Nikko J. Cleri

Eberly Postdoctoral Fellow
The Pennsylvania State University

Summary

Research:	Galaxy Evolution, High-Redshift Galaxies, Emission-Line Galaxies, Population III Stars, Active Galactic Nuclei, Black Hole Seeds, Star Formation, Dust Attenuation
Techniques:	UV/Optical/Near-IR Spectroscopy, Photoionization Modeling
Proposals:	As PI/Co-PI: 1 *JWST*, 1 *HST*, >300k USD awarded | As Co-I: 6 *JWST*, 1 Gemini, >500 hours total awarded
Collaborations:	CEERS, NGDEEP, RUBIES, CAPERS, POPPIES
Publications:	4 first author, 4 significant author, 64 coauthor, 3436 citations, h-index 30
Presentations:	17 research, 10 outreach and professional development

Academic and Professional Appointments

2024-	Eberly Postdoctoral Fellow	Penn State
2021-24	Graduate Student (Advisor: Prof. Casey Papovich)	Texas A&M
2019-21	Graduate Student (Advisor: Prof. Jonathan Trump)	UConn
2017-20	Research Assistant (Advisor: Prof. Gerald Dunne)	UConn
2018	NSF REU Student (Advisor: Prof. Louis Strigari)	Texas A&M

Education

Ph.D. Astronomy — Texas A&M University — 2021 - 2024

Advisor: Casey Papovich
Thesis: *Spectroscopic Studies of Stars and Black Holes Across Cosmic Time*

M.S. Physics — University of Connecticut — 2019 - 2021

Advisor: Jonathan R. Trump
Thesis: *CLEAR: Paschen-β Star Formation Rates and Dust Attenuation in Low Redshift Galaxies*

B.S. Physics | *Mathematics Minor* — University of Connecticut — 2015 - 2019

Advisor: Gerald V. Dunne
Undergraduate Research: *Resurgent trans-series for generalized Hastings-McLeod solutions*

Awarded Proposals and Grants

Principal Investigator		2
2024	JWST-AR-5558: *A Census of Optical Diagnostics of Ionizing Sources Across Cosmic Time*	∼$174k
2021	HST-AR-16609: *Peering Through the Dust: Paschen-beta Indicators of Star Formation and Dust Attenuation*	∼$136k

2024	JWST-GO-5718: *A Spectroscopic Census of Faint, Broad-Line AGN at z>5* (PI: D. Kocevski)	20.49 hours
2024	JWST-GO-5943: *What really are the Physical Properties of Galaxies in the Epoch of Reionization?* (PI: C. Papovich)	61.83 hours
2024	JWST-GO-5407: *MEOW: The MIRI Early Obscured-AGN Wide Survey* (PI: G. Leung)	73.95 hours
2024	JWST-GO-5507: *Deep Spectroscopy of Galaxies at z=4-14: Uncovering Drivers of Early Galaxy Formation and Black Hole Growth* (PI: T. Hutchison)	23.29 hours
2024	JWST-GO-6368: *The CANDELS-Area Prism Epoch of Reionization Survey (CAPERS)* (PI: M. Dickinson)	293.21 hours
2023	JWST-GO-3703: *Breaking the z=10 barrier with MIRI: redshift confirmation and detection of rest-frame optical emission lines* (PI: J. Zavala)	24.33 hours
2023	GS-2023A-Q-136: *Optical Spectroscopy of JWST ERO Galaxies* (PI: B. Backhaus)	20 hours

Honors and Awards

2022	Texas Space Grant Consortium Graduate Fellow - $5K	Texas A&M
2018	NSF REU - $5K	Texas A&M
2016	Dean's List - College of Liberal Arts and Sciences	UConn
2015-19	Governor's Scholarship - $8.5K/yr	UConn
2015	Community Service Scholarship - $1K	UConn

Teaching Experience

Teaching Assistant/Course Assistant

| 2019-21 | PHYS 1501: Physics for Engineers I | UConn |
| 2021 | PHYS 1025: Introduction to Astronomy | UConn |

Service

Physics & Astronomy Community

Referee - Astronomy & Astrophysics (A&A)
Referee - Astrophysical Journal (ApJ)

College

| 2024- | Astronomy Representative - Eberly College of Science Postdoctoral Council | Penn State |

Department

2024-	Member - Climate and Diversity Committee	Penn State
2023-24	Graduate Representative	Texas A&M
2022-24	Organizer - Astronomy Journal Club	Texas A&M

