as No. 2222, p. 23, of *Bibliographie Géodésique Internationale*, reported as No. 6671 of this list.
6670. PERRIER, Georges, "William Bowie (1872-1940)" (obituary), *Bulletin Géodésique*, New Series, No. 1, 22-32, Paris, 1946.
6671. PERRIER, Georges, CARRIER, A., and TARDI, P.,  
(1) "Bibliographie Géodésique Internationale", *Association de Géodésie de l'Union Géodésique et Géophysique Internationale*, Tome 2, Années 1931-32-33-34, 420 pp., Paris, 1938.  
(2) "Bibliographie Géodésique Internationale", *Ibid.*, Tome 3, Années 1935-36-37, 421 pp.  
Both of these bibliographies list several articles of interest to seismologists, as well as the papers on geodesy and related geophysical fields. Those papers not already listed appear in this *Bibliography* under the names of their respective authors.
6672. PERSICO, Enrico, "Geofisica e Cosmogonia", R. Avalle, 24 pp., 4 fig., Turin, 1932.  
The above book is listed as No. 5004, p. 342, of *Bibliographie Géodésique Internationale*, reported as No. 6671 of this list.
- POMERANTZ, J., BOBROFF, D. L., COX, E. F., ELBOURN, R. D., IRISH, G. R., and PERKINS, B., Jr., "Preliminary Seismic Results on Project Helgoland" (abstract), *Earthquake Notes*. See No. 6654 of this list.
6673. POULTER, Thomas C., "Seismic Measurements on the Ross Shelf Ice—Part II", *Transactions, American Geophysical Union*, Vol. 28, No. 3, 367-384, 10 fig., 1 tab., bib., Washington, June, 1947.
6674. POWERS, H. A., "Annual Tilt Pattern at the Hawaiian Volcano Observatory", *The Volcano Letter*, No. 495, 1-6, 1 fig., 3 tab., Honolulu, Jan.-Mar., 1947.
6675. PRATA, Emidio, "Teoria generale dei Sismografi", Heopli, 160 pp., 44 fig., 8 tab. Price 600 lires. Milan, 1947.  
The above book is written to aid seismograph station operators in the taking of the constants of their instruments. There is also some fundamental theory of seismology and some theory and practice on the interpretation of seismograms.



6676. PROCEEDINGS OF THE PHYSICAL SOCIETY, "Methods of Mathematical Physics", *Proceedings of the Physical Society*, Vol. 59, Part 3, No. 333, 512-513, London, May 1, 1947.

The above article, signed by J.A., is a review of a book of the same title by Harold Jeffreys and Bertha Swirles Jeffreys which was reported as No. 6410 of this list.

6677. QUIRKE, T. T., "Earth Deformation", *Comptes Rendus de la 14e Session du Congrès Géologique Internationale, Madrid, 1926, Institut Géologique et Minier d'Espagne*, No. 4, 1537-1553, Madrid, 1928.

The above paper is listed as No. 5186, p. 363, of *Bibliographie Géodésique Internationale*, reported as No. 6671 of this list.

— RAITT, R. W., "Transducing System" (patent). See No. 6668 of this list.

— RAMIREZ, J. E., S.J., "The New Seismic Station at Chinchina, Colombia" (abstract), *Earthquake Notes*. See No. 6654 of this list.

6678. RANKINE, A. P., "Prospecting for Oil", *Petroleum*, Vol. 9, No. 10, 234-235, London, 1946.

An abstract appears as No. 8817, p. 5, of *Geophysical Abstracts 127*, reported as No. 6699 of this list.

6679. RETTINGER, Michael, "Applied Architectural Acoustics", Chemical Publishing Co., 208 pp., 69 fig., 4 extensive tables, bib., index. Price \$5.50. New York, 1947.

This handy volume (5½" x 9") presents a concise but comprehensive treatment of architectural acoustics stressing particularly the practical application. The theoretical basis is not neglected. The first chapter defines the terms used and the next two outline mathematical and geometrical discussions of the geometry of sound, its reflection, and reverberation. Applications are then made to the design of various types of architecture with a view to acoustic control. The final chapter on acoustic measurements is helpful as are the many graphs presented throughout the volume and the extensive tables at the end.

