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DEPARTMENT OF MINES AND TECHNICAL SURVEYS
DOMINION OBSERVATORIES

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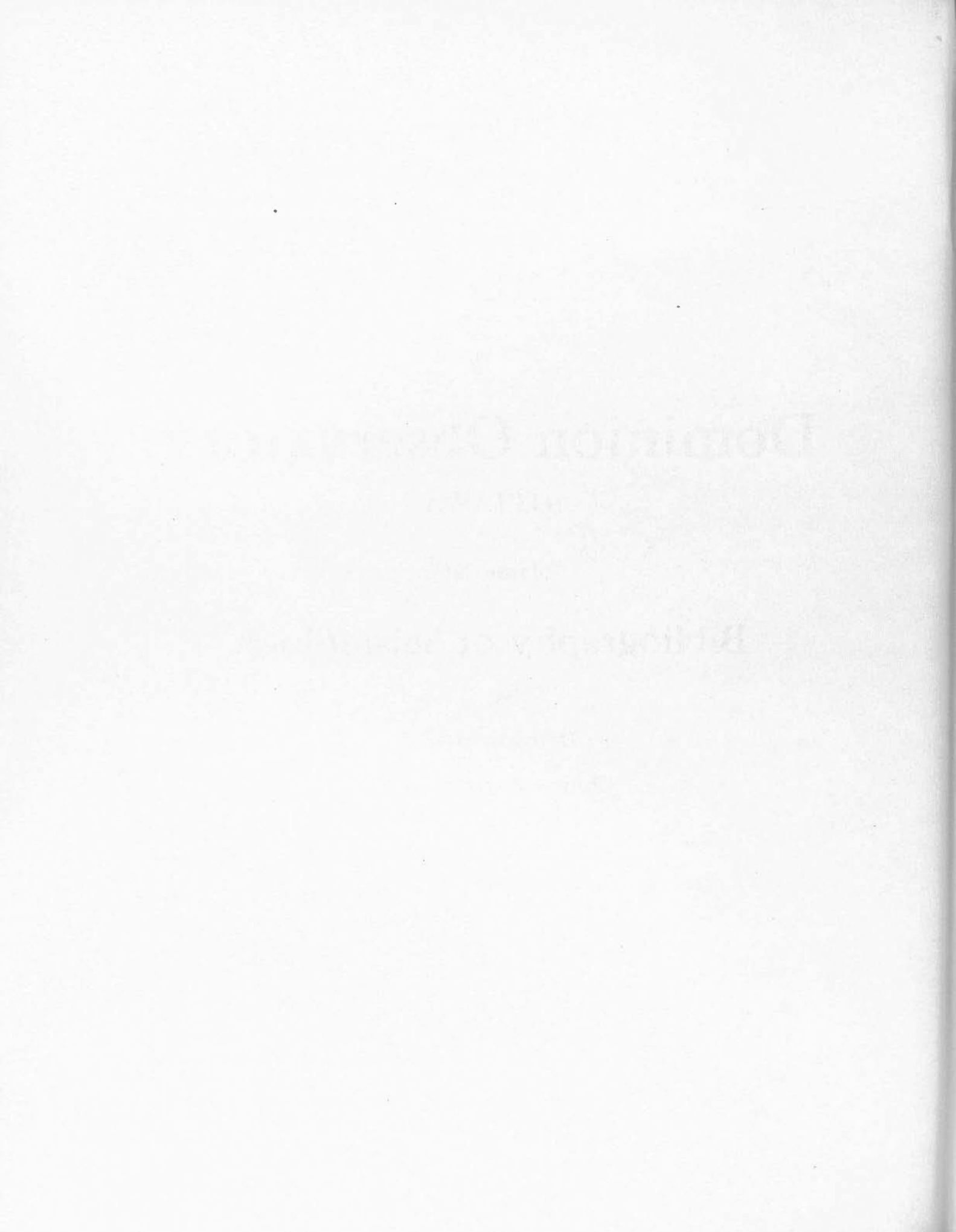
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Avoiding mathematical details and employing a style which commands continued interest and attention, the subject is treated in all its phases: earthquake effects; descriptions of many large earthquakes which have occurred in various parts of the world 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.
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SUBJECT INDEX FOR THE YEAR 1947

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The above is the complete proceedings of the meeting of The Association of Seismology in 1947 at Strasbourg. It is edited by J. P. Rothé. The issue contains the following items: introduction; list of members; program of the meeting; list of members present; minutes of each meeting; a description of the excursions; resolutions adopted (in French and English); and reports by the following members: Stoneley, Rothé, Greve, Jeffreys, Labrouste, Lehmann, and Peterschmitt. The titles of the reports are listed under the names of their respective authors in this *Bibliography*.

