

Alexander P. Ji

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RESEARCH INTERESTS: NEAR-FIELD COSMOLOGY

The first stars and galaxies: metal-free stars, first galaxy relics, reionization
The origin of the elements, especially the rapid neutron-capture process
Milky Way halo substructure and the nature of dark matter
Stellar spectroscopy and physics of stellar atmospheres

EDUCATION AND APPOINTMENTS

Assistant Professor, University of Chicago, Astronomy & Astrophysics Jul 2021 – now
Senior Member, University of Chicago, Kavli Institute for Cosmological Physics Jul 2021 – now
Carnegie Fellow, Observatories of the Carnegie Institution for Science Aug 2020 – Jun 2021
Hubble Fellow, Observatories of the Carnegie Institution for Science Aug 2017 – Jul 2020
Ph. D. Physics, Massachusetts Institute of Technology Jun 2017
Advised by Anna Frebel, Astrophysics division
M.S. Statistics, Stanford University Jun 2012
Focus on Applied Statistics and Machine Learning
B. S. Physics, Stanford University Jun 2011
Minor in Computer Science

HONORS, AWARDS, AND GRANTS

Metallicity Distributions of the Faintest Dwarf Galaxies, NSF AAG 2023-2026
Galactic Archaeology from Careful Modeling of Old Stars, NSF Collaborative AAG 2022-2025
Carnegie Fellowship 2020-2021
Hubble Fellowship 2017-2020
Thacher Research Award in Astronomy Jun 2020
Carnegie Institution P^2 Grant Apr 2019
APS DAP Cecilia Payne-Gaposchkin Thesis Award Finalist Apr 2019
Martin Deutsch Award for Excellence in Experimental Physics, MIT Sep 2016
Young Scientist at 66th Lindau Nobel Laureate Meeting, Germany Jun 2016
Best Poster Prize, Nuclei in the Cosmos XIV, Japan Jun 2016
Henry Kendall Teaching Award, MIT Sep 2014
Whiteman Fellow, MIT Sep 2012 - Aug 2013
Outstanding Learning Assistant, American Association of Physics Teachers Jun 2012

INVITED TALKS

Colloquium Massachusetts Institute of Technology Sep 2023
Colloquium Texas A&M University Sep 2023
Colloquium Princeton University/Institute of Advanced Study Apr 2023
Talk MANIFEST Science Workshop Apr 2023
Colloquium Johns Hopkins University/Space Telescope Science Institute Mar 2023
Colloquium Columbia University Feb 2023

Colloquium UC Berkeley	Jan 2023
Colloquium University of Minnesota	Dec 2022
Colloquium University of Illinois Urbana-Champaign	Sep 2022
Talk JINA Frontiers Meeting	May 2022
Colloquium Durham University	May 2022
Colloquium Center for Computational Astrophysics	Apr 2022
Seminar American Museum of Natural History	Apr 2022
Colloquium The Ohio State University	Apr 2022
Seminar Notre Dame	Feb 2022
Colloquium Illinois State University	Oct 2021
Review Talk European Astronomical Society Symposium	Jun 2021
Colloquium Carnegie Observatories	Jun 2021
Seminar Northwestern/CIERA	Apr 2021
Colloquium University of Indiana, Bloomington	Jan 2021
Seminar Minnesota Institute for Astrophysics Cosmology Seminar	Jan 2021
Seminar Rutgers	Dec 2020
Colloquium Australian National University	Sep 2020
Colloquium Max Planck Institute for Astrophysics	Aug 2020
Colloquium UC Berkeley	Jun 2020
Talk First Stars VI, Concepcion, Chile	Mar 2020
Colloquium University of Texas Austin	Feb 2020
Colloquium Stanford	Feb 2020
Colloquium University of Chicago	Jan 2020
Talk Chemical Evolution of Galaxies: the Next 25 Years, Sesto, Italy	Jan 2020
Seminar JINA Online Seminar	Nov 2019
Colloquium Caltech	Oct 2019
Talk Hubble Symposium	Oct 2019
Talk Dwarf Galaxy Cosmology, Durham	Jul 2019
Talk APS Cecilia Payne-Gaposchkin Doctoral Dissertation Award in Astrophysics Finalist	Apr 2019
Talk Hubble Symposium	Mar 2019
Talk Stellar Archaeology, Tokyo	Dec 2018
Talk The Metal-Poor Galaxy, Ringberg	Jul 2018
Talk American Astronomical Society Denver	Jun 2018
Talk Hubble Symposium	Mar 2018
Colloquium University of Virginia (Joint Physics/Astronomy)	Feb 2018
Seminar CCAPP/Ohio State University	Oct 2016
Highlight Talk First Stars V, Heidelberg	Aug 2016
Talk American Physical Society Hot Topics Session, April Meeting	Apr 2016
Colloquium University of Toledo	Jan 2016

