

## Lijie Sun

Facility for Rare Isotope Beams, Michigan State University

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[Google Scholar](#)

[LinkedIn](#)

[Web of Science](#)

[ResearchGate](#)

[ORCID](#)

[GitHub](#)

## Education

Aug 2014 – Jul 2017 Ph.D., Particle Physics and Nuclear Physics

Thesis: " *$\beta$ -decay spectroscopy of nuclei close to the proton drip line:  $^{24}\text{Si}$ ,  $^{23}\text{Al}$ ,  $^{20}\text{Mg}$ ,  $^{22}\text{Si}$* "

**China Institute of Atomic Energy**

Aug 2011 – Jul 2014 M.Sc., Particle Physics and Nuclear Physics

Thesis: "*Experimental study of  $\beta$ -delayed proton emissions of  $^{36,37}\text{Ca}$* "

**China Institute of Atomic Energy**

Sep 2007 – Jul 2011 B.Sc., Applied Physics

Thesis: "*Experimental study of Compton scattering of  $\gamma$  rays with a NaI(Tl) detector*"

**China University of Petroleum**

## Employment

May 2023 – Present Research Associate

Facility for Rare Isotope Beams

**Michigan State University**

Nov 2021 – Mar 2023 Postdoctoral Researcher

School of Physics and Astronomy

**Shanghai Jiao Tong University**

Oct 2018 – Oct 2021 Research Associate

National Superconducting Cyclotron Laboratory

**Michigan State University**

Jul 2017 – Oct 2018 Postdoctoral Researcher

School of Physics and Astronomy

**Shanghai Jiao Tong University**

## Funded Grants

1. Principal Investigator: "*Experimental study of the decay properties of nuclides in the vicinity of the proton drip-line nucleus  $^{27}\text{S}$* ", National Natural Science Foundation of China funded project ([11805120](#)), Effective Dates: 1/1/2019-12/31/2021, Total Amount Awarded: \$46,000.
2. Principal Investigator: " *$\beta$ -decay spectroscopy of proton drip-line nucleus  $^{27}\text{S}$* ", China Postdoctoral Science Foundation funded project (2017M621442), Effective Dates: 1/1/2018-12/31/2021, Total Amount Awarded: \$8,000.
3. Collaborator: "*Developments of  $4\pi$  charged-particle detector arrays*", National Natural Science Foundation of China funded project ([U1432246](#)), Effective Dates: 1/1/2015-12/31/2018, Total Amount Awarded: \$460,000.
4. Collaborator: "*Experimental study of  $\beta$ -delayed two-proton emission from  $^{26}\text{P}$  at the proton drip line*", National Natural Science Foundation of China funded project ([U1632136](#)), Effective Dates: 1/1/2017-12/31/2019, Total Amount Awarded: \$150,000.
5. Collaborator: "*Complete-kinematic measurements of full-reaction-channels for fusion reactions with heavy-ions at energies around the Coulomb barrier*", National Natural Science Foundation of China funded project ([11635015](#)), Effective Dates: 1/1/2017-12/31/2021, Total Amount Awarded: \$530,000.
6. Collaborator: "*Cross-section measurement of a key reaction  $^{233}\text{U}(n,2n)$  in Th-U fuel cycle*", National Natural Science Foundation of China funded project ([11705285](#)), Effective Dates: 1/1/2018-12/31/2020, Total Amount Awarded: \$45,000.
7. Collaborator: "*Study of the reaction mechanism for  $^7\text{Be}+^{208}\text{Pb}$  at near-Coulomb-barrier energies*", National Natural Science Foundation of China funded project ([U1732145](#)), Effective Dates: 1/1/2018-12/31/2020, Total Amount Awarded: \$77,000.
8. Collaborator: "*Study of the optical potential of halo nuclear system  $^6\text{He}+^{64}\text{Zn}$  from transfer reactions*", National Natural Science Foundation of China funded project ([11505293](#)), Effective Dates: 1/1/2016-12/31/2018, Total Amount Awarded: \$33,000.
9. Collaborator: "*Study of the effect of neutron transfers on the fusion reaction of O+Cr system*", National Natural Science Foundation of China funded project ([11475263](#)), Effective Dates: 1/1/2015-12/31/2018, Total Amount Awarded: \$140,000.
10. Collaborator: "*Breakup reaction mechanism for  $^{11}\text{Be}+^{208}\text{Pb}$* ", National Natural Science Foundation of China funded project ([U1432127](#)), Effective Dates: 1/1/2015-12/31/2017, Total Amount Awarded: \$110,000.
11. Collaborator: "*Experimental study of the  $^{40,44,48}\text{Ca}+^{144,154}\text{Sm}$  fusion and fission reactions near*

