

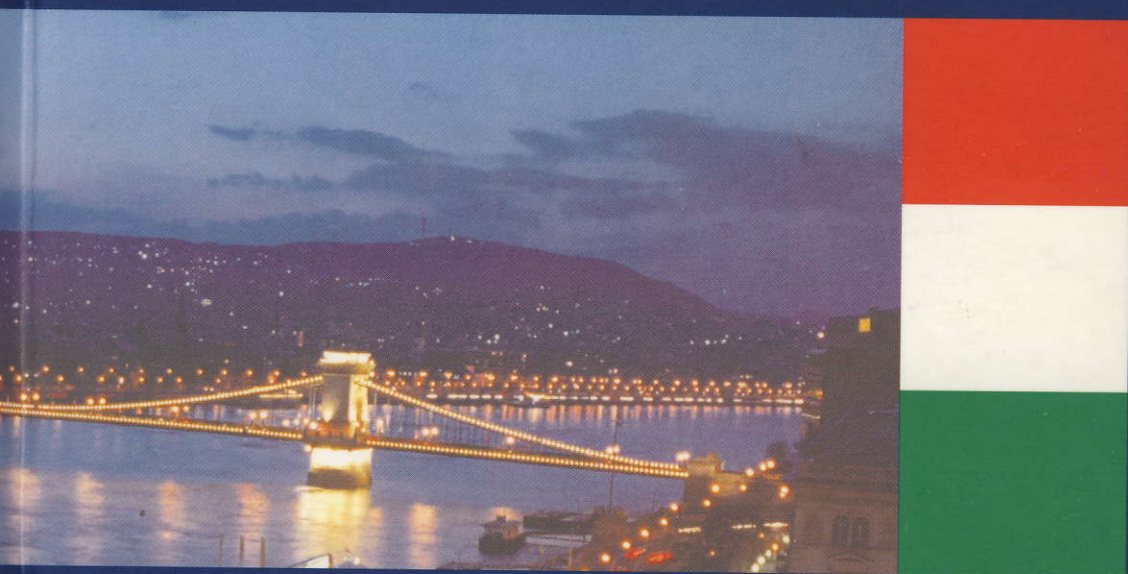
Proceedings of the 9th International Symposium on

CAPTURE GAMMA-RAY SPECTROSCOPY AND RELATED TOPICS

Volume 1

Editors:

G. L. Molnár • T. Belgya • Zs. Révay



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**Budapest, Hungary
8–12 October 1996**

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G. L. Molnár • T. Belgya • Zs. Révay

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PREFACE

The Ninth International Symposium on Capture Gamma-Ray Spectroscopy and Related Topics was organized by the Institute of Isotopes of the Hungarian Academy of Sciences, at Hotel Agro, Budapest on 8-12 October 1996. This Symposium continued the series of meetings which took place previously at Studsvik, Sweden (1969), Petten, The Netherlands (1974), Brookhaven, USA (1978), Grenoble, France (1981), Knoxville, USA (1984), Leuven, Belgium (1987), Asilomar, USA (1990), and Fribourg, Switzerland (1993). It was accompanied by the IAEA Advisory Group Meeting on the Co-ordination of the Nuclear Structure and Decay Data Evaluators' Network, held between 14-18 October 1996.

The five-day Symposium was attended by 175 participants from 32 countries, demonstrating a steady world-wide interest in the subject. The Symposium program continued the general themes of the earlier conferences. While nuclear structure remained dominant, this time a special attention was devoted to nuclear data and to the ever-growing field of applications. The chapters of the proceedings correspond to the eight topical sessions

1. *Nuclear structure*
2. *Capture reactions*
3. *Statistical nuclear properties*
4. *Nuclear astrophysics*
5. *Fundamental physics*
6. *Nuclear data*
7. *Practical applications*
8. *New techniques & facilities*

Finally, a special session was devoted to the history of capture gamma-ray symposia. In each chapter, the respective invited talks and posters are presented together in topical groups, followed by the common block of short poster contributions at the end.

