

REVIEWS OF MODERN PHYSICS

VOLUME 36, NUMBER 1 (Part 2 of Two Parts)

JANUARY 1964

THIRD INTERNATIONAL CONFERENCE ON THE MÖSSBAUER EFFECT

Edited by ALAN J. BEARDEN

*Sponsored by the Advanced Research Projects Agency
through the Materials Science Center of Cornell University*

Held at Cornell University, Ithaca, New York • 4-7 September 1963

The Third International Conference on the Mössbauer Effect sponsored by the Advanced Research Projects Agency, was held at Cornell University, September 4-7, 1963. The Laboratory of Atomic and Solid State Physics and Cornell's Material Science Center were joint hosts for this meeting. The three and one-half day conference was attended by 213 scientists from the fields of physics, chemistry, and biology. Fourteen foreign countries were represented and 118 papers were presented for discussion. This conference, following the first formal conference on recoilless emission and absorption of gamma radiation by a little over three years, shows the growth of interest in, and publication of research papers about, the Mössbauer Effect and its application in many fields. The first international conference, held at Alherton Park by the University of Illinois under the sponsorship of the Air Force Office of Scientific Research attracted about eighty participants. The second conference, held in June, 1961, at Saclay, France, attracted just over one hundred members. The Proceedings of the second conference have been published under the editorship of A. H. Schoen and D. M. J. Compton, by John Wiley & Sons, Inc., New York.

In order to permit late conference paper deadlines and rapid publication of the Proceedings, only the full manuscripts of the invited papers of the Conference are included along with the abstracts of the contributed papers. The authors of all papers were afforded opportunity to correct their papers until the close of the conference. It is hoped that many of the papers which are included here only in abstract form will appear as research papers in the usual physics and chemistry journals. All post deadline papers have been included in the Proceedings in the order they were given at the Conference.

As an aid to the conferees, a bibliography by author, subject, and isotope on the Mössbauer Effect was prepared. This effort has been included in these Proceedings as a help to those interested in research in this field. The main portion of the bibliography was completed on August 1, 1963, so that papers appearing after that date are probably not included. The editor of the Proceedings is grateful to the many members of the Conference who made additions or correction to the information contained in this bibliography. Dr. A. H. Muir of the North American Aviation Science Center in Canoga Park, California, independently has compiled a data index

on the Mössbauer Effect; it is understood that this effort will be continued. Also included in the bibliography are the titles of papers read at a Soviet Conference on the Mössbauer Effect in July, 1962. Complete translations of these papers are available from Consultants Bureau, Inc., New York.

A list of conference participants and an index to papers complete the Proceedings.

ACKNOWLEDGMENTS

Special assistance in the preparation of the manuscripts has been given by Mr. S. Bowen, Mrs. C. Erickson, Miss A. Kingsley, Miss M. Powers, and Mr. G. Schmidt. The Program Chairman, Dr.

G. K. Wertheim of the Bell Telephone Laboratories, Inc., assisted in the ordering of the papers for publication. The bibliographic information on the Mössbauer Effect included in this Proceedings has been compiled at the Laboratory of Atomic and Solid State Physics of Cornell University by A. J. Bearden, Mrs. P. M. Griffith, Miss A. Kingsley, Mrs. M. Thomas, and Mr. John C. Woolum. In addition, we would like to acknowledge the patient advice and cooperation of Mr. David Biesel and Mr. Thomas McCorkle of the editorial staff of the American Institute of Physics, Dr. P. J. Leurgans of the Materials Science Center at Cornell University, and Professor J. A. Krumhansl.