CONTRIBUTED TALKS AND POSTERS

Talk SDSS-V Collaboration Conference, CCA New York	Aug 2023
Talk Dwarf Galaxies, CCA New York	Jul 2023
Talk Dynamical Masses of Local Dwarf Galaxies, Potsdam	Mar 2023
Talk Ancient Globular Clusters, Aspen	Mar 2022

Talk YITP Nuclear Burning Online Workshop	Jul 2021
Talk Streams 21 Online Workshop	Feb 2021
Talk Local Group Online Symposium, StSci	Sep 2020
Session Lead Near/Far Age Workshop, Napa, CA	Dec 2019
Talk GalFRESCA, UC Irvine	Aug 2019
Talk ASU <i>r</i> -process workshop	Mar 2019
Talk UC Irvine	May 2018
Talk JINA Frontiers	May 2018
Talk JINA Forging Connections	Jun 2017
Talk The Galactic Renaissance	Feb 2017
Seminars At Caltech, CfA, UCSC, Yale, Carnegie, KIPAC, Tufts	Apr-Nov 2016
Poster SDSS Collaboration Meeting	Jun 2020
Poster GMT Science Meeting	Sep 2017
Poster Nuclei in the Cosmos XIV	Jun 2016
Poster Local Group Astrostatistics, University of Michigan	Jun 2015
Poster Near-Field Far-Field Conference, UC Irvine	Feb 2014

TEACHING

Instructor ASTR 30100: Stars	2021-2023
Professional Development Program* ISEE (as team leader, with A. Lanz, S. Uddin)	2019
Lecturer “Cosmology and First Stars”, JINA Frontiers Summer School, MSU	2019
Professional Development Program* ISEE (with R. McGurk, D. French)	2018
Workshop Carnegie, Scientific Writing Workshop for Undergraduates (with J. Teske)	2017
Teaching Assistant MIT, 8.282/8.284: Intro to Astronomy/Modern Astrophysics	2014/2016/2017
Head Teaching Assistant Stanford, Physics 25/26: Modern Physics	2012
Teaching Assistant Stanford, Physics 63: Electricity, Magnetism, and Waves	2012
Teaching Assistant* Stanford, Physics 62: Classical Mechanics Laboratory	2010/2011
Instructor* Stanford, Physics 91SI: Practical Computing for Scientists	2011
Teaching Assistant Stanford, Physics 24: Electricity and Optics Laboratory	2011
Resident Tutor Stanford CTL, Math, science, and engineering tutoring	2009 - 2010
Section Leader Stanford, CS 106A/B: Programming Methods/Abstractions	2008 - 2009

* Led or assisted in curriculum development

SELECTED OUTREACH AND SERVICE

Referee for Nature, Nature Astronomy, ApJ, ApJL, MNRAS, A&A	
Panelist/Reviewer for NSF and NASA funding proposals	
Panelist/Reviewer for NASA, Canada TAC, China TAP telescope proposals	
Co-Chair SDSS-V Milky Way Halo Working Group	2020-present
Co-organizer Nuclear Astrophysics with Non-LTE Radiative Transfer	May 2023
Committee Multi-messenger observations for nuclear astrophysics, CeNAM Frontiers	May 2023
Co-organizer Gaia DR3 Chicago Sprint	Jun 2022
Co-organizer IReNA Origin of the Isotopes Online Workshop	Sep 2021-2022
Working Group Co-Organizer JINA Horizons, Explosive nucleosynthesis	Dec 2020
Co-Organizer JINA-CEE Chemical Evolution Workshop	Mar 2020

