

業績

Achievement

1 学術論文

- H. Masui, K. Katō, N. Michel, M. Ploszajczak, “Precise comparison of the Gaussian expansion method and the Gamow shell model”, Phys. Rev. C **89**, 044317 (2014).
- S. Ohkubo, Y. Hirabayashi, “Evidence for a secondary bow in Newton’s zero-order nuclear rainbow”, Phys. Rev. C **89**, 051601(R) (2014).
- T. Harada, Y. Hirabayashi, “ ΣNN quasibound states in ${}^3\text{He}(K^-, \pi^{\mp})$ reactions at 600 MeV/c”, Phys. Rev. C **89**, 054603 (2014).
- S. Ohkubo, Y. Hirabayashi, “Similarity between nuclear rainbow and meteorological rainbow: Evidence for nuclear ripples”, Phys. Rev. C **89**, 061601(R) (2014).
- S. Ebata, T. Nakatsukasa, T. Inakura, “Systematic investigation of low-lying dipole modes using the canonical-basis time-dependent Hartree-Fock-Bogoliubov theory”, Phys. Rev. C **90**, 024303 (2014).
- G. Ropke, P. Schuck, Y. Funaki, H. Horiuchi, Zhongzhou Ren, A. Tohsaki, Chang Xu, T. Yamada, Bo Zhou, “Nuclear clusters bound to doubly magic nuclei: The case of Po212”, Phys. Rev. C **90**, 034304 (2014).
- A. Makinaga, R. Massarczyk, R. Schwengner, M. Beard, F. Dönau, M. Anders, D. Bemmerer, R. Beyer, R. Hannaske, A. R. Junghans, M. Kempe, T. Kögler, M. Röder, K. Schmidt, A. Wagner, “Dipole strength of ${}^{181}\text{Ta}$ for the evaluation of the ${}^{180}\text{Ta}$ stellar neutron capture rate”, Phys. Rev. C **90**, 044301 (2014).
- S. Ohkubo, Y. Hirabayashi, A.A. Ogloblin, Yu.A. Gloukhov, A.S. Dem’yanova, W.H. Trzaska “Refractive effects and Airy structure in inelastic ${}^{16}\text{O} + {}^{12}\text{C}$ rainbow scattering”, Phys. Rev. C **90**, 064617 (2014).
- B. Zhou, Y. Funaki, A. Tohsaki, H. Horiuchi, Z.Z. Ren, “The container picture with two-alpha correlation for the ground state of ${}^{12}\text{C}$ ”, Prog. Theor. Exp. Phys. 2014, 101D01 (2014).
- Takayuki Myo, Yuma Kikuchi, Hiroshi Masui, Kiyoshi Katō , “Recent development of complex scaling method for many-body resonances and continua in light nuclei”, Prog. Part. Nucl. Phys. **79**, 1 (2014).

- Takahiro Mizusaki, Takayuki Myo, Kiyoshi Katō, “A new approach for many-body resonance spectroscopy with the complex scaling method”, *Prog. Theor. Exp. Phys.* **2014**, 091D01 (2014).
- Takayuki Myo, Kiyoshi Katō, “Mirror symmetry breaking in He isotopes and their mirror nuclei”, *Prog. Theor. Exp. Phys.* **2014**, 083D01 (2014).
- S. Ebata, M. Kimura, “Low-lying 2+ states generated by pn-quadrupole correlation and N = 28 shell quenching”, *Phys. Rev. C* **91**, 014309 (2015).
- M. Lyu, Z. Ren, B. Zhou, Y. Funaki, H. Horiuchi, G. Ropke, P. Schuck, A. Tohsaki, C. Xu, T. Yamada, “Investigation of ${}^9\text{Be}$ from a nonlocalized clustering concept”, *Phys. Rev. C* **91**, 014313 (2015).
- R.S. Mackintosh, Y. Hirabayashi, S. Ohkubo, “Emergence of a secondary rainbow and the dynamical polarization potential for ${}^{16}\text{O}$ on ${}^{12}\text{C}$ at 330 MeV”, *Phys. Rev. C* **91**, 024616 (2015).
- T. Harada, Y. Hirabayashi, “Continuum $pp\Lambda$ spectrum of the ${}^3\text{He}(K,\pi^-)$ reaction with continuum discretized coupled channels”, *Nucl. Phys. A* **934**, 8 (2015).
- T. Harada, Y. Hirabayashi, “ P -wave resonant state of the ${}^4\Sigma$ hypernucleus in the ${}^4\text{He}(K^-, \pi^-)$ reaction”, *Phys. Lett. B* **740**, 312 (2015).
- S. Takács, A. Hermanne, F. Ditroi, F. Tárkányi, M. Aikawa, “Reexamination of cross sections of the ${}^{100}\text{Mo}(\text{p},2\text{n}){}^{99m}\text{Tc}$ reaction”, *Nucl. Instr. Method B* **347**, 26 (2015).
- H.-X. Chen, S. Imai, H. Toki, L.-S. Geng, “Study of Hadrons Using the Gaussian Functional Method in the O(4) Linear Sigma model”, *Chin. Phys. C*, (2015) in press.