Mentoring

2022-24	Coordinator - Mentoring and Advising Graduates in an Inclusive Community (MAGIC)	Texas A&M
2022-24	Mentor - Mentoring and Advising Graduates in an Inclusive Community (MAGIC)	Texas A&M
2017-18	Mentor - UConn Undergraduate Peer Mentoring	UConn

Outreach

2022	Volunteer - Gateway to Graduate School	Texas A&M
2022-24	Demonstrator - Physics and Engineering Festival	Texas A&M
2022	High School Research Reviewer - Lumiere	Texas A&M
2021-24	Presenter - Astronomy on Tap BCS 'In the News'	Texas A&M
2021-22	Treasurer - Astronomy on Tap BCS	Texas A&M
2021-22	Pen-Pal - Letters to a Pre-Scientist	Texas A&M
2018	Volunteer - Mitchell Institute Star Party Group	Texas A&M

Collaborations and Survey Membership

Co-I	CAPERS: The CANDELS-Area Prism Epoch of Reionization Survey	JWST
Member	POPPIES: The Public Observation Pure Parallel Infrared Emission-Line Survey	JWST
Member	RUBIES: Red Unknowns: Bright Infrared Extragalactic Survey	JWST
Member	NGDEEP: The Next Generation Deep Exploratory Public Survey	JWST
Member	CEERS: The Cosmic Evolution Early Release Science Survey	JWST
Member	CLEAR: The CANDELS Lyα Emission at Reionization Survey	HST

Technical Skills and Programming Languages

Programming	Fluent: Python, LaTeX
	Familiar: SQL, Julia, C, C++, R, IDL, perl, Mathematica, MATLAB, HTML, CSS
Software	Fluent: Cloudy, PyNeb, LiMe
	Familiar: grizli, DS9, IRAF, sbatch, slurm

Website Architect

Personal Website: njcleri.github.io
TAMU Astronomy (co-author): tamu-astro.github.io/
Mentoring and Advising Graduates in an Inclusive Community (MAGIC) (co-author): tx.ag/tamumagic

Publications

Lead/Co-Lead Author

4. **Cleri, N. J.**, Olivier, G. M., Hutchison T. A., et al. 2023, *Using [Ne V]/[Ne III] to Understand the Nature of Extreme-Ionization Galaxies*, ApJ, 953, 10

3. **Cleri, N. J.**, Yang, G., Papovich, C, et al. 2023, *CLEAR: High-Ionization [Ne V] $\lambda3426$ Emission-line Galaxies at $1.4 < z < 2.3$*, ApJ, 948, 112

2. **Cleri, N. J.**, Trump, J. R., Backhaus, B. E., et al. 2022, *CLEAR: Paschen-β Star Formation Rates and Dust Attenuation of Low Redshift Galaxies*, ApJ, 929, 3

1. **Cleri, N. J.**, Dunne, G. V., 2020, *Resurgent trans-series for generalized Hastings-McLeod solutions*, Journal of Physics A: Mathematical General, 53, 355203

Significant Author

4. Larson, R.L., Finkelstein, S.L., Kocevski, D.D., Hutchison, T.A., Trump, J.R., Arrabal Haro, P., Bromm, V., **Cleri, N.J.**, et al. 2023, *A CEERS Discovery of an Accreting Supermassive Black Hole 570 Myr after the Big Bang: Identifying a Progenitor of Massive z > 6 Quasars*, ApJL, 953, L29

3. Backhaus, B.E., Bridge J.S., Trump, J.R., **Cleri, N.J.**, et al. 2023, *CLEAR: Detecting Low-Luminosity Active Galactic Nuclei at $0.6 < z < 1.3$ via Spatially Resolved Hubble Space Telescope Grism Emission Line Ratios*, ApJ, 943, 37

2. Prescott, M.K.M., Finlator, K.M., **Cleri, N.J.**, et al. 2022, *Using Multiple Emission Line Ratios to Constrain the Slope of the Dust Attenuation Law*, ApJ, 928, 71

1. Backhaus, B.E., Trump, J.R., **Cleri, N.J.**, et al. 2022, *CLEAR: Emission Line Ratios at Cosmic High Noon*, ApJ, 926, 161

Co-Author: Refereed

39. Llerena, M., et al. 2024, *Physical properties of extreme emission-line galaxies at $z \sim 4 - 9$ from the JWST CEERS survey*, A&A, 691, A59

38. Davis, K., et al. 2024, *A Census from JWST of Extreme Emission-line Galaxies Spanning the Epoch of Reionization in CEERS*, ApJ, 974, 42