*barrier energies*", National Natural Science Foundation of China funded project ([11375268](#)), Effective Dates: 1/1/2014-12/31/2017, Total Amount Awarded: \$120,000.

12. Collaborator: "*General-purpose decay station at the Beijing Radioactive Ion-beam Facility*", National Natural Science Foundation of China funded project ([11327508](#)), Effective Dates: 1/1/2014-12/31/2017, Total Amount Awarded: \$450,000.

## Honors and Awards

1. International Postdoctoral Exchange Fellowship, Talent-Dispatch Program, China Postdoctoral Council, 2018. (120 winners nationwide)
2. Top Award, Young Researcher Symposium, China Institute of Atomic Energy, 2017. (7 winners since 1987) [[Link](#)]
3. Outstanding PhD Thesis Award, China Institute of Atomic Energy, 2017.
4. Best Presentation Award for Young Scientists, National Nuclear Reaction Conference, 2015.
5. Outstanding Bachelor's Thesis Award, China University of Petroleum, 2011.
6. First Prize, National English Competition for College Students, 2009. (top 1%)

## Presentations

1. "*Application of Bayesian methods to lifetime measurements of  $^{30}\text{P}(p,\gamma)^{31}\text{S}$  resonances*", oral presentation, 18th Chinese Nuclear Physics Conference, Huzhou University, Huzhou, China, May 2023.
2. "*Application of Bayesian methods to  $\gamma$ -ray lineshape analysis*", oral presentation, Nuclear Physics Seminar, China Institute of Atomic Energy, Beijing, China, Apr 2023.
3. "*Lifetime measurements for the rapid proton capture process*", oral presentation, Youth Innovation Promotion Association Seminar, Institute of Modern Physics, Chinese Academy of Sciences, Lanzhou, China, Jan 2022. [[Link](#)]
4. "*Lifetime measurements for the rapid proton capture process*", oral presentation, Fudan Institute of Modern Physics Seminar, Fudan University, Shanghai, China, Jan 2022.
5. " *$^{30}\text{P}(p,\gamma)^{31}\text{S}$  reaction rate in novae: lifetimes of  $^{31}\text{S}$  states*", oral presentation, Fall Meeting of the Division of Nuclear Physics of the American Physical Society, Virtually, Michigan State University, East Lansing, MI, USA, Oct 2021. [[Link](#)]
6. " *$^{30}\text{P}(p,\gamma)^{31}\text{S}$  reaction rate in novae: lifetimes of  $^{31}\text{S}$  states*", oral presentation, American Physical Society April Meeting, Virtually, Michigan State University, East Lansing, MI, USA, Apr 2021.

[\[Link\]](#)