2 論文（国際会議プロシーディングス等）

- N. Otuka, E. Dupont, V. Semkova, B. Pritychenko, A.I. Blokhin, M. Aikawa, S. Babykina, M. Bossant, G. Chen, S. Dunaeva, R.A. Forrest, T. Fukahori, N. Furutachi, S. Ganesan, Z. Ge, O.O. Gritzay, M. Herman, S. Hlavač, K. Katō, B. Lalremruata, Y.O. Lee, A. Makinaga, K. Matsumoto, M. Mikhaylyukova, G. Pikulina, V.G. Pronyaev, A. Saxena, O. Schwerer, S.P. Simakov, N. Soppera, R. Suzuki, S. Takács, X. Tao, S. Taova, F. Tárkányi, V.V. Varlamov, J. Wang, S.C. Yang, V. Zerkin, Y. Zhuang, “Towards a More Complete and Accurate Experimental Nuclear Reaction Data Library (EXFOR): International Collaboration Between Nuclear Reaction Data Centres (NRDC)”, *Nucl. Data Sheets* **120**, 272 (2014).
- M. Odsuren, K. Katō, M. Aikawa, “Analysis of Three Body Resonances in the Complex Scaled Orthogonal Condition Model”, *Nucl. Data Sheets* **120**, 126 (2014).
- S. Imai, H.-X. Chen, H. Toki, L.-S. Geng, “Thermodynamics of hadrons using Gaussian functional method in the linear sigma model”, *Proceedings of The Seventh International Symposium on Chiral Symmetry in Hadrons and Nuclei*, 49 (2014).

- M. Aikawa, S. Ebata, N. Furutachi, D. Ichinkhorloo, S. Imai, K. Kato, A. Sarsembayeva, B. Zhou, N. Otuka, “Compilation status and research topics in Hokkaido University Nuclear Reaction Data Centre”, Proceedings of the Fifth AASPP Workshop on Asian Nuclear Reaction Database Development, 13 (2015).
- S. Hatakeyama, S. Ebata, W. Horiuchi, M. Kimura, “Multiple-scattering effects in proton- and alpha-nucleus reactions with Glauber theory”, Journal of Physics: Conference Series **569**, 012050 (2014).
- Bo Zhou, “Nonlocalized cluster dynamics and container picture”, Journal of Physics: Conference Series **569**, 012007 (2014).
- Myagmarjav Odsuren, Kiyoshi Kato, Yuma Kikuchi, Masayuki Aikawa, Takayuki Myo, “A resonance problem on the low-lying resonant state in the ${}^9\text{Be}$ system”, Journal of Physics: Conference Series **569**, 012072 (2014).

