**Amanda Wasserman**

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**EDUCATION**

**University of Illinois Urbana-Champaign** **Champaign, Illinois**

* PhD Candidate, Department of Astronomy *Aug 2021 – Present*
* *GPA: 4.00/4.00*
* Advisor: Gautham Narayan

**University of Rochester Rochester, New York**

Bachelor of Science in Physics and Astronomy *Aug 2017 – May 2021*

Minor in Mathematics

* *GPA: 3.88/4.00*
* *Cum Laude* with Highest Distinction
* Thesis Title: *Using Machine Learning to Identify Transients in the DESI Survey*
* Thesis Advisor: Segev BenZvi

**RESEARCH INTERESTS**

Time-domain astronomy; Transients in large surveys; SN Ia Cosmology; Machine learning

**RESEARCH EXPERIENCE**

**Graduate Researcher** | University of Illinois Urbana Champaign**Champaign, Illinois**

*Advisor: Gautham Narayan Aug 2021 – Present*

* Improving LSST spectroscopic follow-up in the time-domain with an active learning loop

**Undergraduate Researcher** | University of Rochester **Rochester, New York**

*Advisor: Segev BenZvi Aug 2018 – May 2021*

* Utilized machine learning techniques to identify transients in the Dark Energy Spectroscopic Instrument Survey

**Undergraduate Researcher** | Columbia University **Gran Sasso, Italy**

*Advisor: Elena Aprile May 2019 – Aug 2019*

* Modeled liquid xenon purification for XENONnT

**PUBLICATIONS**

* Aleo, P. D., et al. incl. **Wasserman,** **A.** 2022, ApJ, arXiv:2211.07128 *Nov* *2022*
* Kilpatrick, C., et al. incl. **Wasserman, A.** 2022, MNRAS *Aug* *2022 (Submitted)*

**FELLOWSHIPS AND GRANTS**

* Center for Astrophysical Surveys Graduate Fellow *2022-2023*
* LSSTC Wasabi Enabling Science Grant *2022*

**HONORS AND AWARDS**

* Janet Fogg Prize for department service, University of Rochester *2021*
* Undergraduate Teaching Award, University of Rochester *2021*
* Chambliss Astronomy Achievement Student Award Honorable Mention, AAS *2021*
* Joseph C. Wilson "Change" Scholarship, University of Rochester *2017*
* Ruth Weltman Memorial Begun Scholarship, JFSA of Cleveland *2017*

**TELESCOPE PROPOSALS**

* Gemini Observatory – 22 hours awarded (PI) - The Young Supernova Experiment: Creating the Reference low‐z Supernova Sample for Cosmology

**OBSERVING EXPERIENCE**

* Cerro-Tololo Inter-American Observatory with DECam (11 nights)
* University of Rochester C.E.K. Mees Observatory 24 inch Cassegrain Telescope (6 nights)

**SUMMER SCHOOL**

* La Serena School for Data Science (*La Serena, Chile*) *Aug* *2023*
* Michigan Cosmology Summer School (*Ann Arbor, MI*) *Jun* *2023*
* Zwicky Transient Facility Summer School (*Minneapolis, MN*) *Jul* *2022*

**CONFERENCES AND PRESENTATIONS**

* **A. Wasserman**, *Spectroscopic Follow-up in the Time Domain*, LSSTC Board Meeting, talk, Oct 2022
* **A. Wasserman**, *Selecting LSST Transients for Spectroscopic Follow-up with an Active Learning Loop*, LSST Project and Community Workshop, poster, Aug 2022
* **A. Wasserman**, V. Tiwari, S. BenZvi, *Developing a Transient Identification Pipeline for DESI Using Machine Learning*, CUWiP Virtual, talk, Jan 2021
* **A. Wasserman**, V. Tiwari, S. BenZvi, *Using Machine Learning to Develop a Transient Identification Pipeline for DESI,* AAS 237th Meeting, poster, Jan 2021
* **A. Wasserman**, D. Gandhi, S. BenZvi, *Using Machine Learning to Identify Astrophysical Transients in the DESI Survey*, APS April Meeting, poster, 2020
* **Wasserman**, *Liquid Xenon Purification Modeling for XENONnT*, CUWiP Pittsburgh, talk, Jan 2020

**MENTORING, TEACHING, AND ADVISING EXPERIENCE**

**Undergraduate Student**

Henna Abunemeh (University of Chicago), Research Mentor, May 2023 – present

* Reducing supernova spectra, studying supernova uniqueness and population diversity with spectroscopy