E.A.H.

6680. RICHTER, C. F., "The Manix (California) Earthquake of April 10, 1947", *Bulletin, Seismological Society of America*, Vol. 37, No. 3, 171-179, 1 fig., 5 tab., bib., Berkeley, July, 1947.

— RICHTER, C. F., and GUTENBERG, B., "Earthquake Study in Southern California, 1946". See No. 6580 of this list.

6681. RIZNICHENKO, Iu. V., "Transformation of Media in Geometric Seismology", *Izvestiia Akademia Nauk SSSR—Serii Geograficheskaja i Geofizicheskaja*, Vol. 11, No. 4, 311-333, English summary, Moscow, 1947.

H.E.L.

— ROBINSON, A. Z., ATANASOFF, J. V., SNAVELY, B. L., BROWN, John, BEECHER, D. W., KOLSRUD, E. R., and LESLIE, C. B., "A New Horizontal Component Seismograph Used for Project Helgoland" (abstract), *Earthquake Notes*. See No. 6654 of this list.

6682. RONNE, Finn, "Tidings from the Bottom of the World", *New York Times Magazine*, Sec. 6, pp. 17, 57, 59, 60, 62, 3 pl., New York, Nov. 23, 1947.

6683. ROTHÉ, E., "Les tremblements de terre: Leurs causes, leurs effets (Earthquakes: Their Causes and Effects)", Flammarion and Co., 242 pp., bib., Paris. 1942.

An abstract appears as No. 8861, p. 19, of *Geophysical Abstracts 127*, reported as No. 6699 of this list.



6684. ROTHÉ, Jean-Pierre,  
 (1) "Tableau de la séismicité du globe pendant les années 1943-44", *Revue pour l'Étude des Calamités*, Vol. 8, No. 23, 119-144, Geneva, 1945.  
 (2) "Les séismes des Alpes françaises en 1938 et la séismicité des Alpes occidentales", *Ibid.*, 157-158.  
 (3) "Les tremblements de terre en France en 1938", *Ibid.*, p. 158.
6685. ROVERETO, Gaetano, "Geologia (Teoria, Pratica, Applicazioni)", Ulrico Hoepli, 805 + xviii pp., 161 fig., 20 maps, Milan, 1931.  
 The above book is listed as No. 5031, p. 344, of *Bibliographie Géodésique Internationale*, reported as No. 6671 of this list.
6686. RUGER, L., "Geotektonische Hypothesen", *Geographische Zeitschrift*, Vol. 37, No. 10, 577-599, 3 fig., Berlin, 1931.  
 The above paper is listed as No. 5194, p. 363, of *Bibliographie Géodésique Internationale*, reported as No. 6671 of this list.
- SARGENT, R. F., and FAGE, A., "Shock-Wave and Boundary-layer Phenomena Near a Flat Surface". See No. 6564 of this list.
6687. SAVARENSKY, E. F., "Diagram for the Interpretation of Deep Focus Earthquakes", *Académie des Sciences de l'Union des Républiques Soviétiques Socialistes*, No. 114, 1-6, 7 fig., 1 tab., 1 graph, English abst., bib., Moscow, 1946.
6688. SCHEPERS, J. H. G., "Onderzoek naar den invloed der aardbeving van 1926 op eenige primaire punten ter Sumatra's Westkust (Recherche de l'influence du séisme de 1926 sur quelques points de la triangulation primordiale de la côte occidentale de Sumatra)", *Jaarverslag van den Topografischen Dienst in Nederlandsch-Indië*, Vol. 26, 89-94, 1 fig., Weltevreden, 1931.  
 The above paper is listed as No. 5505, p. 398, of *Bibliographie Géodésique Internationale*, reported as No. 6671 of this list.
6689. SCHOLTE, J. G., "The Range of Existence of Rayleigh and Stoneley Waves", *Monthly Notices of the Royal Astronomical Society, Geophysical Supplement*, Vol. 5, No. 5, 120-126, 8 fig., 2 tab., bib., London, 1947.
- SCHOLTE-VANNECK, C. A., and GUELKE, R. W., "The Measurement of Sea-water Velocities by Electromagnetic Induction". See No. 6578 of this list.
6690. SCIENCE NEWS-LETTER. The following brief items of interest to seismologists have appeared in recent issues of Vol. 52 of the above periodical (Washington, 1947), as follows:
- (1) "Navy Builds Seismographs to Record Man-made Blasts", No. 1, p. 7, July 5.
  - (2) "Pacific Bottom Shaken by Strong Earthquake", *Ibid.*, p. 9.
  - (3) "Iceland's Mt. Hekla Erupts Same Old Lava", No. 2, p. 24, July 12.
  - (4) "Longest Mountain Range to be Explored by Boat", No. 3, p. 38, 1 fig., July 19.
  - (5) "Roughest Ocean Bottom between Korea, New Guinea", No. 5, p. 72, Aug. 2.
  - (6) "Microseism Theory Tested", No. 14, p. 211, Oct. 4.
  - (7) "Hope to Detect Bomb Test", No. 17, p. 261, Oct. 25.
  - (8) "High-speed Recording by Speedomax Helps Solve Testing Problems", No. 18, p. 286, Nov. 1.