Program Committee for JINA First Frontiers Summer School	May 2019
Climate Survey Working Group Carnegie Institution for Science	2019–2021
Speaker Aspen Physics Cafe	Mar 2022
Public Talk The Messy Milky Way, Carnegie Lunch with an Astronomer	Feb 2021
Public Talk “The First Stars”, San Diego Astronomy Association	Dec 2020
Public Talk “The First Stars, Like, Ever”, Caltech Astronomy on Tap	Aug 2020
Public Talk “Glimpses of the Cosmic Dawn”, Pasadena City College Lectures	Sep 2019
Public Talk “Glimpses of the Cosmic Dawn”, Huntington Library Astronomy Lectures	Mar 2019
Public Talk “Searching for the First Stars”, Carnegie Open House	Oct 2017
Public Talk “Glimpses of the Cosmic Dawn”, Whittin Observatory at Wellesley	Apr 2017
Einstein in the Classroom Instructor Cambridge Science Festival	Apr 2015
Public Talks “The Universe in a Box” and “The First Stars”, MIT IAP	2014/2015/2017
Admissions Committee UChicago Astronomy & Astrophysics Graduate Program	2020-2023
Fellowship Committee Kavli Institute for Cosmological Physics Fellowship	2022-2023
Fellowship Committee Margaret Burbidge Prize Fellowship in Astrophysics	2021-2022
Fellowship Committee Brinson Prize Fellowship in Observational Astrophysics	2020-2021

TELESCOPE AND COMPUTING ALLOCATIONS

As PI (over 50 nights on large ground-based telescopes):

Magellan/MIKE High-resolution spectroscopy

Magellan/M2FS Multi-object spectroscopy

Magellan/IMACS Multi-object spectroscopy

Magellan/MegaCam Imaging

Keck/LRIS Multi-object spectroscopy

VLT/FLAMES Multi-object spectroscopy

Gemini/GRACES High-resolution spectroscopy

Du Pont/Echelle High-resolution spectroscopy

CTIO/DECam Wide-field imaging

As Co-I:

Keck/HIRES High-resolution spectroscopy

DCT/EXPRES High-resolution spectroscopy

VLT/UVES High-resolution spectroscopy

Hubble/ACS Optical imaging

Hubble/COS UV spectroscopy

JWST/NIRCam IR imaging

XSEDE/Stampede, Stampede2, Comet High Performance Computing

STUDENT AND POSTDOCTORAL COLLABORATORS

Postdoctoral Researchers Anirudh Chiti (Brinson Fellow UChicago, 2022-present); Sanjana Curtis (UChicago → NSF AAPF UC Berkeley, 2022-2023); Katy Rodriguez-Wimberly (NSF Ascend Fellow UC Riverside → Faculty at CSUSB, 2020-2023) :Q

Graduate Students Guilherme Limberg (USP PhD, visiting student 2022-2023) Pierre Thibodeaux (UChicago PhD, 2022-present), Yupeng Yao (UChicago MS, 2022-2023), Samantha Usman (UChicago PhD, 2021-present), Alice Luna (UChicago PhD, 2021-present), Shuyu Wang (UChicago MS → PhD Student Leiden, 2021), Kaley Brauer (MIT PhD → NSF AAPF Harvard, 2017-2023),

Undergraduate Students Kaia Atzberger (OSU, 2023); Benjamin Cohen (UChicago, 2023); Jarvis Zhang (UChicago, 2023); Charlie Walsh (UChicago, 2023); Noah Geller (UChicago, 2022); Morgan Lee (UWisconsin → NSF GRFP Brown, 2022); Hillary Andales (MIT → PhD Student UChicago, 2022); Jandrie Rodriguez (ELAC/CSU Long Beach, 2020-2021); Allen Marquez (ELAC/CSU LA, 2019-2020); Mimi Truong (ELAC/CSU Northridge, 2020); Fernando Barceló (Pomona, 2019); Jose Arizmendi (ELAC, 2019); Sergio Escobar (Caltech, 2018); Maude Gull (MIT, 2016-2018); Madelyn Cain (MIT, 2016-2018); Lizhou Sha (MIT, 2016-2017)