37. Chworowsky, K., et al. 2024, *Evidence for a Shallow Evolution in the Volume Densities of Massive Galaxies at $z = 4$ to 8 from CEERS*, AJ, 168, 113

36. Hu, W., et al. 2024, *Characterizing the Average Interstellar Medium Conditions of Galaxies at $z \sim$ 5.6-9 with UV and Optical Nebular Lines*, ApJ, 971, 21

35. Ronayne, K., et al. 2024, *CEERS: 7.7 μm PAH Star Formation Rate Calibration with JWST MIRI*, ApJ, 970, 61

34. Wang, B., et al. 2024, *RUBIES: Evolved Stellar Populations with Extended Formation Histories at $z \sim 7 - 8$ in Candidate Massive Galaxies Identified with JWST/NIRSpec*, ApJL, 969, L13

33. Finkelstein, S.L., et al. 2024, *The Complete CEERS Early Universe Galaxy Sample: A Surprisingly Slow Evolution of the Space Density of Bright Galaxies at $z \sim 8.5 - 14.5$*, ApJL, 969, L2

32. Pirzkal, K., et al. 2024, *The Next Generation Deep Extragalactic Exploratory Public Near-Infrared Slitless Survey Epoch 1 (NGDEEP-NISS1): Extra-Galactic Star-formation and Active Galactic Nuclei at 0.5 < z < 3.6*, ApJ, 969, 90

31. Jung, I., et al. 2024, *CEERS: Diversity of Lyman-Alpha Emitters during the Epoch of Reionization*, ApJ, 967, 73

30. Mascia, S. et al. 2024 *New insight on the nature of cosmic reionizers from the CEERS survey* A&A, 685, A3

29. Morales, A.M., et al. 2024, *Rest-Frame UV Colors for Faint Galaxies at $z \sim 9 - 16$ with the JWST NGDEEP Survey*, ApJL, 964, L24

28. Cheng, Y., et al. 2024, *Exploring the Gas-Phase Metallicity Gradients of Star-forming Galaxies at Cosmic Noon*, ApJ, 964, 94

27. Shen, L., et al. 2024, *NGDEEP Epoch 1: Spatially Resolved Hα Observations of Disk and Bulge Growth in Star-Forming Galaxies at $z \sim$ 0.6-2.2 from JWST NIRISS Slitless Spectroscopy*, ApJL, 963, L49

26. Barro, G., et al. 2023, *Extremely Red Galaxies at z = 5–9 with MIRI and NIRSpec: Dusty Galaxies or Obscured Active Galactic Nuclei?*, ApJ, 963, 128

25. Backhaus, B.E., et al. 2023, *CEERS Key Paper. VIII. Emission-line Ratios from NIRSpec and NIRCam Wide-Field Slitless Spectroscopy at z > 2*, ApJ, 962, 195

24. Kirkpatrick, A., et al. 2023, *CEERS Key Paper VII: JWST/MIRI Reveals a Faint Population of Galaxies at Cosmic Noon Unseen by Spitzer*, ApJL, 959, L7

23. Calabró, A, et al. 2023, *Near-infrared emission line diagnostics for AGN from the local Universe to redshift 3*, A&A, 679, A80

22. Fujimoto, S., et al. 2023, *ALMA FIR View of Ultra High-redshift Galaxy Candidates at $z \sim$ 11-17: Blue Monsters or Low-z Red Interlopers?*, ApJ, 955, 130

21. Kocevski, D.D., et al. 2023, *Hidden Little Monsters: Spectroscopic Identification of Low-Mass, Broad-Line AGN at $z > 5$ with CEERS*, ApJL, 954, L4

20. Arrabal Haro, P., et al. 2023, *Spectroscopic confirmation of CEERS NIRCam-selected galaxies at $z \simeq 8 - 10$*, ApJL, 951, L22

19. Estrada-Carpenter, V., et al. 2023, *CLEAR: The Morphological Evolution of Galaxies in the Green Valley*, ApJ, 951, 115

18. Yang, G., et al. 2023, *CEERS Key Paper VI: JWST/MIRI Uncovers a Large Population of Obscured AGN at High Redshifts*, ApJL, 950, L5

17. Papovich, C., et al. 2023, *CEERS Key Paper IV: Galaxies at $4 < z < 9$ are Bluer than They Appear – Characterizing Galaxy Stellar Populations from Rest-Frame ~ 1 micron Imaging*, ApJL, 949, L18