**University of Illinois Urbana-Champaign** **Champaign, Illinois**

*Teaching Assistant, Department of Astronomy Aug 2021 – May 2022*

* ASTR 310: Computing in Astronomy, Spring 2022
* ASTR 350: The Big Bang, Black Holes, and the End of the Universe, Fall 2021

**University of Rochester Rochester, New York**

*Teaching Intern, Department of Physics & Astronomy Jan 2019 – May 2021*

* AST 104: Planets, Life and Civilizations, Spring 2021
* AST 105: Introduction to the Milky Way Galaxy, Fall 2020
* PHY 113P: General Physics I (Self Paced), Spring 2020
* AST 111: The Solar System and its Origin, Fall 2019
* AST 102: Relativity, Black Holes, and the Big Bang, Spring 2019

**University of Rochester Rochester, New York**

*Peer Advisor (Physics & Astronomy), College Center for Advising Services Aug 2020 – May 2021*

* Advised and counseled undergraduate students on course selection, major declaration, research involvement, independent study, study abroad, and any other academic queries

**University of Rochester Rochester, New York**

*Pre-College Experience in Physics Instructor, Department of Physics & Astronomy May 2018 – Aug 2018*

* Created and implemented a three-week physics curriculum for twenty high school girls teaching mechanics, electricity & magnetism, and other physics topics through lectures, demonstrations, and activities

**LEADERSHIP, SERVICE, AND OUTREACH**

**Astronomy on Tap, Urbana-Champaign** **Champaign, Illinois**

*Organizer Apr 2022 – Present*

* Coordinated speakers and location, advertised, and set up for monthly outreach talks

**Girl’s Astronomy Summer Camp Champaign, Illinois**

*Organizer Mar 2022 – Present*

* Planned camp activities, presented introductory astronomy topics, led coding activities

**Society for Equity in Astronomy, University of Illinois Urbana-Champaign** **Champaign, Illinois**

*Chair Aug 2021 – Present*

* Organized graduate to undergraduate mentorship program, outreach, and colloquium teas
* Mentored three undergraduate students; aided in research involvement, class selection, and graduate school planning

**Astrofest, University of Illinois Urbana-Champaign** **Champaign, Illinois**

*Organizer Feb 2022 – Apr 2022*

* Organized speakers and poster presenters, coordinated poster judging, and advertised for an annual showcase of research in astronomy

**Society of Physics Students, University of Rochester Rochester, New York**

*President, Secretary, Social Chair, Freshman Ambassador Aug 2017 – May 2021*

* Presided over meetings, implemented ideas for events, coordinated co-sponsorships and grants, and collaborated with the department and school to fund and hold events

*Tutor Aug 2019 – Dec 2019*

* Tutored introductory physics classes once a week for two hours

**Society of Women in Astronomy and Physics, University of Rochester Rochester, New York**

*Business Manager, Member Aug 2018 – May 2021*

* Co-founded the organization; managed funding

**C.E.K. Mees Observatory University of Rochester Naples, New York**

*Student Tour Guide May 2018 – Aug 2018*

* Presented to the public on the history of the observatory, astronomy facts, and current events
* Led observation tours by operating a 24-inch Cassegrain telescope and giving constellation tours

**ARTICLES**

* **A. Wasserman**, *Using Machine Learning to Identify Transients in the DESI Survey*, Astrobites, 2021
* M. Griston, **A. Wasserman**, *University of Rochester SPS Chapter Responds to Black Lives Matter: How We Need to Change*, SPS Observer, 2020

**PROFESSIONAL MEMBERSHIPS**

* Phi Beta Kappa Academic Honor Society (ΦBK)
* Phi Kappa Phi Honor Society ()
* Sigma Pi Sigma, National Physics Honor Society ()
* American Astronomical Society (AAS)

**ACTIVE COLLABORATIONS**

* Dark Energy Science Collaboration (LSST/DESC)
* Young Supernova Experiment (YSE)

**SKILLS**

**Computer Programming and Data Analysis:**

* Python, Java, Fortran, C++, C#, Mathematica, SQL, ROOT
* UNIX shell scripting (Bash)
* SAOImage DS9, CCDSoft, CCDStack, TheSkyX, Igor Pro

**Document Editing:**

* LaTeX, Microsoft Office, Google Workspace

**Technical Skills:**

* Working in a clean room, soldering, working with photomultipliers
* Operating a 24-inch computerized Cassegrain telescope

**Languages:**

* English (native), Chinese (Mandarin, basic)