

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
Senior Personnel , NSF-Simons SkAI Institute	Oct 2025 – 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 Advised by Anna Frebel, Astrophysics division	Jun 2017
M.S. Statistics , Stanford University Focus on Applied Statistics and Machine Learning	Jun 2012
B. S. Physics , Stanford University Minor in Computer Science	Jun 2011

HONORS AND AWARDS

Sloan Fellowship	2025
Scialog Fellow: Early Science with the LSST	Nov 2024
Stromlo Distinguished Visitor	Apr-May 2024
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	2012–2013
Outstanding Learning Assistant, American Association of Physics Teachers	Jun 2012

GRANTS

A Global Stellar Metallicity Scale for Resolved Dwarf Galaxies, NASA ADAP (PI)	2025–2028
Metallicity Distributions of the Faintest Dwarf Galaxies, NSF AAG (PI)	2023–2026
Galactic Archaeology from Careful Modeling of Old Stars, NSF AAG (PI)	2022–2025
RCSA Scialog: A unified model of stellar systems in LSST-Y1 for dark matter inference (Co-PI)	2025
NASA/JPL Keck: Ursa Major III/UNIONS 1: the lowest mass galaxy known? (PI)	2025

NASA/JPL Keck: The Formation History of the Most Primitive Galaxy Known (PI)	2023
JWST Cycle 1: Synthesis of the Heaviest Elements with Kilonova Photometry (Co-I)	2021-2022
KICP Workshop Support	2022/2023/2024
IReNA Network Workshop Support	2021/2023
University of Chicago DSI, AI in Science, Workshop Support	2023
University of Chicago DSI, AI in Science, Visitor Support	2023

TEACHING

Instructor* ASTR 29901-29902: Field Course	2025
Instructor* ASTR 49910: Colloquium	2024
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

CONFERENCE AND WORKSHOP ORGANIZATION

Co-organizer FALCON Science Workshop, KICP	Mar 2025
Lead organizer Dwarf Galaxies, Star Clusters, and Streams in the LSST Era, KICP	Jul 2024
Lead organizer Nuclear Astrophysics with NLTE Radiative Transfer, IReNA and KICP	May 2023
Committee Multi-messenger observations for nuclear astrophysics, CeNAM Frontiers	May 2023
Lead organizer Gaia DR3 Chicago Sprint, KICP	Jun 2022
Co-organizer IReNA Origin of the Isotopes Online Workshop	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

SELECTED OUTREACH AND OTHER SERVICE

Referee for Nature, Nature Astronomy, ApJ, ApJL, MNRAS, A&A	
Panelist/Reviewer for NSF, NASA, and international funding proposals	
Panelist/Reviewer for NASA, Canada TAC, China TAP telescope proposals	
Co-Chair SDSS-V Galactic Genesis Working Group	2024-present
Co-Chair SDSS-V Milky Way Halo Working Group	2020-present
Science Advisor FALCON Instrument at Magellan	2024-present
Public Talk “The First Stars”, Ryerson Astronomical Society	Jan 2024

Public Talk “The Messy Milky Way”, Life-long Learning	Jan 2023
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”, Whitin 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

DEPARTMENT COMMITTEES AND RESPONSIBILITIES

Deputy Chair for Equity, Diversity and Inclusion	2024-present
Climate Survey and Recommendation Committee (Chair 2024-2025)	2021-present
SkAI Fellowship Committee	2024-2025
KICP Fellow Mentoring Committee (Chair)	2024-2025
Candidacy Committee	2024-2025
Magellan Time Allocation Committee	2021-2024
Graduate Admissions Committee	2020-2024
KICP Colloquium Committee (Chair)	2023-2024
Astronomy & Astrophysics Colloquium Committee	2022-2023
KICP Fellowship Committee	2022-2023
KICP Thursday Seminar Committee	2021-2022
Brinson Lecture Selection Committee	2021-2022
Margaret Burbidge Fellowship Committee	2021-2022
Faculty Mentor for 4 PhD students	2021-present

TELESCOPE AND COMPUTING ALLOCATIONS

As PI (over 60 nights on large ground-based telescopes and 4M CPU hours):

