

R. MICHAEL JENNINGS

robertmjenningsjr@berkeley.edu

michaeljennings11.github.io

EDUCATION

Johns Hopkins University - Baltimore, MD *August 2021 -*
PhD Astronomy and Astrophysics (Candidate)

University of California, Berkeley - Berkeley, CA *August 2018 - May 2021*
B.A. Physics, B.A. Astrophysics
Advisors: Yuan Li, Eugene Chiang, Eliot Quataert
GPA: 3.725 *Honors*

Diablo Valley College - Pleasant Hill, CA *January 2016 - July 2018*
A.S. Physics, A.S. Mathematics
Cert. of Achievement C++ Programming, Cert. of Achievement Japanese Language
GPA: 3.835 *Honors*

RESEARCH EXPERIENCE

Constraints on Transport Processes from Kelvin-Helmholtz Generated Turbulence in Jellyfish Galaxy Tails
Advisor: Yuan Li *December 2020 - Present*

Determining the Obliquity of Fragments Formed Within Self-Gravitating Discs (*Honors Thesis*)
Advisor: Eugene Chiang *August 2020 - Present*

Simulating Mixing Layers in the ISM through the Kelvin-Helmholtz Instability
As ULab Mentor *September 2019 - May 2020*

Simulating Thermal Instability and Multiphase Gas in the Interstellar Medium
Advisors: Yuan Li, Eliot Quataert *January 2019 - December 2020*

PUBLICATIONS

[2] **Jennings, R. M.**; Chiang, E.; *Primordial Obliquities of Brown Dwarfs and Super-Jupiters from Fragmenting Gravito-Turbulent Discs*, in prep

[1] **Jennings, R. M.**; Li, Y.; *Thermal Instability and Multiphase Gas in the Simulated Interstellar Medium with Conduction, Viscosity and Magnetic Fields*, submitted to MNRAS (2020), [arXiv:2012.05252](https://arxiv.org/abs/2012.05252)

SKILLS

Computer Languages	C/C++, Python, Linux/Unix, L ^A T _E X, bash, git, ADQL, HTML, CSS
Parallel Computing	MPI, OpenMP
Software	Athena/Athena++, Enzo, yt
Supercomputing	NASA Pleiades, Berkeley Research Computing (BRC) Savio, NERSC Cori

AWARDS AND SCHOLARSHIPS

Dorothea Klumpke Roberts Prize	2021
James Monroe McDonald Scholarship	2020-2021
Ensign-Hornbeck Scholarship	2020-2021
DLMC Foundation Scholarship	2020-2021

George A. Douglass Scholarship	2019-2021
Albert L. Ehrman Memorial Scholarship	2019-2020
Odell Wilson Scholarship	2019-2020

TALKS, POSTERS AND OTHER WRITINGS

- [7] *Simulating Super-Jupiter Obliquities*, UC Berkeley, February 2021. (short lunch talk)
- [6] *Thermal Instability and Mechanisms for Small Cloud Production*, Center for Computational Astrophysics, February 2021. (invited discussion talk)
- [5] *Thermal Instability and Multiphase Gas in the ISM*, University of North Texas, January 2021. (talk)
- [4] Lee, M.; **Jennings, R. M.**; *Large Scale Structure Evolution With Various Cosmologies: Exploring Particle Mesh Cosmological Simulations*, ASTRON C161 Final Project, Berkeley, CA, May 2020. (class project)
- [3] Sunseri, J.; Tausik, N.; Zezulka, S.; Wellnitz, G.; Lera, I.; Deak, B.; Chan, T. Y.; **Jennings, R. M.**; *Computational Analysis of Mixing Layers in the Interstellar Medium*, ULab poster session, Berkeley, CA, May 2020. (poster)
- [2] **Jennings, R. M.**; Li, Y.; Quataert, E.; *Thermal Instability In The Interstellar Medium And The Implementation of Anisotropic Conduction in Athena++*, Astronomy Poster Summer Intern Symposium, Berkeley, CA, August 2019. (poster)
- [1] Mo, S.; Raizada, S.; Ott, J.; Dicks, P.; Kofford, S.; **Jennings, R. M.**; *Interplanetary Radiation Harnessing Voltaic System*, ULab poster session, Berkeley, CA, May 2019. (poster)

TEACHING AND WORK EXPERIENCE

Mentor, ULab Theoretical Astrophysics Group University of California, Berkeley	<i>September 2019 - May 2020</i>
Mentor, ULab Particle Physics Group University of California, Berkeley	<i>September 2018 - May 2019</i>
Technician, Physics Laboratory Diablo Valley College	<i>February 2017 - June 2018</i>
Astronomy Tutor, Physical Science Department Diablo Valley College	<i>August 2016 - May 2018</i>

SERVICE AND OUTREACH

Observatory Deck Docent and Telescope Operator Chabot Space and Science Center, Oakland	<i>August 2017 - December 2017</i>
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REFERENCES

Yuan Li
Professor, Department of Physics, University of North Texas
Email: yuan.li@unt.edu

Eugene Chiang
Professor, Department of Astronomy & Department of Earth and Planetary Science
Email: echiang@astro.berkeley.edu

Mariska Kriek
Professor, Department of Astronomy
Email: mkriek@berkeley.edu