

# Meetings and Societies

## Role of Gravitation in Physics

Some 45 physicists from England, Denmark, France, Germany, Japan, Sweden, Turkey, and the United States met at the University of North Carolina, Chapel Hill, 18–23 Jan., for a week of working sessions to discuss the role of gravitation in physics. The conference was the first formal activity of the Institute of Field Physics, Inc., whose North Carolina project was established within the department of physics of the University of North Carolina in 1956. The conference was sponsored by the International Union of Pure and Applied Physics, the National Science Foundation, the Wright Air Development Center of the U.S. Air Force, the Office of Ordnance Research of the U.S. Army, and the Institute of Natural Science of the University of North Carolina.

The title of the conference emphasizes the fact that gravitation, although one of the earliest theories in physics, has so far remained isolated and has very few links with other branches of physics. The works of Galileo, Newton, and Einstein—of great intellectual beauty—seem, at first, to be completely self-contained. But if, as a working hypothesis, we believe in the organic whole of nature, we want to investigate the concepts which would bring gravitation intimately into our description of nature. In particular, a quantum theory of gravitation would bring together the laws of the very small and of the very large. Even if no real progress is made, in the course of such an investigation, toward linking the theory of gravitation more closely with the other physical theories, the investigation in itself would force us into a deeper understanding of both gravitation and other physical theories.

The first session of the conference was devoted to a report on experiments which substantiate the Einstein relativistic theory of gravitation. Very few such experiments are feasible with present-day techniques, and the scarcity of experimental guideposts is one of the biggest difficulties for researchers in this field. The three well-known astronomical observations were briefly mentioned only to express the wish that they could be performed with more accuracy. On the other hand, the accuracy of the

Eötös experiment (1890), which proves the equivalence of the gravitational and inertial mass (in other words, that all bodies fall at the same rate in the same gravitational field) can now be increased from 1 part in  $10^8$  to 1 part in  $10^{11}$ . There are other experiments which could also delineate the validity of Einstein theory, such as the “clock experiment,” which can now be performed on earth, and the measure of the (absence of) secular variation in the strength of the gravitational interaction.

The next session of the conference covered some advances which have been made recently in the mathematics of Einstein's equations. The extraordinary mathematical difficulties involved in the study of gravitation have not yet been overcome, but some tools developed by mathematicians in the study of integration of nonlinear partial differential equations and properties of their solutions, and by physicists in their studies of quantum field theories, foster a renewed interest in the subject.

The working sessions were divided, for convenience, into sessions on classical general relativity and sessions on quantized general relativity. The main problems discussed in the classical group were the following: (i) Do the equations predict the existence of gravitational waves? (ii) What are the true observables of the theory (as opposed to variables of integration chosen for mathematical convenience)? (iii) Which invariants and topological problems might lead to a grasp of the physical reality of the gravitational field?

The first question raised in the sessions on quantum field theory was, Why quantize the gravitational field? The theory of measurement in the context of gravitation can tell us whether there is a logical necessity for quantizing the gravitational field. It seems at present that there is a logical need either to quantize the gravitational field or else to introduce a new basic principle in physics. Even without settling this question, physicists are interested in tackling the technical problems of quantization of the gravitational field, partly because of their present difficulties in understanding existing quantum field theories and elementary particles and partly because it is a challenging problem in itself. One

of the techniques most discussed was the use of Feynman's path integral in curved space.

Cosmologists were invited to report on some advances in their field that are of interest for the theory of gravitation and, as one conferee said, “to give us a view of applied gravitation theory.”

A short report cannot give a picture of the active discussions that went on among the conferees. Most of them are working almost wholly independently of one another and are eager to engage in discussions of all the difficulties they have encountered and the results that they are beginning to obtain. This conference was the second one devoted to the subject of gravitation; the first “A jubilee of relativity theory,” was held in Bern, Switzerland, in 1955. All the conferees wished to have other opportunities to meet together; specifically, it is hoped that another conference will be held in the summer of 1958.