Magellan/MIKE High-resolution spectroscopy
Magellan/M2FS Multi-object spectroscopy
Magellan/IMACS Multi-object spectroscopy
Magellan/MegaCam Imaging
Keck/LRIS Multi-object spectroscopy
Keck/DEIMOS Multi-object spectroscopy
VLT/FLAMES Multi-object spectroscopy
Gemini/GRACES High-resolution spectroscopy
Du Pont/Echelle High-resolution spectroscopy
CTIO/DECam Wide-field imaging
UChicago/Midway High Performance Computing

As Co-I:

Keck/HIRES High-resolution spectroscopy
DCT/EXPRES High-resolution spectroscopy

VLT/UVES High-resolution spectroscopy
Gemini/GHOST High-resolution spectroscopy
Gemini/GMOS Low-resolution spectroscopy and imaging
Hubble/ACS Optical imaging
Hubble/COS UV spectroscopy
JWST/NIRCam IR imaging and grism spectroscopy
XSEDE/Stampede, Stampede2, Comet High Performance Computing

STUDENT AND POSTDOCTORAL COLLABORATORS/MENTEES

Postdoctoral Researchers (4) Anirudh Chiti (Brinson Fellow UChicago, 2021-present); Guilherme Limberg (KICP Fellow UChicago, 2024-present), Sanjana Curtis (UChicago, 2022-2023 → NSF AAPF UC Berkeley → Faculty at Oregon State in 2025); Katy Rodriguez-Wimberly (NSF Ascend Fellow UC Riverside, 2020-2023 → Faculty at CSU SB)

Graduate Students (9) Samantha Usman (UChicago PhD, 2021-present), Alice Luna (UChicago PhD, 2021-present), Pierre Thibodeaux (UChicago PhD, 2022-present), Daisy Bissonette (UChicago PhD, 2023-present), Hillary Andales (UChicago PhD, 2024-present), Yupeng Yao (UChicago MS, 2022-2023 → CS PhD Student North Texas), Shuyu Wang (UChicago MS, 2021 → PhD Student Leiden), Guilherme Limberg (USP PhD, visiting student 2022-2023 → UChicago), Kaley Brauer (MIT PhD, 2017-2023 → NSF AAPF Harvard)

Undergraduate Students (20) Ha Do (UChicago, 2024-present); Selenna Meijas-Torres (UChicago, 2024-present); Naomi Carl (ASU, 2024); Ananya Kaalva (UT Austin, 2024-present); Benjamin Cohen (UChicago, 2023-present); Jarvis Zhang (UChicago, 2023-present); Charlie Walsh (UChicago, 2023); Kaia Atzberger (OSU, 2023-2024 → NSF GRFP UVirginia); Noah Geller (UChicago, 2022 → MS Data Science, UChicago); Morgan Lee (UWisconsin, 2022 → NSF GRFP Brown); Hillary Andales (MIT, 2022 → PhD Student UChicago); Jandrie Rodriguez (ELAC/CSU Long Beach, 2020-2021 → PhD Student Syracuse); Allen Marquez (ELAC/CSU LA, 2019-2020 → Northrop Grumman); 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, High-Resolution/Chemical Abundances Lead)
SDSS-V, Galactic Genesis and Milky Way Halo Working Group co-chair, <https://www.sdss.org/>
The *Caterpillar* Project (<https://www.caterpillarproject.org/>, Project Builder)
DECam Local Volume Exploration Survey (DELVE, <https://delve-survey.github.io/>)
Mapping the Ancient Galaxy in CaHK Survey (MAGIC)
The Magellanic Satellites Survey (MagLiteS)
Joint Institute for Nuclear Astrophysics (JINA-CEE)
International Research Network for Nuclear Astrophysics (IReNA)

INVITED TALKS

Colloquium University of Chicago	Oct 2024
Colloquium University of Toronto	Sep 2024
Review Talk Cosmic Dawn Revealed by JWST, KITP	Aug 2024

