

AAAS ANNUAL MEETING

26-31 December 1970, Chicago

Registration badges will be required for admission to all sessions, except for a few special programs to which the public will be invited.

ADVANCE REGISTRATION FORM

**Mail to: American Association for the Advancement of Science, Dept. R,
1515 Massachusetts Ave., NW, Washington, D.C. 20005**

- ☐ Enclosed is \$10 Registration Fee (*Program* and Convention Badge)
- ☐ Enclosed is \$15 Registration Fee (including spouse) (*Program* and Convention Badges)
- ☐ Enclosed is \$5 Student Registration Fee (16 years and older) (*Program* and Convention Badge)
- ☐ Enclosed is \$5 for the *Program* only AAAS Member ☐ Nonmember ☐

(Mailing date of Program and Badge—1 December)

NAME: _____
(Last) (First) (Middle Initial)

MULTIPLE REGISTRATION: _____
(List full name for spouse and each student.)

HOME ADDRESS: _____
[For receipt of *Program* and Badge(s)] (Street) (City/State) (Zip Code)

INSTITUTION OR
COMPANY AFFILIATION: _____

(City) (State) (Zip Code)

CONVENTION ADDRESS: _____

Office and Session Locations

Conrad Hilton: AAAS Headquarters Office; AAAS Registration Desk; AAAS Lecture Aides; AAAS Television Room; AAAS Press Headquarters; AAAS Council Meeting; AAAS Exposition of Science and Industry; AAAS Invited Lectures (Special Lecture; Distinguished Lecture; Sigma Xi-Phi Beta Kappa Lecture); AAAS Commission and Committee Symposia (Commission on Science Education); AAAS General Science Symposia ("Mood, Behavior and Drugs"; "Man's Impact on the Global Environment"; "The Teaching of Science"; "Techniques and Status of Modern Parapsychology"; "Is there a Generation Gap in Science?"); AAAS Sections—A-Mathematics; C-Chemistry; FG-Biological Sciences; H-Anthropology; I-Psychology; N-Medical Sciences; Nd-Dentistry; Q-Education; American Society of Zoologists Office; Sigma Delta Epsilon Office.

Sheraton-Blackstone: AAAS Invited Lectures (RESA Annual Address and Panel Discussion); AAAS Committee on Council Affairs (Open Hearing); AAAS General Science Symposia ("Science and the Federal Government—1970"; "Science and Man: Values and Expectations"; "Crime, Violence, and Social Control"; "Contributions of U.S. Minority Groups to the Development of Science"; "Women in Science"); AAAS Sections—H-Anthropology; K-Social and Economic Sciences; L-History and Philosophy of Science; P-Industrial Sciences; T-Information and Communication; U-Statistics.

Pick-Congress: AAAS Science Film Theatre; AAAS Film Lectures; AAAS Commission and Committee Symposia (Commission on Population and Reproduction Control; Committee on Arid Lands; Committee on Environmental Alteration); AAAS General Science Symposia ("Public Policy for the Environment"; "Large-Scale Use of Defoliants"; "Scientific Organizations, War-Peace Issues, and the Public Policy Process"); AAAS Sections—B-Physics; D-Astronomy; E-Geology and Geography; FG-Biological Sciences; K-Social and Economic Sciences; M-Engineering; Np-Pharmaceutical Sciences; O-Agriculture; Q-Education; W-Atmospheric and Hydrospheric Sciences; Society for General Systems Research Office.

Field Museum of Natural History: AAAS Invited Lectures (Address of the Retiring AAAS President and following Reception; Frontiers of Science Lecture).

Adler Planetarium: AAAS Section D-Astronomy (“On Teaching Astronomy”).

University of Illinois Medical Center: Alpha Epsilon Delta.

Essex Inn: Beta Beta Beta—Biennial National Meeting; Association of Academies of Science; American Junior Academy.

Ascot House: Beta Beta Beta—Biennial National Meeting.

HOTEL RATES*
(Per Day)

The American Association for the Advancement of Science will hold its 1970 Annual Meeting in Chicago, Illinois, 26-31 December. The AAAS registration desk will be located at the Conrad Hilton Hotel. The following hotels will be used for housing.

HOTEL	SINGLE	DOUBLE	TWIN	SUITES
1) Conrad Hilton 720 South Michigan	\$15 17 19	\$21 23 25	\$21 23 25	\$55 and up
2) Pick-Congress 520 South Michigan	15 17 19	21 23 25	21 23 25	45 and up
3) Sheraton-Blackstone 636 South Michigan	15 17 19	21 23 25	21 23 25	40 and up
4) Essex Inn 800 South Michigan	15 17 19	21 23 25	21 23 25	45 and up

*Illinois Room Tax, 6%; rates for suites: parlor plus one-, two-, three-bedrooms; \$5.00-\$8.00 additional charge for cots.