6691. SCIENTIFIC AMERICAN, "Man-Made Earthquakes Plumb Depths of Greenland's Ice", *Scientific American*, Vol. 146, No. 4, p. 204, New York, 1932.

The above article is listed as No. 5035, p. 345, of *Bibliographie Géodésique Internationale*, reported as No. 6671 of this list.

6692. SCIENTIFIC AMERICAN, "Off-Shore Oil Well", *Scientific American*, Vol. 177, No. 2, p. 77, New York, Aug., 1947.

— SEAVEY, F. R., "Explosives" (patent). See No. 6667 of this list.

6693. SHAFFER, Paul R., "Fundamentals of Earth Science", *Science*, No. 2758, Vol. 106, p. 454, New York, Nov. 7, 1947.

The above is a review of a book by H. D. Thompson which was reported as No. 6493 of this list.

6694. SHEPARD, Ward, Jr., and BEYER, G. L., Jr., "A Recording Six-Trace Cathode-Ray Oscillograph", *Geophysics*, Vol. 12, No. 3, 424-431, 4 fig., bib., Menasha, July, 1947.

6695. SHEPHERD, W. C. F., "Speed Around the Initiating Point of the Detonation Wave in High Explosives", *Nature*, No. 4055, Vol. 160, p. 92, 1 fig., bib., London, July 19, 1947.

— SHIMEK, E. J., and GROENENDYKE, G. M., "Gain-Controlling System for Seismographs" (patent). See No. 6668 of this list.

6696. SHOOK, E. M., OLSON, R. W., and KERR, R. B., "Combination of Amplitude and Frequency Modulation for Communication in Seismograph Exploration for Petroleum Reservoirs", *Proceedings, Institute of Radio Engineers*, Vol. 32, No. 10, 583-590, New York, 1944.

An abstract appears as No. 8385, p. 20, of *Geophysical Abstracts 124*, reported as No. 6699 of this list.

6697. SHVEDCHIKOV, L. K., "Twelve-Channel Seismic Station" (in Russian), *Razvedka Nedr*, Vol. 13, No. 2, 38-44, Leipsig, 1947. H.E.L.

6698. SIMPICH, Frederick, "Louisiana Trades with the World", *National Geographic Magazine*, Vol. 92, No. 6, 705-738, 1 fig., Washington, Dec., 1947.

The above article, describing the resources of the State of Louisiana, mentions briefly the seismograph method of locating oil structures.

6699. SKITSKY, V. L.,

- (1) "Geophysical Abstracts 124", *U.S. Bureau of Mines*, No. 7384, 1-60, Washington, January-March, 1946.

The above issue contains abstracts 8327-8484, together with an index to the current issue.

- (2) "Geophysical Abstracts 127", *Ibid.*, No. 7414, 1-86, October-December, 1946.

The above issue contains abstracts 8807-8962, together with an index to the current issue and an index for the year 1946.