COLLABORATION MEMBERSHIP

The Southern Stellar Stream Spectroscopic Survey (S^5 , <https://s5collab.github.io/>, Project Builder)
SDSS-V, <https://www.sdss.org/future/>, Milky Way Halo Working Group co-chair
The *Caterpillar* Project (<https://www.caterpillarproject.org/>, Project Builder)
DECam Local Volume Exploration Survey (DELVE, <https://delve-survey.github.io/>)
The Magellanic Satellites Survey (MagLiteS)
Joint Institute for Nuclear Astrophysics (JINA-CEE)
International Research Network for Nuclear Astrophysics (IReNA)

PUBLICATIONS

28 refereed or submitted first and second author papers, >1100 total citations, h -index = 17.

83 total refereed or submitted papers, >3100 total citations, h -index = 31.

As of Aug 2023 (via NASA ADS). * indicates papers written with students I supervised or co-supervised.

FIRST AND SECOND AUTHOR PUBLICATIONS

28. Limberg, G.*, **Ji, A. P.**, Naidu, R. P., Chiti, A., Rossi, S., Usman, S. A., . . . , *Extending the Chemical Reach of the H3 Survey: Detailed Abundances of the Dwarf-galaxy Stellar Stream Wukong/LMS-1*, submitted to MNRAS, arXiv: 2308.13702
27. Kirby, E. N., **Ji, A. P.**, Kovalev, M., *r-process Abundance Patterns in the Globular Cluster M92*, accepted to AAS, arXiv:2308.10980
26. Yao, Y.*, **Ji, A. P.**, Koposov, S. E., Limberg, G., *188,000 Candidate Very Metal-poor Stars in Gaia DR3 XP Spectra*, submitted to MNRAS, arXiv:2303.17676
25. Frebel, A. & **Ji, A. P.**, 2022, *Observations of R-Process Stars in the Milky Way and Dwarf Galaxies*, in Handbook of Nuclear Physics, Springer, arXiv:2302.09188
24. **Ji, A. P.**, Naidu, R. P., Brauer, K., Ting, Y.-S., Simon, J. D., *Chemical Abundances of the Typhon Stellar Stream*, 2023, MNRAS, 519, 4467
23. **Ji, A. P.**, Simon, J. D., Roederer, I. U., Magg, E., . . . , *Metal Mixing in the R-Process Enhanced Ultra-Faint Dwarf Galaxy Reticulum II*, 2023, AJ, 165, 100
22. Reggiani, H., **Ji, A. P.**, Schlaufman, K. C., Frebel, A., . . . , *The Chemical Composition of Extreme-Velocity Stars*, 2022, AJ, 163, 252
21. Naidu, R. P., **Ji, A. P.**, Conroy, C., Bonaca, A., Ting, Y.-S., et al., *Evidence from Disrupted Halo Dwarfs that r-process Enrichment via Neutron Star Mergers is Delayed by $\gtrsim 500$ Myrs*, 2022, ApJL, 926, 36
20. Li, T. S., **Ji, A. P.**, Pace, A. B., Erkal, D., Koposov, S. E., Shipp, N., et al., *S^5 : The Orbital and Chemical Properties of One Dozen Stellar Streams*, 2022, ApJ, 928, 30
19. **Ji, A. P.**, Koposov, S. E., Li, T., S., Erkal, D., Pace, A. B., et al., *Kinematics of Antlia 2 and Crater 2 from The Southern Stellar Stream Spectroscopic Survey*, 2021, ApJ, 921, 32
18. Casey, A. R., **Ji, A. P.**, Hansen, T. T., Li, T. S., et al., *Signature of a massive rotating metal-poor star imprinted in the Phoenix stellar stream*, 2021, ApJ, 921, 67
17. Hansen, T. T., **Ji, A. P.**, Da Costa, G. S., Li, T. S., et al., *S^5 : The destruction of a bright dwarf galaxy as revealed by the chemistry of the Indus stellar stream*, 2021, ApJ, 915, 103
16. Brauer, K.*, **Ji, A. P.**, Drout, M. R., Frebel, A., *Collapsar R-Process Yields Can Reproduce [Eu/Fe] Abundance Scatter in Metal-Poor Stars*, 2021, ApJ, 915, 81
15. **Ji, A. P.**, Li, T. S., Hansen, T. T., Casey, A. R., et al., *The Southern Stellar Stream Spectroscopic Survey (S^5): Chemical Abundances of Seven Stellar Streams*, 2020, AJ, 160, 181
14. **Ji, A. P.**, Li, T. S., Simon, J. D., et al., *Detailed Abundances in the Ultra-Faint Magellanic Satellites Carina II and III*, 2020, ApJ, 889, 27
13. **Ji, A. P.**, Drout, M. R., & Hansen, T. T., *The Lanthanide Fraction Distribution in Metal-poor Stars: a Test of Neutron Star Mergers as the Dominant r-process Site*, 2019, ApJ, 882, 1