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Following an introduction which includes a short historical sketch, the author deals with the Theory of Elasticity, Wave Motion, Reflection and Refraction of Elastic Waves, and the applications to an Earth Model. He then discusses the seismograph both theoretically and with descriptions of various types. The construction of Time-Distance Curves is next explained and the means of deducing the structure of the Earth. Finally, the problem of the mechanics of earthquakes receives attention, together with short discussions of other problems of seismology, pure and applied.

The book admirably fills a real need by presenting the essentials of the Theory of Seismology in fairly compact form. The equations are numbered which will be most convenient. It is a matter of minor regret that the references to other papers are indicated only by the names of the authors. No titles or bibliographical data are given which will make it somewhat difficult for students not familiar with the literature.

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6816. NATIONAL RESEARCH COUNCIL OF CANADA.
- "Canadian Geophysical Bulletin", Vol. 1, No. 3, 41 pp., Ottawa, July-September, 1947.
- The above periodical is the organ of the Associate Committee on Geodesy and Geophysics of Canada. Articles of interest to seismologists in this issue are as follows: Seismic Survey Project, Kirkland Lake, Ontario; Ontario Department of Mines Seismic 12 Channel Refraction Survey for Determination of Depth of Overburden in North York Township, Ontario; Geophysical Surveys in Western Canada by Oil Companies; Toronto Transportation Commission.

6817. NATURE.

Brief items of interest to seismologists have appeared in Vol. 160 of the above periodical (London, 1947), as follows:

- (1) "Volcanic Activity in 1946", No. 4074, p. 744, Nov. 29.
- (2) "Bibliography of Seismology", No. 4078, p. 898, Dec. 27.

6818. NATURE.

Brief items of interest to seismologists have appeared in recent issues of Vol. 161 of the above periodical (London, 1948), as follows:

- (1) "Earthquake in the Philippines", No. 4085, p. 232, Feb. 14.
- (2) "Earthquakes During the Last Quarter of 1947", No. 4087, p. 306, Feb. 28.
- (3) "Seismological Research in Great Britain", No. 4094, 615-616, April 17.
- (4) "Earthquakes During July-August, 1947", No. 4095, p. 657, April 24.

6819. NEUMANN, Frank, "Earthquake Notes", Vol. 19, Nos. 1 and 2, 16 pp., Washington, Sept.-Dec., 1947.

The above periodical is the organ of the Eastern Section of the Seismological Society of America. The issue listed contains a thorough discussion of the problem of a university operating a seismograph station. The sub-headings are as follows: Editorial comment; the university seismograph problem; principal uses of seismographic data; why additional stations are needed; the microseism problem; stations in seismic and non-seismic areas; how the university benefits by operating a seismographic station; independent and cooperative stations; cost of equipment; selection of site and instrument; maintenance; interpretation of records and publication of results; amateur seismology; some general considerations on the choice of a seismograph; Benioff seismographs; Sprengnether seismographs; Wood-Anderson seismographs; miscellaneous seismographs; amateur seismographs; bibliography of papers on seismographs. The following important article is quoted from the publication: "Seismologists operating seismographs are requested to submit further discussion of the university seismograph problem in a subsequent issue of *Earthquake Notes*. Please contact the Editor now concerning your plans".

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ERRATA

Errors in translation in Vol. XIV, No. 1, of the *Bibliography* have been called to our attention as follows:

- No. 6468: "The epicentres of the earthquakes in Switzerland and Algeria indicate the active faults of the Alpine chain" should read:— "indicate the active foldings of the Alpine chain".
- No. 6470: "The hypothesis relates the building of the continents with the sinking of the Atlantic" should be:— "the hypothesis conciliates the drift theory of the continents with the sinking of the Atlantide".

LIST OF COLLABORATORS

The initials appended to various items throughout the *Bibliography* indicate, in each case, the contribution by the respective collaborator. Seismologists who receive publications which are not listed in the *Bibliography* are asked to send details of these publications to the Editor so that all seismological work may be included in this one list. Prepared forms for reporting publications will be forwarded on request.

