

# Curriculum Vitae

as of September 3, 2024

## Research Experience

**2017-present:** Senior Research Scientist, FRIB/NSCL, Michigan State University

**2013-present:** Adjunct Professor, Department of Physics and Astronomy, Michigan State University

**2013-2017:** Staff Research Scientist, NSCL, Michigan State University

**2007-2013:** Research Scientist, NSCL, Michigan State University

**2004-2007:** Research associate, NSCL, Michigan State University

**2004:** Visiting scientist, TRIUMF

**2002-2004:** Post Doctoral Fellow for Research Abroad (at TRIUMF), Japan Society for the Promotion of Science

**2000-2002:** Research Fellow, Laboratory of Nuclear Studies, Osaka University

**2000:** Research Assistant, Department of Physics, Osaka University

**1996-1999:** Research Fellow for Young Scientists, Japan Society for the Promotion of Science

## Education

**1999:** Doctor of Science, Osaka University

**1996:** Master of Science, Osaka University

## Publication

**High Voltage Determination and Stabilization for collinear laser spectroscopy applications**, K. König, F. Köhler, J. Palmes, H. Badura, A. Dockery, [K. Minamisono](#), J. Meisner, P. Müller, W. Nörtershäuser and S. Passon, *Rev. Sci. Instrum.* **95**, 083370 (2024), DOI: 10.1063/5.0218649.

**Nuclear charge radii of silicon isotopes**, Kristian König, Julian C. Berengut, Anastasia Borschevsky, Alex Brinson, B. Alex Brown, Adam Dockery, Serdar Elhatisari, Ephraim Eliav, Ronald F. Garcia Ruiz, Jason D. Holt, Bai-Shan Hu, Jonas Karthein, Dean Lee, Yuan-Zhuo Ma, Ulf-G. Meißner, [Kei Minamisono](#), Alexander V. Oleynichenko, Skyy V. Pineda, Sergey D. Prosnnyak, Marten L. Reitsma, Leonid V. Skripnikov, Adam Vernon and Andreí Zaitsevskii, *Phys. Rev. Lett.* **132**, 162502 (2024), DOI: 10.1103/PhysRevLett.132.162502.

**Isotope-shift factors with quantum electrodynamics effects for many-electron systems: A study of the nuclear charge radius of  $^{26m}\text{Al}$** , Leonid V. Skripnikov, Sergey D. Prosnnyak, Aleksei V. Malyshev, Michail Athanasakis-Kaklamanakis, Alex Jose Brinson, [Kei Minamisono](#), Fabian C. Pastrana Cruz, Jordan Ray Reilly, Brooke J. Rickey and Ronald F. Garcia Ruiz, *Phys. Rev. A* **110**, 012807 (2024), DOI: 10.1103/PhysRevA.110.012807.

**Precision mass measurement of the proton dripline halo candidate  $^{22}\text{Al}$** , S. E. Campbell, G. Bollen, B. A. Brown, A. Dockery, C. M. Ireland, [K. Minamisono](#), D. Puentes, B. J. Rickey, R. Ringle, I. T. Yandow, K. Fosse, A. Ortiz-Cortes, S. Schwarz, C. S. Sumithrarachchi and A. C. C. Villari, *Phys. Rev. Lett.* **132**, 152501 (2024), DOI: 10.1103/PhysRevLett.132.152501.

**Hyperfine structure of low-lying triplet states in  $^{45}\text{Sc II}$** , A. Dockery, K. König, J. Lantis, Y. Liu, [K. Minamisono](#), S. Pineda and R. Powel, *Phys. Rev. A* **108**, 052816 (2023), DOI: 10.1103/PhysRevLett.131.102501.

**Surprising Charge-Radius Kink in the Sc Isotopes at  $N = 20$** , Kristian König, Stephan Fritzsche, Gaute Hagen, Jason D. Holt, Andrew Klose, Jeremy Lantis, Yuan Liu, [Kei Minamisono](#), Takayuki Miyagi, Witold Nazarewicz, Thomas Papenbrock, Skyy V. Pineda, Robert Powel, and Paul-Gerhard Reinhard, *Phys. Rev. Lett.* **131**, 102501 (2023), DOI: 10.1103/PhysRevLett.131.102501.

**Charge radii of  $^{55,56}\text{Ni}$  and surprising similarity of charge radii for the  $N = 28$  isotones**, Felix Sommer, Kristian König, Dominic M. Rossi, Nathan Everett, David Garand, Ruben P. de Groote, Jason D. Holt, Anthony Inorvati, Colton Kalman, Andrew Klose, Jeremy Lantis, Yuan Liu, Andrew J. Miller, [Kei Minamisono](#), Takayuki Miyagi, Witold Nazarewicz, Wilfried Nörtershäuser, Skyy V. Pineda, Robert Powel, Paul-Gerhard Reinhard, Laura Renth, Elisa Romero-Romero, Robert Roth, Achim Schwenk, Chandana Sumithrarachchi, and Andrea Teigelhöfer, *Phys. Rev. Lett.* **129**, 132501 (2022), DOI: 10.1103/PhysRevLett.129.132501.

