Foreword

**O. Hartmann · P. Bühler · J. Marton · K. Suzuki ·
E. Widmann · J. Zmeskal**

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This proceedings volume contains the contributions of the 4th EXA Conference EXA 2011 which took place in Vienna, in the Austrian Academy of Sciences from September 5th to 9th, 2011. Like the previous EXA Conferences it was organized by SMI (Co-Chairmen: J. Marton, E. Widmann and J. Zmeskal). EXA 2011 attracted more than 120 scientists working in the broad research field covered by this conference on exotic atoms and related topics. The Conference was opened by Eberhard Widmann and overall 17 sessions devoted to the broad scientific scope followed. In the first session the extremely successful two decades of research on antiprotonic helium was celebrated in an overview talk by Ryu Hayano followed by presentations about the current research and results in theory and experiment. The recent advances in antihydrogen studies and CPT and gravity tests with antimatter were discussed by distinguished speakers from the collaborations working at the AD of CERN. Another session was devoted to other exotic atoms where an exciting new result on the size of the proton was one of the highlights.

Hot topics in precision experiments - using different probes like neutrons and muons - were discussed. The topic strong interaction with strangeness in the low energy regime was presented in talks on kaonic atoms and nuclei. The new result of the SIDDHARTA experiment at DAFNE/LNF on the strong interaction observables from kaonic hydrogen - representing another highlight of EXA 2011- was discussed by M. Cargnelli/SMI. On the occasion of the 80th birthday of P. Kienle a symposium „Creativity-Innovation-the Seed for Frontier Science“ took place in the framework of EXA 2011. The talks were given by distinguished scientists and summarized the scientific topics in which P. Kienle delivered and delivers new ideas with crucial impact.

Many young scientists attended the Conference and gave very interesting talks respectively poster presentations about their work. This fact is an extremely good

O. Hartmann · P. Bühler · J. Marton · K. Suzuki · E. Widmann (✉) · J. Zmeskal
Stefan Meyer Institute for Subatomic Physics, Austrian Academy of Sciences,
Boltzmanngasse 3, 1090 Vienna, Austria
e-mail: eberhard.widmann@oeaw.ac.at

sign for the future research in the broad scientific field covered by the EXA Conference series.

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The next conference of the EXA series will be hosted and organized again by the Stefan Meyer Institute and will take place in Vienna.

DI Robert Alexander Herbst