GHASWALA, S. K., Bombay, India.	S.K.G.
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Bibliography of Seismology

July to December, 1948

Geophysicists will be interested to know that Macelwane and Sohon's INTRODUCTION TO THEORETICAL SEISMOLOGY. PART I. GEODYNAMICS by J. B. Macelwane. PART II. SEISMOLOGY by F. W. Sohon, which has been out of print for several years, is being reproduced photographically by Saint Louis University. Both parts are available in cloth binding at the same prices as were formerly charged by John Wiley and Son, that is, Part I \$6.50, and Part II \$3.75. Please address inquiries to: Saint Louis University Book Stores, 221 North Grand Boulevard, Saint Louis 3, Missouri, U.S.A.

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6862. ASSOCIATION DE SÉISMOLOGIE.

The following are the papers presented at the meeting of the Union Géodésique et Géophysique Internationale at Oslo from the 17th to the 28th of August, 1948. Those papers not appearing in other publications are listed in this issue of the *Bibliography* under the names of their respective authors.

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 - (31) "Microseisms: Correlation of Microseisms and Meteorological Data" by E. Gherzi, S.J.
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- (2) "Earthquakes and Rock Creep" by Hugo Benioff.
- (3) "Amplitude of P Waves" by Perry Byerly and Alexis I. Mei, S.J.
- (4) "Seismograph Station near Hungry Horse Dam, Montana" by Dean S. Carder and F. H. Werner.
- (5) "Difficulties in the Accepted Theories of Seismic Wave Propagation" by C. Hewitt Dix.
- (6) "Use of Large Computing Machines in Seismology" by C. Hewitt Dix.
- (7) "Trend of Engineering Design since the Long Beach Shock of March 10, 1933", by H. M. Engle.
- (8) "Horizontal Earth Movement, Vicinity of San Francisco" by William Gibson.
- (9) "On a Layer of Relatively Low Wave Velocity at a Depth of about 80 Kilometers" by B. Gutenberg.

- (10) "Microseisms in New England—Case History II" by L. Don Leet.
- (11) "California Earthquakes in 1912" by George D. Louderback.
- (12) "Montana Earthquake of November 23, 1947" by Stephen W. Nile.
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- (15) "Aftershocks of the Manix Earthquake" by C. F. Richter and J. M. Nordquist.
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 - (2) "International Seismological Summary", No. 4102, p. 923, June 12.
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 - (2) "Earthquakes during March and April, 1948", No. 4108, p. 138, July 24.
 - (3) "Earthquakes during May", No. 4110, p. 211, Aug. 7.
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 - (5) "Earthquakes during June", No. 4111, p. 248, Aug. 14.
 - (6) "Earthquake in Iran", No. 4121, p. 647, Oct. 23.
 - (7) "New Zealand Earthquakes during June", No. 4122, p. 690, Oct. 30.
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- (2) "A Modern Seismograph Installed at University of Washington", No. 2808, p. 433, Oct. 22.
- (3) "A New Method of Seismic Exploration", No. 2812, p. 572, Nov. 19.

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- (2) "Earth Due for Ice Age", No. 13, p. 197, Sept. 25.
- (3) "Man-made Shock Waves Measured by New Device", No. 17, p. 263, Oct. 23.
- (4) "Improved Seismic Method of Locating Oil Revealed", No. 20, p. 307, 1 fig., Nov. 13.
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LIST OF COLLABORATORS

