Thomas Minh Do

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https://github.com/thomasdoastro

Education

Doctor of Philosophy Degree | August 2023– Present
Michigan State University, East Lansing, MI

- Astronomy
- Relevant Coursework
    - Radiative Processes (Fall 2023)
    - Stellar Astrophysics (Spring 2024)

Bachelor of Science Degree | September 2018 – June 2022
University of Washington – Seattle, Seattle, WA

- Cumulative GPA: 3.91/4.00
- Astronomy and Physics
- Relevant Coursework
    - The Contents of Our Galaxy (Autumn 2019)
    - Extragalactic Astronomy and Cosmology (Winter 2020)
    - Intro to Programming for Astronomical Applications (Winter 2020)
    - High Energy Astrophysics (Winter 2021)
    - Introduction to Astronomical Data Analysis (Spring 2021)
    - Cosmology (Autumn 2021)
- Dean's List, awarded September 2018 – June 2022
- Washington State Opportunity Scholarship (WSOS), awarded June 2018

Research Experience

Graduate Researcher | Michigan State University: Astronomy Dept. | August 2024 – Present

- Collaborating with Professors Jay Strader and Laura Chomiuk to identify intermediate and supermassive black holes in local group galaxies and globular clusters. Radio data from the VLA will be used for this project

Undergraduate/Post-Baccalaureate Researcher | University of Washington – Seattle: Astronomy Dept. | October 2020 – June 2021 (Undergraduate), October 2021 – June 2022 (Undergraduate), and June 2022 – August 2023 (Post-Baccalaureate)

- Collaborated with Professor Jessica Werk and the Werk SQuAD (Student Quasar Absorption Diagnosticians) to analyze UV and visible light spectra. More recently, I analyzed galaxy inclinations and orientations to find a correlation between galaxy morphology and detected column densities. Used Python scripts/GUI and HST/COS data

Undergraduate/ Post-Baccalaureate Researcher | Harvard and Smithsonian Center for Astrophysics | June 2021 – August 2021 (Undergraduate), September 2021 – June 2022 (Undergraduate), and June 2022 – August 2023 (Post-Baccalaureate)

- Collaborated with Professor Federico Fraschetti with modeling the energy spectra of charged particles accelerated by interplanetary shocks. Used IDL and Python to produce plots and fits to ACE/EPAM data

Post-Baccalaureate Researcher | University of Washington – Seattle: Astronomy Dept. | October 2022 – August 2023

- Collaborated with Dr. Yakov Faerman on studying non-thermal sources of pressure within cold gas clouds within the CGM. Used Python scripts to produce relevant plots.

Presentations

Model for Particles Accelerated at Interplanetary Shocks starting with a Power Law Energy Spectrum

- Thomas Do, Federico Fraschetti, Manpreet Singh | August 8, 2021 | Harvard and Smithsonian Center for Astrophysics

Model for the Energetic Particles Spectrum at Interplanetary Shocks resulting from Acceleration and Escape sourced by a Preexisting Population with Power Law Energy Spectrum

- Thomas Do, Federico Fraschetti, Manpreet Singh | December 14, 2021 | American Geophysical Union
- Thomas Do, Federico Fraschetti, Manpreet Singh | May 20, 2022 | University of Washington Undergraduate Research Symposium

The two-dimensional distribution of the multi-phase CGM in the CGM^2 survey

- Thomas Do, Ally Payne, Alexandre Ramirez | January 6, 2023 | American Astronomical Society

Other Work Experience

Instructor for ISP-205L | Michigan State University: Astronomy Dept.
August 2023 – Present

- Conducted lectures, guided group activities, addressed student questions/concerns, and graded weekly lab reports for ~80 student classes

Grader for Astronomy 301 | University of Washington – Seattle: Astronomy Dept.
January 2020 – March 2020 and January 2023 – March 2023

- Graded student quizzes and provided written feedback to supplement their learning

Teaching Assistant for Astronomy 150 | University of Washington – Seattle: Astronomy Dept.
October 2022 – December 2022

- Interacted with students in online discussions to support their learning

Skills

Git Hub: Version control
Data Analysis: Python coding (Pandas and NumPy packages), IDL coding
Scholarly Writing: LaTeX