**$\beta^2$  corrections to spherical EDF calculations for root-mean-square charge radii**, B. Alex Brown, and [Kei Minamisono](#), *Phys. Rev. C* **106**, L011304 (2022), DOI: 10.1103/PhysRevC.106.L011304.

**Ground state magnetic dipole moment of  $^{40}\text{Sc}$** , Robert Powel, B. Alex Brown, J. D. Holt, Andrew Klose, Kristian König, Jeremy Lantis, [Kei Minamisono](#), T. Miyagi, and Skyy Pineda, *Phys. Rev. C* **105**, 034310 (2022), DOI: 10.1103/PhysRevC.105.034310.

**Charge radius of neutron-deficient  $^{54}\text{Ni}$  and symmetry energy constraints using the difference in mirror pair charge radii**, Skyy V. Pineda, Kristian König, Dominic M. Rossi, B. Alex Brown, Anthony Incorvati, Jeremy Lantis, K. Minamisono, Wilfried Nörtershäuser, Jorge Piekarewicz, Robert Powel, and Felix Sommer, *Phys. Rev. Lett.* **127**, 182503 (2021), DOI: 10.1103/PhysRevLett.127.182503.

**Improved wavelength meter calibration in near infrared region via Doppler-free spectroscopy of molecular iodine**, R. Powel, M. Koble, J. Palmes, N. Everett, P. Imgram, K. König, J. Lantis, K. Minamisono, W. Nörtershäuser, R. Parker, S. Pineda, F. Sommer, and A. Klose, *Appl. Phys.* **B 127**, 104 (2021), DOI: 10.1007/s00340-021-07650-5.

**Isotope-shift measurements and King-fit analysis in nickel**, K. König, F. Sommer, J. Lantis, K. Minamisono, W. Nörtershäuser, S. Pineda, and R. Powel, *Phys. Rev.* **C 103**, 054305 (2021), DOI: 10.1103/PhysRevC.103.054305.

**Beam energy determination via collinear laser spectroscopy**, K. Köni, K. Minamisono, J. Lantis, S. Pineda, and R. Powel, *Phys. Rev.* **A 103**, 032806 (2021), DOI: 10.1103/PhysRevA.103.032806.

**Implications of the  $^{36}\text{Ca}$ - $^{36}\text{S}$  and  $^{38}\text{Ca}$ - $^{38}\text{Ar}$  difference in mirror charge radii on the neutron matter equation of state**, B. A. Brown, K. Minamisono, J. Piekarewicz, H. Hergert, D. Garand, A. Klose, J. D. Lantis, Y. Liu, B. Maaß, A. J. Miller, W. Nörtershäuser, S. V. Pineda, R. C. Powel, D. M. Rossi, F. Sommer, C. Sumithrarachchi, A. Teigelhöfer, J. Watkins, and R. Wirth, *Phys. Rev. Research* **2**, 022035(R) (2020), DOI: 10.1103/PhysRevResearch.2.022035.

**Three-step resonance ionization of zirconium with Ti:Sapphire lasers**, Y. Liu, E. Romero-Romero, D. Garand, J.D. Lantis, K. Minamisono, D.W. Stracener, *Spectrochimica Acta Part B* **158**, 105640 (2019), DOI: 10.1016/j.sab.2019.105640.

**Ground-state electromagnetic moments of  $^{37}\text{Ca}$** , A. Klose, K. Minamisono, A. J. Miller, B. A. Brown, D. Garand, J. D. Holt, J. D. Lantis, Y. Liu, B. Maaß, W. Nörtershäuser, S. V. Pineda, D. M. Rossi, A. Schwenk, F. Sommer, C. Sumithrarachchi, A. Teigelhöfer, and J. Watkins, *Phys. Rev.* **C 99**, 061301(R) (2019), DOI: 10.1103/PhysRevC.99.061301.

**Proton superfluidity and charge radii in proton-rich calcium isotopes**, A. J. Miller, K. Minamisono, A. Klose, D. Garand, C. Kujawa, J. D. Lantis, Y. Liu, B. Maaß, P. F. Mantica, W. Nazarewicz and W. Nörtershäuser, S. V. Pineda, P. -G. Reinhard, D. M. Rossi, F. Sommer, C. Sumithrarachchi, A. Teigelhöfer and J. Watkins, *Nature Physics* **15**, 432 (2019), DOI: 10.1038/s41567-019-0416-9.