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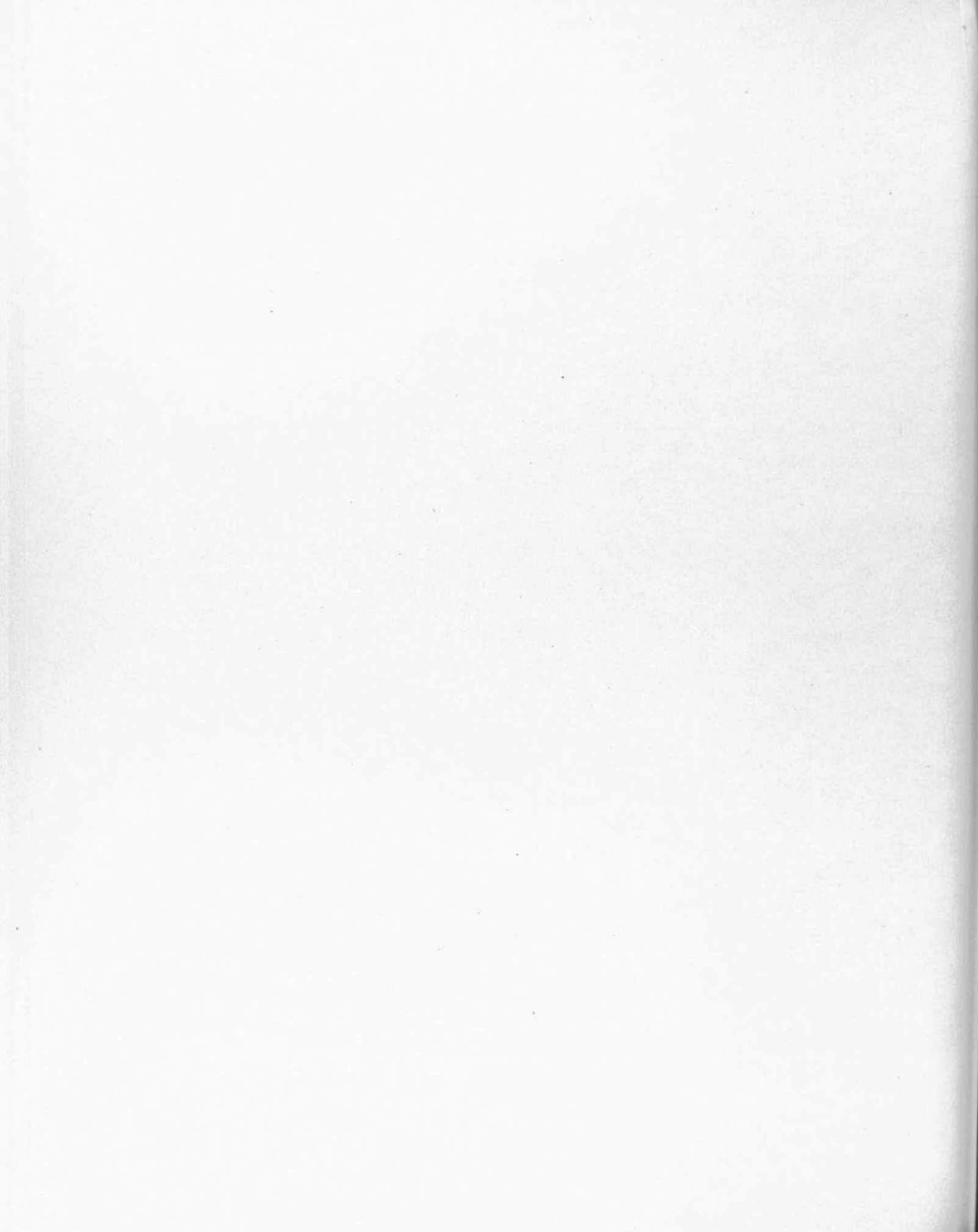
SUBJECT INDEX FOR THE YEAR 1948

The following subject index for the items listed in the *Bibliography of Seismology* for the year 1948 has been prepared in the same form as that for the items listed in 1947 (see pp. 49-52, Vol. XIV, No. 2, of these Publications, and may be considered a continuation of that index.

- B1. Building Construction: Nos. 6887, 6963, 6989.
- B2. Bibliographies: No. 6986.
- B2.1 Reviews of Papers, Textbooks, etc.: No. 6929.
- B3. Biographies: No. 6981.

