RIKEN Nishina Center for Accelerator-Based Science

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[**Book · Proceedings**]

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Quantum Hadron Physics Laboratory

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Theoretical Nuclear Physics Laboratory

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RBRC Computing Group

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RBRC Experimental Group

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Radioactive Isotope Physics Laboratory

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[Book ・Proceedings]

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Warr N., Blazhev A. and Moschner K.: "Simulations of the SIMBA array towards the determination of Qβ values" EPJ Web Conf. 93, 07008 (2015)
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Wang H. et al., "Structural Evolution of the Pd Isotopes Towards N = 82", Proceedings of the 12th Asia Pacific Physics Conference (APPC12), JPS Conf. Proc. Volume 1 (2015)
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Oral Presentations

(International Conference etc.)

H. Sakurai : "Emergence of Exotic Phenomena in Unstable Nuclei -how to observe them", International School of Nuclear Physics in Eriche, Sicily, Italy, September (2014) *Invited Talk*
H. Sakurai : "Physics of Exotic Nuclei at RIBF", APS-JPS Joint Nuclear Physics Meeting, Hawaii, USA, October (2014) *Invited Talk*
H. Sakurai : "Physics Programs at RIBF"
International Symposium on Physics of Unstable Nuclei 2014, Ho Chi Minh City, Vietnam, November (2014) *Invited Talk*
Nishimura S.: "Survey of decay properties nad perspective at RIBF", Workshop on Nuclear Astrophysics, Beihang Univ., China January 21-23 (2015) *Invited Talk*
Nishimura S.: "Decay properties of exotic nuclei relevant to r-process nucleosynthesis", APS-JPS Meeting 2014, Hawaii, USA, October 7-11 (2014).
Nishimura S.: "Study of R-process Nucleosynthesis via Decay Spectroscopy at RIBF", International nuclear physics conference (NUBA2014), Adrasan-Antalya, Turkey, September 15-22 (2014). *Invited Talk*
Nishimura S.: Decay spectroscopy of exotic nuclei with EURICA spectrometer at RIBF", Fifteenth International

Symposium on Capture Gamma-Ray Spectroscopy and Related Topics (CGS2014), Dresden, Germany, August 25-29 (2014). *Invited Talk*

Nishimura S.: "Decay Properties of Exotic Nuclei with the EURICA", 4th European Gamma and Ancillary detectors network (EGAN2014), Darmstadt, Germany, June 23-26 (2014). *Invited Talk*

Nishimura S.: "Decay Properties of Exotic Nuclei and their Impacts to the r-process Nucleosynthesis" International Conference for Advances in Radioactive Isotope Science (ARIS2014), Tokyo, Japan, June 1-6 (2014). *Invited Talk*

Nishimura S.: "Decay spectroscopy of EURICA at RIBF", 11th International Spring Seminar on Nuclear Physics, Ischia, Italy, May 12-16 (2014). *Invited Talk*

Nishimura S.: "Decay spectroscopy of Ni isotopes", The structure of 68Ni: Current knowledge and open questions, Leuven, Belgium, April 23-24 (2014). *Invited Talk*

Pieter Doornenbal: "Perspectives for In-Beam Gamma-Ray Spectroscopy at the RIBF", Invited talk at the JPS Spring Meeting, Waseda Univ., Japan, March (2015)

Pieter Doornenbal: "Overview of SUNFLOWER", Invited talk at the Progress in Nuclear Shell-Model Calculations Workshop, Wako, Japan, November 26-28 (2014)

Pieter Doornenbal: "In-Beam Gamma-Ray Spectroscopy with Fast Beams Around the `Island of Inversion`", Invited talk at ISPUN14, Ho Chi Minh City, Vietnam, November 3th -- 8th (2014)

Pieter Doornenbal: "In-Beam Gamma-Ray Spectroscopy of Fast Exotic Beams at the RIBF", Invited talk at the 4th Joint APS--JPS Meeting, Hawaii, USA, October 7th -- 11th (2014)

Pieter Doornenbal: "Overview of In-Beam Gamma-Ray Spectroscopy at the RIBF", Invited talk at CGS15, Dresden, Germany, August 25th -- 29th (2014)