6700. SKY AND TELESCOPE,

- (1) "Seismologists Track Hurricanes", *Sky and Telescope*, Vol. 6, No. 10, p. 11, Cambridge, Aug., 1947.

- (2) "Symposium on Earth's Origin", *Ibid.*, Vol. 7, No. 2, p. 39, Dec., 1947.

6701. SLEGGs, G. F., "Differential Cooling and the Origin of Continents", *Nature*, No. 3325, Vol. 132, 137-138, London, 1933.

The above paper is listed as No. 5013, p. 342, of *Bibliographie Géodésique Internationale*, reported as No. 6671 of this list.

6702. SMITH, N. J., and GULMON, G. W., "Geophysical History, Lake St. John Field, Concordia and Texas Parishes, Louisiana", *Geophysics*, Vol. 12, No. 3, 369-383, 10 fig., Menasha, July, 1947.

6703. SMIT SIBINGA, G. L., "De betekenis der diepe aardbevingen in Nederlandsch-Indië voor de ouderdomsbepaling der zwaartekrachten afwijkingen (The significance of the Deep Earthquakes in the Netherlands East Indies to the Dating of the Gravitational Anomalies)", *Tijdschrift van het Koninklijk Nederlandsch Aardrijkskundig Genootschap*, Vol. 55, 336-337, Leiden, 1938. J.F.S.

- SNAVELY, B. L., BROWN, John, BEECHER, D. W., KOLSRUD, E. R., LESLIE, C. B., ROBINSON, A. Z., and ATANASOFF, J. V., "A New Horizontal Component Seismograph Used for Project Helgoland" (abstract), *Earthquake Notes*. See No. 6654 of this list.

6704. SPRENGNETHER, W. F., Jr., "Horizontal- and Vertical-Component Seismographs", *Bulletin, Seismological Society of America*, Vol. 37, No. 2, 101-105, 5 fig., Berkeley, April, 1947.

- STANTON, J., and CASSEN, B., "Theory of Non-steady Shock Waves" (abstract). See No. 6540 of this list.

6705. SVERDRUP, H. U., "Period Increase of Ocean Swell", *Transactions, American Geophysical Union*, Vol. 28, No. 3, 407-417, 7 fig., bib., Washington, June, 1947.

6706. TARDI, P., "Le Général Georges Perrier" (obituary), *Bulletin Géodésique*, New Series, No. 1, 7-21, Paris, July, 1946.

The above obituary is made up of a series of papers in appreciation of the work of General Perrier. There are articles by M. Jacquinet, Admiral Durand-Viel, and Elie Cartan together with a summary by P. Tardi.

6707. TARDI, P., "Réunion de la commission permanente", *Bulletin Géodésique*, New Series, No. 2, 2-39, Paris, Oct., 1946.

- TARDI, P., PERRIER, Georges, and CARRIER, A.,  
 (1) "Bibliographie Géodésique Internationale".  
 (2) "Bibliographie Géodésique Internationale".  
 See No. 6671 of this list.

6708. TAUB, A. H., "Refraction of Plane Shock Waves", *Physical Review*, Vol. 72, No. 1, 51-60, 1 fig., 1 tab., Lancaster, July 1, 1947.

6709. TAYLOR, Angus E., and GRANT, U. S., "Effects of a Vertically Moving Surface on Spirit Leveling", *Bulletin, Seismological Society of America*, Vol. 37, No. 4, 315-329, 7 fig., 2 tab., bib., Berkeley, Oct., 1947.