12. Frebel, A., **Ji, A. P.**, Ezzeddine, R., Hansen, T. T., Chiti, A., Thompson, I. B., Merle, T. *Chemical abundance Signature of J0023+0307 – A Second-Generation Main-Sequence Star with $[Fe/H] < -6$* , 2019, ApJ, 871, 146
11. Brauer, K.*, **Ji, A. P.**, Frebel, A., Dooley, G. A., Gomez, F. A., O’Shea, B. W. *The Origin of r -process Enhanced Metal-Poor Halo Stars In Now-Destroyed Ultra-Faint Dwarf Galaxies*, 2019, ApJ, 871, 2
10. **Ji, A. P.**, Simon, J. D., Frebel, A., Venn, K. A., Hansen, T. T. *Chemical Abundances in the Ultra-Faint Dwarf Galaxies Grus I and Triangulum II: Neutron-Capture Elements as a Defining Feature of the Faintest Dwarfs*, 2019, ApJ, 870, 83
9. **Ji, A. P.** & Frebel, A. *From Actinides to Zinc: Using the full abundance pattern of the brightest star in Reticulum II to distinguish between different r -process sites*, 2018, ApJ, 856, 138
8. Safarzadeh, M., **Ji, A. P.**, Dooley, G., Frebel, A., Scannapieco, E., Gomez, F., O’Shea, B. W. *Selecting ultra-faint dwarf candidate progenitors in cosmological N -body simulations at high redshifts*, 2018, MNRAS, 476, 5006
7. **Ji, A. P.**, Frebel, A., Ezzeddine, R., Casey, A. R. *Chemical Diversity in the Ultra-faint Dwarf Galaxy Tucana II*, 2016, ApJL, 832, 1
6. **Ji, A. P.**, Frebel, A., Simon, J. D., Chiti, A. *Complete element abundances of nine stars in the r -process galaxy Reticulum II*, 2016, ApJ, 830, 93
5. **Ji, A. P.**, Frebel, A., Chiti, A., Simon, J. D. *R -process enrichment from a single event in an ancient dwarf galaxy*, 2016, Nature, 531, 610
4. Griffen, B. F., **Ji, A. P.**, Dooley, G. A., Gomez, F. A., Vogelsberger, M., O’Shea, B. W., Frebel, A., *The Caterpillar Project: A Large Suite of Milky Way Sized Halos*, 2016, ApJ, 818, 10
3. **Ji, A. P.**, Frebel, A., Simon, J. D., Geha, M., *High-resolution spectroscopy of extremely metal-poor stars in the least evolved galaxies: Bootes II*, 2016, ApJ, 817, 41
2. **Ji, A. P.**, Frebel, A., Bromm, V., *Preserving chemical signatures of primordial star formation in the first low-mass stars*, 2015, MNRAS, 454, 659
1. **Ji, A. P.**, Frebel, A., Bromm, V., *The chemical imprint of silicate dust on the most metal-poor stars*, 2014, ApJ, 782, 95

