

Genevieve Schroeder

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Education

Northwestern University Ph.D. in Astronomy, Advisor: Wen-fai Fong	Evanston, IL 2018–present
Northwestern University M.S., Advisor: Wen-fai Fong	Evanston, IL 2018–2020
University of Rochester B.S. in Physics and Astronomy, GPA: 3.72/4.00, cum laude – Minor in Mathematics	Rochester, NY 2014–2018

Research Interests

- **Observational Astronomy, Gamma-ray Bursts (GRBs), Radio Astronomy:** long GRBs, short GRBs, the connection between GRBs and magnetars, radio follow up of GRBs and other transients, star formation, obscured star formation, the life and death of stars

Research Experience

Northwestern University Graduate Research Assistant under Wen-fai Fong – Reducing and modeling radio observations of gamma-ray bursts and other transients	Evanston, IL Summer 2018–present
Boston University REU Student under Dan Clemens – Data processing of polarimetry observations of molecular clouds, namely L1448 and GF 9	Boston, MA Summer 2017
University of Rochester Undergraduate Research Assistant under Alice Quillen – Simulating heat profiles of satellites undergoing tidal evolution	Rochester, NY Spring 2017

Principal Investigator Telescope Proposals

- **Very Large Array** 2021B, 6 hr 2021
“Uncovering Evidence for the Birth of a Magnetar in SGRB 200522A”
- **Chandra X-ray Observatory Director’s Discretionary** 2022, 40 ks 2022
“The wide angle outflow of SGRB 210726A”

- **Very Large Array Director’s Discretionary 2022A**, 6 hr 2022
“Uncovering Evidence for the Birth of a Magnetar in GRB 211211A”
- **Very Large Array 2023A**, 6 hr 2023
“Determining the Fates of Three Neutron Star Mergers with the VLA”
- **Very Large Array 2023A**, 17 hr 2023
“Elucidating the Explosion Properties of Cosmological Short GRBs with the VLA”
- **Gemini South 2023 Fast Turnaround**, 0.95 hr 2023
“Uncovering the Mechanism Behind SGRB 210726A’s Mysterious Afterglow”
- **Very Large Array 2023B**, 2 hr 2023
“Uncovering Evidence for the Birth of a Magnetar in SGRB 180618A”

Talks and Presentations

- CfA: High Energy Seminar** April 2023
The Hunt for Magnetar Remnants: Searching for the Elusive Radio Signal from Binary Neutron Star Mergers
- MIT: Monday Afternoon Talks** April 2023
The Hunt for Magnetar Remnants: Searching for the Elusive Radio Signal from Binary Neutron Star Mergers
- HEAD 20: 20th Divisional Meeting of HEAD** March 2023
What GRBs Do in the Shadows: A Radio Bright, Dust Obscured Population of Long GRBs
- Scientific Frontiers and Synergies for the DSA-2000 Radio Camera** March 2023
The Hunt for Magnetar Remnants: Searching for the Elusive Radio Signal from Binary Neutron Star Mergers
- The Past, Present, and Future of the VLA: Celebrating 40 Years** August 2021
Using VLA Radio Observations of Dark GRBs to Uncover Obscured Star Formation
- HEAD Frontier Seminar** July 2021
Late-time Radio Observations of Short Gamma-ray Bursts Lend Insight to the Products of Binary Neutron Star Mergers
- EAS Annual Meeting** July 2021
Using Radio Observations of Dark GRBs to Uncover Obscured Star Formation
- APS Prairie Section** November 2020
Do Gamma-ray Bursts Produce Magnetars

Students Mentored

- **Maura Lally** at Northwestern University Summer 2020
Summer Research Project (SURG) - Graduate Mentor
- **Maura Lally** at Northwestern University Winter 2021–Spring 2021
Senior Thesis - Graduate Mentor

Publications

FIRST AUTHOR

- **Schroeder, G.**, Rhodes, L., Laskar, T., et al., 2023, “A Radio Flare in the Long-Lived Afterglow of the Distant Short GRB 210726A: Energy Injection or a Reverse Shock from Shell Collisions?”, arXiv e-prints, arXiv:2308.10936.
- **Schroeder, G.**, Laskar, T., Fong, W.-f., et al., 2022, “A Radio-selected Population of Dark, Long Gamma-Ray Bursts: Comparison to the Long Gamma-Ray Burst Population and Implications for Host Dust Distributions”, *The Astrophysical Journal*, 940, 53.
- **Schroeder, G.**, Margalit, B., Fong, W.-f., et al., 2020, “A Late-time Radio Survey of Short Gamma-ray Bursts at $z < 0.5$: New Constraints on the Remnants of Neutron-star Mergers”, *The Astrophysical Journal*, 902, 82.