- TEICHERT, C., and GLAESSNER, M. F., "Geosynclines: A Fundamental Concept in Geology". See No. 6572 of this list.
6710. THOMPSON, Stanley, "Remarks on Compressive and Tensile Strength", *Journal of Applied Physics*, Vol. 18, No. 8, p. 781, 3 fig., bib., Lancaster, Aug., 1947.
6711. TILLOTSON, Ernest, "Microseisms and Atmospheric Oscillations", *Nature*, No. 4062, Vol. 160, 321-322, London, Sept. 6, 1947.
6712. TROMP, S. W., "A Tentative Classification of the Main Structural Units of the Anatolian Orogenic Belt", *Journal of Geology*, Vol. 55, No. 4, 362-377, 1 fig., 5 tab., bib., Chicago, July, 1947.
6713. ULRICH, Franklin P., and HOLLIS, Edward P., "Progress Report of Seismological Work by the United States Coast and Geodetic Survey in the Western United States during 1945", *Bulletin, Seismological Society of America*, Vol. 37, No. 2, 89-100, 4 fig., 2 tab., Berkeley, April, 1947.
6714. U.S. NAVAL TECHNICAL MISSION TO JAPAN, "Japanese Geophysical Research", British Intelligence Objectives Sub-Committee Report, J.A.P., P.R., 758, 23 pp., 17 fig., London, January, 1947. M.N.
6715. VALENZUELA, J. I., "Earthquake Resisting Structures", *Engineer*, No. 178, 64-67, London, 1945.
6716. VALLAUX, Camille, "Le relief du fond des océans", *Revue Scientifique*, Vol. 74, No. 23, 723-729, Paris, 1936.  
The above paper is listed as No. 8905, p. 337, of *Bibliographie Géodésique Internationale*, reported as No. 6671 of this list.
6717. VALLE, P. E.,
- (1) "On the Energy Associated with Seismic SKS and SKKS Waves", *Ricerca Scientifica*, Vol. 14, 8-14, Rome; Jan., 1943.
  - (2) "Absorption and Attenuation of Some Types of Seismic Waves", *Ibid.*, 177-182, April.
  - (3) "On the Dispersion of Direct Seismic Waves", *Ibid.*, Vol. 15, 424-425, Oct., 1945.
- Abstracts of the above papers appear in *Physics Abstracts*, Sec. A, No. 597, Vol. 50, 253-254, Sept., 1947.
6718. VAN BEMMELEN, R. W., and BERLAGE, H. P., "Versuch einer methematischen Behandlung geotektonischer Bewegungen unter besonderer Berücksichtigung der Undationstheorie", *Gerlands Beiträge zur Geophysik*, Vol. 43, p. 19, Leipsig, 1934.  
The paper is listed as No. 4931, p. 324, of *Bibliographie Géodésique Internationale*, reported as No. 6671 of this list.
- VENTER, F. A., and KRIGE, L. J., "The Zululand Earthquake of the 31st December, 1932". See No. 6620 of this list.
6719. VESANEN, Eijo,
- (1) "On Seismogram Types and Focal Depth of Earthquakes in the North Japan and Manchuria Region", *Annales Academiæ Scientiarum Fennicæ*, Series A. 111. Geologica-Geographica, Vol. 11, 25 pp., 14 fig., 4 tab., bib., Helsinki, 1946.
  - (2) "On Alaskan Earthquakes", *Ibid.*, Vol. 14, 1-21, 7 fig., 9 tab., bib., Helsinki, 1947.