HOTEL RESERVATIONS FORM

Mail To: AAAS Housing Bureau, Chicago Convention Bureau, 332 South Michigan Ave., Chicago, Illinois 60604

(Reservations received after 13 December cannot be assured.)

CHOICE OF HOTEL: First _____ Second _____ Third _____

ROOM: ☐ Single ☐ Double ☐ Twin ☐ Suite Preferred rate \$ _____

NAME: _____

(Individual requesting reservation)

ADDRESS: _____

(Street)

(City and State)

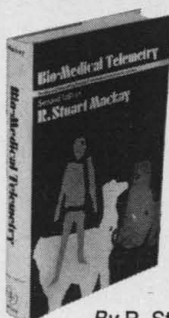
(Zip Code)

ARRIVAL: Date _____; _____ a.m. _____ p.m.

DEPARTURE: Date _____; _____ a.m. _____ p.m.

Be sure to list definite arrival and departure date and time. Hotel reservations will be held *only* until 6 p.m. unless otherwise specified.

Number in party _____ sharing this room will be (list name and address of each person, including your own):



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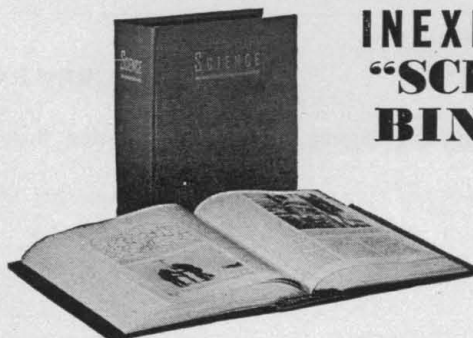
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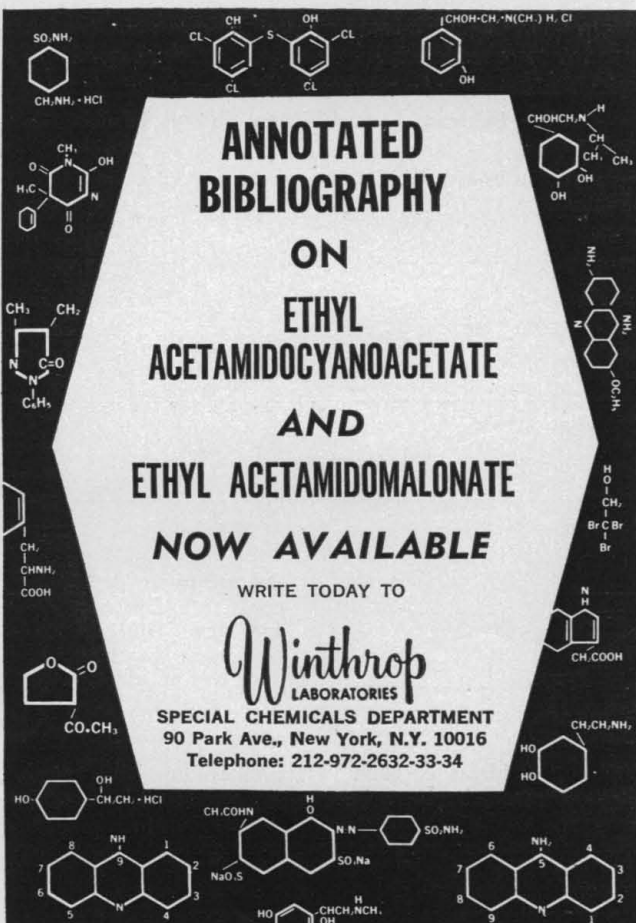
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SCIENCE, VOL. 170



Personnel Placement

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Washington, D.C. 20005

POSITIONS WANTED

Biochemist: M.S., biochemistry; 10 years' research experience. Seeks research/development position where extensive experience will be utilized and is required. Background: protein and carbohydrate structure; enzymology; carbohydrate metabolism; steroids; analytical methodology (wet and instrumental). Publications. East Coast preferred. Available Fall 1970. Box 353, SCIENCE. 10/9

Department of Cell Science of a research institute wishes to change its affiliation. It consists of a small number of established, independent scientists, their department chairman, extremely well-equipped laboratories, and in excess of \$250,000 per annum in grants. Inquiries from academic institutions with superior student bodies are solicited. Box 372, SCIENCE. X