Review Talk Small Galaxies Cosmic Questions, Durham	Jul 2024
Seminar University of Sydney	May 2024
Seminar Monash University	Apr 2024
Colloquium Australian National University	Apr 2024
Seminar University of New South Wales	Apr 2024
Seminar Macquarie University	Apr 2024
Seminar Lund University Group Meeting	Apr 2024
Seminar Michigan State University	Mar 2024
Seminar Weinberg Institute at the University of Texas at Austin	Jan 2024
Seminar Geneva Stellar Seminar	Jan 2024
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 AAS 243, New Orleans	Jan 2024
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 r -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
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

PUBLICATIONS

35 refereed or submitted first and second author papers, >1600 total citations, h -index = 20.

106 total refereed or submitted papers + 6 unrefereed manuscripts, >4600 total citations, h -index = 37.

As of Feb 2025 (via NASA ADS). * indicates papers written with students I supervised or co-supervised.

FIRST AND SECOND AUTHOR PUBLICATIONS

35. Katz, H., **Ji, A. P.**, Telford, O. G., Senchyna, P., *Early Bright Galaxies from Helium Enhancements in High-Redshift Star Clusters*, 2024, OJAp, 7E, 106, arXiv:2410.14846
34. Nugent, A. E., **Ji, A. P.**, Fong, W.-F., Shah, H., van de Voort, F., *Where has all the r -process gone? Timescales for GRB-Kilonovae to Enrich their Host Galaxies*, AAS subm, arXiv:2410.00095
33. Ting, Y.-S. & **Ji, A. P.**, *Quantifying Bursty Star Formation in Dwarf Galaxies*, 2025, OJAp, 8E, 7, arXiv:2408.06807
32. Thibodeaux, P. N.*, **Ji, A. P.**, Cerny, W., Kirby, E. N., Simon, J. D., *LAMOST J1010+2358 is not a Pair-Instability Supernova Relic*, 2024, OJAp, 7E, 66, arXiv:2404.17078
31. Ou, X.*, **Ji, A. P.**, Frebel, A., Naidu, R. P., Limberg, G., *The Rise of the R -Process in the Gaia-Sausage/Enceladus Dwarf Galaxy*, 2024, ApJ, 974, 232
30. **Ji, A. P.**, Curtis, S., Storm, N., Chandra, V., Schlaufman, K. C., Stassun, K. G., Heger, A., Pignatari, M., . . . , *Spectacular nucleosynthesis from early massive stars*, 2024, ApJL, 961, 41
29. Usman, S. A.*, **Ji, A. P.**, Li, T. S., Pace, A. B., Cullinane, L. R., . . . , *Multiple Populations and a CH Star Found in the 300S Globular Cluster Stellar Stream*, 2024, MNRAS, 529, 2413
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*, 2024, MNRAS, 531, 2512
27. Kirby, E. N., **Ji, A. P.**, Kovalev, M., *r -process Abundance Patterns in the Globular Cluster M92*, 2023, ApJ, 958, 45
26. Yao, Y.*, **Ji, A. P.**, Koposov, S. E., Limberg, G., *200,000 Candidate Very Metal-poor Stars in Gaia DR3 XP Spectra*, 2024, MNRAS, 527, 10937
25. Frebel, A. & **Ji, A. P.**, 2022, *Observations of R -Process Stars in the Milky Way and Dwarf Galaxies*, in Handbook of Nuclear Physics (eds Tanihata, I., Toki H., Kajina, T.), 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., *S⁵: 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., *S⁵: 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 (S⁵): 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