A report on the proceedings of the conference is now in press and will be distributed as a U.S. Air Force technical report. Inquiries concerning this report should be sent to Wright Air Development Center, attention: WCRRX, Wright-Patterson Air Force Base, Ohio.

Papers related to the subjects discussed at the conference will appear in the July issue of *Reviews of Modern Physics*.

CECILE DEWITT

*University of North Carolina,  
Chapel Hill*

## African Studies Association

At a recent weekend conference in New York of 35 leading scholars and specialists on African affairs, Melville J. Herskovits, director of the Northwestern University Program of African Studies, was elected president of the newly created African Studies Association. During the 2-day conference, the decision was taken to establish a formal organization to serve the needs and interests of individual scholars, university African programs, and organizations concerned with Africa.

In view of the postwar proliferation of scholarly associations, a majority of Africanists have previously displayed a reluctance to set up an African studies association until the usefulness of such a body could be clearly demonstrated. However, the continually increasing importance of Africa in world affairs, and the attraction of an ever-growing number of specialists to African research, convinced those attending the conference that a clearing house was needed for the cross-dissemination of information on Africa.

Reflecting the activities and interests of most of those attending the confer-

ence, the African Studies Association will focus attention upon the problems of sub-Saharan Africa. However, throughout Africa's long history, trade and commerce have repeatedly breached the Saharan barrier to link North and South Africa. With ties between the two regions strengthened by modern communications and with an expressed interest among the leaders of independent Africa for the creation of an African bloc, the association will welcome to its membership specialists in North African research.

The functions of this nonpolitical association will be to facilitate communication among scholars interested in Africa and to stimulate research on Africa by specialists in various scientific disciplines and the humanities.

The conference concluded its work by setting up a temporary organization and electing officers. In addition to naming Herskovits as president, Gwendolen M. Carter, Smith College political scientist, was elected to the vice presidency. The board of trustees that was empowered to draft a constitution and administer association affairs until the convening of the first annual meeting included: W. O. Brown, director, Boston University African Studies Program; John Considine, professor of contemporary world affairs at Maryknoll Seminary; L. Gray Cowan, Columbia University; Leonard Doob, Yale University; Walter Goldschmidt, anthropologist, University of California at Los Angeles; Franklin Frazier, Howard University; C. W. de Kiewiet, president, University of Rochester; and Vernon McKay, professor of African studies at the Johns Hopkins University.

### AAAS Meeting Support

Additional contributions to help reduce the deficit of the AAAS meeting held in New York, 26-31 Dec. 1956, have been received from the following during the months since the report of the meeting was made [*Science* 125, 285 (15 Feb. 1957)]: Chase Manhattan Bank; S. Sloan Colt, chairman of the board, Bankers Trust Company; Eastman Kodak Company; Erwin, Wasey and Company, Inc.; General Dynamics Corporation; Johnson and Johnson; National Cash Register Company; Owens-Illinois; Pfizer Foundation, Inc.; Phelps Dodge Corporation; Socony Mobil Oil Company, Inc.; Union Carbide Corporation; United States Steel Corporation; and Winthrop Laboratories.

### College Administration

The annual Institute on College Administration for presidents, deans, and other administrative officers will be held at the University of Michigan from 15-

19 July. Major themes to be covered in the program include: problems and trends in higher education; curriculum planning and administration; human relations factors in personnel administration; student personnel problems; and purposes of higher education and their implementation. Those attending the institute will have opportunity to help determine specific topics and problems to be discussed at the afternoon sessions. Special attention will be given to the use of institutional self-studies.

The director of the institute will be Algo D. Henderson, professor of higher education, and the assistant director will be James M. Davis, assistant professor of education and director of the International Center, both of the University of Michigan. Other staff will include Earl McGrath, director of the Institute for the Study of Higher Education, Teachers College, Columbia University; Frank R. Kille, dean of Carleton College; E. G. Williamson, dean of students, University of Minnesota; and administrative officers and professors of the University of Michigan. Additional information may be obtained by writing to Algo D. Henderson, 2442 U.E.S., University of Michigan, Ann Arbor, Mich.