N-TH AUTHOR PUBLICATIONS

55. Heiger, M. E., Li, T. S., Pace, A. B., Simon, J. D., **Ji, A. P.**, . . . , *Reading Between the (Spectral) Lines: Magellan/IMACS spectroscopy of the Ultra-faint Dwarf Galaxies Eridanus IV and Centaurus I*, submitted to AAS, arXiv:2308.08602
54. Goetberg, Y., Drout, M. R., **Ji, A. P.**, Groh, J. H., . . . , *Stellar properties of observed stars stripped in binaries in the Magellanic Clouds*, accepted to ApJ, arXiv:2307.00074
53. Fu, S. W., Weisz, D. R., Starkenburg, E., . . . , **Ji, A. P.**, . . . , *Metallicity Distribution Functions of 13 Ultra-Faint Dwarf Galaxy Candidates from Hubble Space Telescope Narrowband Imaging*, submitted to AAS, arXiv:2306.06260
52. Alexander, R. K., Vincenzo, F., **Ji, A. P.**, Richstein, H., Jordan, C. J., Gibson, B. K., *Inhomogeneous Galactic Chemical Evolution: Modelling Ultra-Faint Dwarf Galaxies of the Large Magellanic Cloud*, 2023, MNRAS, 522, 5415

51. Almeida et al., *The Eighteenth Data Release of the Sloan Digital Sky Surveys: Targeting and First Spectra from SDSS-V*, 2023, ApJS, 267, 44
50. Shah, S.*, Ezzeddine, R., **Ji, A. P.**, Hansen, T. T., Catelan, M., . . . , *Uranium Abundances and Ages of R-process Enhanced Stars with Novel U II Lines*, 2023, ApJ, 948, 122
49. Chandra, V., Naidu, R. P., Conroy, C., **Ji, A. P.**, . . . , *Distant Echoes of the Milky Way's Last Major Merger*, 2023, ApJ, 951, 26
48. Simon, J. D., Brown, T. M., Mutlu-Pakdli, B., **Ji, A. P.**, . . . , *Timing the r-Process Enrichment of the Ultra-Faint Dwarf Galaxy Reticulum II*, 2023, ApJ, 944, 43
47. Wang, S.*, Necib, L., **Ji, A. P.**, Ou, X., Lisanti, M., de los Reyes, M. A. C., Strom, A. L., Truong, M., *High-Resolution Chemical Abundances of the Nyx Stream*, accepted to ApJ, arXiv:2210.15013
46. Koposov, S. E., Erkal, D., Li, T. S., . . . , **Ji, A. P.**, . . . , *S5: : Probing the Milky Way and Magellanic Clouds potentials with the 6-D map of the Orphan-Chenab stream*, 2023, MNRAS, 521, 4936
45. Mardini, M. K., Frebel, A., Ezzeddine, R., . . . , **Ji, A. P.**, . . . , *The chemical abundance pattern of the extremely metal-poor thin disk star 2MASS J1808-5104 and its origins*, 2022, MNRAS, 517, 3993
44. Shipp, N., Panithanpaisal, N., Necib, L., . . . , **Ji, A. P.**, . . . , *Streams on FIRE: Populations of Detectable Stellar Streams in the Milky Way and FIRE*, 2023, ApJ, 949, 44
43. Brauer, K.*, Andales, H. D.*, **Ji, A. P.**, Frebel, A., . . . *Possibilities and Limitations of Kinematically Identifying Stars from Accreted Ultra-Faint Dwarf Galaxies*, 2022, ApJ, 937, 14
42. Chiti, A., Simon, J. D., Frebel, A., Pace, A. B., **Ji, A. P.**, Li, T. S., *Magellan/IMACS spectroscopy of Grus I: a low metallicity ultra-faint dwarf galaxy*, 2022, ApJ, 939, 41
41. Schatz, H., Becerril Reyes, A. D., et al., including **Ji, A. P.**, *Horizons: Nuclear Astrophysics in the 2020s and Beyond*, 2022, JPhG, 49, 11, 110502
40. Chiti, A., Frebel, A., **Ji, A. P.**, Mardini, M. K., . . . , *Detailed chemical abundances of stars in the outskirts of the Tucana II ultra-faint dwarf galaxy*, 2023, AJ, 165, 55
39. Lileengen, S., Petersen, M. S., Erkal, D., . . . , **Ji, A. P.**, . . . , *The effect of the deforming dark matter haloes of the Milky Way and the Large Magellanic Cloud on the Orphan-Chenab Stream*, 2023, MNRAS, 518, 774
38. Hartwig, T., Magg, M., Chen, L.-H., Tarumi, Y., . . . , **Ji, A. P.**, . . . , *Public Release of A-SLOTH: Ancient Stars and Local Observables by Tracing Halos*, 2022, ApJ, 936, 45
37. Cerny, W., Simon, J. D., Li, T. S., Drlica-Wagner, A., . . . , **Ji, A. P.**, . . . , *Pegasus IV: Discovery and Spectroscopic Confirmation of an Ultra-Faint Dwarf Galaxy in the Constellation Pegasus*, 2023, ApJ, 942, 111
36. Chen, L.-H., Magg, M., Hartwig, T., Glover, S. C. O., **Ji, A. P.**, Klessen, R. S., *Tracing stars in Milky Way satellites with A-SLOTH*, 2022, MNRAS, 513, 934
35. Rasmussen, K. C., Brogi, M., . . . , **Ji, A. P.**, *Increasing Detection Significances from High-Resolution Exoplanet Spectroscopy with Novel Smoothing Algorithms*, 2022, AJ, 164, 35
34. Fu, S. W., Weisz, D. R., Starkeburg, E., Martin, N., **Ji, A. P.**, . . . , *Metallicity Distribution Function of the Eridanus II Ultra-Faint Dwarf Galaxy from Hubble Space Telescope Narrow-band Imaging*, 2022, ApJ, 925, 6

