

Timeline of Graduate Studies

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Fall 2014 - Spring 2015: Began graduate studies, and worked as a Teaching Assistant.

Summer 2015: Began work as a graduate Research Assistant with Dr. Benjamin P. Brown. *Awarded CU Boulder's 3-year George Ellery Hale Graduate Student Fellowship.*

Fall 2015: Hale fellowship funding began.

January 2016: Completed department qualifier Comprehensive Exam I with highest marks in cohort.

Spring-Summer 2016: Studied fundamental compressible, stratified convection simulations.

Fall 2016: Passed second and final departmental Ph.D. qualifier, Comprehensive Exam II. This exam was essentially a master's thesis defense.

Spring 2017: Improved work from comprehensive exam II and submitted it to Physical Review Fluids (published in Summer 2017). Worked on a side project analyzing stellar flares on flare star YZ CMi, but decided to return to convection work for thesis. Finished graduate coursework.

Summer - Fall 2017: Started two projects in convection: one studying internally heated, stratified convection, and another studying how to use boundary value problems (BVPs) to fast-forward convective solutions in order to save computational time.

Spring 2018: Submit paper on BVPs to referees (February 2018). Continue work on internally heated convection. Getting married April 2018.

Summer 2018: Finalize work on internally heated convection, submitting results to the Astrophysical Journal by end of summer. *End of funding of Hale fellowship.*

Fall 2018: *Start of proposed funding from NESSF.* Determine proper atmospheric setup for simulations with realistic opacity and determine how to control Mach number of these simulations. Run first simulations with realistic opacities.

Spring 2019: Run final realistic opacity simulations, analyze and finalize results on the effects of Mach number on these simulations. Submit to The Astrophysical Journal.

Summer-Fall 2019: Determine proper atmospheric setup for simulations with hydrogen ionization and recombination. Run simulations and analyze data. Submit results to the Astrophysical Journal.

Spring 2020: Write thesis, which will cover the work of the five published papers above. Defend thesis and graduate with Ph. D. in Astrophysical & Planetary Sciences.