Pieter Doornenbal: " Overview of In-Beam Gamma-Ray Spectroscopy at the RIBF", Invited talk at the Zakopane Conference on Nuclear Physics, Poland, August 31st -- September 7th (2014)

Pieter Doornenbal: "Spectroscopy of Exotic Nuclei with EURICA", Invited talk at Nuclear Structure 2014, Vancouver, Canada, July 21st -- 25th (2014)

Pieter Doornenbal: "AGATA@RIBF",Oral Presentation at the 4th EGAN Workshop, Darmstadt, Germany, June 23rd -- 26th (2014)

Par-Anders Soderstrom, "Recent work of decay spectroscopy at RIBF", Fourth Joint Meeting of the Nuclear Physics Divisions of the American Physical Society and The Physical Society of Japan, Waikoloa, Hawai'i, USA, 8 Oct 2014.

Isobe T., "SPiRIT project for the study of density dependent symmetry energy of high dense matter with Heavy RI collisions at RIBF", 4th International Symposium on the Nuclear Symmetry Energy NuSYM14, University of Liverpool, UK, 7-9 July 2014.

Isobe T., "Readout System for SPiRIT experiment" , SAMURAI International Collaboration Workshop 2014, Tohoku University, 2014 8th -9th Sep. 2014

Isobe T., "GET for SPiRIT project", GET collaboration meeting 2014, Saint Avit Loisirs, France, 22-25 Sep. 2014.

Isobe T., "Development of SPYBOX for the calibration of GET clock synchronization", GET collaboration meeting 2014, Saint Avit Loisirs, France, 22-25 Sep. 2014.

Isobe T., "SPiRIT-TPC with GET readout electronics for the study of density dependent symmetry energy of high dense matter with Heavy RI collisions", APS/DNP 4th joint meeting @HAWAII, Hawaii, USA, 7-11 Oct. 2014.

Shiga Y., K. Yoneda, D. Steppenbeck, N. Aoi, P. Doornenbal, J. Lee, H. Liu, M. Matushita, S. Takeuchi, H. Wang, H. Baba, P. Bednarczyk, Zs. Dombradi, Zs. Fulop, S. Go, T. Hashimoto, E. Ideguchi, K. Ieki, K. Kobayashi, Y. Kondo , et al., "Shell structure studies in the vicinity of the doubly-magic ^78 Ni by in-beam γ-ray spectroscopy", FOURTH JOINT MEETING OF THE NUCLEAR PHYSICS DIVISIONS OF THE AMERICAN PHYSICAL SOCIETY and The PHYSICAL SOCIETY OF JAPAN , HAWAII ISLAND, 7th-11th Oct. 2014.

Nakai Y., Hidaka H., Watanabe N., Kojima T. M., "Ionic cluster formation using an ion drift-tube with selected-ion injection - Measurement of thermodynamic quantities for H3O+ Hydrate", The 17th International Symposium on Small Particles and Inorganic Clusters, Fukuoka, Sep. (2014).

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(Domestic Conference)

H. Sakurai, "Current Status and Future of RIBF My Very Personal Perspectives" (招待講演),
RIBF Theory Forum Workshop, Wako, August (2014)

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SAMURAI International Collaboration Workshop, Tohoku University, Sendai, September (2014)

櫻井博儀,"長寿命核分裂廃棄物の核変換データとその戦略"(招待講演)、原子力学会、京都、2014 年 9 月

H. Sakurai, "Nuclear Transmutation Programs at SAMURAI", SAMURAI International Collaboration Workshop, Sendai, Japan, Sept., 2014

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M. Kurata-Nishimura: “Status Of the SPiRIT Time Projection Chamber”
SAMURAI International Collaboration Workshop 2014 , Tohoku Univ., Sendai Japan, September (2014)

Par-Anders Soderstrom, “Gamma-ray spectroscopy results from the EURICA experiment”, Progress in nuclear shell-model calculations in CNS-RIKEN collaboration, RIKEN, Wako, Japan, 28th Nov 2014.