**Measurement of the  $^{20}\text{F}$  half-life**, M. Hughes, E. A. George, O. Naviliat-Cuncic, P. A. Voytas, S. Chandavar, A. Gade, X. Huyan, S. N. Liddick, K. Minamisono, S. V. Paulauskas and D. Weisshaar, *Phys. Rev.* **C 97**, 054328 (2018).

**Geant4 simulations of the absorption of photons in GsI and NaI produced by electrons with energies up to 4 MeV and their application to precision measurements of the  $\beta$ -energy spectrum with a calorimetric technique**, X. Huyan, O. Naviliat-Cuncic, P. Voytas, S. Chandavar, M. Hughes, K. Minamisono, and S. V. Paulauskas, *Nucl. Instrum. Methods Phys. Res.* **A 879**, 134 (2018).

**First determination of ground state electromagnetic moments of  $^{53}\text{Fe}$** , A. J. Miller, K. Minamisono, D. M. Rossi, R. Beerwerth, B. A. Brown, S. Frizsche, D. Garand, A. Klose, Y. Liu, B. Maaß, P. F. Mantica, P. Müller, W. Nörtershäuser, M. R. Pearson, and C. Sumithrarchchi, *Phys. Rev. C* **96**, 054314 (2017).

**RFQ beam cooler and buncher for collinear laser spectroscopy of rare isotopes**, B. R. Barquest, G. Bollen, P. F. Mantica, K. Minamisono, R. Ringle, S. Schwarz, C. S. Sumithrarchchi, *Nucl. Instrum. Methods Phys. Res. A* **866**, 18 (2017).

**Charge radii of neutron deficient  $^{52,53}\text{Fe}$  produced by projectile fragmentation**, K. Minamisono, D. M. Rossi, R. Beerwerth, S. Fritzsche, D. Garand, A. Klose, Y. Liu, B. Maaß, P. F. Mantica, A. J. Miller, P. Müller, W. Nazarewicz, W. Nörtershäuser, E. Olsen, M. R. Pearson, P.-G. Reinhard, E. E. Saperstein, C. Sumithrarchchi, and S. V. Tolokonnikov, *Phys. Rev. Lett.* **117**, 252501 (2016).

**Population distribution subsequent to charge exchange of 29.85 keV  $\text{Ni}^+$  on sodium vapor**, C. A. Ryder, K. Minamisono, H. B. Asberry, B. Isherwood, P. F. Mantica, A. Miller, D. M. Rossi, and R. Strum, *Spectrochimica Acta Part B* **113**, 16 (2015).

**Charge radii of neutron-deficient  $^{36}\text{K}$  and  $^{37}\text{K}$** , D. M. Rossi, K. Minamisono, H. B. Asberry, G. Bollen, B. A. Brown, K. Cooper, B. Isherwood, P. F. Mantica, A. Miller, D. J. Morrissey, R. Ringle, J. A. Rodriguez, C. A. Ryder, A. Smith, R. Strum, and C. Sumithrarchchi, *Phys. Rev. C* **92**, 014305 (2015).

**A field programmable gate array-based time-resolved scaler for collinear laser spectroscopy with bunched radioactive potassium beams**, D. M. Rossi, K. Minamisono, B. R. Barquest, G. Bollen, K. Cooper, M. Davis, K. Hammerton, M. Hughes, P. F. Mantica, D. J. Morrissey, R. Ringle, J. A. Rodriguez, C. A. Ryder, S. Schwarz, R. Strum, C. Sumithrarchchi, D. Tarazona, and S. Zhao, *Rev. Sci. Instrum.* **85**, 093503 (2014).

**Collinear laser spectroscopy on the ground state and an excited state in neutral  $^{55}\text{Mn}$** , A. K. Klose, K. Minamisono, and P. F. Mantica, *Phys. Rev. A* **88**, 042701 (2013).

**Commissioning of the Collinear Laser Spectroscopy System in the BECOLA Facility at NSCL**, K. Minamisono, P. F. Mantica, A. Klose, S. Vinnikova, A. Schneider, B. Johnson, and B. R. Barquest, *Nucl. Instrum. Methods in Phys. Res. A* **709**, 85 (2013).

**$\beta$ -delayed proton emission in the  $^{100}\text{Sn}$  region**, G. Lorusso, A. Becerril, A. Amthor, T. Baumann, D. Bazin, J. S. Berryman, B. A. Brown, R. H. Cyburt, H. L. Crawford, A. Estrade, A. Gade, T. Ginter, C. J. Guess, M. Hausmann, G. W. Hitt, P. F. Mantica, M. Matos, R. Meharchand, K. Minamisono, F. Montes, G. Perdikakis, J. Pereira, M. Prtillo, H. Schatz, K. Smith, J. Stoker, A. Stolz, and R. G. T. Zegers, *Phys. Rev. C* **86**, 014313 (2012).