71. Casey, Q. O., Mutlu-Pakdil, B., Sand, D. J., . . . , **Ji, A. P.**, . . . , *Deep Photometric Observations of Ultra-Faint Milky Way Satellites Centaurus I and Eridanus IV*, ApJ subm, arXiv:2501.04772
70. Mead, J., Brauer, K., . . . , **Ji, A. P.**, . . . , *Aeos: Transport of metals from minihalos following Population III stellar feedback*, 2025, ApJ, 980, 62
69. Awad, P., Li, T. S., Erkal, D., . . . , **Ji, A. P.**, . . . , *S5: New insights from deep spectroscopic observations of the tidal tails of the globular clusters NGC 1261 and NGC 1904*, 2025, A&A, 693, 69
68. Brauer, K., Emerick, A., Mead, J., **Ji, A. P.**, Wise, J. H., . . . , *AEOS: Star-by-Star Cosmological Simulations of Early Chemical Enrichment and Galaxy Formation*, 2025, ApJ, 980, 41
67. Atzberger, K. R.*, Usman, S. A.*, **Ji, A. P.**, . . . , *Chemical Abundances in the Leiptr Stellar Stream: A Disrupted Ultra-faint Dwarf Galaxy?*, OJAp subm, arXiv:2410.17312
66. Naidu, R. P., Matthee, J., . . . , **Ji, A. P.**, . . . , *All the Little Things in Abell 2744: >1000 Gravitationally Lensed Dwarf Galaxies at $z = 0 - 9$ from JWST NIRCcam Grism Spectroscopy*, OJAp subm, arXiv:2410.01874
65. Tan, C. Y., Cerny, W., Drlica-Wagner, A., Pace, A. B., . . . , **Ji, A. P.**, . . . , *A Pride of Satellites in the Constellation Leo? Discovery of the Leo VI Milky Way Satellite Galaxy with DELVE Early Data Release 3*, 2025, ApJ, 979, 176
64. Cerny, W., Chiti, A., Geha, M., . . . , **Ji, A. P.**, . . . , *Discovery and Spectroscopic Confirmation of Aquarius III: A Low-Mass Milky Way Satellite Galaxy*, 2025, ApJ, 979, 164
63. Ness, M. K., Mendel, J. T., Buder, S., Wheeler, A., **Ji, A. P.**, . . . , *ACACIAS I: Element abundance labels for 192 stars in the dwarf galaxy NGC 6822*, MNRAS accepted, arXiv:2407.17661
62. Simon, J. D., Li, T. S., **Ji, A. P.**, Pace, A. B., . . . , *Eridanus III and DELVE 1: Carbon-rich Primordial Star Clusters or the Smallest Dwarf Galaxies?*, 2024, ApJ, 976, 256
61. Pan, Y., Chiti, A., Drlica-Wagner, A., **Ji, A. P.**, . . . , *Stellar Metallicities from DECam u-band Photometry: A Study of Milky Way Ultra-Faint Dwarf Galaxies*, 2025, ApJ, 978, 39
60. Hilmi, T., Erkal, D., Koposov, S. E., . . . , **Ji, A. P.**, . . . , *Inferring dark matter subhalo properties from simulated subhalo-stream encounters*, MNRAS subm, arXiv:2404.02953
59. Chiti, A., Mardini, M., Limberg, G., . . . , **Ji, A. P.**, . . . , *Enrichment by Extragalactic First Stars in the Large Magellanic Cloud*, 2024, Nat Astron., 8, 637
58. Hansen, T. T., Simon, J. D., Li, T. S., Sharkey, D., **Ji, A. P.**, . . . , *Chemical Diversity on Small Scales – Abundance Analysis of the Tucana V Ultra-Faint Dwarf Galaxy*, 2024, ApJ, 968, 21
57. Shah, S., Ezzeddine, R., Roederer, I. U., Hansen, T. T., . . . , **Ji, A. P.**, . . . , *The R-Process Alliance: Detailed Chemical Composition of an R-Process Enhanced Star with UV and Optical Spectroscopy*, 2024, MNRAS, 529, 1917
56. Nugent, A. E., Fong, W-F, Castrejón, C., Leja, J., Zevin, M., **Ji, A. P.**, *A Population of Short-duration Gamma-ray Bursts with Dwarf Host Galaxies*, 2024, ApJ, 912, 5

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*, 2024, ApJ, 961, 234
54. Goetberg, Y., Drout, M. R., **Ji, A. P.**, Groh, J. H., . . . , *Stellar properties of observed stars stripped in binaries in the Magellanic Clouds*, 2023, ApJ, 959, 125
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*, 2023, ApJ, 958, 167
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
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