Nikko J. Cleri · Curriculum Vitae · cleri@tamu.edu · orcid.org/0000-0001-7151-009X · Website: tx.ag/cleri

Nikko J. Cleri | CV

- Position: PhD Student at Texas A&M University
- Research: Emission-Line Galaxies, Galaxy Evolution, Starburst Galaxies, High-Redshift Galaxies, Star Formation Rates and Histories, Dust Attenuation, Active Galactic Nuclei

Summary

Nikko J. Cleri is a PhD candidate in astronomy at Texas A&M University. His current work studies emission line galaxies in the CLEAR (CANDELS Lyman-α Emission at Reionization) survey of the *Hubble Space Telescope* and the CEERS (Cosmic Evolution Early Release Science) survey from the *James Webb Space Telescope*. He is also very active in mentoring and outreach initiatives, currently serving as the coordinator for Texas A&M's Mentoring and Advising Graduates in an Inclusive Community (MAGIC) program.

Education

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

- Advisor: Casey Papovich
- Associate Advisors: Robert C. Kennicutt, Justin Spilker

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

- Advisor: Jonathan R. Trump
- Associate Advisors: Cara Battersby and Gerald V. Dunne
- Thesis: *CLEAR: Paschen-β Star Formation Rates and Dust Attenuation in Low Redshift Galaxies*

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

- Advisor: Gerald V. Dunne
- Undergraduate Research: *Resurgent Trans-Series for Non-Integrable Deformations of Painleve II*

Academic and Professional Appointments

2021-	**Graduate Student** (Advisor: Prof. Casey Papovich)	TAMU
2021	**Research Technician** (Advisor: Prof. Jonathan Trump)	UConn
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)	TAMU

Awarded Proposals and and Grants - Total Value: >$135k

2021	**HST Cycle 29** - AR 16609: *Peering Through the Dust: Paschen-beta Indicators of Star Formation and Dust Attenuation*	~$136k

Honors and Awards

2022	**Texas Space Grant Consortium Graduate Fellow** - $5K	TAMU
2018	**NSF REU** - $5K	TAMU
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 - Cumulative Enrollment: 361

2019-21	**TA** - PHYS 1501: Physics for Engineers I - Cumulative Enrollment: 253	UConn
2021	**TA/CA** - PHYS 1025: Introduction to Astronomy - Cumulative Enrollment: 108	UConn

Professional Service

2021-	**Referee** - Astrophysical Journal (ApJ)	TAMU

Outreach

2022-	**High School Research Reviewer** - Lumiere	TAMU
2022-	**Demonstrator** - Physics and Engineering Festival	TAMU
2021-	**Presenter** - Astronomy on Tap BCS 'In the News'	TAMU
2021-22	**Treasurer** - Astronomy on Tap BCS	TAMU
2021-	**Pen-Pal** - Letters to a Pre-Scientist	TAMU
2018	**Volunteer** - Mitchell Institute Star Party Group	TAMU
2014-	**Member** - Booth Memorial Astronomical Society, Stratford, CT	

Mentoring

2022-	**Coordinator** - Mentoring and Advising Graduates in an Inclusive Community (MAGIC)	TAMU
2022-	**Mentor** - Mentoring and Advising Graduates in an Inclusive Community (MAGIC)	TAMU
2017-18	**Mentor** - UConn Undergraduate Peer Mentoring	UConn

Societies

2018	**American Astronomical Society**	Member
2018	**American Physical Society**	Member
2018	**American Institute of Physics**	Member
2015	**Society of Physics Students**	Member

Publications - Total Refereed: 10 | Submitted: 8 | Primary Author: 6 | Total Citations: 150 | H-Index: 7

First Author 3

- **Cleri, N. J.**, Yang, G., Papovich, C, et al. 2022, *CLEAR: High-Ionization [Ne V] λ3426 Å Emission-line Galaxies at* $1.4 < z < 2.3$
- **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
- **Cleri, N. J.**, Dunne, G. V., 2020, *Resurgent Trans-Series for Non-Integrable Deformations of Painleve II*, Journal of Physics A: Mathematical General, 53, 355203

Significant Author 3

- Backhaus, B.E., Bridge J.S., Trump, J.R., **Cleri, N.J.**, submitted, *CLEAR: Detecting Low-Luminosity Active Galactic Nuclei at* $0.6 < z < 1.3$ *via Spatially Resolved Hubble Space Telescope Grism Emission Line Ratios*, arXiv e-prints, arXiv:2207.11265.
- 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
- 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 12