The Symposium began with the welcoming addresses of Prof. D. Kiss, Member of the Hungarian Academy of Sciences, and Prof. L. Wojnárovits, Vice Director of the Institute of Isotopes. The oral sessions were organized in the mornings and evenings, all were plenary. All posters were on display during the entire Symposium. To facilitate discussions, two topical poster sessions were held in parallel each afternoon, except on the excursion day. The session chairmen who presided during the oral sessions were R. F. Casten, J. Cizewski, G. Graw, R. Hoff, U. Kneissl (Nuclear structure), C. Coceva, H. Kitazawa (Capture reactions), P. Prokofjevs (Statistical properties), M. Arnold, F. Käppeler, M. Wiescher (Nuclear astrophysics), M. Pendlebury (Fundamental physics), G. Audi, J. Dairiki (Nuclear data), G. Grass, Yu-Kun Ho (Practical applications), C. Corvi, T. von Egidy, S. Wender (Techniques & facilities). The speakers had been nominated by the Advisory and Program Committees. Young speakers were given high priority. Eventually, 22 keynote speakers and 50 more oral contributions were selected by the Advisory Committee on the basis of a confidential ballot by both committees. In addition, 30 contributions were selected for invited poster by the Chairman on the basis of the same ballot. The intention was to avoid parallel sessions and, by the same virtue, emphasize the importance of poster sessions.

In view of the diversity of subjects covered by the Symposium we have agreed not to have a summary talk, and I certainly do not want to overrule that decision here. Nevertheless, some personal impressions might be in order. First of all, the great enthusiasm to keep the tradition of

Capture Gamma Symposia alive has been reflected in the devoted work of committee members, the high number of submitted contributions and, eventually, in the slightly increased amount of participants and their high scientific level. This is probably the reason why CGS has remained one of the most important conferences in low-energy nuclear structure physics. The 75 contributions out of the total 180 well illustrate this fact, especially if we consider the additional 29 devoted to capture phenomena and statistical properties of nuclei. In view of the importance of capture processes in nucleosynthesis the active participation of nuclear astrophysicists is not surprising, and it has to be further encouraged. The international nuclear data community participated for the first time and the interaction between data users and providers has proved most fruitful at a time of emerging electronic data services, including the INTERNET. Finally, the growing variety of applications, especially in chemical analysis, and the appearance of several new neutron sources and facilities are most gratifying. If this trend prevails the Capture Gamma Symposia may continue for a long time.

Industrial exhibits were displayed in the poster area. The representatives of Berthold, Canberra-Packard and Oxford Instruments have enjoyed lively interactions with the conference participants.

In addition to the hard work the participants were also offered social programs. An evening reception took place on the opening day in the conference hotel's restaurant where the Hungarian wine was accompanied by the night panorama of Budapest. Refreshments and cookies were provided in the breaks and during the after-lunch poster sessions in the huge poster area overlooking the panorama terrace. The usual banquet was held in one of the traditional restaurants of Old Buda where the famous Hungarian food, wine and gypsy music were mixed with the "schwabisch" atmosphere of the place, characteristic of the district's past. To complete the study of multinational cultures of the Danube valley, an afternoon excursion was organized to the ancient town of Szentendre (St. Andrew) where the former city of Serbian traders, its tourist shops and cafes, as well as the open-air village museum were the main attractions. Also, many have enjoyed Budapest's cultural attractions in the free evenings.

Many people deserve my gratitude for their contribution to the organization of the conference. First I want to thank all our sponsors (listed separately) for their support which has made possible the participation of many young scientists, mainly from developing countries. I am indebted to the members of the Advisory and Program Committees who have helped considerably to shape the scientific program. My special thanks go to three former CGS chairmen, J. Kern, S. Raman and T. von Egidy who shared their experience with me and gave most valuable advice. I am grateful to all session chairman for fulfilling their duty perfectly. Thanks are due to all speakers and poster presenters, and all participants in general for contributing to the scientific success of the conference. Finally, I acknowledge the great help of the local Organizing Committee and of many collaborators from the Institute of Isotopes and the services of Scope Ltd. and Hotel Agro. I thank particularly Ms. Éva Sós and Ms. Gy. Goda for their help. Ms. Zita Tóth deserves special thanks for carefully editing the manuscript.

It is my pleasure to announce that the Advisory Committee has entrusted Prof. Steve Wender to organize the tenth Capture Gamma Symposium at Los Alamos National Laboratory, USA in 1999. On behalf of the Organizing Committee I congratulate and wish him and his colleagues success. I hope to see at Los Alamos all attendees of CGS9 and many new young faces, to witness together the progress of the forthcoming years.

Gábor Molnár

Budapest, October 1996



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