- C1. Catalogues of Earthquakes, Lists of Aftershocks, etc.: Nos. 6912, 6918, 6949, 6950, 6953, 6962, 6963, 6969, 6974, 6977, 7003.
See also R2. (Reports).
- C3. Cosmogony; Theoretical Discussions of Similar Nature; Continental Drift, Orogeny, etc.: Nos. 6862, 6868, 6916, 6920, 6921, 6922, 6923.
- D1. Dams and Earthquakes: No. 6882.
See also E2. (Engineering).
- D2. Deformations, Gradual, of the Earth's Crust: Nos. 6862, 6882, 6940, 6946, 6996.
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- E2. Engineering; Particular Applications to Seismology or of Seismology: Nos. 6882, 6887, 6894.
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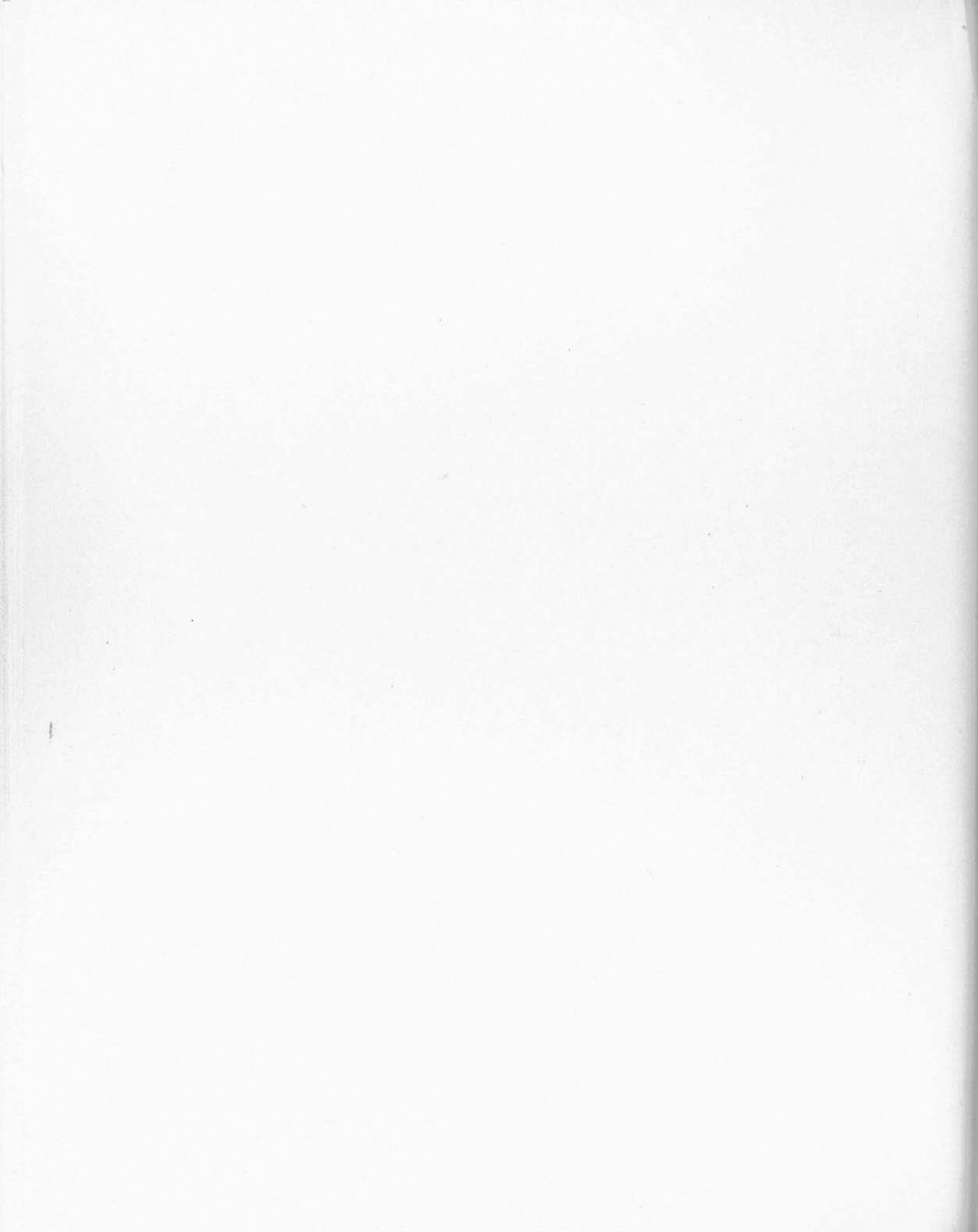
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SUBJECT INDEX FOR THE YEAR 1949

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LIST OF COLLABORATORS

The initials appended to various items throughout the *Bibliography* indicate, in each case, the contribution by the respective collaborator.

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7943. UNION GÉODÉSIQUE ET GÉOPHYSIQUE INTERNATIONALE, ASSOCIATION DE SÉISMOLOGIE ET DE PHYSIQUE DE L'INTÉRIEUR DE LA TERRE. "Comptes Rendus des Séances de la Neuvième Conférence, Réunie à Bruxelles du 20 Août au 1^{er} Septembre 1951", 283 pages, rédigés par le secrétaire, J. P. Rothé, Société Nouvelle d'Impression Muh-le Roux, Strasbourg, 1952.

The conference opened with the presidential address entitled "The International Seismological Summary an Example of International Co-operation in Science", by Dr. Robert Stoneley, and continued with the presentation of various financial statements and reports including the reports of the Director of the International Seismological Summary for the years 1948 to 1950 inclusive, by Dr. Harold Jeffreys.