Embryologist, Ph.D., general interests in development and heredity, cell and tissue structure and function; special interests in cardiogenesis. Twelve years' teaching and research at undergraduate and graduate level. Desires position that is complementary to background and interests. Box 361, SCIENCE. 10/9

Endocrinologist, M.S., October 1970. Seeking industrial or academic position to make use of educational experience. Biological and general paramedical background including physiology, biochemistry, and so forth. Box 373, SCIENCE. X

Pharmacologist, M.S., Ph.D.; 35. Can teach entire medical, dental, nursing, veterinary, or graduate course; psycho-biochemical pharmacology to non-medics. D.V.M. gives comparative/interdisciplinary orientation. Seeking university or teaching hospital post. Publications in CNS/cardiovascular/autonomic. Administrative experience. Box 374, SCIENCE. X

Scientist/Engineer, Ph.D., 34. Strong background in continuum mechanics, dynamics, vibration, control, servomechanism and machine-design. Publications in dynamics, solid-earth geophysics, and so forth. Teaching experience. Seeks teaching/research position in mechanical, civil engineering, or geophysics. Box 375, SCIENCE. X

Virologist-Oncologist, Ph.D. Postdoctoral fellow at NCI. Five years' experience with RNA tumor viruses. Interested in biochemical and molecular biological approach to oncogenic virus-host cell interactions. Desires research/teaching position on East/West Coast of United States/Canada. Box 376, SCIENCE. X

Virologist, Ph.D., seeks challenging academic position. Experience: tumor viruses/immunochimistry, cell biology, E.M.; 15 publications. Box 377, SCIENCE. X

9 OCTOBER 1970

Signal Averaging... Principles and Practices *Phase Correction in NMR*

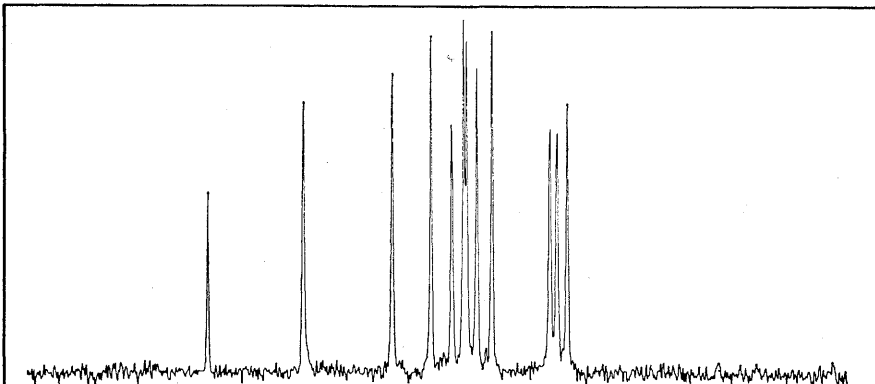
Number 12 of a Series

The objective of fast Fourier transform (FFT) techniques in NMR spectroscopy is to produce absorption spectra equal or superior to those obtained through CW methods, and in far less time. Unfortunately, rather than directly providing a true absorption spectrum, the FFT algorithm yields only two intermediate results called the real and imaginary components.

Ideally, the real component should be a good representation of the absorption spectrum. But some distortion due to the phase characteristics of the spectrometer/data handling system is unavoidable. Any time lag in recording data following onset of the exciting pulse, for example, will produce a linear frequency-dependent phase shift. (Often, such a delay must be deliberately introduced to avoid feedthrough of the pulse into the observed free induction decay signal.)

It is possible to eliminate phase distortion by calculating the magnitude spectrum, i.e., the square root of the sum of the squares of the real and imaginary components. The problem here is that spectral lines are broadened by the squaring operations; therefore, the resolution obtainable from a magnitude plot is necessarily inferior to that of a true absorption spectrum.

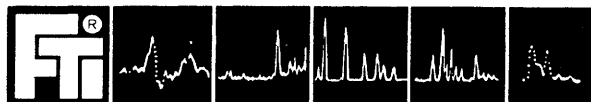
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Proton-decoupled, natural abundance ^{13}C NMR absorption spectrum (after phase correction) of aqueous 1 M sucrose at 38°C . Shown is 100 ppm sweep starting at 66.8 ppm upfield from neat CS_2 out of a total sweep width of 250 ppm at 15.08 MHz with a ^{19}F lock. 128 scans were made in 5 minutes with 4K points in the time domain. Data courtesy of A. Allerhand, Department of Chemistry, Indiana University, Bloomington, Indiana.