**Tests of Atomic Charge-Exchange Cells for Collinear Laser Spectroscopy**, A. Klose, K. Minamisono, Ch. Geppert, N. Frömmgen, M. Hammen, J. Krämer, A. Krieger, C. D. P. Levy, P. F. Mantica, W. Nörtershäuser, and S. Vinnikova, *Nucl. Instrum. Methods in Phys. Res. A* **678**, 114 (2012).

**Low Energy Test of SCC in  $\beta$  Decays of Spin Aligned  $^{20}\text{F}$  and  $^{20}\text{Na}$** , K. Minamisono, T. Nagatomo, K. Matsuta, C. D. P. Levy, Y. Tagishi, M. Ogura, M. Yamaguchi, H. Ota, J. A. Behr, K. P. Jackson, A. Ozawa, M. Fukuda, T. Sumikama, H. Fujiwara, T. Iwakoshi, R. Matsumiya, M. Mihara, A. Chiba, Y. Hshizume, T. Yasuno, and T. Minamisono, *Phys. Rev. C* **84**, 055501, (2011).

**High-spin  $\mu$ s Isomeric States in  $^{96}\text{Ag}$** , A. D. Becerril, G. Lorusso, A. M. Amthor, T. Baumann, D. Bazin, J. S. Berryman, B. A. Brown, H. L. Crawford, A. Estrade, A. Gade, T. Ginter, C. J. Guess, M. Hausmann, G. W. Hitt, P. F. Mantica, M. Matos, R. Meharchand, K. Minamisono, F. Montes, G. Perdikakis, J. Pereira, M. Portillo, H. Schatz, K. Smith, J. Stoker, A. Stolz, and R. G. T. Zegers, *Phys. Rev. C* **84**, 041303 (2011).

**Test of the Conserved Vector Current Hypothesis by Beta-Ray Angular Distribution Measurement in the Mass-8 System**, T. Sumikama, K. Matsuta, T. Nagatomo, M. Ogura, T. Iwakoshi, Y. Nakashima, H. Fujiwara, M. Fukuda, M. Mihara, K. Minamisono, T. Yamaguchi, and T. Minamisono, *Phys. Rev. C* **83**, 065501 (2011).

**Half-Lives of Ground and Isomeric States in  $^{97}\text{Cd}$  and the Astrophysical Origin of  $^{96}\text{Ru}$** , G. Lorusso, A. Becerril, A. Amthor, T. Baumann, D. Bazin, J. S. Berryman, B. A. Brown, R. H. Cyburt, H. L. Crawford, A. Estrade, A. Gade, T. Ginter, C. J. Guess, M. Hausmann, G. W. Hitt, P. F. Mantica, M. Matos, R. Meharchand, K. Minamisono, F. Montes, G. Predikakis, J. Pereira, P. Portillo, J. Schatz, K. Smith, J. Stoker, A. Stolz, and R. G. T. Zegers, *Phys. Lett. B* **699**, 141 (2011).

**$\beta$  Decay and Isomeric Properties of Neutron-Rich Ca and Sc Isotopes**, H. L. Crawford, R. V. F. Janssens, P. F. Mantica, J. S. Berryman, R. Broda, M. P. Carpenter, N. Cieplicka, B. Fornal, G. F. Grinyer, N. Hoteling, B. P. Kay, T. Lauritsen, K. Minamisono, I. Stefanescu, J. B. Stoker, W. B. Walters, and S. Zhu, *Phys. Rev. C* **82**, 014311 (2010).

**Nuclear Polarization of Short-Lived Na Isotopes Maintained in Single Crystals for  $\beta$ -NMR Spectroscopy**, K. Minamisono, K. Matsuta, T. Minamisono, C. D. P. Levy, T. Nagatomo, M. Ogura, T. Sumikama, J. A. Behr, K. P. Jackson, M. Mihara and M. Fukuda, *Nucl. Instrum. and Methods in Phys. Res. A* **616**, 45 (2010).

**Doubly-Magic Nature of  $^{56}\text{Ni}$ : Measurement of the Ground State Nuclear Magnetic Dipole Moment of  $^{55}\text{Ni}$** , J. S. Berryman, K. Minamisono, W. F. Rogers, B. A. Brown, H. L. Crawford, G. F. Grinyer, P. F. Mantica, J. B. Stoker, and I. S. Towner, *Phys. Rev. C* **79**, 064305 (2009).

