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Nota di contenuto	Preface; CONTENTS; GANIL-SPIRAL2: A New ERA S. Gales; 1. Introduction; 2. Exotic nuclei at GANIL: recent physics highlights; 2.1. Tunnelling of exotic systems; 2.2. Another major research area at GANIL is the quest for shell structure changes far off stability; 2.3. MUST2 Campaign at RIKEN; 2.4. A new spin aligned pairing phase in ⁹² Pd; 2.5. Fission Time Measurements as New Probe for testing Super heavy Element Stability; 2.6. Prompt gamma spectroscopy of fully identified fission fragments with VAMOS; 3. The future of GANIL - SPIRAL: SPIRAL2; Acknowledgments; References Nuclear Physics in Japan and RIKEN Nishina Center H. En'yo1. Nishina Center in history and at present; 2. Nuclear Physics in Japan; 3. Summary; Nuclear Physics Programs at RIBF H. Sakurai; 1. Introduction; 2. Reaction study with island-of-inversion nuclei and its vicinity; 3. Decay spectroscopy on A~110 neutron-rich nuclei; 4. Programs with Deuteron Beams; 5. Summary and Outlook; References Unbound States of the Drip-Line Nucleus ²⁴ O V. Lapoux, S. Boissinot, E. C. Pollacco, F. Flavigny, C. Louchart, L. Nalpas, A. Obertelli, H. Otsu, H. Baba, R. J. Chen, N. Fukuda, N. Inabe, D. Kameda, M. Matsushita, T. Motobayashi, T. Onishi, E. Y. Nikolskii, M. Nishimura, H. Sakurai, M. Takechi, S. Takeuchi, Y. Togano, K. Yoneda, A. Yoshida, K. Yoshida, A. Matta, Y. Blumenfeld, S. Franchoo, F. Hammache, Ph. Rosier, E. Rindel,

P. Gangnant, Ch. Houarner, J. F. Libin and F. Saillant

1. Resonances of the nuclei close to or at the drip-line;
 - 1.1. Motivations
 - 1.2. Resonances of the light neutron-rich ${}^6\text{He}$ halo nucleus
 - 1.3. Study of the shell effect associated to $N=16$
2. Spectroscopy of ${}^{24}\text{O}$ using the (p,p') reaction;
 - 2.1. Experimental set-up and kinematics
 - 2.2. Particle identification
3. The analysis of the Ex spectra; Perspectives;

Acknowledgments; References

High-Resolution Ion-Optical Analysis of RI-Beams with the Sharaq Spectrometer

T. Uesaka, S. Michimasa, H. Tokieda, S. Shimoura, S. Ota, Y. Sasamoto, H. Miya, S. Kawase, Y. Kikuchi, K. Kisamori, M. Takaki, H. Matsubara, M. Dozono, S. Noji, K. Miki, K. Yako, H. Sakai, H. Takeda, D. Kameda, T. Ohnishi, Y. Yanagisawa, T. Kubo, H. Baba, T. Kawabata, P. Roussel-Chomaz, M. Sasano and G. P. A. Berg

1. High-resolution ion-optical analysis of RI-beams;
2. SHARAQ spectrometer and Cathode Read-out Drift Chamber;
3. Dispersion matching of secondary beam;
4. Physics cases;
5. Summary;

Acknowledgements
References

Sommario/riassunto

The book contains the papers presented in the French-Japan Symposium on Nuclear Structure Problems, held in January 2011 at RIKEN Wako Campus with 100 participants. Based on the long history of collaboration between France and Japan in the field of nuclear physics, various problems in recent and future studies are discussed. Emphasis is on the structure of nuclei far from the stability, reactions involving stable and unstable nuclei, nuclear processes and properties of astrophysical interest, synthesis of super-heavy elements, and instrumentation and accelerator projects.