### Biological Symposium

The eighth annual Biological Symposium of the University of Michigan Summer Session will be held 9-11 July. The general subject is "Hormones and growth." The speakers will be Dietrich Bodenstein (Army Chemical Center), Roy O. Greep (Harvard University), Frederick L. Hisaw (Harvard University), and Folke K. Skogg (University of Wisconsin).

Housing may be secured by writing directly to the Michigan Union, 530 S. State St., Ann Arbor, Mich. Other inquiries may be directed to Dr. Burton L. Baker, Department of Anatomy, University of Michigan, Ann Arbor.

### Mammalian Cell Culture

A 3-day series of conferences and laboratory demonstrations dealing with quantitative methods of mammalian cell culture will be presented by the department of biophysics, University of Colorado Medical Center, in Denver, Colo., 9-11 Sept. The techniques for quantitative growth on plates of single mammalian cells and isolation of clonal stocks will be demonstrated. Application of these methods to problems of mammalian cell growth, genetics, nutrition, and interaction with agents like x-radiation and viruses will be considered.

These sessions are open to responsible scientists engaged in teaching and re-

search. Inquiries should be directed to the Office of Graduate and Postgraduate Education, University of Colorado Medical Center, Denver 20, Colo. Applications will be accepted in the order of their receipt, to the limit of the available accommodations. The conference is sponsored by the Colorado Division of the American Cancer Society.

### International Conference on Pesticides

The International Conference on Pesticides that was to be held 16-18 Oct., if sufficient supporting funds became available, has been postponed. The funds subscribed totaled \$14,250, which was something short of the \$25,000 minimum considered necessary; therefore, plans for holding the conference in 1957 have had to be canceled. If sufficient interest continues, development of plans for a conference in 1958 will be considered.

### Origin of Life

A Symposium on the Origin of Life, organized under the auspices of the International Union of Biochemistry, will be held in Moscow, U.S.S.R., 19-24 Aug., followed by a visit to Leningrad. Further details can be obtained from the secretary of the Organizing Committee, Prof. G. A. Deborin, Institute of Biochemistry, U.S.S.R. Academy of Sciences, B. Kaluzskaya 33, Moscow, B.71, U.S.S.R.

### Forthcoming Events

#### June

10-11. Instrumentation in Medicine and Biology, symp., Ridgefield, Conn. (J. H. Heller, New England Inst. for Medical Research, Ridgefield.)

11-13. American Meteorological Soc., Monterey, Calif. (K. C. Spengler, AMS, 3 Joy St., Boston 8, Mass.)

11-15. Ionization Phenomena in Gases, 3rd internatl. conf., Venice, Italy. (U. Facchini, Laboratori CISE, Via Procaccini 1, Milan, Italy.)

12-15. Colloquium of College Physicists, 19th annual, Iowa City, Iowa. (J. A. Van Allen, Dept. of Physics, State Univ. of Iowa, Iowa City.)

13-15. Instrumental Methods of Analysis, 3rd natl. symp., Chicago, Ill. (H. S. Kandler, Instrument Soc. of America, 313 Sixth Ave., Pittsburgh 22, Pa.)

16-20. American Soc. of Mammalogists, annual, Lawrence, Kansas. (B. P. Glass, Dept. of Zoology, Oklahoma A.&M. College, Stillwater.)

16-21. American Soc. for Testing Materials, Atlantic City, N.J. (R. J. Painter, ASTM, 1916 Race St., Philadelphia 3.)

17-19. American Neurological Assoc., Atlantic City, N.J. (C. Rupp, 133 S. 36 St., Philadelphia 4, Pa.)

17-19. Astronomical Soc. of the Pacific, annual, Flagstaff, Ariz. (S. Einarsson, Univ. of California, Berkeley 4.)

