Jonathan Cohn

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Texas A&M University
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The Mitchell Institute for
Fundamental Physics and
Astronomy — (MIST) 313
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EDUCATION

Ph.D., Astronomy 2022 (expected)
Texas A&M University
Department of Physics and Astronomy
4242 TAMU
College Station, TX 77843-4242
Advisor: Dr. Jonelle Walsh

M.S., Astronomy May 2019
Texas A&M University
Department of Physics and Astronomy
4242 TAMU
College Station, TX 77843-4242
Advisor: Dr. Kim-Vy Tran

B.S., Physics, *Magna Cum Laude* May 2016
The University of Texas at Dallas
800 W Campbell Rd
Richardson, TX 75080
Advisors: Dr. Michael Kesden, Dr. Lindsay King

EXPERIENCE

Research Assistant Summer 2017 & 2018, Spring 2019 – present
Department of Physics and Astronomy, Texas A&M University

Observations for Large Program 28 Jan – 2 Feb 2020
2.7m telescope, VIRUS-W, McDonald Observatory, Fort Davis, Texas

ALMA data reduction workshop 13 – 15 Mar 2019
National Radio Astronomy Observatory, Charlottesville, VA

Observations for MASSIVE survey 9 – 12 Apr 2018
2.7m telescope, VIRUS-P, McDonald Observatory, Fort Davis, Texas

Other observations 13 Apr 2018
2.7m telescope, VIRUS-W, McDonald Observatory, Fort Davis, Texas

Teaching Assistant — Instructor of Record Summer 2017 – Spring 2018
Astronomy 102: Observational Astronomy
Department of Physics and Astronomy, Texas A&M University

Teaching Assistant Fall 2016 – Spring 2017, Fall 2018
Astronomy 101: Basic Astronomy
Department of Physics and Astronomy, Texas A&M University

Undergraduate Teaching Assistant Fall 2015 – Spring 2016
Weather & Climate
Department of Physics, The University of Texas at Dallas

Undergraduate Research Assistant Summer 2015
Department of Physics, The University of Texas at Dallas

Peer-led Team Learning Super Leader Fall 2015 – Spring 2016
PLTL Leader and Coordinator, General Chemistry I & II
Student Success Center, The University of Texas at Dallas

Peer-led Team Learning Leader Fall 2013 – Spring 2016
PLTL Leader, General Chemistry I & II
Student Success Center, The University of Texas at Dallas

AWARDS

Undergraduate Research Award 2014 – 2015
The University of Texas at Dallas

STEM Columbia Crew Memorial Scholarship 2014 – 2015
Texas Space Grant Consortium

Academic Excellence Scholarship, Honors 2012 – 2016
The University of Texas at Dallas

PUBLICATIONS

- *Black Hole Mass Measurements of Radio Galaxies NGC 315 and NGC 4261 Using ALMA CO Observations*
  B. D. Boizelle, J. L. Walsh, A. J. Barth, D. A. Buote, A. J. Baker, J. Darling, L. C. Ho, **J. Cohn**, K. M. Kabasares
  The Astrophysical Journal (2021), 908, 19
- *MOSEL: Strong [OIII] 5007 Å Emitting Galaxies at ($3 < z < 4$) from the ZFOURGE Survey*
  K-v H. Tran, B. Forrest, L.Y. Alcorn, T. Yuan, T. Nanayakkara, **J. Cohn**, and 10 additional authors
  The Astrophysical Journal (2020), 898, 45
- *A giant galaxy in the young Universe with a massive ring*
  T. Yuan, A. Elagali, I Labbé, G. G. Kacprzak, C. del P. Lagos, L. Y. Alcorn, **J. Cohn**, and 8 additional authors
  Nature Astronomy (2020), 4, 957
- *MOSEL Survey: Tracking the Growth of Massive Galaxies at $2 < z < 4$ Using Kinematics and the IllustrisTNG Simulation*
  A. Gupta, K-v. H. Tran, **J. Cohn**, and 13 additional authors
  The Astrophysical Journal (2020), 893, 23
- *A Tale of Two Clusters: An Analysis of Gas-phase Metallicity and Nebular Gas Conditions in Protocluster Galaxies at $z \sim 2$*