7. " *$\beta$ -decay spectroscopy of  $^{25}\text{Si}$  using the Gaseous Detector with Germanium Tagging system*", oral presentation, National Postdoctoral Seminar Series, Previews of the Future in Low-Energy Experimental Nuclear Physics, Virtually, Michigan State University, East Lansing, MI, USA, Dec 2020. [\[Link\]](#)
8. " *$^{25}\text{Si}$   $\beta$ -decay spectroscopy using the Gaseous Detector with Germanium Tagging (GADGET) system*", oral presentation, Fall Meeting of the Division of Nuclear Physics of the American Physical Society, Virtually, New Orleans, LA, USA, Oct 2020. [\[Link\]](#)
9. "*Exotic Decays of Extremely Proton-rich Nuclei in sd-shell and Related Topics*", oral presentation, International Conference on Proton-Emitting Nuclei 2019 (PROCON2019), Michigan State University, East Lansing, MI, USA, Jun 2019.
10. "*Application and extension of the Particle X-ray Coincidence Technique to X-ray burst reaction rates*", oral presentation, 2019 JINA-CEE Frontiers in Nuclear Astrophysics Meeting, Michigan State University, East Lansing, MI, USA, May 2019.
11. "*Precise thermonuclear  $^{26}\text{Si}(p,\gamma)^{27}\text{P}$  rate and its ultimate role in galactic  $^{26}\text{Al}$  puzzle*", oral presentation, Workshop on the Decay Study of Proton-rich Nuclei with  $20 < A < 30$ , The University of Hong Kong, Hong Kong, China, Jul 2018.
12. " *$\beta$ -decay spectroscopy of  $^{27}\text{S}$  and its implications for the  $^{26}\text{Si}(p,\gamma)^{27}\text{P}$  reaction in nova and X-ray burst nucleosynthesis*", oral presentation, 17th National Conference on Nuclear Structure, Liaoning Normal University, Dalian, China, Jul 2018.
13. " *$\beta$ -decay spectroscopy of  $^{27}\text{S}$  and its implication for the  $^{26}\text{Si}(p,\gamma)^{27}\text{P}$  reaction rate in classical nova*", oral presentation, 2nd Gravitational Wave and Heavy Element Synthesis Interdisciplinary Symposium, Sun Yat-Sen University, Zhuhai, China, Apr 2018.
14. "*Recent experiment on  $\beta$  decay of proton drip-line nuclei at RIBLL*", oral presentation, 12th HIRFL-RIBLL Collaboration Workshop, Shanghai Maritime University, Shanghai, China, Jan 2018.
15. " *$\beta$ -decay studies of proton drip-line nuclei  $^{20}\text{Mg}$  and  $^{22}\text{Si}$* ", poster presentation, 3rd International Conference on Advances in Radioactive Isotope Science (ARIS2017), Keystone Conference Center, Dillon, CO, USA, May-Jun 2017.
16. " *$\beta$ -decay studies of proton drip-line nuclei  $^{24}\text{Si}$ ,  $^{23}\text{Al}$ ,  $^{20}\text{Mg}$ , and  $^{22}\text{Si}$* ", oral presentation, Forum in Commemoration of the 100th Anniversary of the Birth of Wang Ganchang, China Institute of Atomic Energy, Beijing, China, May 2017. [\[Link\]](#)
17. " *$\beta$ -decay studies of proton drip-line nuclei  $^{20}\text{Mg}$  and  $^{22}\text{Si}$* ", oral presentation, 11th National Conference on Nuclear Reaction, Huzhou University, Huzhou, China, Apr 2017.