磯部忠昭, “理研 RIBF における重 RI 衝突を用いた対称エネルギー密度依存性の研究”,「宇宙核物理実験の現状と将来」研究会, 大阪大学核物理研究センター,7th-8th Aug. 2014

磯部忠昭, “理研 RIBF での低エネルギー非対称重イオン衝突を用いた原子核状態方程式の研究”,「J-PARC における重イオン衝突実験が拓く新しい物理」研究会, KEK, 26th-27th Nov. 2014

磯部忠昭, “ビームタイム一週間の加速器実験に求められるフレキシブルな計算機環境～RIKEN-RIBF でのコンピューティング ～”, 第 70 回年次大会、シンポジウム「実験のための最先端コンピューティング」, 早稲田大, 21st-24th Mar. 2015

磯部忠昭, “自由自在にモノ（物質）を変えられるとしたら、何を何に変えたいですか？”, 日本科学未来館 サイエンティスト・クエスト, 日本科学未来館, 27 Mar. 2015
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岸田隆, “核変換技術の科学コミュニケーション”, 第一回「長寿命核分裂核廃棄物の核変換データとその戦略」ワークショップ, 和光, 3 月(2014)

岸田隆, “３つの循環と文明論の科学”, 西宮サイエンス談話会, 西宮, 12 月(2014)

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岸田隆, “３つの循環と文明論の科学”, 鳥居薬品外部講師講演会, 東京, 3 月(2015)

中井陽一, 日高宏, 渡部直樹, 小島隆夫, “イオン打ち込み移動管を用いた水和クラスターイオンの生成実験の現状 4”, 日本物理学会第 69 回年次大会, (日本物理学会), 平塚, 3 月(2014)

日高宏, 中井陽一, 小島隆夫, 渡部直樹, “NO+による水クラスターイオン生成 : 準安定 NO+による影響”, 日本物理学会第 69 回年次大会, (日本物理学会), 平塚, 3 月(2014)

渡部直樹, 日高宏, 中井陽一, 小島隆夫, “イオン誘起微粒子核生成 I : 装置開発とねらい”, 日本地球惑星科学連合大会 2014 年大会, 横浜, 5 月(2014)

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Wang H., “Total kinetic energy detector” (invited talk), BigRIPS data analysis workshop, RIKEN Nishina Center, 11th Sep., 2014

Wang H., “Status of RIBF-31 experiment: Structure study of the neutron-rich nuclei beyond 132Sn” (invited talk), 3rd SUNFLOWER workshop, University of Tokyo, 15th -16th Sep., 2014

Wang H., “Cross section measurement strategy for long-lived fission product and in-beam gamma-ray spectroscopy at RIBF” (invited talk), 2014 Symposium on Nuclear Data, Hokkaido University Conference hall, Nov. 27-28, 2014

(Other Seminars)

櫻井博儀："科学するこころ -対象、思索、実行-"
不動岡高校、加須市、2014 年 6 月

櫻井博儀："経験、知識、知恵 -実生活から研究活動までの三つのキーワード-", 大宮高校、さいたま市、2014 年 11 月

Spin Isospin Laboratory

Publications

[Journal]

(Original Papers) *Subject to Peer Review

Bai, C. L. and Sagawa, H. and Colo, G. and Fujita, Y. and Zhang, H. Q. and Zhang, X. Z. and Xu, F. R.: "Low-energy collective Gamow-Teller states and isoscalar pairing interaction", Physical Review C **90**, 054335 (2014).*

Bohm, C. and Borgmann, C. and Audi, G. and Beck, D. and Blaum, K. and Breitenfeldt, M. and Cakirli, R. B. and Cocolios, T. E. and Eliseev, S. and George, S. and Herfurth, F. and Herlert, A. and Kowalska, M. and Kreim, S. and Lunney, D. and Manea, V. and Ramirez, E. M. and Naimi, S. and Neidherr, D. and Rosenbusch, M. and Schweikhard, L. and Stanja, J. and Wang, M. and Wolf, R. N. and Zuber, K.: "Evolution of nuclear ground-state properties of neutron-deficient isotopes around Z=82 from precision mass measurements", Physical Review C **90**, 044307 (2014).*