L. Y. Alcorn, A. Gupta, K-V. H. Tran, G. G. Kacprzak, T. Yuan, **J. Cohn**, and 9 additional authors
The Astrophysical Journal (2019), 883, 153

- ZFOURGE*: Extreme 5007 Å emission may be a common early-lifetime phase for star-forming galaxies at* $z > 2.5$
  J. Cohn, J. Leja, K-v. H. Tran, and 12 additional authors
  The Astrophysical Journal (2018), 869, 141
- *ZFOURGE: Using Composite Spectral Energy Distributions to Characterize Galaxy Populations at* $1 < z < 4$
  B. Forrest, K-v.H. Tran, A. Broussard, **J. Cohn**, and 11 additional authors
  The Astrophysical Journal (2018), 863, 131
- *Detecting binarity of GW150914-like lenses in gravitational microlensing events*
  D.H. Eilbott, A.H. Riley, **J.H. Cohn**, M.H. Kesden, L.J. King
  Monthly Notices of the Royal Astronomical Society Letters (2017), 467 (1)

CONFERENCES AND PRESENTATIONS

- 237^{th} Meeting of the American Astronomical Society — 14 Jan 2021
  Talk: *Gas-dynamical mass measurement of the Supermassive Black Hole in UGC 2698 with ALMA*
  Virtual Meeting
- Supermassive Black Holes 2020 — 7 – 11 Dec 2020
  Talk: *Gas-dynamical mass measurement of the SMBH in UGC 2698 with ALMA*
  Virtual Meeting, hosted from Universidad de Concepción, Chile
- 2020 Texas A&M Astronomy Symposium — 17 Aug 2020
  Talk: *Gas-dynamical mass measurement of the Supermassive Black Hole in UGC 2698*
  Virtual Meeting, hosted from Texas A&M University, College Station, TX
- IAU Symposium 359: GALFEED — 2 – 6 Mar 2020
  (Galaxy Evolution and Feedback Across Different Environments)
  Poster and flash talk: *Gas-dynamical mass of the supermassive black hole in UGC 2698*
  Bento Gonçalves, Rio Grande do Sul, Brazil
- 2019 Frank N. Bash Symposium — 21 – 23 Oct 2019
  Poster and flash talk: *Gas-dynamical mass of the supermassive black hole in UGC 2698*
  The University of Texas at Austin, Austin, TX
- 2019 Texas A&M Astronomy Symposium — 23 Aug 2019
  Talk: *Estimating the masses of supermassive black holes in compact elliptical galaxies*
  Texas A&M University, College Station, TX
- Understanding emission-line galaxies for the next generation of cosmological surveys — 5 Sept 2018
  Talk: *ZFOURGE: Extreme 5007 Å emission may be a common early-lifetime phase for star-forming galaxies at* $z > 2.5$
  Centro de Estudios de Física del Cosmos de Aragón, Teruel, Spain
- 2018 Texas A&M Astronomy Symposium — 24 Aug 2018
  Talk: *Extreme emission may be a common early-lifetime phase for star-forming galaxies at* $z > 2.5$
  Texas A&M University, College Station, TX
- 231^{st} Meeting of the American Astronomical Society — 9 Jan 2018
  Talk: *Star Formation Histories of Extreme Emission Line Galaxies at* $z \sim 3.5$ *in the ZFOURGE Survey*
  Washington, DC
- Plumbing Star Formation Rates in the Age of JWST — 1 Nov 2017
  Talk: *Star Formation Histories of Extreme Emission Line Galaxies at* $z \sim 3.5$ *in the ZFOURGE Survey*
  Texas A&M University, College Station, TX