- Kocevski, D. et al. 2022 submitted, *CEERS Key Paper III: The Resolved Host Properties of AGN at 3 < z < 5 with JWST*, arXiv e-prints, arXiv:2208.14480.. [Author XXX of XXX]
- Rose, C. et al. 2022 submitted, *Identifying Galaxy Mergers in Simulated CEERS NIRCam Images using Random Forests*, arXiv e-prints, arXiv:2208.11164. [Author XXX of XXX]
- Zavala, J. et al. 2022 submitted, *Dusty starbursts masquerading as ultra high redshift galaxies in JWST observations*, arXiv e-prints, arXiv:2208.01816. [Author XXX of XXX]
- Constantin, L. et al. 2022 submitted, *Expectations of the size evolution of massive galaxies at* $3 \leq z \leq 6$ *from the TNG50 simulation: the CEERS/JWST view*, arXiv e-prints, arXiv:2208.00007. [Author 8 of 18]
- García-Argumánez, A. et al. 2022 submitted, *Probing the earliest phases in the formation of massive galaxies with simulated HST+JWST imaging data from Illustris*, arXiv e-prints, arXiv:2207.14062. [Author 16 of 23]
- Finkelstein, S.L. et al. 2022 submitted, *A Long Time Ago in a Galaxy Far, Far Away: A Candidate* $z \sim 14$ *Galaxy in Early JWST CEERS Imaging*, arXiv e-prints, arXiv:2207.12474. [Author 52 of 114]
- Trump, J.R. et al. 2022 submitted, *The Physical Conditions of Emission-Line Galaxies at Cosmic Dawn from JWST/NIRSpec Spectroscopy in the SMACS 0723 Early Release Observations*, arXiv e-prints, arXiv:2207.12388. [Author 24 of 65]
- Matharu, J. et al. 2022 submitted, *CLEAR: The Evolution of Spatially Resolved Star Formation in Galaxies between* $0.5 \leq z \leq 1.7$ *using H*α *Emission Line Maps*, arXiv e-prints, arXiv:2205.08543. [Author 8 of 17]
- Papovich, C. et al. 2022 submitted, *CLEAR: The Ionization and Chemical-Enrichment Properties of Galaxies at* $1.1 < z < 2.3$ arXiv e-prints, arXiv:2205.05090. [Author 9 of 18]
- Jung, I. et al. 2021 submitted, *CLEAR: Boosted Ly*α *Transmission of the Intergalactic Medium in UV bright Galaxies*, ApJ, 933, 87, [Author 7 of 14]
- 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, [Author 8 of 14]
- Estrada-Carpenter, V. et al. 2020, *CLEAR II: Evidence for Early Formation of the Most Compact Quiescent Galaxies at High Redshift*, ApJ, 880, 2 [Author 7 of 14]

Presentations

Research Presentations 7

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

14 June 2022	*HST Grism Observations of Paschen-Line Star-Formation and Dust Attenuation: A Precursor to the JWST Era* at AAS 240th Meeting, Pasadena, California, USA	Poster
27 August 2021	*Paschen-β Star Formation Rates and Dust Attenuation with HST and JWST* at Texas A&M Astrosymposium, College Station, Texas, USA	Talk
13 January 2021	*CLEAR: Paschen-β Star Formation Rates and Dust Attenuation in Low Redshift Galaxies* at AAS 237th Meeting, Virtual	Poster
9 January 2019	*Modeling ^{8}B Solar Neutrino Detection with CEνNS* at AAS 233rd Meeting, Seattle, Washington, USA	Poster
1 August 2018	*Modeling ^{8}B Solar Neutrino Detection with CEνNS* at TAMU Undergraduate Research Poster Session, College Station, Texas, USA	Poster

Outreach and Professional Development Presentations 4

29 July 2022	*How to Get Into Grad School* at Texas A&M University, College Station, Texas, USA	Panel
2 June 2022	*Data Visualization in Astronomy: More Important than the Science Itself* at Texas A&M University, College Station, Texas, USA	Talk
2 June 2022	*Matplotlib: The Champion of Plotting in Python* at Texas A&M University, College Station, Texas, USA	Workshop
1 June 2022	*pandas: Your Best Friend for Data Analysis in Python* at Texas A&M University, College Station, Texas, USA	Workshop

References

PhD Advisor **Prof. Casey J. Papovich** Texas A&M

- Mitchell Institute for Fundamental Physics and Astronomy, 4242 TAMU, College Station, TX 77843-4242
- papovich@tamu.edu

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

- University of Connecticut Department of Physics, 2152 Hillside Road, Unit 3046A, Storrs, CT, 06269-3046
- jonathan.trump@uconn.edu

B.S. Advisor **Prof. Gerald V. Dunne** UConn

- University of Connecticut Department of Physics, 2152 Hillside Road, Unit 3046A, Storrs, CT, 06269-3046
- gerald.dunne@uconn.edu