

## REPORT

### Report on the Seventh Meeting of the International Society of Magnetic Resonance, Delft, the Netherlands.

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The Seventh Meeting of the International Society of Magnetic Resonance (ISMAR) was held in Delft, The Netherlands from August 25th to August 29th 1980. Held jointly with the Groupment Ampere, the meeting was ISMAR's first in Europe.

At the opening of the meeting Professor J. Smidt introduced Professor Kienietz, the Rector of the Delft University of Technology who brought the blessing of the University of Technology; Professor Raymond Andrew, the President of Groupment Ampere brought the blessings of Groupment Ampere and Professor Daniel Fiat, Chairman of the International Society of Magnetic Resonance presented the Opening Address and following it presided over the International Society of Magnetic Resonance Award Address.

Dr. Fiat mentioned that previous meetings of the International Society of Magnetic Resonance (ISMAR) were held in Japan, Brazil, Australia, Israel, India and Canada. As the present meeting was held in Europe it was decided to hold it jointly with the distinguished European Scientific organization the Groupment Ampere. The Netherlands have been chosen in recognition of the great scientific achievements that have been made by the dutch scientists and the important contributions that they have made to the fields of magnetic resonance. Dr. Fiat said that it was a great pleasure for ISMAR to learn in 1971 that Professor Jacob Smidt from the Delft University of Technology accepted the chairmanship of the local organizing committee. The dutch scientists have chosen an excellent organizing committee that

put together an outstanding scientific program. Since the last meeting of ISMAR, in Banff, Canada three years ago, great advances have been made in magnetic resonance and its applications. The program of the Delft meeting reflects these advances in magnetic resonance and the impetus it has given to so many diversified fields of science encompassing physics, chemistry, biology and medicine. We see great advances in sophisticated instrumentation for nuclear magnetic resonance, electron spin resonance and in particular in pulsed ESR, CIDNP, high sensitivity NQR double resonance, multiple quantum spectroscopy, cross polarization and their combinations. High resolution studies of solids by means of polarization transfer and magic angle spinning and combinations of the two techniques are becoming routine. Fourier Transform and 2-D spectroscopy are becoming very common and utilized for routine studies by chemists and biologists. New theoretical approaches make it possible to determine the three dimensional structure of large molecules and magnetic resonance methods are being utilized as noninvasive and hazardless methods in medical diagnosis. NMR imaging has developed within a very short period and it seems that it is about to become a clinical tool complementary to x-ray tomography and to have certain advantages over x-ray as a diagnostic technique.

The large number of papers presented at the meeting and the participation of 600 scientists from 30 countries are a demonstration of the unprecedented scientific activity of

the fields of magnetic resonance and their applications. In previous meetings contributions to magnetic resonance and its application have been recognized, among them the discovery of the electron spin resonance phenomenon by the late E. K. Zavoitzki, the discovery of the spin echo by E. Hahn and the great contributions that were made by Herbert Gutowsky and Robert Blinc in chemistry and physics.

At the Delft meeting the discovery of the Nuclear Quadrupole Resonance phenomenon and the industrial development of magnetic resonance instrumentation have been recognized.

The ISMAR Award in Basic Research for 1980 was presented to Professor Hans Dehmelt of The University of Washington, USA. The honor was bestowed in recognition of Professor Dehmelt's distinguished contributions to magnetic resonance and rf spectroscopy, including the co-discovery with his doctoral advisor, Professor Hubert Krueger, of the Nuclear Quadrupole Resonance phenomenon in Göttingen, Hanover, Germany, in 1949, and for the development of techniques for studying atomic particles at rest in free space. The latter work resulted in the most precise determination of the electron g factor in free electron traps in 1976 and in 1979 in the most precise studies of magnetic properties of a single positron. These studies, carried out in Seattle, Washington, USA, consist of the best test of quantum electrodynamics obtained so far. Professor Dehmelt was introduced by Professor Robert Blinc, a close colleague who spent time at the University of Washington in 1980.

The ISMAR Award in Industrial Development for 1980 was presented to Professor Gunther Laukien, President of Bruker Physik AG, Karlsruhe, Germany. The award was given in recognition of his distinguished contributions to the industrial development of magnetic resonance instrumentation, which has given tremendous

impetus to magnetic resonance and its applications at universities, research institutes and in industry. Professor Laukien was introduced by Professor Karl Hausser, a close friend and colleague.

The conference has brought together old friends and colleagues and developed new acquaintances, stimulated many interesting and innovative discussions during the meetings and during leisure time and the interesting visits to museums at DeHaag and during the conference banquet. At the conference banquet a tribute to the scientific achievements of Professor Bleany, from Oxford, England was presented by Professor Anatol Abragam from Orsay, France.

The closing session of the conference took place on August 29, 1980. In his concluding remarks, Dr. Fiat said:

"On behalf of the International Society of Magnetic Resonance I would like to thank the organizing committee, and in particular Professors Smidt and Wissman for organizing this most pleasant and rewarding meeting. It has brought together scientists active in magnetic resonance and its applications and has given us the opportunity to learn from each other, meet old friends, and make new friends.

"The International Society of Magnetic Resonance plans to hold future meetings in the USA, Brazil, Japan and Rumania, along with summer schools and specialized symposia in Canada, Italy, and Greece. Information regarding these meetings will be published in the Bulletin of Magnetic Resonance.

"I wish all of you a safe journey home and hope to see you again in the near future."

The full proceedings of the conference were published in Volume 2 of the Bulletin of Magnetic Resonance.