16. Simons, R.C., et al. 2023, *CLEAR: Survey Overview, Data Analysis and Products*, ApJS, 266, 13

15. Constantin, L. et al. 2023, *Expectations of the size evolution of massive galaxies at $3 \leq z \leq 6$ from the TNG50 simulation: the CEERS/JWST view*, ApJ, 946, 71

14. Perez-Gonzalez, P.G.. et al. 2022, *CEERS Key Paper V: A triality on the nature of HST-dark galaxies*, ApJL, 946, L16

13. Kocevski, D.D., et al. 2023, *CEERS Key Paper II: The Resolved Host Properties of AGN at 3 < z < 5 with JWST*, ApJL, 946, L14

12. Finkelstein, S.L.. et al. 2023, *CEERS Key Paper I: An Early Look into the First 500 Myr of Galaxy Formation with JWST*, ApJL, 946, L13

11. Guo, Y. et al. 2023, *First Look at z > 1 Bars in the Rest-Frame Near-Infrared with JWST Early CEERS Imaging*, ApJL, 945, L10

10. Trump, J.R. et al. 2023, *The Physical Conditions of Emission-Line Galaxies at Cosmic Dawn from JWST/NIRSpec Spectroscopy in the SMACS 0723 Early Release Observations*, ApJ, 945, 35

9. García-Argumánez, A. et al. 2023, *Probing the earliest phases in the formation of massive galaxies with simulated HST+JWST imaging data from Illustris*, ApJ, 944, 3

8. Zavala, J. et al. 2023, *Dusty starbursts masquerading as ultra high redshift galaxies in JWST observations*, ApJL, 943, L9

7. Rose, C. et al. 2023, *Identifying Galaxy Mergers in Simulated CEERS NIRCam Images using Random Forests*, ApJ, 942, 54

6. Finkelstein, S.L. et al. 2022, *A Long Time Ago in a Galaxy Far, Far Away: A Candidate $z \sim 14$ Galaxy in Early JWST CEERS Imaging*, ApJL, 940, L55

5. Papovich, C. et al. 2022, *CLEAR: The Ionization and Chemical-Enrichment Properties of Galaxies at* $1.1 < z < 2.3$ ApJ, 937, 22

4. Matharu, J. et al. 2022, *CLEAR: The Evolution of Spatially Resolved Star Formation in Galaxies between* $0.5 \leq z \leq 1.7$ *using Hα Emission Line Maps*, ApJ, 937, 16

3. Jung, I. et al. 2022, *CLEAR: Boosted Lyα Transmission of the Intergalactic Medium in UV bright Galaxies*, ApJ, 933, 87

2. Simons, R. C. et al. 2021, *CLEAR: The Gas-Phase Metallicity Gradients of Star-Forming Galaxies at* $0.6 < z < 2.6$, ApJ, 923, 203

1. Estrada-Carpenter, V. et al. 2020, *CLEAR II: Evidence for Early Formation of the Most Compact Quiescent Galaxies at High Redshift*, ApJ, 880, 2

Co-Author: Submitted

25. Finkelstein, S.L., et al. 2025, *The Cosmic Evolution Early Release Science Survey (CEERS)*, arXiv e-prints, arXiv:2501.04085

24. Leung, G.C.K., et al. 2024, *Exploring the Nature of Little Red Dots: Constraints on AGN and Stellar Contributions from PRIMER MIRI Imaging*, arXiv e-prints, arXiv:2411.12005

23. Cheng, Y., et al. 2024, *Unveiling the Dark Side of UV/Optical Bright Galaxies: Optically Thick Dust Absorption*, arXiv e-prints, arXiv:2411.08100

22. Setton, D.J., et al. 2024, *Little Red Dots at an Inflection Point: Ubiquitous "V-Shaped" Turnover Consistently Occurs at the Balmer Limit*, arXiv e-prints, arXiv:2411.03424

21. Burgarella, D., et al. 2024, *CEERS: Forging the First Dust – Transition from Stellar to ISM Grain Growth in the Early Universe*, arXiv e-prints, arXiv:2410.23959

20. Shen, L., et al. 2024, *NGDEEP: The Star Formation and Ionization Properties of Galaxies at* $1.7 < z < 3.4$, arXiv e-prints, arXiv:2410.23349

19. Bisigello, L., et al. 2024, *Spectroscopic confirmation of a dust-obscured, metal-rich dwarf galaxy at z~5*, arXiv e-prints, arXiv:2410.10954