33. Rodriguez Wimberly, M. K., Cooper, M. C., ... **Ji, A. P.**, *Sizing from the Smallest Scales: The Mass of the Milky Way*, 2022, MNRAS 513, 4986
32. de los Reyes, M. A. C., Kirby, E. N., **Ji, A. P.**, Nuñez, E. H., *Simultaneous Constraints on the Star Formation History and Nucleosynthesis of Sculptor dSph*, 2022, ApJ, 925, 66
31. Shipp, N., Erkal, D., Drlica-Wagner, A., ..., **Ji, A. P.**, ..., *Measuring the Mass of the Large Magellanic Cloud with Stellar Streams Observed by S⁵*, 2021, ApJ, 923, 149
30. Martinez-Vazquez, C. E., Cerny, W., ..., **Ji, A. P.**, ..., *RR Lyrae stars in the newly discovered ultra-faint dwarf galaxy Centaurus I*, 2021, AJ, 162, 253
29. Reggiani, H., Schlaufman, K. C., Casey, A. R., Simon, J. D., **Ji, A. P.**, *The Most Metal-poor Stars in the Magellanic Clouds are r-process Enhanced*, 2021, ApJ, 162, 229
28. Nelson, T., Ting, Y.-S., Hawkins, K., **Ji, A. P.**, Kamdar, H., El-Badry, K., *Distant Relatives: The Chemical Homogeneity of Comoving Pairs Identified in Gaia*, 2021, ApJ, 921, 118
27. Gull, M., Frebel, A., ..., **Ji, A. P.**, Brauer, K., *R-process-rich stellar streams in the Milky Way*, 2021, ApJ, 912, 52
26. Jenkins, S., Li, T. S., Pace, A. B., **Ji, A. P.**, Koposov, S. E., Mutlu-Pakdil, B., *VLT Spectroscopy of Ultra-Faint Dwarf Galaxies. 1: Bootes I, Leo IV, Leo V*, 2021, ApJ, 920, 92
25. Chiti, A., Frebel, A., Simon, J. D., ..., **Ji, A. P.**, ..., *An extended halo around an ancient dwarf galaxy*, 2021, Nat Astron., 5, 392
24. Li, T. S., Koposov, S. E., Erkal, D., **Ji, A. P.**, ..., *Broken into Pieces: ATLAS and Aliqa Uma as One Single Stream*, 2021, ApJ, 911, 149
23. Wan, Z., Lewis, G. F., Li, T. S., ... **Ji, A. P.**, ..., *The tidal remnant of an unusually metal-poor globular cluster*, 2020, Nature, 583, 768
22. Reggiani, H., Schlaufman, K. C., Casey, A. R., **Ji, A. P.**, *The Most Metal-poor Stars in the Inner Bulge*, 2020, ApJ, 160, 173
21. Cain, M., Frebel, A., **Ji, A. P.**, Placco, V. M., ..., *The R-Process Alliance: J1521-3538, a very metal-poor, extremely r-process-enhanced star with [Eu/Fe]=+2.2, and the class of r-III stars*, 2020, ApJ, 898, 1
20. Ezzeddine, R., Rasmussen, K., Frebel, A., ... **Ji, A.P.**, ..., *The R-process Alliance : First Magellanic/MIKE Release from the Southern Search for R-Process-enhanced Stars*, 2020, ApJ, 898, 150
19. Placco, V. M., Santucci, R. M., ... **Ji, A. P.**, ..., *The R-Process Alliance: The Peculiar Chemical Abundance Pattern of RAVE J183013.5-455510*, 2020, ApJ, 897, 78
18. Hawkins, K., Lucey, M., Ting, Y.-S., **Ji, A. P.**, ..., *Identical or fraternal twins? The chemical homogeneity of wide binaries from Gaia DR2*, 2020, MNRAS, 492, 1164
17. Norfolk, B. J., Casey, A., ..., **Ji, A. P.**, *Discovery of s-process enhanced stars in the LAMOST survey*, 2019, MNRAS, 490, 2219
16. Koposov, S. E., Boubert, D., Li, T. S., ..., **Ji, A. P.** (7th/20), ..., *Discovery of a nearby 1700 km/s star ejected from the Milky Way by Sgr A**, 2020, MNRAS, 491, 2645,
15. Li, T. S., Koposov, S. E., Zucker, D. B., ..., **Ji, A. P.** (7th/32), ..., *The Southern Stellar Stream Spectroscopic Survey (S⁵): Overview, Target Selection, Data Reduction, Validation, and Early Science*, 2019, MNRAS, 490, 3508