17-19. Health Physics Soc., 3rd annual, Pittsburgh, Pa. (H. W. Patterson, Radiation Lab., Univ. of California, Berkeley.)

17-19. Military Electronics, national convention, Washington, D.C. (G. Rapaport, Emerson Radio & Phonograph Corp., 701 Lamont St., NW, Washington 10.)

17-20. Carbon Conf., 3rd, Buffalo, N.Y. (Carbon Conf., Univ. of Buffalo, Buffalo.)

17-20. Institute of Aeronautical Sciences, natl. summer, Los Angeles, Calif. (S. P. Johnston, IAS, 2 E. 64 St., New York 21.)

17-21. American Soc. for Engineering Education, annual, Ithaca, N.Y. (W. L. Collins, Univ. of Illinois, Urbana.)

17-21. Association of Official Seed Analysts, annual, Baton Rouge, La. (L. C. Shenberger, Seed Lab., Dept. of Agricultural Chemistry, Purdue Univ., Lafayette, Ind.)

17-21. Canadian Medical Assoc., 90th annual, Edmonton, Alberta, Canada. (CMA, 244 George St., Toronto, Ont.)

17-22. Coordination of Galactic Research, internatl. symp., Stockholm, Sweden. (P. T. Oosterhoff, University Observatory, Leiden, Netherlands.)

17-22. Internal Combustion Engine Cong., 4th internatl., Zurich, Switzerland. (C. C. M. Logan, British National Committee, 6 Grafton St., London, W.1.)

17-28. Wear Theory in Metal Cutting

and Bearing Design, special summer program, Cambridge, Mass. (Massachusetts Inst. of Technology, Cambridge 39.)

19-21. Association for Computing Machinery, annual, Houston, Tex. (J. Moshman, ACM, 2 E. 63 St., New York 21.)

19-21. Society for the Study of Development and Growth, 16th annual symp., Kingston, R.I. (R. O. Erickson, SSDG, Botanical Lab., Univ. of Pennsylvania, Philadelphia 4.)

20-22. American Assoc. of Physics Teachers, annual, Schenectady, N.Y. (F. Verbrugge, School of Physics, Univ. of Minnesota, Minneapolis.)

20-22. American Physical Soc., Notre Dame, Ind. (K. K. Darrow, APS, Columbia Univ., New York 27.)

20-22. Soc. of Nuclear Medicine, 4th annual, Oklahoma City, Okla. (R. Lackey, SNM, 452 Metropolitan Bldg., Denver, Colo.)

21-23. American Assoc. of Bioanalysts, annual, New Orleans, La. (G. Hoffman, 3707 Gaston, Suite 419, Dallas, Tex.)

22-28. American Soc. of Medical Technologists, annual, Chicago, Ill. (Miss R. Matthaei, ASMT, Suite 25, Hermann Professional Bldg., Houston 25, Tex.)

23-26. American Soc. of Agricultural Engineers, E. Lansing, Mich. (J. L. Butt, ASAE, St. Joseph, Mich.)

23-28. American Physical Therapy Assoc., annual, Detroit, Mich. (Miss M. E. Haskell, APTA, 1790 Broadway, New York 19.)

23-28. National Assoc. of Power En-

gineers, natl., Grand Rapids, Mich. (E. J. Schuetz, NAPE, 176 W. Adams St., Chicago 3, Ill.)

23-29. American Library Assoc., annual, Kansas City, Kans. (D. H. Clift, ALA Hq., 50 E. Huron St., Chicago 11, Ill.)

23-30. Rheumatic Diseases, 9th internatl. cong., in conjunction with American Rheumatism Assoc., Toronto, Ont., Canada. (E. Dunlop, Box 237, Terminal "A," Toronto.)

24-26. Aging, 10th conf., Ann Arbor, Mich. (Div. of Gerontology, Univ. of Michigan, Rackham Bldg., Ann Arbor.)