18. "*Beta-decay studies of proton-rich nuclei  $^{20}\text{Mg}$  and  $^{22}\text{Si}$* ", oral presentation, 10th HIRFL-RIBLL Collaboration Workshop, Beijing, China, Jan 2017.
19. "*Beta-decay study of  $T_z = -2$  proton-rich nucleus  $^{20}\text{Mg}$* ", oral presentation, 16th Chinese Nuclear Physics Conference, Sichuan University, Chengdu, China, Oct 2016.
20. "*Beta-decay studies of  $T_z = -2$  proton-rich nuclei  $^{24}\text{Si}$  and  $^{20}\text{Mg}$* ", oral presentation, 16th National Conference on Nuclear Structure, Lanzhou University, Lanzhou, China, Jul 2016.
21. " *$\beta$  decay of  $T_z = -2$  proton-rich nucleus  $^{24}\text{Si}$* ", oral presentation, 10th National Conference on Nuclear Reaction, Guizhou Normal University, Guiyang, China, Jul 2015.
22. " *$\beta$ -delayed proton decay of  $T_z = -2$  proton-rich nucleus  $^{24}\text{Si}$* ", oral presentation, 5th International Conference on Proton-emitting Nuclei, Institute of Modern Physics, Chinese Academy of Sciences, Lanzhou, China, Jul 2015.
23. "*Experimental study of  $\beta$ -delayed proton emission of  $^{25}\text{Si}$* ", oral presentation, 15th National Conference on Nuclear Structure, Guangxi Normal University, Guilin, China, Oct 2014.
24. "*Experimental studies of  $\beta$ -delayed proton emissions of  $^{36,37}\text{Ca}$* ", oral presentation, 5th HIRFL-RIBLL Collaboration Workshop, Institute of Modern Physics, Chinese Academy of Sciences, Wuwei, China, Jul 2014.
25. "*Study of exotic decays of proton-rich nuclei ( $Z=20$ )*", oral presentation, 15th Chinese Nuclear Physics Conference, Shanghai Institute of Applied Physics, Shanghai, China, Oct 2013.
26. "*Study of  $\beta$ -delayed proton emissions of proton-rich nuclei*", oral presentation, 9th National Conference on Nuclear Reaction, Shenzhen University, Shenzhen, China, May 2013.
27. "*Barrier Distributions for  $^{32}\text{S}+^{90,96}\text{Zr}$ : Investigation of the Role of Neutron Transfer in Sub-barrier Fusion Reactions*", oral presentation, 11th CNS International Summer School, University of Tokyo, Wako, Japan, Aug-Sep 2012.

## Experiments

1. Participated in the experiment of " *$\beta$ -decays of  $^{22}\text{Al}$  and  $^{26}\text{P}$* " at the Facility for Rare Isotope Beams in collaboration with Aarhus University in Jun 2023.
2. Participated in the experiment of "*Lifetime of the key  $^{22}\text{Na}(p,\gamma)^{23}\text{Mg}$  resonance in novae*" at TRIUMF in Dec 2022.
3. Participated in the experiment of "*Measurement of the  $^{20}\text{Mg}(\beta p \alpha)^{15}\text{O}$  decay sequence using an upgraded Gaseous Detector with Germanium Tagging system*" at the Facility for Rare Isotope Beams in Nov 2022.