- 2017 Frank N. Bash Symposium 23 – 25 Oct 2017
  Poster and flash talk: *Star Formation Histories of Extreme Emission Line Galaxies at $z \sim 3.5$ in the ZFOURGE Survey*
  The University of Texas at Austin, Austin, TX
- Fall 2017 Joint Meeting of the Texas Section of the APS 20 Oct 2017
  Talk: *Star Formation Histories of Extreme Emission Line Galaxies at $z \sim 3.5$ in the ZFOURGE Survey*
  The University of Texas at Dallas, Richardson, TX
- 2017 Texas A&M Astronomy Symposium 25 Aug 2017
  Talk: *Properties of Extreme Emission Line Galaxies in ZFOURGE from Prospector-α*
  Texas A&M University, College Station, TX
- 2016 ZFOURGE Team meeting 24-28 Oct 2016
  Talk: *Extreme emission-line galaxy properties*
  Magnolia, TX
- 2016 Texas A&M Astronomy Symposium 26 Aug 2016
  Talk: *Detectability of GW150914-like events by gravitational microlensing*
  Texas A&M University, College Station, TX
- Fall 2015 Joint Meeting of the Texas Section of the APS 30 Oct 2015
  Talk: *Gravitational microlensing by binary black holes*
  Baylor University, Waco, TX
- The University of Texas at Dallas Undergraduate Research Poster Competition 7 Apr 2015
  Poster: *Gravitational microlensing by binary black holes*
  The University of Texas at Dallas, Richardson, TX

MEMBERSHIPS

American Astronomical Society
Sigma Pi Sigma Physics Honor Society

MENTORSHIP

Mentoring and Advising Graduates in an Inclusive Community Fall 2019 — present
Program founder, coordinator, & primary mentor
Texas A&M University, Department of Physics & Astronomy

Discover, Explore, and Enjoy Physics and Engineering (DEEP) Fall 2017 — present
Astronomy Team Mentor
Texas A&M University, Department of Physics & Astronomy

OUTREACH AND VOLUNTEER WORK

TAMU Astronomy graduate student website (tamu-astro.github.io) Spring 2021
Co-creator, head writer
Texas A&M University, Department of Physics & Astronomy

TAMU Astronomy Graduate Handbook Spring 2021
Creator, head writer
Texas A&M University, Department of Physics & Astronomy

TAMU Astronomy Group Website — Spring 2021
Design and write website for prospective and incoming graduate students
Texas A&M University, Department of Physics & Astronomy

Conferences for Undergraduate Women in Physics at TAMU — 17 – 19 Jan 2020
Panel moderator, poster session judge, volunteer
Texas A&M University, Department of Physics & Astronomy

Letters to a Pre-Scientist — Fall 2018 — Spring 2020
Scientist pen-pal

Astronomy on Tap BCS, invited speaker & panelist
Panel: *Answering YOUR Burning Questions* — 13 Dec. 2018, 11 Sep. 2019, 15 Jan. 2020
Talk: *Here Be ~~Dragons~~ Aliens: The Unsolved Equation* — 11 Oct. 2018
Talk: *Chasing the Event Horizon* — 17 Jul. 2019
Talk: *From Earth to the Stars* — 16. Sep. 2020
Bryan, TX

Astronomy on Tap BCS — Apr. 2018 — present
Chapter co-founder, host, & organizer
Bryan, TX

Discover, Explore, and Enjoy Physics and Engineering (DEEP) Physics Shows — Fall 2017 — present
Design, build, and present physics, engineering, and astronomy demonstrations
Texas A&M University, Department of Physics & Astronomy

Texas A&M Physics & Engineering Festival — Apr. 2017, Apr. 2018
Texas A&M University, Department of Physics & Astronomy

Public Star Parties — Spring 2017
Texas A&M University, Department of Physics & Astronomy

Dallas Arboretum: Earth Day — Apr. 2015
UT Dallas Society of Physics Students

Dallas Arboretum: The Joy of Science — Apr. 2014
UT Dallas Society of Physics Students

UT Dallas Society of Physics Students, Secretary & Vice President — Fall 2013 — Spring 2016
The University of Texas at Dallas

27th Texas Symposium on Relativistic Astrophysics — Dec. 2013
The University of Texas at Dallas, Department of Physics

Alpha Phi Omega Math & Science Camp — Oct. 2013
The University of Texas at Dallas, Department of Physics

SKILLS

Data & modeling: MCMC, nested sampling, computer clusters
Fluent: python, LaTeX, git
Experience with: html, IDL, Bash, R, casa, SQL, iraf, SLURM, LSF, virtual machines