24-26. American Soc. of Heating and Air-Conditioning Engineers, Murray Bay, Quebec, Canada. (A. V. Hutchinson, ASHAE, 62 Worth St., New York 13.)

24-27. Agricultural Inst. of Canada, with six other Canadian agricultural socs., annual, Vancouver, B.C. (W. J. Anderson, Dept. of Agricultural Economics, Univ. of British Columbia, Vancouver.)

24-28. American Inst. of Electrical Engineers, summer general, Montreal, Quebec, Canada. (N. S. Hibshman, AIEE, 33 W. 39 St., New York 18.)

24-28. Scientific Management, 11th internatl. cong., Paris, France. (Internatl. Committee of Scientific Management, 57, rue de Babylone, Paris 7<sup>e</sup>.)

24-29. Cosmical Gas Dynamics, 3rd symp. (by invitation), Internatl. Union of Theoretical and Applied Mechanics, Cambridge, Mass. (J. M. Burgers, Univ. of Maryland, College Park.)

25-27. Max Planck Soc. for the Advancement of Science, annual general assembly, Lübeck, Germany. (Max Planck Soc. for the Advancement of Science, Kaiserwertherstrasse 164, Dusseldorf, Germany.)

25-28. American Dairy Science Assoc., 51st annual, Stillwater, Okla. (H. F. Judkins, 32 Ridgeway Circle, White Plains, N.Y.)

25-28. American Home Economics Assoc., St. Louis, Mo. (Miss M. Horton, AHEA, 1600 20 St., NW, Washington 9.)

30-1. National Education Assoc., annual, Philadelphia, Pa. (W. G. Carr, NEA, 1201 16 St., NW, Washington 6.)

## July

1-3. Reproduction and Infertility, 3rd symp., Fort Collins, Colo. (F. X. Gassner, Colorado State Univ., Fort Collins.)

1-6. Brazilian Soc. for the Advancement of Science, 9th annual, Rio de Janeiro, Brazil. (Sociedade Brasileira Para o Progresso da Ciencia, Caixa Postal 2926, São Paulo, Brazil.)

1-6. Industrial Medicine, 12th internatl. cong., Helsinki, Finland. (L. Noro, Inst. of Occupational Health, Huopalahdenkatu 1, T8818, Helsinki.)

2-4. Neurological Basis of Behavior, Ciba Foundation Symp. (by invitation only), London, England. (G. E. W. Wolstenholme, Ciba Foundation, 41 Portland Pl., London, W.1.)

2-6. Physical Problems of Color Television, internatl. symp. of IUPAP, Paris, France. (Secretary, Colloque International sur les Problèmes de la Télévision en Couleurs, Conservatoire National des

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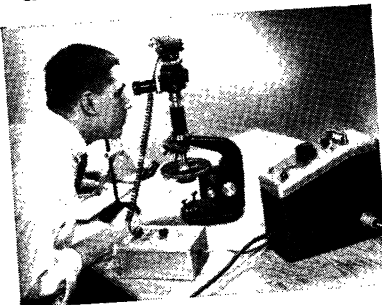
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Arts et Métiers, 292, rue Saint-Martin, Paris 3<sup>e</sup>.)

3-6. Current Problems in Crystal Physics, conf. IUPAP and NSF, Cambridge, Mass. (J. S. Slater, Massachusetts Inst. of Technology, Cambridge 39.)

8-10. Astrophysical Symp., 8th internat., Liège, Belgium. (P. Swings, Institut d'Astrophysique, Université de Liège, Liège.)

8-10. Endocrine Aspect of Breast Cancer, Internatl., conf., Glasgow, Scotland. (A. P. M. Forrest, Dept. of Surgery, Western Infirmary, Glasgow, W.I.)

8-12. Inter-American Cong. of Philosophy, 5th, Washington, D.C. (R. M. Chisholm, Brown Univ., Providence, R.I.)