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POSITIONS OPEN

ASSOCIATE EDITOR—EARTH SCIENCES

We have an opening in Editorial Department for an Associate Editor—Earth Sciences. This is a challenging position with responsibility in the areas of meteorology, atmospheric physics, and oceanography. Candidates should have the Ph.D. degree in one of these fields, and that rare blend of broad technical competence and editorial ability. The salary for this post is negotiable and fringe benefits are excellent. Interested candidates should submit a complete résumé, including a list of research publications and/or edited works to . . .

Joan K. Downey
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425 North Michigan Avenue
Chicago, Illinois 60611

BIOCHEMIST

A position has been created in a new Development Department for a qualified individual with a Ph.D. degree and 1 to 5 years' experience in diagnostic and separation technology. Would include ultracentrifugation, electrophoresis, and column and paper chromatography. Should also have research experience with immunoglobulins and a working knowledge in the fields of virology and tissue culture. Postdoctoral or other research experience would be desirable. Excellent salary and company benefits. Qualified candidates should send résumé including details of professional experience, education and salary required to:

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CSIRO
Australia

Appointment of
CHIEF
Division of Radiophysics.

The position of Chief, CSIRO Division of Radiophysics, will become vacant when Dr. E. G. Bowen retires in January, 1971. The Executive of CSIRO invites applications from scientists who would wish to be considered for the position.

The Division was formed in 1939 to meet the needs for research and development in radar for the armed services. Dr. Bowen has been Chief since May, 1946. Under his leadership, in recent years the programme of the Division has been concentrated on radioastronomy and cloud physics. It has also in the past been concerned with navigation aids for civil aviation, computers and semi-conductors. It is intended that radioastronomy will remain the major but not the sole activity of the Division.

The Division has a scientific staff of 65 and a total staff of 238. The Division is located in a new and well-equipped building in a pleasant area on the outskirts of Sydney. Its principal observing stations are the Australian National Radio Astronomy Observatory at Parkes which houses the 210-ft steerable telescope, and the CSIRO Solar Observatory (near Narrabri) with the 96-element Radioheliograph.

The appointee will be responsible to the Executive of CSIRO for the direction of the research activities of the Division. He will be expected to make recommendations on future areas of research and to maintain close contact with national and international groups engaged in similar fields of endeavour. He should have a background of physical science or engineering and a record of personal achievement in research and research leadership.

The salary of the appointee will be the subject of negotiations dependent on the experience and achievement of the successful applicant, but will not be less than \$15,469 p.a. The position carries with it Superannuation privileges, subject to a medical examination.

Scientists interested in this position should write in the first instance to:

The Secretary (Administration),
Head Office, CSIRO
P.O. Box 89,
EAST MELBOURNE, VIC. 3002

by 23rd October, 1970.

POSITIONS OPEN

bioengineer

phd

Nuclear-Chicago, the world's largest manufacturer of nuclear instrumentation and a

subsidiary of G. D. Searle & Co., is presently assembling an interdisciplinary group of scientists for instrument research concerning clinical **IN VITRO** instrumentation. As an integral part of this group, we seek a Ph.D. Bioengineer with a base in Physics, Biophysics, or Electrical Engineering. The selected candidate will assume responsibility for all hardware aspects of the program and in so doing, will exercise skills in several, though not necessarily all, of the following areas:

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The base competence of the selected individual must lie in the physical sciences, more specifically instrumentation, but complemented by sufficient biological course work as to provide ready communication with clinical workers. Automation in clinical chemistry is a new field—one in which reputations can be made. Qualified candidates interested in accepting this challenge should direct a complete resume describing training, experience and publications to:



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P.O. Box 6998 Chicago, Illinois 60680

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APPLICATIONS ARE INVITED FOR
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FOR THE ACADEMIC YEAR 1971/1972

In the Fields of Physics, Chemistry, Life Sciences
and Earth Sciences

The applicant is required to submit his application (in letter form) together with a curriculum vitae and list of publications, to reach the Dean's Office by December 1, 1970. Simultaneously, to arrange for at least two letters of recommendation to be directed to the same Office, from persons intimate with the applicant's academic and research records.

The fellowship provides for a tax-free salary of IL.10,000, and usually allows for a single round-trip air-ticket.

The fellowship is intended primarily for persons who attained their degree during the years 1968-1970, or those who will complete all requirements for the Ph.D. degree by the summer of 1971.

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