18. Cooper, O.R., et al. 2024, *RUBIES: JWST/NIRSpec resolves evolutionary phases of dusty star-forming galaxies at* $z \sim 2$, arXiv e-prints, arXiv:2410.08387

17. Brooks, M., et al. 2024, *Here There Be (Dusty) Monsters: High Redshift AGN are Dustier Than Their Hosts*, arXiv e-prints, arXiv:2410.07340

16. Brooks, M., et al. 2024, *Here There Be (Dusty) Monsters: High Redshift AGN are Dustier Than Their Hosts*, arXiv e-prints, arXiv:2410.07340

15. Gupta, A.R., et al. 2024, *Emission-Line Ratios and Ionization Conditions of CEERS Star-Forming Galaxies with JWST/NIRSpec*, arXiv e-prints, arXiv:2410.03784

14. Taylor, A.J., et al. 2024, *Broad-Line AGN at* $3.5 < z < 6$*: The Black Hole Mass Function and a Connection with Little Red Dots*, arXiv e-prints, arXiv:2409.06772

13. de Graaff, A., et al. 2024, *RUBIES: a complete census of the bright and red distant Universe with JWST/NIRSpec*, arXiv e-prints, arXiv:2409.05948

12. Weibel, A., et al. 2024, *RUBIES Reveals a Massive Quiescent Galaxy at z=7.3*, arXiv e-prints, arXiv:2409.03829

11. Katz, H., et al. 2024, *21 Balmer Jump Street: The Nebular Continuum at High Redshift and Implications for the Bright Galaxy Problem, UV Continuum Slopes, and Early Stellar Populations*, arXiv e-prints, arXiv:2408.03189

10. Rose, C., et al. 2024, *CEERS Key Paper. IX. Identifying Galaxy Mergers in CEERS NIRCam Images Using Random Forests and Convolutional Neural Networks*, arXiv e-prints, arXiv:2407.21279

9. Seille, L.-M., et al. 2024, *Physical properties of strong 1 < z < 3 Balmer and Paschen lines emitters observed with JWST*, arXiv e-prints, arXiv:2404.09659

8. de Graaff, A., et al. 2024, *Efficient formation of a massive quiescent galaxy at redshift 4.9*, arXiv e-prints, arXiv:2404.05683

7. Kocevski, D.D., et al. 2024, *The Rise of Faint, Red AGN at $z > 4$: A Sample of Little Red Dots in the JWST Extragalactic Legacy Fields*, arXiv e-prints, arXiv:2404.03576

6. Zavala, J., et al. 2024, *Detection of ionized hydrogen and oxygen from a very luminous and young galaxy 13.4 billion years ago*, arXiv e-prints, arXiv:2403.10491

5. Wang, B., et al. 2024a, *RUBIES: JWST/NIRSpec Confirmation of an Infrared-luminous, Broad-line Little Red Dot with an Ionized Outflow*, arXiv e-prints, arXiv:2403.02304

4. Calabró, A., et al. 2024, *The evolution of the SFR and Σ_{SFR} of galaxies in cosmic morning $(4 < z < 10)$*, arXiv e-prints, arXiv:2402.17829

3. Napolitano, L., et al. 2024, *'Peering into cosmic reionization: the Lyα visibility evolution from galaxies at $z = 4.5$-8.5 with JWST*, arXiv e-prints, arXiv:2402.11220

2. Cole, J.W., et al. 2023, *CEERS: Increasing Scatter along the Star-Forming Main Sequence Indicates Early Galaxies Form in Bursts*, arXiv e-prints, arXiv:2312.10152

1. Jung, I, et al. 2022, *New $z > 7$ Lyman-alpha Emitters in EGS: Evidence of an Extended Ionized Structure at $z \sim 7.7$*, arXiv e-prints, arXiv:2212.09850

Presentations

Research Presentations

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17. Talk: *High-Redshift Diagnostics of Star Formation and Active Galactic Nuclei*, The Pennsylvania State University, State College, Pennsylvania, USA — 17 September 2024

16. Talk: *High-Redshift Diagnostics of Ionizing Sources*, University of Wisconsin, Madison, Wisconsin, USA — 17 July 2024

15. Discussion Chair: *Active Galactic Nuclei and Little Red Dots*, San Lorenzo de El Escorial, Spain — 13 May 2024

14. Talk: *Diagnostics of Ionizing Sources at High-z using Models and Observations*, San Lorenzo de El Escorial, Spain — 13 May 2024