**Ground State Magnetic Moments of Mirror Nuclei Studied at NSCL**, P. F. Mantica and K. Minamisono, *Acta Physica Polonica B* **40**, 779 (2009).

**Collinear Laser Spectroscopy and Polarized Exotic Nuclei at NSCL**, K. Minamisono, G. Bollen, P. F. Mantica, D. J. Morrissey and S. Schwartz, *Proc. Insti. Nucl. Theory* **16**, 180 (2009).

**Quadrupole moment of Neutron-Deficient  $^{20,21}\text{Na}$** , K. Minamisono, K. Matsuta, T. Minamisono, C. D. P. Levy, T. Nagatomo, M. Ogura, T. Sumikama, J. A. Behr, K. P. Jackson, M. Mihara and M. Fukuda, *Phys. Lett. B* **672**, 120 (2009).

**$\beta$  decay Half-Life of the  $rp$ -Process Waiting Point Nuclide  $^{84}\text{Mo}$** , J. B. Stoker, P. F. Mantica, D. Bazin, A. Becerril, J. S. Berryman, H. L. Crawford, A. Estrade, C. J. Guess, G. W. Hitt, G. Lorusso, M. Matos, K. Minamisono, F. Montes, J. Pereira, G. Perdikakis, H. Schatz, K. Smith, R. G. T. Zegers, *Phys. Rev. C* **79**, 015803 (2009) .

**Production and  $\beta$  Decay of  $rp$ -Process Nuclei  $^{96}\text{Cd}$ ,  $^{98}\text{In}$ , and  $^{100}\text{Sn}$** , D. Bazin, F. Montes, A. Becerril, G. Lorusso, A. Amthor, T. Baumann, H. Crawford, A. Estrade, A. Gade, T. Ginter, C. J. Guess, M. Hausmann, G. W. Hitt, P. F. Mantica, M. Matos, R. Meharchand, K. Minamisono,

G. Perdikakis, J. Pereira, J. Pinter, M. Portillo, H. Schatz, K. Smith, J. Stoker, A. Stolz, and R. G. T. Zegars, *Phys. Rev. Lett.* **101**, 252501 (2008).

**Search for the  $G$ -parity irregular term in weak nucleon currents extracted from mirror beta decays in the mass 8 system**, T. Sumikama, K. Matsuta, T. Nagatomo, M. Ogura, T. Iwakoshi, Y. Nakashima, H. Fujiwara, M. Fukuda, M. Mihara, K. Minamisono, T. Yamaguchi and T. Minamisono, *Phys. Lett. B* **664**, 235 (2008).

**Quadrupole moment of  $^{37}\text{K}$** , K. Minamisono, P. F. Mantica, H. L. Crawford, J. S. Pinter, J. B. Stoker, Y. Utsuno and R. R. Weerasiri, *Phys. Lett. B* **662**, 389 (2008).

**Fast switching NMR system for measurements of ground-state quadrupole moments of short-lived nuclei**, K. Minamisono, R. R. Weerasiri, H. L. Crawford, P. F. Mantica, K. Matsuta, T. Minamisono, J. S. Pinter and, J. B. Stoker, *Nucl. Instrum. Meth. Phys. Res. A* **589**, 185 (2008).

**Feasibility study of in-beam polarization of fluorine**, C. D. P. Levy, T. E. Cocolios, J. A. Behr, K. Jayamanna, K. Minamisono, and M. R. Pearson, *Nucl. Instrum. Meth. Phys. Res. A* **580**, 1571 (2007).

**Magnetic Moment of  $^{57}\text{Cu}$  Ground State**, K. Minamisono, P. F. Mantica, T. J. Mertzimekis, A. D. Davies, M. Hass, J. Pereira, J. S. Pinter, W. F. Rogers, J. B. Stoker, B. E. Tomline, and R. R. Weerasiri, *Phys. Rev. Lett.* **96**, 102501 (2006).

**New limit of the  $G$ -Parity Irregular Weak Nucleon Current Detected in  $\beta$  Decays of Spin Aligned  $^{12}\text{B}$  and  $^{12}\text{N}$** , K. Minamisono, K. Matsuta, T. Minamisono, T. Yamaguchi, T. Sumikama, T. Nagatomo, M. Ogura, T. Iwakoshi, M. Fukuda, M. Mihara, K. Koshigiri, and M. Morita, *Phys. Rev. C* **65**, 015501 (2002).

**In-Medium Nucleon Mass Renormalization Detected in  $\beta$  Decays of Spin Aligned  $^{12}\text{B}$  and  $^{12}\text{N}$** , K. Minamisono, K. Matsuta, T. Minamisono, T. Yamaguchi, T. Sumikama, T. Nagatomo, M. Ogura, T. Iwakoshi, M. Fukuda, M. Mihara, and K. Koshigiri, *Phys. Rev. C* **65**, 015209 (2002).