Cao, L. G. and Colo, G. and Sagawa, H. and Bortignon, P. F.: "Properties of single-particle states in a fully self-consistent particle-vibration coupling approach", Physical Review C **89**, 044314(2014).*

Colo, G. and Garg, U. and Sagawa, H.: "Symmetry energy from the nuclear collective motion: constraints from dipole, quadrupole, monopole and spin-dipole resonances", European Physical Journal A **50**, 26(2014).*

Fujita, Y. and Fujita, H. and Adachi, T. and Bai, C. L. and Algora, A. and Berg, G. P. A. and von Brentano, P. and Colo, G. and Csatlos, M. and Deaven, J. M. and Estevez-Aguado, E. and Fransen, C. and De Frenne, D. and Fujita, K. and Ganioglu, E. and Guess, C. J. and Gulyas, J. and Hatanaka, K. and Hirota, K. and Honma, M. and Ishikawa, D. and Jacobs, E. and Krasznahorkay, A. and Matsubara, H. and Matsuyanagi, K. and Meharchand, R. and Molina, F. and Muto, K. and Nakanishi, K. and Negret, A. and Okamura, H. and Ong, H. J. and Otsuka, T. and Pietralla, N. and Perdikakis, G. and Popescu, L. and Rubio, B. and Sagawa, H. and Sarriguren, P. and Scholl, C. and Shimbara, Y. and Shimizu, Y. and Susoy, G. and Suzuki, T. and Tameshige, Y. and Tamii, A. and Thies, J. H. and Uchida, M. and Wakasa, T. and Yosoi, M. and Zegers, R. G. T. and Zell, K. O. and Zenihiro, J.: "Observation of Low- and High-Energy Gamow-Teller Phonon Excitations in Nuclei", Physical Review Letters, **112**, 112502(2014).*

Hagino, K. and Sagawa, H.: "Three-body model calculation of the 2(+) state in O-26", Physical Review C, **90**, 027303(2014).*

Hagino, K. and Sagawa, H.: "Correlated two-neutron emission in the decay of the unbound nucleus O-26", Physical Review C, **89**, 014331(2014).*

Hamamoto, I. and Sagawa, H.: "Self-consistent Hartree-Fock and RPA Green's function method indicate no pygmy resonance in the monopole response of neutron-rich Ni isotopes", Physical Review C, **90**, 031302(2014).*

Isaka, M. and Fukukawa, K. and Kimura, M. and Hiyama, E. and Sagawa, H. and Yamamoto, Y.: "Superdeformed Lambda hypernuclei with antisymmetrized molecular dynamics", Physical Review C, **89**, 024310(2014).*

Karakoc, M. and Zegers, R. G. T. and Brown, B. A. and Fujita, Y. and Adachi, T. and Boztosun, I. and Fujita, H. and Csatlos, M. and Deaven, J. M. and Guess, C. J. and Gulyas, J. and Hatanaka, K. and Hirota, K. and Ishikawa, D. and Krasznahorkay, A. and Matsubara, H. and Meharchand, R. and Molina, F. and Okamura, H. and Ong, H. J. and Perdikakis, G. and Scholl, C. and Shimbara, Y. and Susoy, G. and Suzuki, T. and Tamii, A. and Thies, J. H. and Zenihiro, J.: "Gamow-Teller transitions in the A=40 isoquintet of relevance for neutrino captures in Ar-40", Physical Review C, **89**, 064313(2014).*

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Astro-Glaciology Research Unit

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Superheavy Element Production Team

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森田浩介、日本耳鼻咽喉科学会学術講演会　2014 年 5 月 16 日　福岡市　‘113 番元素発見への道のり’

森田浩介、福岡県高校理科部会夏季研修会講演会　2014 年 8 月 20 日　　福岡市‘113 番新元素の探索’

森田浩介、科学を語る会講演会　2014 年 11 月 8 日　福岡市　‘新元素の探索－現代の錬金術－’

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Superheavy Element Research Device Development Team

Publications

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Computing and network Team

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Niigata University

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