A discussion was held on a proposal for the revision of the present symbols for seismic waves, and resulted in the formation of a Commission consisting of Mme Labrouste, Messrs. Caloi, Gutenberg, Hiller and Jeffreys to study the question. A second Commission consisting of Dr. Guyot as chairman, Mme. Labrouste and Dr. Richter, was formed to establish the text of a Dictionary of Seismological Terms.

Reports on seismological activity were submitted on behalf of each of the member countries, including in most cases a bibliography of the contributions made.

The papers listed below were presented at the above mentioned conference and bear the same numbers as assigned to their respective abstracts appearing in *Comptes Rendus No. 10*, under section 12 entitled "Communications Scientifiques".

- (1) PINAR, Mille N., "Les Régions sismiques de l'Anatolie Occidentale (Turquie)", to be in *Publications du Bureau central séismologique international, Série A, Travaux Scientifiques*, Fascicule No. 18.
- (2) LAHN, E., "Les Zones séismogéniques de l'Anatolie Orientale (Turquie)", to be published in the same place as No. (1).
- (3) SHALEM, N., "La Séismicité au Levant", *Bulletin of the Research Council of Israel*, No. 5, May, 1952.
- (4) MADWAR BEY, M. R., "Sur une zone séismique autour du Caire", to be published in the same place as No. (1).
- (5) RAMIREZ, J. E., "El gran Terremoto Ecuatoriano de Pelileo, Agosto 5, 1949", *Revista de la Academia Colombiana de Ciencias Fisicas, Exactas y Naturales*, Vol. 8, No. 29, 129-139, Bogota, Nov., 1950. (See also No. 7640, in No. 9, of this volume).
- (6) VESANEN, E., and JONES, J., "On Seismicity in the State of Washington".
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- (11) BATH, Marcus, "Initial Motion of the First Longitudinal Earthquake Wave Recorded at Pasadena and Huancayo". See No. 7787 of this list.

- (12) STONELEY, R., "The Propagation of Elastic Waves in an Anisotropic Earth". The content of this communication comprises two papers listed as No. 7114 in No. 5, and No. 7646 in No. 9, of this volume.
- (13) NANDA, J. N., "Determination of Average Crustal Characteristics from Reverberation of Seismic Waves", to be published in *Journal of Geophysical Research*, U.S.A.
- (14) ANDERSON, D. V., and NORTHWOOD, T. D., "Model Seismology". *Bulletin, Canadian Association of Physicists*, 1950.
- (15) GASSMANN, F., "Sur des mouvements vibratoires dans les milieux non compacts et dans des milieux amortissants". For places of publication see *Comptes Rendus* No. 10, page 60.
- (16) SATO, Y., "Transformation de la fonction d'ondes par transformation des systèmes de coordonnées". Content is the same as that of No. 7756 in No. 10 of this volume.
- (17) TAKEUCHI, H., "Diffraction des ondes élastiques par une sphère élastique". Reported as No. 7767 in No. 10 of this volume.
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- (19) LABROUSTE, Mme, and GILBERT, M. J., "Détermination des épicertrés à l'aide des couples de stations ayant reçu les ondes *P* à la même heure", *Annales de Géophysique*, Vol. 7, 268-271, Paris, 1951.
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The initials appended to various items throughout the *Bibliography* indicate, in each case, the contribution by the respective collaborator.

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LIST OF COLLABORATORS

The initials appended to various items throughout the *Bibliography* indicate, in each case, the contribution by the respective collaborator.

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SUBJECT INDEX FOR THE YEAR 1952

The following subject index for the items listed in the *Bibliography of Seismology* for the year 1952 has been prepared in the same form as that for the items listed in 1951 (see pp. 209-210, Vol. XIV, No. 10, of these *Publications*), and may be considered a continuation of that index.

- A1. Aids to Seismological Study: Nos. 7940, 7955.
See also M1. (Maps).
- B1. Building Construction: Nos. 7868, 7950, 7956, 7998, 8039, 8052.
See also E2. (Engineering).
- C1. Catalogues of Earthquakes, Lists of Aftershocks, etc.: Nos. 7811, 8043, 8044, 8045, 8046, 8047, 8093.
See also R2. (Reports).
- C2. Causes of Earthquakes: Nos. 7808, 8029, 8038.
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- D3. Descriptions, General, of Earthquakes in Canada or the United States: Nos. 7839, 7903, 7963, 8018, 8095.
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- E1. Effects of Earthquakes, on Buildings, Ground, etc., Observed during or after the Disturbance: No. 7820.
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ERRATA

Page 267, Item 8185, second line, for "... Times Blasts", *read* "... Timed Blasts".

