# Alexander P. Ji

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## 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

## CURRENT EXTERNAL RESEARCH SUPPORT

**NSF-2206264** Galactic Archaeology from Careful Modeling of Old Stars, Co-PI

**JWST-GO-02091** Detecting the Synthesis of the Heaviest Elements with Photometry of a Kilonova in the Optically Thin Phase, Co-I

No overlap with the proposed project.

## HONORS AND AWARDS

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|---|---|
| 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

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| **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** 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
**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 2021-2022
**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", 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
**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

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

**Undergraduate Students** Benjamin Cohen (UChicago, 2023); Jarvis Zhang (UChicago, 2023); Noah Geller (UChicago, 2022); Morgan Lee (UWisconsin, 2022); Hillary Andales (MIT, 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)

**Postdoctoral Researchers** Sanjana Curtis (UChicago, 2022-present); Anirudh Chiti (Brinson Fellow at UChicago, 2022-present); Katy Rodriguez-Wimberly (NSF MPS Ascend Fellow at UC Riverside, 2020-present)

## 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)
The R-Process Alliance (RPA, `https://sites.google.com/view/rprocessalliance/home`)
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

25 refereed or submitted first and second author papers, >1000 total citations, $h$-index = 17.
75 total refereed or submitted papers, >2500 total citations, $h$-index = 30.
As of Jan 2023 (via NASA ADS). * indicates papers written with students I supervised or co-supervised.

### FIRST AND SECOND AUTHOR PUBLICATIONS

25. Frebel, A. & **Ji, A. P.**, *Observations of r-process stars in the Milky Way and Dwarf Galaxies*, Handbook of Nuclear Physics – Part III, in press

24. **Ji, A. P.**, Naidu, R. P., Brauer, K., Ting, Y.-S., Simon, J. D., *Chemical Abundances of the Typhon Stellar Stream*, accepted to MNRAS, arXiv:2207.04016

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*, accepted to ApJ, arXiv:2207.03499

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

50. Chandra, V., Naidu, R. P., Conroy, C., **Ji, A. P.**, ..., *Distant Echoes of the Milky Way's Last Major Merger*, submitted to ApJ, arXiv:2212.00806

49. 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*, accepted to ApJ, arXiv:2212.00810

48. 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*, submitted to ApJ, arXiv:2210.15013

47. 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*, submitted to MNRAS, arXiv:2211.04495

46. 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*, submitted to ApJ

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*, submitted to ApJ, arXiv:2208.02255

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*, accepted to ApJ, arXiv:2205.01740

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*, accepted to ApJ, arXiv:2203.11788

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., Starkenburg, 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 $S^5$*, 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 Magellan/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 ($S^5$): Overview, Target Selection, Data Reduction, Validation, and Early Science* , 2019, MNRAS, 490, 3508

14. Kozlowski, 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

8. Li, T. S., Simon, J. D., ..., **Ji, A. P.**, ..., *Ships Passing in the Night: Spectroscopic Analysis of Two Ultra-Faint Satellites in the Constellation Carina*, 2018, ApJ, 851, 145

7. Hartwig, T., Yoshida, N., ..., **Ji, A. P.**, ..., *Descendants of the first stars: the distinct chemical signature of second generation stars*, 2018, MNRAS 478, 1795

6. Griffen, B. F., Dooley, G., **Ji, A. P.**, O'Shea, B. W., Gomez, F., Frebel, A., *Tracing the origin of the first stars and galaxies within the hierarchical assembly history of the Milky Way*, 2018, MNRAS, 474, 443

5. Drout, M. R., Piro, A. L., . . . , **Ji, A. P.**, . . . , *Light Curves of the Neutron Star Merger GW170817/SSS17a: Implications for R-Process Nucleosynthesis*, 2017, Science, 358, 1570

4. Shappee, B. J., Simon, J. D., . . . , **Ji, A. P.**, . . . , *Early Spectra of the Gravitational Wave Source GW170817: Evolution of a Neutron Star Merger*, 2017, Science, 358, 1574

3. Placco, V. M., Holmbeck, E. M., . . . , **Ji, A. P.**, . . . , *RAVE J203843.2−002333: The first highly r-process enhanced star identified in the RAVE survey*, 2017, ApJ, 844, 18

2. Frebel, A., Chiti, A., **Ji, A. P.**, Jacobson, H. R., Placco, V. M., *SD 1313–0019 — another second generation star with [Fe/H] = -5.0, observed with the Magellan telescope*, 2015, ApJL, 810, 27

1. Dooley, G., Griffen, B. F., Zukin, P., **Ji, A. P.**, Vogelsberger, M., Hernquist, L., Frebel, A., *The effects of varying cosmological parameters on halo substructure*, 2014, ApJ, 786, 50

## UNREFEREED MANUSCRIPTS

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