



PROCEEDINGS OF THE  
**15<sup>th</sup>** INTERNATIONAL WORKSHOP  
ON MESON PHYSICS

7 – 12 June 2018, Kraków, Poland

organized by  
Jagiellonian University, Kraków  
Forschungszentrum Jülich GmbH, Jülich  
INFN-LNF, Frascati  
IFJ-PAN, Kraków

Edited by  
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## Preface

The 15th International Workshop on Meson Physics - MESON 2018 - took place in Cracow, Poland, from 7 to 12 June 2018. We were celebrating the 15th edition of this conference. Therefore the opening of the conference was devoted to the memories of previous editions and during the banquet an anniversary cake was served. At this point, we also wanted to recall briefly the history of this series of conferences. The tradition of MESON conferences dates back to 1991. The main initiator of the first MESON conference was Walter Oelert and it was co-chaired by Eckart Grosse and Andrzej Magiera. The first three meetings were thematically related to the physics program planned for the accelerator COSY and started in GSI. The meetings were attended by many experts in meson physics, and the program was not limited only to low-energy meson physics which the organizers dealt with. Then we realized that meetings of this kind were very useful for the whole community involved in various aspects of meson physics. Therefore we decided to continue our meetings extending their program beyond standard meson physics. Since 1996 our conferences have gained their current name MESON and have become traditional meetings of the meson community. Since the beginning the Jagiellonian University and Forschungszentrum Jülich were the conference organizers, and the third organizer GSI Darmstadt was replaced by LNF-INFN Frascati in 2000 and fourth organizer INP-PAS Cracow has joined in 2010. Over the years also the chairmen have changed. Among them, the largest number of conferences were presided over by Carlo Guaraldo, Hartmut Machner, Lucjan Jarczyk, St. Kistryn, Andrzej Magiera and Hans Stöher. The number of participants from about 70 at the beginning increased and stabilized on about 180 in recent conferences. Over 1200 physicists from all over the world participated in all conferences, and more than a thousand contributions were published in the conference proceedings.

The recent MESON2018 conference was attended by over 170 participants from 25 countries representing 69 institutions from around the world. In total, there were 38 plenary talks, 69 parallel session talks and 26 posters. Additionally a special public talk on hadron therapy was given by Paweł Olko. Laura Fabbietti presented an overview of the current status of the physics areas in which mesons play an important role, together with a preview of the planned investigations. The topics of the conference included hadronic and electromagnetic meson production in a broad energy range, meson interaction with mesons and nuclei, structure of hadrons, fundamental symmetry studies with mesons, exotic systems, rare decays. Theoretical talks focused mainly on the problems of low-energy QCD with use of effective field theory and lattice QCD. Widely presented were diverse approaches to the problems of dynamical chiral symmetry breaking, kaon bound states, mesic atoms and nuclei, and mesons in nuclear matter.

The success of the conference was made possible by the extensive work of the Advisory Committee, the Organizing Committee and the Local Organizing Committee. We especially thank our institutions for their financial and generous support. Special thanks go to the scientific secretary Aleksandra Wrońska for her excellent organization of the last few conferences. In subsequent conferences, we will miss her great commitment because she decided to leave our organizing committee. We gratefully acknowledge further financial assistance from our sponsors: European Physical Journal, Nowoczesna Elektronika Ltd., CAEN and the Municipality of Cracow (KRK2B). Last but not least, we thank all the participants for interesting presentations and lively discussions on recent results and expected further discoveries in the fields related to meson physics. We will further continue with the organization of the MESON conferences and hope to have a celebration of the 20th edition in next 10 years. The goal of MESON conferences will remain the same: bring people together and let them inspire each other in the beautiful surrounding and a friendly atmosphere of Cracow.

*Carlo Guaraldo, Andrzej Magiera, Hans Stöher*

November 2018

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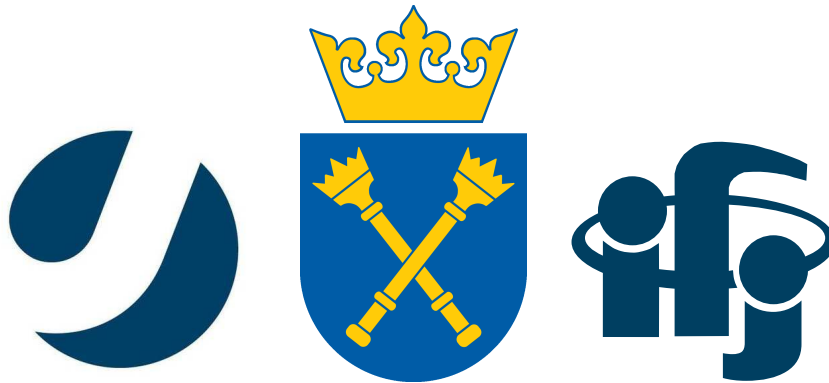
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