Page 274, Item 8275, for Sheidegger, *read* Scheidegger.

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LIST OF JOURNALS

The following list gives the titles of publications regularly searched for items to be entered in the *Bibliography of Seismology*.

Authors whose articles in seismology are published elsewhere, and readers noting articles of interest to seismologists in journals not listed below, are invited to collaborate in the preparation of the *Bibliography* by forwarding the necessary information about the papers to The Director, Dominion Observatory, Attention: Seismological Division, Department of Mines and Technical Surveys, Ottawa, Canada.

The assistance of collaborators will be acknowledged in the text. Collaborator's report forms will be forwarded to interested persons on request.

<i>Advancement of Science</i>	London
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<i>Anales de la Sociedad Científica Argentina</i>	Buenos Aires
<i>Annales de Géophysique</i>	Paris
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<i>Annotated Bibliography of Economic Geology</i>	Urbana
<i>Arkiv för Geofysik</i>	Stockholm
<i>Boletín del Centro de Documentación Científica y Técnica</i>	Mexico
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<i>Bulletin of the American Meteorological Society</i>	Boston
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<i>Bulletin of the Geographical Survey Institute</i>	Chiba
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<i>Discovery</i>	Norwich
<i>Earthquake Notes</i>	Washington
<i>Economic Geology</i>	Lancaster
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<i>Endeavour</i>	London
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<i>Geographical Review</i>	New York
<i>Geophysical Abstracts</i>	Washington
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<i>Geophysics</i>	Menasha

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<i>Journal of Geology</i>	Chicago
<i>Journal of Geophysical Research</i>	Baltimore
<i>Journal of Research of the National Bureau of Standards</i>	Washington
<i>Journal of Scientific Instruments</i>	London
<i>Journal of the Franklin Institute</i>	Philadelphia
<i>Journal of the Royal Astronomical Society of Canada</i>	Toronto
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<i>Meteoros</i>	Buenos Aires
<i>Monthly Notices of the Royal Astronomical Society</i>	London
<i>Nature</i>	London
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<i>Proceedings of the National Institute of Sciences of India</i>	New Delhi
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The initials appended to various items throughout the *Bibliography* indicate, in each case, the contribution by the respective collaborator.

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SUBJECT INDEX FOR THE YEAR 1953

The following subject index for the items listed in the *Bibliography of Seismology* for the year 1953 has been prepared in the same form as that for the items listed in 1952 (see pp. 252-255, Vol. XIV, No. 12, of these *Publications*), and may be considered a continuation of that index.

- A1. Aids to Seismological Study: Nos. 8139, 8187, 8222, 8245, 8315, 8334, 8498.
See also M1. (Maps).
- A2. Air, Sound vibrations in; Pressure of: No. 8154.
- C1. Catalogues of Earthquakes, Lists of Aftershocks, etc.: Nos. 8129, 8130, 8141, 8156, 8176, 8177, 8178, 8244, 8248, 8253, 8273, 8277, 8278, 8286, 8299, 8318, 8352, 8376, 8451, 8452, 8453, 8480, 8499.
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- C4. Cycles, Earthquake: Nos. 8306, 8375, See also P 5. (Prediction).
- D2. Deformations, Gradual, of the Earth's Crust: Nos. 8142, 8198, 8211, 8254, 8372, 8373, 8465, 8473, 8490, 8500 (2).
See also G1. (Geodesy) and T2. (Tides).
- D3. Descriptions, General, of Earthquakes in Canada or the United States: No. 8127, 8325, 8342, 8369, 8445.
- D4. Descriptions, General, of Earthquakes other than those in Canada or the United States: Nos. 8155, 8197, 8199, 8205, 8207, 8223, 8233, 8238, 8249, 8255, 8259, 8261, 8262, 8284, 8320, 8362, 8363, 8393, 8426, 8434, 8471, 8472, 8544.
- E1. Effects of Earthquakes, on Buildings, Ground, etc., Observed during or after the Disturbance: Nos. 8422, 8424, 8467, 8516, 8540.
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The following list gives the titles of publications regularly searched for items to be entered in the *Bibliography of Seismology*.