4. Participated in the experiment of "*Measurement of  $\beta^+$  Gamow-Teller strength via the  $^{14}\text{O}(d,^2\text{He})^{14}\text{N}$  reaction in inverse kinematics*" at the National Superconducting Cyclotron Laboratory in Oct 2020.
5. Participated in the experiment of "*Mass measurement of  $^{36}\text{Ca}$* " at the National Superconducting Cyclotron Laboratory in Oct 2019.
6. Participated in the experiment of "*Exotic Decay of  $^{11}\text{Be}$* " at the National Superconducting Cyclotron Laboratory in Jul 2019.
7. Participated in the experiment of "*Transfer Reactions of  $^{39}\text{K}(^3\text{He},t)^{39}\text{Ca}$  and  $^{32}\text{S}(^3\text{He},\alpha)^{31}\text{S}$* " at the Maier-Leibnitz-Laboratory of Ludwig Maximilian University of Munich and Technical University of Munich in collaboration with McMaster University in Jun 2019.
8. Participated in the experiment of " *$\beta$  decays of proton-rich nuclei  $^{31}\text{Cl}$  and  $^{32}\text{Ar}$* " at the National Superconducting Cyclotron Laboratory in collaboration with McMaster University and Oak Ridge National Laboratory in Nov 2018.
9. Participated in the experiment of " *$\beta$  decays of proton-rich nuclei around  $^{27}\text{S}$  and  $^{23}\text{Si}$* " at the Lanzhou Heavy Ion Accelerator National Laboratory in collaboration with Peking University and the University of Hong Kong in Nov 2017.
10. Participated in the experiment of " *$^9\text{Be}(^9\text{Be},^{14}\text{C}^*\rightarrow\alpha+^{10}\text{Be})^4\text{He}$  transfer reaction*" at the Beijing Tandem Accelerator Nuclear Physics National Laboratory in collaboration with Peking University in Dec 2016.
11. Participated in the experiment of "*Fusion of  $^{32}\text{S}+^{144,154}\text{Sm}$  systems*" at the Beijing Tandem Accelerator Nuclear Physics National Laboratory from Oct to Nov 2016.
12. Participated in the experiment of " *$\beta$ -decay of  $^{47}\text{Mn}$* " at the Lanzhou Heavy Ion Accelerator National Laboratory in collaboration with Nuclear Astrophysics Group, CIAE in Jun 2016.
13. Participated in the experiment of " *$^9\text{Be}(^{13}\text{C},^{18}\text{O}^*\rightarrow^{14}\text{C}+\alpha)\alpha$  transfer reaction*" at the Beijing Tandem Accelerator Nuclear Physics National Laboratory in collaboration with Peking University in May 2016.
14. Participated in the experiment of "*Breakup and transfer reactions of  $^{208}\text{Pb}(^7\text{Li},^6\text{He})^{209}\text{Bi}$ ,  $^{63}\text{Cu}(^7\text{Li},^6\text{He})^{64}\text{Zn}$* " at the Beijing Tandem Accelerator Nuclear Physics National Laboratory in Apr 2016.
15. Participated in the experiment of "*Breakup of  $^{17}\text{F}+^{58}\text{Ni}$* " at RIKEN Nishina Center for Accelerator-Based Science and Center for Nuclear Study, the University of Tokyo in collaboration with the University of Padova and University of Naples Federico II from Nov to Dec 2015.

16. Participated in the experiment of "*Breakup of  $^{17}\text{F}+^{208}\text{Pb}$* " at the Lanzhou Heavy Ion Accelerator National Laboratory from Sept to Oct 2015.
17. Participated in the experiment of "*Elastic scattering of  $^{17}\text{F}+^{89}\text{Y}$* " at the Lanzhou Heavy Ion Accelerator National Laboratory in Feb 2015.
18. Participated in the experiment of " *$^9\text{Be}(^9\text{Be},^{10}\text{Be}^*\rightarrow\alpha+^6\text{He})^8\text{Be}$  transfer reaction*" at the Beijing Tandem Accelerator Nuclear Physics National Laboratory in collaboration with Peking University from Jan to Feb 2015.
19. Participated in the experiment of "*Fusion of  $^{16,18}\text{O}+^{50,52}\text{Cr}$ ,  $^{54}\text{Fe}$ ,  $^{58}\text{Ni}$  systems*" at the Beijing Tandem Accelerator Nuclear Physics National Laboratory in Dec 2014.
20. Participated in the experiment of " *$\beta$ -delayed two-proton emission of  $^{23,22}\text{Si}$* " at the Lanzhou Heavy Ion Accelerator National Laboratory in collaboration with the Shanghai Institute of Applied Physics, Chinese Academy of Sciences from Nov 2014 to Jan 2015.
21. Participated in the experiment of "*Breakup of  $^6,7\text{Li}+^{208}\text{Pb}$* " at the Beijing Tandem Accelerator Nuclear Physics National Laboratory from Aug to Sept 2014.
22. Participated in the experiment of "*Resonant elastic scattering of  $^{17}\text{F}$ ,  $^{22}\text{Na}+p$  with a thick-target method*" at the Lanzhou Heavy Ion Accelerator National Laboratory in collaboration with the Institute of Modern Physics, Chinese Academy of Sciences in Jun 2014.
23. Participated in the experiment of "*Fusion of  $^{3,4}\text{He}+^{206,208,\text{nat}}\text{Pb}$  systems*" at the Beijing Tandem Accelerator Nuclear Physics National Laboratory in collaboration with Prof. Roman Wolskiin from Dubna and Prof. E. Piasecki from the University of Warsaw in Mar 2014.
24. Participated in the experiment of " *$\beta$ -delayed two-proton emission of  $^{26}\text{P}$  and  $^{22}\text{Al}$* " at the Lanzhou Heavy Ion Accelerator National Laboratory in collaboration with the Shanghai Institute of Applied Physics, Chinese Academy of Sciences from May to Aug 2013.
25. Participated in the experiment of "*Fusion of  $^{32,34}\text{S}+^{112,116,120,124}\text{Sn}$  systems*" at the Beijing Tandem Accelerator Nuclear Physics National Laboratory in Apr and Sept 2013.
26. Participated in the experiment of " *$^{208}\text{Pb}(^7\text{Li},^6\text{He})^{209}\text{Bi}$ ,  $^{63}\text{Cu}(^7\text{Li},^6\text{He})^{64}\text{Zn}$ ,  $^{11}\text{B}(^7\text{Li},^6\text{He})^{12}\text{C}$  transfer reactions*" at the Beijing Tandem Accelerator Nuclear Physics National Laboratory from May to Jun 2012.
27. Participated in the experiment of "*Exotic decay of proton-rich nuclei  $^{36,37}\text{Ca}$* " at the Lanzhou Heavy Ion Accelerator National Laboratory from Mar to Apr 2012.
28. Participated in the experiment of "*Fusion of  $^{16}\text{O}+^{76,74}\text{Ge}$  systems*" at the Beijing Tandem Accelerator Nuclear Physics National Laboratory from Nov 2011 to Feb 2012.