**Electromagnetic Moments of the  $\beta$ -Emitting Nucleus  $^{16}\text{N}$** , K. Matsuta, T. Miyake, K. Minamisono, A. Morishita, S. Momota, Y. Nojiri, M. Mihara, M. Fukuda, K. Sato, S. Y. Zu, H. Kitagawa, and T. Minamisono, *Phys. Rev. Lett.*, **86**, 3735-3738 (2001).

**Quadrupole Moment of the Proton Drip-Line Nuclide  $^{13}\text{O}$** , K. Matsuta, K. Sato, M. Fukuda, M. Mihara, T. Yamaguchi, M. Sasaki, T. Miyake, K. Minamisono, T. Minamisono, M. Tanigaki, T. Ohtsubo, T. Onishi, Y. Nojiri, S. Momota, S. Fukuda, T. Fukao, Y. Matsumoto, A. Harada, K. Yoshida, A. Ozawa, T. Kobayashi, I. Tanihata, J.R. Alonso, G.F. Krebs, T.J.M. Symons, H. Kitagawa, and H. Sagawa, *Phys. Lett. B* **457**, 81-85 (1999).

**In-Medium Mass Renormalization of Nucleons Detected in the Axial Charges of the  $\beta$ -Decays of Spin Aligned  $^{12}\text{B}$  and  $^{12}\text{N}$** , T. Minamisono, K. Matsuta, T. Yamaguchi, K. Minamisono, M. Fukuda, A. Kitagawa, and K. Koshigiri, *Phys. Rev. Lett.* **82**, 1644-1647 (1999).

**New limit of the  $G$ -Parity Irregular Weak Nucleon Current Detected in  $\beta$  Decays of Spin Aligned  $^{12}\text{B}$  and  $^{12}\text{N}$** , K. Minamisono, *Genshikaku Kenkyu* **44**, 33-42 (1999). (in Japanese)

**New Limit of the  $G$ -Parity Irregular Weak Nucleon Current Disclosed in  $\beta$ -Ray Angular Distributions from Spin Aligned  $^{12}\text{B}$  and  $^{12}\text{N}$** , T. Minamisono, K. Matsuta, T. Yamaguchi,

K. Minamisono, T. Ikeda, Y. Muramoto, M. Fukuda, Y. Nojiri, A. Kitagawa, K. Koshigiri, and M. Morita, *Phy. Rev. Lett.* **80**, 4132-4135 (1998).

## Oral Presentation

The invited talks and seminars are indicated by solid circles.

- **Precision measurements with laser spectroscopy for nuclear structure studies at the BECOLA/RISE facility at FRIB**, Workshop on Precision Measurements and BSM Physics, APS DNP fall 2024 meeting, Boston, USA, October 2024.

**Charge radius of  $^{32}\text{Si}$  and symmetry energy in nuclear EOS from difference of mirror charge radii  $^{32}\text{Si}$ - $^{32}\text{Ar}$** , Nuclear Structure, Argonne National Laboratory, USA, July 2024.

- **Laser spectroscopy experiments at FRIB for nuclear structure studies**, Kickoff meeting of the CNRS-MSU international research laboratory on nuclear physics and nuclear astrophysics, FRIB, USA, December 2023.
- **Nuclear Structure Studies by Laser Spectroscopy in the Ca-Ni Region at FRIB & Nuclear EOS from Mirror Radii**, International conference on HYPERFINE interactions and their applications, Nara, Japan, November 2023.
- **Laser assisted nuclear structure studies at FRIB**, Gordon research conference, Patterns and reactions of exotic nuclei, New London, NH, June 2023.
- **Laser spectroscopy of rare isotopes at FRIB**, FRIB TA topical program, theoretical justifications and motivations for early high-profile FRIB experiments, FRIB, May 2023.
- **Precision measurements: Mass, radii and electromagnetic moments**, NSAC LRP town meeting, Nuclear structure and reactions experiments WG, online, November 2022.
- **Laser spectroscopy with rare isotope beams**, FRIB-TA topical program, Nuclear Isomers in the era of FRIB, online, May 20, 2022.
- **Neutron equation of state and difference of charge radii between  $^{54}\text{Ni}$  and  $^{54}\text{Fe}$  mirror nuclei**, ECT\* Workshop, Nuclear physics from atomic spectroscopy, online, April 13, 2022.

**Talks at American Physical Society, Division of Nuclear Physics annual meetings**, every year from 2006 to 2018 and 2020, 2021.