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<i>Advancement of Science</i>	London
<i>Advances in Physics</i>	London
<i>American Journal of Science</i>	New Haven
<i>Anales de la Sociedad Científica Argentina</i>	Buenos Aires
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<i>Bulletin Géodésique International</i>	Paris
<i>Bulletin of the American Meteorological Society</i>	Boston
<i>Bulletin of the Earthquake Research Institute of Tokyo University</i>	Tokyo
<i>Bulletin of the Geographical Survey Institute</i>	Chiba
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<i>Economic Geology</i>	Lancaster
<i>Electronics</i>	New York
<i>Endeavour</i>	London
<i>Geofysikální Sborník, Nakladatelství Československé Akademie Věd</i>	Prague
<i>Geographical Journal</i>	London
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<i>Journal of Research of the National Bureau of Standards</i>	Washington
<i>Journal of Scientific Instruments</i>	London
<i>Journal of the Franklin Institute</i>	Philadelphia
<i>Journal of the Royal Astronomical Society of Canada</i>	Toronto
<i>Journal of the Washington Academy of Sciences</i>	Washington
<i>Meteoros</i>	Buenos Aires
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SUBJECT INDEX FOR THE YEAR 1954

The following subject index for the items listed in the *Bibliography of Seismology* for the year 1954 has been prepared in the same form as that for the items listed in 1953 (see pp. 305-308, Vol. XIV, No. 14, of these *Publications*), and may be considered a continuation of that index.

- A1. Aids to Seismological Study: Nos. 8686, 8756.
See also M1. (Maps).
- B1. Building Construction: No. 8731.
See also E2. (Engineering).
- B2. Bibliographies: No. 8688.
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Authors whose articles in seismology are published elsewhere, and readers noting articles of interest to seismologists in journals not listed below, are invited to collaborate in the preparation of the *Bibliography* by forwarding the necessary information about the papers to the Dominion Astronomer, Dominion Observatory, attention Seismological Division, Department of Mines and Technical Surveys, Ottawa, Canada.

The assistance of collaborators will be acknowledged in the text. Collaborators' report forms will be forwarded to interested persons on request.

<i>Advancement of Science</i>	London
<i>Advances in Physics</i>	London
<i>American Journal of Science</i>	New Haven
<i>Anales de la Sociedad Científica Argentina</i>	Buenos Aires
<i>Annales de Géophysique</i>	Paris
<i>Annali di Geofisica</i>	Rome
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<i>British Journal of Applied Physics</i>	London
<i>Bulletin Géodésique Internationale</i>	Paris
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<i>Bulletin of the Earthquake Research Institute of Tokyo University</i>	Tokyo
<i>Bulletin of the Geographical Survey Institute</i>	Chiba
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<i>Discovery</i>	Norwich
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<i>Economic Geology</i>	Lancaster
<i>Endeavour</i>	London
<i>Geofisica Pura e Applicata</i>	Rome
<i>Geofysikální Sborník, Nakladatelství Československé Akademie Věd</i>	Prague
<i>Geographical Journal</i>	London
<i>Geographical Review</i>	New York

<i>Geophysical Abstracts</i>	Washington
<i>Geophysical Magazine</i>	Tokyo
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<i>Journal of Atmospheric and Terrestrial Physics</i>	London
<i>Journal of Geology</i>	Chicago
<i>Journal of Geophysical Research</i>	Baltimore
<i>Journal of Research of the National Bureau of Standards</i>	Washington
<i>Journal of Scientific Instruments</i>	London
<i>Journal of the Franklin Institute</i>	Philadelphia
<i>Journal of the Royal Astronomical Society of Canada</i>	Toronto
<i>Journal of the Washington Academy of Sciences</i>	Washington
<i>Meteoros</i>	Buenos Aires
<i>Monthly Notices of the Royal Astronomical Society, Geophysical Supplement</i>	London
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<i>Observatory</i>	Hailsham
<i>Papers in Meteorology and Geophysics</i>	Tokyo
<i>Philosophical Magazine</i>	London
<i>Philosophical Transactions of the Royal Society of London</i>	London
<i>Physics Abstracts</i>	London
<i>Proceedings of the Japan Academy</i>	Tokyo
<i>Proceedings of the National Academy of Sciences of U.S.A.</i>	Washington
<i>Proceedings of the National Institute of Sciences of India</i>	New Delhi
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The initials appended to various items throughout the *Bibliography* indicate, in each case, the contribution by the respective collaborator.

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LIST OF COLLABORATORS

The initials appended to various items throughout the *Bibliography* indicate, in each case, the contribution by the respective collaborator.

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