## Services

Member of the Epool and Data Room Committee, Facility for Rare Isotope Beams, (2023- ).

Member of the American Physical Society, (2020- ).

Member of the Joint Institute for Nuclear Astrophysics - Center for the Evolution of the Elements, (2019- ).

Teaching Assistant of Nuclear Data Hands-on Session, 20th Exotic Beam Summer School, Michigan State University, East Lansing, MI, USA, Jul 2023.

Session Manager, Fall Meeting of the Division of Nuclear Physics of the American Physical Society, Virtually, New Orleans, LA, USA, Oct 2020.

Co-organizer, 8th HIRFL-RIBLL Collaboration Workshop, China Institute of Atomic Energy, Beijing, China, Jan 2016.

## News and Media

1. Scientists discover strongest-ever isospin mixing in  $\beta$  decay  
[[Phys.org](#)] [[Chinese Academy of Sciences](#)] [[Science and Technology Daily](#)]  
[[China Science Daily](#)] [[Institute of Modern Physics](#)] [[Shanghai Jiao Tong University](#)]
2. Scientists discover the largest isospin asymmetry in low-lying nuclear states  
[[Institute of Modern Physics](#)] [[Institute of Modern Physics](#)]
3. Scientists make progress in two-proton emission studies  
[[Chinese Physical Society](#)] [[Institute of Modern Physics](#)]
4. Scientists reveal the impact of new mass measurements of  $^{27}\text{P}$  on X-ray bursts  
[[Chinese Academy of Sciences](#)] [[Tencent News](#)]
5. New achievements in the  $\beta$  decay spectroscopy of drip-line nucleus  $^{27}\text{S}$   
[[Institute of Modern Physics](#)] [[China Institute of Atomic Energy](#)]
6. New achievements in the  $\beta$  decay spectroscopy of drip-line nuclei  $^{20}\text{Mg}$  and  $^{22}\text{Si}$   
[[Chinese Academy of Sciences](#)] [[Sina News](#)]