SIGNIFICANT CO-AUTHOR

- Laskar, T., Escorial, A. R., **Schroeder, G.**, et al., 2022, “The First Short GRB Millimeter Afterglow: The Wide-angled Jet of the Extremely Energetic SGRB 211106A”, *The Astrophysical Journal Letters*, 935, L11.
- Alexander, K. D., **Schroeder, G.**, Paterson, K., et al., 2021, “A Late-time Galaxy-targeted Search for the Radio Counterpart of GW190814”, *The Astrophysical Journal*, 923, 66.

NTH AUTHOR

- Dong, Y., Eftekhari, T., Fong, W.-f., et al. (incl. **Schroeder, G.**), 2023, “Mapping Obscured Star Formation in the Host Galaxy of FRB 20201124A”, arXiv e-prints, arXiv:2307.06995.
- Laskar, T., Alexander, K. D., Margutti, R., et al. (incl. **Schroeder, G.**), 2023, “The Radio to GeV Afterglow of GRB 221009A”, *The Astrophysical Journal*, 946, L23.
- Rastinejad, J. C., Gompertz, B. P., Levan, A. J., et al. (incl. **Schroeder, G.**), 2022, “A kilonova following a long-duration gamma-ray burst at 350 Mpc”, *Nature*, 612, 223.
- Fong, W.-f., Nugent, A. E., Dong, Y., et al. (incl. **Schroeder, G.**), 2022, “Short GRB Host Galaxies. I. Photometric and Spectroscopic Catalogs, Host Associations, and Galactocentric Offsets”, *The Astrophysical Journal*, 940, 56.
- Giarratana, S., Rhodes, L., Marcote, B., et al. (incl. **Schroeder, G.**), 2022, “VLBI observations of GRB 201015A, a relatively faint GRB with a hint of very high-energy gamma-ray emission”, *Astronomy and Astrophysics*, 664, A36.
- Fong, W., Laskar, T., Rastinejad, J., et al. (incl. **Schroeder, G.**), 2021, “The Broadband Counterpart of the Short GRB 200522A at $z = 0.5536$: A Luminous Kilonova or a Collimated Outflow with a Reverse Shock?”, *The Astrophysical Journal*, 906, 127.
- Lundquist, M. J., Paterson, K., Fong, W., et al. (incl. **Schroeder, G.**), 2019, “Searches after Gravitational Waves Using ARizona Observatories (SAGUARO): System Overview and First Results from Advanced LIGO/Virgo’s Third Observing Run”, *The Astrophysical Journal*, 881, L26.

- Clemens, D. P., El-Batal, A. M., Cerny, C., et al. (incl. **Schroeder, G.**), 2018, “Magnetic Field Uniformity Across the GF 9-2 YSO, L1082C Dense Core, and GF 9 Filamentary Dark Cloud”, *The Astrophysical Journal*, 867, 79.

Scholarships and Awards

- **NRAO Student Observing Support** VLA/23A-298
Determining the Fates of Three Neutron Star Mergers with the VLA
- **NRAO Student Observing Support** VLA/20B-057
Elucidating the Explosion and Jet Properties of Cosmological Short GRBs
- **NRAO Student Observing Support** VLA/19A-124
Exploring Extreme Explosions from the Cosmic Dawn

Leadership, Service Outreach

- **Astronomy Live** Spring 2021 –Summer 2021
Helped plan events, acted as host, interviewer, and talk presenter
- **Astronomy on Tap** Fall 2018 –Present
Created trivia, helped plan and run events
- **CUWiP** at Northwestern January 2019
Helped organize panels and search for local women in physics to give talks and sit on panels

Teaching Experience

- **Camp Instructor** at Roycemore School June 2021
RoyceX Camp - Astronomy Astrophysics
- **Graduate Teaching Assistant** at Northwestern University Winter 2020
General Physics - Electricity and Magnetism (PHYSICS 135-2)
- **Graduate Teaching Assistant** at Northwestern University Fall 2019
Highlights of Astronomy (ASTRON 120-0)
- **Undergraduate Teaching Intern** at University of Rochester Fall 2016
Electricity and Magnetism Mastery/Self-Paced (PHY 122-P)
- **Pre-College Experience in Physics (PREP) Instructor** at University of Rochester Summer 2016
<http://www.pas.rochester.edu/about/community-programs/prep/>

Skills

- **Computer Programming and Data Analysis:** Python, CASA, Miriad, IDL, Mathematica
- **Technical Skills:** Trained to operate the Northwestern University’s Dearborn Observatory’s 18.5 inch computerized telescope