8-12. Poliomyelitis Conf., 4th inter-

natl., Geneva, Switzerland. (Secretariat, 4th International Poliomyelitis Conference, Hotel du Rhone, Geneva.)

9-11. Biological Symp., 8th annual, Univ. of Michigan, Ann Arbor. (B. L. Baker, Dept. of Anatomy, Univ. of Michigan, Ann Arbor.)

9-13. European Molecular Spectroscopy Conf., Freiburg, Breisgau, Germany. (R. Mecke, Dept. of Physical Chemistry, Univ. of Freiburg, Freiburg.)

9-13. International Cong. for the Study of Social Insects, Paris, France. (G. Richard, International Union for the Study of Social Insects, Faculty of Sciences, University of Rennes, Rennes, France.)

10-12. Thermodynamic and Transport

Properties of Fluids, conf., IUPAC, London, England. (Institution of Mechanical Engineers, 1, Birdcage Walk, Westminster, London, S.W. 1.)

10-17. International Union of Crystallography, 4th genl. assembly, Montreal, Canada. (G. A. Jeffrey, Chemistry Dept., Univ. of Pittsburgh, Pittsburgh 13, Pa.)

14-19. International Assoc. of Gerontology, Merano, Italy. (A. I. Lansing, Dept. of Anatomy, Univ. of Pittsburgh, Pittsburgh 13, Pa.)

14-20. Clinical Pathology, 4th internat. cong., Brussels, Belgium. (M. Welsch, Service de Bacteriologie et de Parasitologie, Université de Liège, Blvd. de la Constitution, Liège, Belgium.)

15-19. Institute on College Administration, annual, Ann Arbor, Mich. (A. D. Henderson, 2442 U.E.S., Univ. of Michigan, Ann Arbor.)

16-19. American Malacological Union, annual, New Haven, Conn. (Miss M. C. Teskey, P.O. Box 238, Marinette, Wis.)

16-24. International Cong. for Pure and Applied Chemistry, 16th, Paris, France (R. Morf, Secy. Genl., IUPAC, Sandoz, S.A., Basel, Switzerland.)

20-21. Medical-Sociological Aspects of Senile Nervous Diseases, internatl. symp., Venice, Italy. (S. N. Feingold, Jewish Vocational Service of Greater Boston, 70 Franklin St., Boston 10, Mass.)

21-28. Neurological Sciences, 1st internatl. cong., Brussels, Belgium. (P. Bailey, National Institutes of Health, Bethesda 14, Md.)

23-24. Modern Electrochemical Methods of Analysis, Internatl. symp., Paris, France. (G. Charles, Ecole Supérieure de Physique et de Chimie, 10, rue Vauquelin, Paris 5<sup>e</sup>.)

25-26. Structure Properties Relationships of Polymers (IUPAC), Paris France. (International Union of Pure and Applied Chemistry, 4, Avenue de l'Observatoire, Paris 6<sup>e</sup>.)

25-29. Protein Chemistry Symp., IUPAC, Paris, France. (J. Roche, College de France, Place Marcellin Berthelot, Paris 5<sup>e</sup>.)

26-27. Experimental Psychology and Animal Behavior Section of International Union of Biology, Brussels, Belgium. (H. S. Langfeld, Dept. of Psychology, Princeton Univ., Princeton, N.J.)

26-27. Linguistic Soc. of America, Ann Arbor, Mich. (A. A. Hill, Box 7790, University Station, Austin 12, Tex.)

26-27. Military Psychology, internatl. symp., Brussels, Belgium. (National Academy of Sciences, 2101 Constitution Ave., NW, Washington 25.)

26-1. International Congress on Nutrition, 4th, Paris, France. (Quatrième Congrès International de Nutrition, CNERNA, 71, boulevard Péreire, Paris 17<sup>e</sup>.)

28-1. Psychoanalysis, 20th internatl. cong., Paris, France. (Dr. Nacht, 187, rue Saint-Jacques, Paris 5.)