13. Talk: *Diagnostics of AGN, Black Hole Seeds, and Population III Stars with JWST* at the AAS 243rd Meeting, New Orleans, Louisiana, USA — 10 January 2024

12. Poster: *Emission Line Ratio Diagnostics of AGN, Black Hole Seeds and Population III Stars with JWST* at the First Year of JWST Science Conference, Space Telescope Science Institute, Baltimore, Maryland, USA — 11 September 2023

11. Talk: *Diagnostics of Exotic Ionizing Sources with JWST* at Texas A&M Astrosymposium, College Station, Texas, USA — 17 August 2023

10. Talk: *Diagnostics of Exotic Ionizing Sources Across Cosmic Time - High-Ionization Emission-Line Ratios: Ne53* at University of Texas, Austin, Texas, USA — 10 May 2023

9. Poster: *High-Ionization [Ne V] Emission-Line Galaxies at Cosmic Noon and the Epoch of Reionization* at AAS 241st Meeting, Seattle, Washington, USA — 12 January 2023

8. Talk: *Using [Ne V] to Constrain the Sources of Highly-Energetic Photoionization Across Cosmic Time: Exploring the "Mystery of Neon" with HST and JWST* at Texas A&M University, College Station, Texas, USA — 2 December 2022

7. Talk: *Extreme High-Ionization Emission-Line Galaxies at Cosmic Noon and the Epoch of Reionization: Exploring the "Mystery of Neon" with HST and JWST* at Texas A&M University, College Station, Texas, USA — 18 August 2022

6. Talk: *The Evolution of Spectroscopy from HST to JWST: Implications for the Epoch of Reionization* at Texas A&M University, College Station, Texas, USA — 22 July 2022

5. Poster: *HST Grism Observations of Paschen-Line Star-Formation and Dust Attenuation: A Precursor to the JWST Era* at AAS 240th Meeting, Pasadena, California, USA — 14 June 2022

4. Talk: *Paschen-β Star Formation Rates and Dust Attenuation with HST and JWST* at Texas A&M Astrosymposium, College Station, Texas, USA — 27 August 2021

3. Poster: *CLEAR: Paschen-β Star Formation Rates and Dust Attenuation in Low Redshift Galaxies* at AAS 237th Meeting, Virtual — 13 January 2021

2. Poster: *Modeling ^{8}B Solar Neutrino Detection with CEνNS* at AAS 233rd Meeting, Seattle, Washington, USA — 9 January 2019

1. Poster: *Modeling ^{8}B Solar Neutrino Detection with CEνNS* at TAMU Undergraduate Research Poster Session, College Station, Texas, USA — 1 August 2018

Outreach Presentations

2. Talk: *The Origin of the Elements: Chemistry Across Cosmic Time* at Astronomy on Tap State College, State College, Pennsylvania, USA — 19 September 2024

1. Talk: *Beyond the Telescope: Unraveling Mysteries with AI in Astronomy* at Astronomy on Tap B/CS, Bryan, Texas, USA — 24 April 2024

Professional Development Presentations

8. Panel: *GLASS Postdoc Panel* at Texas A&M University, College Station, Texas, USA — 8 March 2024

7. Talk: *How to Be A Referee* at Texas A&M University, College Station, Texas, USA — 10 November 2023

6. Panel: *How to Get Into Grad School* at Texas A&M University, College Station, Texas, USA — 28 July 2023

5. Talk: *Data Visualization in Astronomy: More Important than the Science Itself?* at Texas A&M University, College Station, Texas, USA — 11 November 2022

4. Panel: *How to Get Into Grad School* at Texas A&M University, College Station, Texas, USA — 29 July 2022

3. *Data Visualization in Astronomy: More Important than the Science Itself?* at Texas A&M University, College Station, Texas, USA — 2 June 2022

2. Workshop: *Matplotlib: The Champion of Plotting in Python* at Texas A&M University, College Station, Texas, USA — 2 June 2022

1. Workshop: *pandas: Your Best Friend for Data Analysis in Python* at Texas A&M University, College Station, Texas, USA — 1 June 2022

References

| Postdoctoral Mentor | **Prof. Joel Leja** | Penn State |

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Davey Laboratory, State College, PA, 16802
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| PhD Advisor | **Prof. Casey J. Papovich** | Texas A&M |

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| M.S. Advisor | **Prof. Jonathan R. Trump** | UConn |

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| PhD Mentor | **Prof. Robert C. Kennicutt** | Texas A&M |

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