- **Nuclear structure studies using laser light at NSCL/MSU**, Nuclear physics seminar, University of Tennessee, Knoxville, TN, USA, November 4, 2019.
- **Recent laser spectroscopy results at NSCL/MSU**, International workshop on laser spectroscopy as a tool for nuclear theory, LSTNT, CEA, France, October 7-11, 2019.
- **Charge radii of neutron-deficient Ca isotopes**, International conference on laser probing, PLATAN, Helmholtz Institute Mainz, Mainz, Germany, May 19-24, 2019.
- **Laser spectroscopy on short-lived isotopes**, Experimental techniques in quantum sensing and information workshop, Michigan State University, East Lansing, MI, USA, March 21-22, 2019.
- **Nuclear structure studies using lasers at NSCL/MSU**, SFB Colloquia, TU Darmstadt, Darmstadt, Germany, February 8, 2018.

- **Nuclear structure studies using laser spectroscopy techniques -past and future 10 years-**, International symposium on RI beam physics in the 21st century, RIKEN, Saitama, Japan, December 4-5, 2017.
- **Charge radii of neutron-deficient  $^{52,53}\text{Fe}$  produced by projectile fragmentation**, ARIS 2017, Keystone, CO, May 28 - June 2, 2017.
- **Charge radii of  $^{36,37}\text{K}$  and disappearance of shell-closure signature at  $N = 20$** , Nuclear Structure 2016, Knoxville, TN, July 24 - 29, 2016.
- **Charge radii of neutron-deficient K and Fe isotopes around  $N = 20$  &  $28$** , 10th International Workshop on Application of Lasers and Storage Devices in Atomic Nuclei Research, Recent Achievements and Future Prospects, Poznan, Poland, May 16 - 19, 2016.
- **Laser spectroscopy for nuclear structure studies at BECOLA facility at NSCL/MSU**, 2016 Munich-Michigan EDM Meeting, MSU, East Lansing, MI, April 6 - 8, 2016.
- **BECOLA facility; recent CLS studies on neutron-deficient K & Fe isotopes**, NUSTAR annual meeting 2016, GSI, Darmstadt, Germany, March 1 - 4, 2016.
- **BECOLA facility and charge radii of neutron-deficient K isotopes**, ECT\* workshop, the interplay between atomic and nuclear physics to study exotic nuclei, Trento, Italy, August 24 - 27, 2015.
- **Prospects for laser spectroscopy of radioactive isotopes at BECOLA**, 7th International Conference on Laser Probing, East Lansing, MI, June 7 - 10, 2015.
- **Collinear laser spectroscopy & beta NMR at NSCL/MSU**, Joint International Conference on Hyperfine Interactions and Nuclear Quadrupole Interactions 2014, Canberra, Australia, September 21 - 26, 2014.
- **Nuclear moments and charge-radii measurements by collinear laser spectroscopy in singly charged ions and atoms**, Workshop on highly charged ions and its application, NSCL, East Lansing, MI, May 23, 2014.
- **BECOLA facility at NSCL/MSU: collinear laser spectroscopy with bunched beams**, Physics Division Seminar, ORNL, Oak Ridge, TN, August 5, 2013.
- **BECOLA facility at NSCL/MSU: collinear laser spectroscopy with bunched beams**, IX International Workshop on Application of Lasers and Storage Devices in Atomic Nuclei Research, Poznan, Poland, May 13 - 16, 2013.
- **Collinear Laser Spectroscopy Studies at BECOLA Facility at NSCL**, the 6th International Conference on Laser Probing, Paris, France, June 4 - 8, 2012.
- **Nuclear Physics Studies Using Laser Lights at NSCL and FRIB**, Seminar at Central Michigan University, Mount Pleasant, MI, USA, March 14, 2012.
- **Collinear Laser Spectroscopy Studies of Rare Isotopes at NSCL**, 2011 Fall Meeting of the APS Division of Nuclear Physics, East Lansing, MI, USA, October 26 - 29, 2011.
- **Low Energy Test of SCC in  $\beta$  Decays of Spin Aligned  $^{20}\text{F}$  and  $^{20}\text{Na}$** , Workshop on Low-Energy Fundamental Interactions Physics, SCK-CEN, Mol, Belgium, October 3 - 5, 2011.

- **Collinear Laser Spectroscopy Studies at NSCL**, the 5th International Conference on Laser Probing, TRIUMF, Vancouver, Canada, September 27 - October 1, 2010.
- **Plenary talk for Laser Spectroscopy and Neutral Atom Traps**, FRIB Equipment Workshop, East Lansing, MI, USA, February 20-22, 2010.
- **$\beta$ -NQR Spectroscopy for Quadrupole Moments and Laser Polarizer/Spectroscopy Project at NSCL**, Biophysical/Physical Seminar, Department of Chemistry, Michigan State University, East Lansing, MI, USA, February 24, 2009.

