

Justin Michael Brown

Graduate Institution: University of California - Santa Cruz

Graduate Discipline: Astrophysics

Hometown: San Jose, California

Relevant SC Research: Nuclear Physics



Research Interest:

As a stellar astrophysicist, my research interests span from the formation and evolution of stars to fluid dynamics and nucleosynthesis. At UCSC, I study three dimensional models of thermohaline convection and semi-convection in the astrophysical parameter space to attempt to develop a model for the thermal and compositional transport due to these processes in stars. I also look at the nucleosynthetic yields of stars to determine the origins of the elements and to monitor how processes such as semi-convection alter the nucleosynthesis of these stars.

About Me:

In my time at the University of California Santa Cruz, I have become involved with several of the astronomy graduate student activities on campus, including the Program for Inmate Education and telescope outreach. The Program for Inmate Education is a group of graduate students that teach algebra to inmates at the Santa Cruz Main Jail. On campus, I've joined the telescope outreach group, which holds public observing nights. We set up the telescopes and show non-scientists some of the more visually interesting astronomical sights.

After completing my PhD, I plan to pursue one or two postdoctorate programs before applying to work as a researcher in computational physics or astrophysics. It is my long-term goal to work in a national lab as a leader of a research team with a focus either on nuclear physics or fluid dynamics.

During my undergraduate career, I also received a bachelor's degree in music composition. In my spare time, I compose music, orchestral and electronic. I recently wrote the score for a video game being produced as part of a psychology experiment at Syracuse University.



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