

Julio M. Morales

EDUCATION

NEW MEXICO STATE UNIVERSITY

PH.D IN ASTRONOMY

Aug 2022 - Present | Las Cruces, NM

UNIVERSITY OF MASSACHUSETTS AMHERST

B.S IN PHYSICS AND ASTRONOMY

May 2022 | Amherst, MA

College of Natural Sciences

GPA: 3.4/4.0

CONTACT INFO

Website: JulioM1823.com

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Number: (978) 467-6662

SKILLS

PROGRAMMING

- Python • GitHub • Git • \LaTeX
- HTML

SPOKEN LANGUAGES

- English (native fluent)
- Spanish (native proficient)

RESEARCH EXPERIENCE

POST-BACCALAUREATE RESEARCH | AMHERST COLLEGE

July 2022 - Sep 2022 | Amherst, MA

- Developed Python code to optimize photometric measurements for direct-imaging.
- Used models to interpret data of weakly-accreting T-Tauri/Herbig stars.
- Traveled to present results of research (AAS 2022 & Cool Stars 21).
- Drafted a first-authored paper of results.

SENIOR THESIS | UMASS AMHERST

Sep 2021 - May 2022 | Amherst, MA

- Title: Accretion Variability in Transitional Disk Host-Stars: Second-to-Minute Timescale $H\alpha$ Variability in the Giant Accreting Protoplanet Survey
- Advisor: Professor Katherine B. Follette

FIVE COLLEGE ASTRONOMY DEPARTMENT SUMMER INTERNSHIP | AMHERST COLLEGE

July 2021 - Sep 2021 | Amherst, MA

- Developed Python code to perform optimized aperture photometry on survey data.
- Planned and ran outreach event.

TELESCOPE OBSERVING EXPERIENCE

SOUTHERN ASTROPHYSICAL RESEARCH (SOAR) TELESCOPE

Oct 2022 | Cerro Pachón, Chile

AMHERST COLLEGE OBSERVATORY

Oct 2022 | Amherst, Massachusetts

CONFERENCES/PRESENTATIONS

- SACNAS Diversity in STEM Conference | San Juan, PR (presenting in Nov 2022)
- 2022 Northeast Star and Planet Formation Meeting | Middleton, CT (attended in July 2022)
- Cool Stars Conference | Toulouse, FR (presented in July 2022)
- American Astronomical Society Conference 240 | Pasadena, CA (presented in June 2022)
- Amherst College Physics and Astronomy Senior Thesis Talk | Amherst, MA (presented in May 2022)
- Five College Astronomy Department Thesis Picnic Talk | Amherst, MA (presented in May 2022)
- SACNAS Diversity in STEM Conference | (Virtual) (attended in Nov 2021)
- Amherst College Summer Research Poster Session | Amherst, MA (presented in Sep 2021)

- Five College Astronomy Department Research Presentation | Amherst, MA (presented in Aug 2021)

OUTREACH

RESEARCH EXPERIENCE FOR UNDERGRADUATES Q&A PANEL

Panelist | September 2021 | Amherst, Massachusetts

EXPLORE THE SOLAR SYSTEM: AMAZING FACTS & HISTORY OF THE SOLAR SYSTEM

Outreach Coordinator | July 2021 | Northampton, Massachusetts

MODERN ASTRONOMY SUMMER PRE-COURSE

Observing Night Assistant | July 2021 | Amherst, Massachusetts

TEACHING HISTORY

ASTRONOMY HELP DESK | UMass Amherst

Tutor | 2021-2022 | Amherst, Massachusetts

TRIO UPWARD BOUND | UMass Boston

Instructor/Tutor/TA | 2020 | Boston, Massachusetts

TRIO UPWARD BOUND | UMass Boston

Tutor/TA | 2019 | Paxton, Massachusetts

AWARDS/HONORS

- AAS Chambliss Astronomy Achievement Award Competition (Medalist) | 2022
- Webber Voyager Graduate Fellowship | 2022 | \$7,500/yr
- SACNAS Travel Scholarship | 2022
- UMass Amherst Deans List Honors | 2021-2022
- John and Abigail Adams Scholarship | 2017 | \$1,400/yr

PUBLICATIONS

- [1] W. O. Balmer, K. B. Follette, L. M. Close, J. R. Males, R. J. De Rosa, J. I. A. Redai, A. Watson, A. J. Weinberger, K. M. Morzinski, J. Morales, K. Ward-Duong, and L. Pueyo. Improved orbital constraints and h-alpha photometric monitoring of the directly imaged protoplanet analog hd 142527 b, 2022.
- [2] K. B. Follette, L. M. Close, M. J. R., K. Ward-Duong, W. O. Balmer, J. A. Redai, J. M. Morales, C. Sarosi, B. Dacus, R. J. De Rosa, F. G. Toro, C. Leonard, B. Macintosh, K. M. Morzinski, W. Mullen, J. Palmo, N. Saitoti, Raymond, E. Spiro, H. Treiber, J. Wang, D. Wang, A. Watson, and A. J. Weinberger. The giant accreting protoplanet survey (gaplanets) - results from a six year campaign to image accreting protoplanets, 2022.
- [3] J. M. Morales, W. O. Balmer, and K. B. Follette. H-alpha variability in the giant accreting protoplanet survey, 2023 (in progress).