## List of Publications

### Peer-reviewed journals

- [1] **L. J. Sun**<sup>†,\*</sup>, C. Fry<sup>†,\*</sup>, B. Davids<sup>\*</sup>, N. Esker, C. Wrede<sup>\*</sup>, M. Alcorta, S. Bhattacharjee, M. Bowry, B. A. Brown, T. Budner, R. Caballero-Folch, L. Evitts, M. Friedman, A. B. Garnsworthy, B. E. Glassman, G. Hackman, J. Henderson, O. S. Kirsebom, J. Lighthall, P. Machule, J. Measures, M. Moukaddam, J. Park, C. Pearson, D. Pérez-Loureiro, C. Ruiz, P. Ruotsalainen, J. Smallcombe, J. K. Smith, D. Southall, J. Surbrook, L. E. Weghorn, and M. Williams,  
"First application of Markov Chain Monte Carlo-based Bayesian data analysis to the Doppler-Shift Attenuation Method"  
[Phys. Lett. B 839, 137801 \(2023\).](#)
- [2] **L. J. Sun**<sup>†,\*</sup>, M. Friedman<sup>†,\*</sup>, T. Budner, D. Pérez-Loureiro, E. Pollacco, C. Wrede<sup>\*</sup>, B. A. Brown, M. Cortesi, C. Fry, B. E. Glassman, J. Heideman, M. Janasik, A. Kruskie, A. Magilligan, M. Roosa, J. Stomps, J. Surbrook, and P. Tiwari,  
"<sup>25</sup>Si  $\beta^+$ -decay spectroscopy"  
[Phys. Rev. C 103, 014322 \(2021\).](#)
- [3] **L.J. Sun**<sup>†</sup>, X.X. Xu<sup>†,\*</sup>, S.Q. Hou<sup>†</sup>, C.J. Lin<sup>\*</sup>, J. José<sup>\*</sup>, J. Lee<sup>\*</sup>, J.J. He, Z.H. Li, J.S. Wang, C.X. Yuan, F. Herwig, J. Keegans, T. Budner, D.X. Wang, H.Y. Wu, P.F. Liang, Y.Y. Yang, Y.H. Lam, P. Ma, F.F. Duan, Z.H. Gao, Q. Hu, Z. Bai, J.B. Ma, J.G. Wang, F.P. Zhong, C.G. Wu, D.W. Luo, Y. Jiang, Y. Liu, D.S. Hou, R. Li, N.R. Ma, W.H. Ma, G.Z. Shi, G.M. Yu, D. Patel, S.Y. Jin, Y.F. Wang, Y.C. Yu, Q.W. Zhou, P. Wang, L.Y. Hu, X. Wang, H.L. Zang, P.J. Li, Q.Q. Zhao, H.M. Jia, L. Yang, P.W. Wen, F. Yang, M. Pan, X.Y. Wang, Z.G. Hu, R.F. Chen, M.L. Liu, W.Q. Yang, and Y.M. Zhao,  
"Experimentally well-constrained masses of <sup>27</sup>P and <sup>27</sup>S: Implications for studies of explosive binary systems"  
[Phys. Lett. B 802, 135213 \(2020\).](#)
- [4] **L. J. Sun**, X. X. Xu<sup>\*</sup>, C. J. Lin<sup>\*</sup>, J. Lee<sup>\*</sup>, S. Q. Hou, C. X. Yuan, Z. H. Li, J. José<sup>\*</sup>, J. J. He, J. S. Wang, D. X. Wang, H. Y. Wu, P. F. Liang, Y. Y. Yang, Y. H. Lam, P. Ma, F. F. Duan, Z. H. Gao, Q. Hu, Z. Bai, J. B. Ma, J. G. Wang, F. P. Zhong, C. G. Wu, D. W. Luo, Y. Jiang, Y. Liu, D. S. Hou, R. Li, N. R. Ma, W. H. Ma, G. Z. Shi, G. M. Yu, D. Patel, S. Y. Jin, Y. F. Wang, Y. C. Yu, Q. W. Zhou, P. Wang, L. Y. Hu, X. Wang, H. L. Zang, P. J. Li, Q. Q. Zhao, L. Yang, P. W. Wen, F. Yang, H. M. Jia, G. L. Zhang, M. Pan, X. Y. Wang, H. H. Sun, Z. G. Hu, R. F. Chen, M. L. Liu, W. Q. Yang, Y. M. Zhao, and H. Q. Zhang,  