6720. VINES, R. G., "Properties of Liquid Explosives", *Nature*, No. 4064, Vol. 160, 400-401, 4 fig., bib., London, Sept. 20, 1947.
6721. VISSER, S. W., "Aardbevingen met zeer diepe haard in Nederlands-Indië (Earthquakes with a Very Deep Focus in the Netherlands East Indies)", *Natuurkundig Tijdschrift voor Nederlandsch-Indië*, Vol. 97, 168-172, Batavia, 1937. J.F.S.
6722. von FICKER, H., "Alfred Wegener" (obituary), *Meteorologie Zeitschrift*, Vol. 48, 241-245, Berlin, 1931.  
The above paper is listed as No. 2218, p. 23, of *Bibliographie Géodésique Internationale*, reported as No. 6671 of this list.
- WALTER, E. J., "The New Seismological Observatory at John Carroll University" (abstract), *Earthquake Notes*. See No. 6654 of this list.
6723. WANNER, E.,  
 (1) "Jahresbericht des Erdbebendienstes der Schweiz im Jahre 1941", *Annalen der Schweizerisch en Meteorologischen Zentralanstalt*, 16 pp., 1 pl., Zurich, 1942.  
 (2) "Jahresbericht des Erdbebendienstes der Schweiz im Jahre 1942", *Ibid.*, 16 pp., 1 pl., 1943.  
 (3) "Jahresbericht des Erdbebendienstes der Schweiz im Jahre 1943", *Ibid.*, 24 pp., 1 pl., 1944.
6724. WANNER, Ernst, "Die Erdbebenherde in der Umgebung von Zurich", *Eclogæ Geologicae Helvetiae*, Vol. 38, 151-161, 5 fig., 1 pl., Zurich, 1945.  
A review by F. Montandon appears on p. 77 of *Revue pour l'Étude des Calamités*, Vol. 9, No. 24, Geneva, 1946.
6725. WARDLE, J. M., "Canada's North Magnetic Pole", *Engineering Journal*, Vol. 30, No. 10, 456-457, 498, 1 fig., Montreal, Oct., 1947.
- WATERS, K. H., and ALCOCK, E. D., "A Shooting Method for Areas of Difficult Drilling". See No. 6507 of this list.
6726. WELLISCH, S., "Über das allgemeine Erdsphäriod", *Kartographische Mitteilungen*, Vol. 1, 54-57, Vienne, 1930.  
The above paper is listed as No. 5023, p. 343, of *Bibliographie Géodésique Internationale*, reported as No. 6671 of this list.
- WENANDER, H. S., "Vibration Device" (patent). See No. 6668 of this list.
6727. WILLMORE, P. L., "Seismic Aspects of the Heligoland Explosion", *Nature*, No. 4063, Vol. 160, 350-351, 1 fig., bib., London, Sept. 13, 1947.
- WILSON, J. T., "Increase in the Period of Earthquake Surface Waves with Distance" (abstract), *Earthquake Notes*. See No. 6654 of this list.
6728. WINTERBOTHAM, H. St. J. L., "A Commission for the Study of the Earth's Crust", *Bulletin Géodésique*, Vol. 51, 315-319, Paris, 1936.  
The above paper is listed as No. 8910, p. 338, of *Bibliographie Géodésique Internationale*, reported as No. 6671 of this list.



6729. WOLD, K., "Hovedproblemer i geologi basert på det isostatiske princip (Problèmes principaux de Géologie basés sur le principe isostatique)", *Naturen*, Series 6, 20-29, Bergen, 1932.

The above article is listed as No. 5084, p. 351, of *Bibliographie Géodésique Internationale*, reported as No. 6671 of this list.

6730. WOOD, Harry O.,

(1) "Earthquakes in Southern California with Geologic Relations" (Part One), *Bulletin, Seismological Society of America*, Vol. 37, No. 2, 107-157, 4 tab., Berkeley, April, 1947.

(2) "Earthquakes in Southern California with Geologic Relations" (Part Two), *Ibid.*, No. 3, 217-258, 6 fig., 13 tab., 4 maps, bib., July, 1947.

6731. WRATHER, W. E., "Science and Natural Resources", *Mines Magazine*, Vol. 37, No. 6, 21-24, 1 fig., Denver, June, 1947.

6732. WRIGHT, Frederick E., "Ninth Award of the William Bowie Medal", *Transactions, American Geophysical Union*, Vol. 28, No. 3, 359-360, Washington, June, 1947.

The citation for this medal is given by Frederick E. Wright, the response by H. A. Helb, and the reply and acceptance by F. A. Vening Meinesz.

— YOUNG, W. W., "Vibration Recorder" (patent). See No. 6668 of this list.

6733. ZCHAKAIA, A. D., "Time-Distance Curve *S-P* from the Observations of the Seismological Stations of Tblissi (Georgia)", *Académie des Sciences de la RSS de Géorgie, Institut de Physique et Géophysique*, Vol. 12, No. 1, English abst., bib., Tiflis, January-March, 1939.

— ZCHAKAIA, A., and BÜSS, E., "The Tabazkuri Earthquake on the Night of May 7-8, 1940, According to Macroseismic Observations". See No. 6535 of this list.

— ZCHAKAIA, A., BÜSS, E., and LEBEDEWA, T., "Das Erdbeben von Adshikend AM 21.12. 1938". See No. 6534 of this list.

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## SUBJECT INDEX FOR THE YEAR 1947

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