**Collinear Laser Polarizer and Spectroscopy Project at NSCL**, the 4th International Conference on Laser Probing, Nagoya University, Nagoya, Japan, October 6-10, 2008.

- **Possibilities with Collinear Laser-Polarized Atoms**, the 4th ANL/INT/MSU/JINA RIA Theory Workshop on Rare Isotopes and Fundamental Symmetries, Institute for Nuclear Theory, University Washington, Seattle, September 19-22, 2007.
- **Nuclear Moments Measurements at the NSCL**, Seminar at University of Tsukuba Tandem Accelerator Center at Research Facility Center for Science and Technology, Tsukuba, Ibaraki, Japan, June 7, 2007.

**Measurements of Nuclear Quadrupole Moments at the NSCL**, International Nuclear Physics Conference 2007, Tokyo, Japan, June 3-8, 2007.

**Short-Lived Excited-State  $g$  factors of fast  $^{38,40}\text{S}$  Fragments**, 2007 Division of Nuclear Physics Annual Meeting, Jacksonville, Florida, USA, April 14-17, 2007.

- **Magnetic Moment of  $^{57}\text{Cu}$  and Shell Breaking of the  $^{56}\text{Ni}$  Core**, 2006 Division of Nuclear Physics Annual Meeting, Nashville, Tennessee, USA, October 25-28, 2006.
- **Measurement of Nuclear Static Moments at the NSCL**, Argonne Physics Division Seminar, Argonne National Laboratory, October 9, 2006.

**Magnetic Moment of  $^{57}\text{Cu}$  Ground State**, Nuclear Structure 06, Oak Ridge, Tennessee, USA, July 24-28, 2006.

**Alignment Correlation Term of  $^{20}\text{Na}$  and Quadrupole Moments of  $^{20,21}\text{Na}$** , International Nuclear Physics Conference (INPC2004), Göteborg, Sweden, June 27- July 2, 2004.

- **Application of the  $\beta$ -NMR and -NQR Technique to the Precise Measurement**, National Superconducting Cyclotron Lab. Seminar, Michigan State University, April 16, 2004.
- **$G$ -Parity Irregular Term in Weak Nucleon Current**, CENPA Seminar, University of Washington, January 22, 2004.
- **Meson and Quark Effects in Nuclear  $\beta$  Decay of  $A = 12$  system and  $^{20}\text{Na}$  (E871) -  $\beta$ -Ray Angular Distribution from Oriented Nuclei-**, TRIUMF ISAC Seminar, TRIUMF, April 23, 2003.
- **Study on the  $G$ -Parity Irregular Current in the  $\beta$  Decays of  $A = 12$  System**, as the 9th Rookie of the Year Award, Nuclear Physics Forum in Japan, the 58th Annual Meeting of Physical Society of Japan, Sendai, Japan, March 28-31, 2003.

**Spin Manipulation by Use of Nuclear Quadrupole Interactions - Quarks and Medium Effects in the Nucleus -**, XVI International Symposium on Nuclear Quadrupole Interactions (NQI2001), Higashi-Senda Campus of Hiroshima University, Hiroshima, Japan, Sept. 9-14, 2001.

**New Limit of the  $G$ -Parity Irregular Weak Nucleon Current Detected in  $\beta$  Decays of Spin Aligned  $^{12}\text{B}$  and  $^{12}\text{N}$** , International Nuclear Physics Conference (INPC 2001), Berkeley, California, USA, July 30-August 3, 2001.

- **$G$ -Parity and In-Medium Mass Renormalization of Nucleons Detected through the  $\beta$  Decays of Spin Aligned  $^{12}\text{B}$  and  $^{12}\text{N}$** , TRIUMF Lunchtime Seminar, TRIUMF, August 12, 1999.

**$G$ -Parity Irregular Induced Tensor Current and the Axial Charge in the Weak Nucleon Current Detected in Alignment Correlation Terms of  $^{12}\text{B}$  and  $^{12}\text{N}$   $\beta$  Decays**, Particles and Nuclei International Conference (PANIC99), Uppsala, Sweden, June 9-16, 1999.

**New Limit of the  $G$ -Parity Irregular Induced Tensor Current and of the Axial Charge in the Weak Nucleon Current Detected in Alignment Correlation Terms of  $^{12}\text{B}$  and  $^{12}\text{N}$   $\beta$  Decays**, International Nuclear Physics Conference (INPC98), Paris, France, August 24-28, 1998.

**Non-Zero Second Class Current in Weak Nuclear Axial Vectors of  $^{12}\text{B}$  and  $^{12}\text{N}$** , 2nd International Symposium on Symmetries in Subatomic Physics, Seattle, USA, June 25-28, 1997.