14. Kozłowski, S., Bañados, E., . . . , **Ji, A. P.**, . . . , *Discovery of two quasars at $z = 5$ from the OGLE survey*, 2019, ApJ, 878, 115
13. Placco, V., Santucci, R. M., . . . , **Ji, A. P.**, . . . , *The R-Process Alliance: Spectroscopic Follow-up of Low-metallicity Star Candidates from the Best & Brightest Survey*, 2019, ApJ, 870, 122
12. Kemp, A., Casey, A., . . . , **Ji, A. P.**, . . . , *On the discovery of K-enhanced and possibly Mg-depleted stars throughout the Milky Way*, 2018, MNRAS, 480, 1384
11. Cain, M. G., Frebel, A., Gull, M., **Ji, A. P.**, . . . , *The R-Process Alliance: Chemical Abundances for a Trio of R-Process-Enhanced Stars*, 2018, ApJ, 864, 43
10. Gull, M., Frebel, A., Cain, M. G., Placco, V., **Ji, A. P.**, . . . , *The R-Process Alliance: discovery of the first metal-poor star with a combined r- and s-process element signature*, 2018, ApJ, 862, 174
9. Chiti, A., Frebel, A., **Ji, A. P.**, Jerjen, H., Kim, D., Norris, J. E., *Chemical Abundances of New Member Stars in the Tucana II Dwarf Galaxy*, 2018, ApJ, 857, 74
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