3 口頭発表（国際会議等）

- Technical Meeting on the International Network of Nuclear Reaction Data Centres, May 6-9, 2014, Smolenice, Slovakia
 - Masayuki AIKAWA, “Japan Nuclear Reaction Data Centre (JCPRG) progress report”
 - Masayuki AIKAWA, “Japanese compilation tools”
- 3rd International Workshop on “State of the Art in Nuclear Cluster Physics”, May. 26-30, 2014, Yokohama, Japan
 - K. Kato, “Many-body resonances and continuum states above many-body decay thresholds”
 - Bo Zhou, “Container picture for cluster structures in ${}^{12}\text{C}$ ”
- The 2nd Conference on “Advances in Radioactive Isotope Science” (ARIS2014), Jun. 1-6, 2014, Tokyo, Japan
 - S. Ebata, “Repulsive Aspects of Pairing Correlation in Nuclear Fusion Reaction”
 - S. Ebata, “Quenching of N=28 Shell Gap and a Novel Type of Low-lying Quadrupole Mode in the vicinity of neutron-rich N=28 isotones”
 - A. Makinaga, “Compilation of Nuclear Reaction Data from RIBF”
- The 5th Asian Nuclear Reaction Database Development Workshop, Sep. 22-24, 2014, Mumbai, India
 - M. Aikawa, “Compilation Status and Research Topics in Hokkaido University Nuclear Reaction Data Centre”
- Workshop on EXFOR Compilation, Oct. 6-10, 2014, Vienna, Austria

- D. Ichinkhorloo, “Digitization software GSYS”
- The International Conference on Cluster Structure of Unstable Nuclei and Its Decay, Dec. 1-4, 2014, Nanjing, China
 - Bo Zhou, “Container picture for cluster structures in ^{12}C ”

4 口頭発表（学会等）

- 2014 年度核データ研究会, Nov. 27-28, 2014, Sapporo, Japan
 - Masayuki Aikawa, “International Collaboration of Hokkaido University Nuclear Reaction Data Centre”
 - Masaaki Kimura, “Clustering phenomena studied by Antisymmetrized Molecular Dynamics”
 - Kiyoshi Katō, “PHOTODISINTEGRATION CROSS SECTION OF THE $^9\text{Be}(1/2+)$ STATE IN THE COMPLEX SCALING METHOD”
 - Shotaro Imai, “Thick-target yields on radioactive targets estimated by inverse kinematics”
 - Bo Zhou, “The container picture with two-alpha correlation for the ground state of ^{12}C ”
 - Aiganysh Sarsembayeva, “A new EXFOR editor system: Java version of HENDEL”
 - Dagvadorj Ichinkhorloo, “Calculation of the scattering cross section for $^6\text{Li}+\text{n}$ and $^7\text{Li}+\text{n}$ reactions”
- 経営情報学会 2014 年春季全国研究発表大会, May 31-Jun. 1, 2015, Sagamihara, Japan
 - 片山敏之, “核反応データベース研究開発と東アジア地域の国際連携”
- 日本原子力学会 2015 年春の年会, Mar. 20-22, 2015, Hitachi, Japan
 - 今井匠太朗, “逆運動学に基づく放射性ターゲットに対する厚い標的核の核反応生成量の評価”
- 日本物理学会第 70 回年次大会, Mar. 21-24, 2015, Tokyo, Japan
 - 江幡 修一郎, “陽子中性子四重極相関と $N=28$ シエルクエンチで生じる低エネルギー 2+状態”
 - 江幡 修一郎, “正準基底時間依存ハートレー・フォック・ボゴリューボフ理論の開発”

5 口頭発表（その他）

- 仁科加速器センター RIBF 核物理セミナー, Jan. 13, 2015, Wako, Japan
 - 江幡 修一郎, “正準基底表示時間依存ハートレー・フォック・ボゴリューボフ理論の開発”

- RCNP Experiment Seminar, Dec. 16 13, 2014, Suita, Japan
 - 今井 匠太朗, “厚い放射性標的核による核反応生成量の逆運動学に基づく評価”

6 受賞

- 2015 年日本物理学会理論核物理領域：若手奨励賞
 - 江幡 修一郎, “正準基底時間依存ハートレー・フォック・ボゴリューポフ理論の開発”