28-3. Psychology, 15th internatl. cong., Brussels, Belgium. (L. Delys, 296, avenue des Sept Bonniers, Forest-Bruxelles.)

31-5. International Assoc. for Hydraulic Research, Lisbon, Portugal. (M. Coelho Mendes da Rocha, Laboratório Nacional de Engenharia Civil, Avenida do Brasil, Lisbon.)

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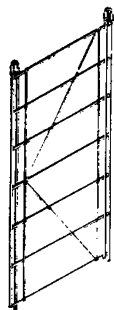
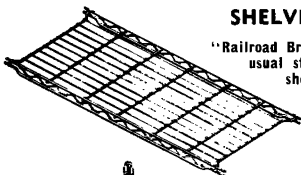
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31-6. Dermatology, 11th internat. cong., Stockholm, Sweden. (C. H. Floden, Hudkliniken, Karolinska Sjukhuset, Stockholm 60.)

#### August

5-11. Pan American Cong. of Pediatrics, 5th, Lima, Peru. (C. F. Krumdieck, Washington 914, Lima.)

5-17. Curare and Curare-Like Agents, internat. symp., Rio de Janeiro, Brazil. (C. Chagas, Instituto de Biofisica, Universidade do Brasil, 458 Avenida Pasteur, Rio de Janeiro.)

6-9. Poultry Science Assoc., annual, Columbia, Mo. (C. B. Ryan, Texas A.&M. College, College Station.)

7-9. Industrial Applications of X-Ray Analysis, 6th annual conf., Denver, Colo. (J. P. Blackledge, Metallurgy Div., Denver Research Inst., Univ. of Denver, Denver 10.)

7-9. International Union against the Venereal Diseases and the Treponematoses, 31st general assembly, Stockholm, Sweden. (Secretary General, Institut Alfred Fournier, 25, boulevard Saint-Jacques, Paris 14<sup>e</sup>, France.)

8-15. International Statistical Inst., 30th, Stockholm, Sweden. (Secretary General, ISI 30th Session, Fack, Stockholm 5.)

8-15. International Union for the Scientific Study of Population, Stockholm, Sweden. (F. Lorimer, c/o American University, Washington 16.)

11-14. Heat Transfer, national conf., University Park, Pa. (G. M. Dusinberre, Pennsylvania State Univ., University Park.)

11-17. World Federation for Mental Health, 10th annual, Copenhagen, Denmark. (Miss E. M. Thornton, 19 Manchester St., London, W.1, England.)

12-16. Canadian Teachers' Federation, annual, Edmonton, Alberta, Canada. (G. G. Croskery, 444 MacLaren St., Ottawa 4, Ont.)

12-18. Theory of Functions, internat. colloquium, Helsinki, Finland. (B. Eckmann, Ecole Polytechnique, Federale, Zurich, Switzerland.)

12-25. International Soc. of Soil Mechanics and Foundation Engineering, 4th Conf., London, England. (A. Banister, Institution of Civil Engineers, Great George St., London, S.W.1.)

18-21. American Astronomical Soc., Urbana, Ill. (J. A. Hynek, Smithsonian Astrophysical Observatory, 60 Garden St., Cambridge 38, Mass.)


19-22. American Veterinary Medical Assoc., annual, Cleveland, Ohio. (J. G. Hardenbergh, AVMA, 600 S. Michigan Ave., Chicago 5, Ill.)

19-23. Clay Conf., 6th natl., Berkeley, Calif. (Dept. of Conferences and Special Activities, Univ. of California Extension, Berkeley 4.)

19-23. Clinical Chemistry, 2nd international European cong., Stockholm, Sweden. (K. Agner, Box 12024, Stockholm 12.)

19-24. Finite Groups, internat. colloquium, Tübingen, Germany. (H. Wielandt, Faculty of Mathematics and Natural Science, Eberhard-Karls-Universität, Tübingen.)

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