" $\beta$ -decay spectroscopy of <sup>27</sup>S"  
[Phys. Rev. C 99, 064312 \(2019\).](#)
- [5] **L. J. Sun**, X. X. Xu<sup>\*</sup>, D. Q. Fang<sup>\*</sup>, C. J. Lin<sup>\*</sup>, J. S. Wang, Z. H. Li, Y. T. Wang, J. Li, L. Yang, N. R. Ma, K. Wang, H. L. Zang, H. W. Wang, C. Li, C. Z. Shi, M. W. Nie, X. F. Li, H. Li, J. B. Ma, P. Ma, S. L. Jin, M. R. Huang, Z. Bai, J. G. Wang, F. Yang, H. M. Jia, H. Q. Zhang, Z. H. Liu, P. F. Bao, D. X. Wang, Y. Y. Yang, Y. J. Zhou, W. H. Ma, J. Chen, Y. G. Ma, Y. H. Zhang, X. H. Zhou, H. S. Xu, G. Q. Xiao, and W. L. Zhan,  
" $\beta$ -decay study of the  $T_z = -2$  proton-rich nucleus <sup>20</sup>Mg"  
[Phys. Rev. C 95, 014314 \(2017\).](#)
- [6] **L.J. Sun**, X.X. Xu<sup>\*</sup>, C.J. Lin<sup>\*</sup>, J.S. Wang, D.Q. Fang, Z.H. Li, Y.T. Wang, J. Li, L. Yang, N.R. Ma, K. Wang, H.L. Zang, H.W. Wang, C. Li, C.Z. Shi, M.W. Nie, X.F. Li, H. Li, J.B. Ma, P. Ma, S.L. Jin, M.R. Huang, Z. Bai, J.G. Wang, F. Yang, H.M. Jia, H.Q. Zhang, Z.H. Liu, P.F. Bao, D.X. Wang, Y.Y. Yang, Y.J. Zhou, W.H. Ma, and J. Chen,  
"A detection system for charged-particle decay studies with a continuous-implantation method"  
[Nucl. Instrum. Methods Phys. Res. A 804, 1 \(2015\).](#)
- [7] **SUN Li-jie**, Lin Cheng-Jian<sup>\*</sup>, Xu Xin-Xing, Wang Jian-Song, Jia Hui-Ming, Yang Feng, Yang Yan-Yun, Yang Lei, Bao Peng-Fei, Zhang Huan-Qiao, Jin Shi-Lun, Wu Zhen-Dong, Zhang Ning-Tao, Chen Si-Ze, Ma Jun-Bing, Ma Peng, Ma Nan-Ru, and Liu Zu-Hua,  
"Experimental study of beta-delayed proton emission of <sup>36,37</sup>Ca"  
[Chin. Phys. Lett. 32, 012301 \(2015\).](#)

- [8] **L. J. Sun**, C. J. Lin\*, F. Yang\*, Z. Q. Guo, T. S. Guo, X. X. Xu, P. F. Bao, L. Yang, H. M. Jia, H. Q. Zhang, Z. H. Liu, and Q. L. Xia,  
"Development and test of double-sided silicon strip detector"  
[Atomic Energy Science and Technology 49, 336 \(2015\)](#). (in Chinese)
- [9] **L. J. Sun**, C. J. Lin\*, X. X. Xu, J. S. Wang, H. M. Jia, F. Yang, Y. Y. Yang, L. Yang, P. F. Bao, H. Q. Zhang, S. L. Jin, J. L. Han, Z. D. Wu, N. T. Zhang, S. Z. Chen, J. B. Ma, P. Ma, N. R. Ma, Z. H. Liu, and L. Zheng,  
"Experimental study of beta-delayed proton emission of  $^{37}\text{Ca}$ "  
[Nuclear Techniques 37, 100509 \(2014\)](#). (in Chinese)
- [10] **Sun Lijie**, Xu Jing, Meng Xiangpeng, Liu Chaozhuo\*,  
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