

Kevin Lee Moore

CONTACT INFORMATION	219 Walnut Ave Apt A Santa Cruz, CA 95060 USA	<i>Mobile:</i> 484-574-0874 <i>E-mail:</i> klmoore@soe.ucsc.edu
EMPLOYMENT	University of California, Santa Cruz , Santa Cruz, CA USA Postdoctoral Researcher October 2013 - <ul style="list-style-type: none">• Theoretical Astrophysics at Santa Cruz (TASC) Postdoc working with Pascale Garaud in the Applied Math & Statistics Dept. and Jonathan Fortney in the Astronomy & Astrophysics Dept.• Research areas: Computational stellar/planetary evolution, mixing and transport processes in stars, detonation physics, asteroseismology	
EDUCATION	University of California, Santa Barbara , Santa Barbara, CA USA Ph.D., Physics, September 2013 <ul style="list-style-type: none">• Advisor: Lars Bildsten• Thesis: Stellar Explosions from Accreting White Dwarfs Certificate in College and University Teaching, September 2013 M.A., Physics, May 2010 <ul style="list-style-type: none">• GPA: 4.0 Cornell University , Ithaca, NY USA B.A., Physics, June 2007 <ul style="list-style-type: none">• With distinction in all subjects, GPA: 3.9	
REFEREED JOURNAL PUBLICATIONS	<p>S. Valenti, F. Yuan, S. Taubenberger, K. Maguire, A. Pastorello, S. Benetti, S. J. Smartt, E. Cappellaro, D. A. Howell, L. Bildsten, K. Moore, M. Stritzinger, J. P. Anderson, S. Benitez-Herrera, F. Bufano, S. Gonzalez-Gaitan, M. G. McCrum, G. Pignata, M. Fraser, A. Gal-Yam, L. Le Guillou, C. Inserra, D. E. Reichart, R. Scalzo, M. Sullivan, O. Yaron, and D. Young. PESSTO monitoring of SN 2012hn: further heterogeneity among faint type I supernovae. 2014. <i>Monthly Notices of the Royal Astronomical Society</i>, Volume 437, Issue 2.</p> <p>Moore, K., Townsley, D., and Bildsten, L. The Effects of Curvature and Expansion on Helium Detonations on White Dwarf Surfaces. 2013. <i>The Astrophysical Journal</i>. Volume 776, Issue 1.</p> <p>Moore, K. and Bildsten, L. Circumstellar Shell Formation in Symbiotic Recurrent Novae. 2012. <i>The Astrophysical Journal</i>. Volume 761, Issue 2.</p> <p>Dilday, B.; Howell, D. A.; Cenko, S. B.; Silverman, J. M.; Nugent, P. E.; Sullivan, M.; Ben-Ami, S.; Bildsten, L.; Bolte, M.; Endl, M.; Filippenko, A. V.; Gnat, O.; Horesh, A.; Hsiao, E.; Kasliwal, M. M.; Kirkman, D.; Maguire, K.; Marcy, G. W.; Moore, K.; Pan, Y.; Parrent, J. T.; Podsiadlowski, P.; Quimby, R. M.; Sternberg, A.; Suzuki, N.; Tytler, D. R.; Xu, D.; Bloom, J. S.; Gal-Yam, A.; Hook, I. M.; Kulkarni, S. R.; Law, N. M.; Ofek, E. O.; Polishook, D.; and Poznanski, D. PTF 11kx: A Type Ia Supernova with a Symbiotic Nova Progenitor. 2012. <i>Science</i>. Volume 337, Issue 6097, Page 942.</p>	

Townsley, D.; **Moore, K.**; and Bildsten, L. Laterally Propagating Detonations in Thin Helium Layers on Accreting White Dwarfs. 2012. *The Astrophysical Journal*. Volume 755, Issue 1.

Bildsten, L.; Paxton, B.; **Moore, K.**; Macias, P. Acoustic Signatures of the Helium Core Flash. 2012. *The Astrophysical Journal Letters*. Volume 744, Issue 1.

Moore, K. and Bildsten, L. Clearing the Gas from Globular Clusters and Dwarf Spheroidals with Classical Novae. 2011. *The Astrophysical Journal*. Volume 728, Issue 2, Page 81.

AWARDS

University of California, Santa Barbara

- Worster Fellowship - 2011
- John Cardy Award (highest grades in first-year courses) - 2008
- Hanan Baddar Graduate Fellowship - 2008

INVITED TALKS

2014 - Hebrew University of Jerusalem - *Helium Shell Detonations from Accreting White Dwarfs*

2013 - University of California, Santa Cruz - *Quenching Surface Helium Detonations on White Dwarfs*

2012 - University of Alabama - *Quenching Surface Helium Detonations on White Dwarfs*

2012 - Santa Barbara Museum of Natural History - *Exploding Stars and Other Things That Go Boom in the Night* (public lecture)

CONTRIBUTED TALKS

Observational Signatures of Type Ia Supernova Progenitors II

- 2013 - Outcomes of Helium Shell Detonations

Theoretical Astrophysics in Southern California (TASC) Meetings

- 2012 - Quenching Helium Detonations on White Dwarfs
- 2011 - Observational Signatures of the Helium Core Flash
- 2010 - Helium Detonations on White Dwarfs
- 2009 - Hydrodynamic Helium Burning Events
- 2008 - Clearing the Gas from Globular Clusters with Novae

Palomar Transient Factory (PTF) Meetings

- 2013 - Expansive Effects in Laterally Propagating Helium Detonations
- 2012 - Shell Formation in Symbiotic Systems
- 2010 - Laterally Propagating Helium Detonations

Nova Workshop - Caltech (2012)

- Novae and Supernovae in Symbiotic Systems

Fireworks Conference - Caltech (2011)

- New Results for Helium Detonations: Speeds and Nucleosynthesis

POSTERS

Wild Stars Conference - U. Arizona (2009)

- Clearing the Gas from Globular Clusters with Novae

WORKSHOPS
ATTENDED

- Institute for Science and Engineer Educators, UCSC** Santa Cruz, CA
- Inquiry Institute (Monterey, CA)* **March 2014**
- Intensive 4-day workshop on teaching STEM topics through inquiry
- Design Institute (Santa Cruz, CA)* **April 2014**
- 3-day workshop on designing inquiry activities in STEM
- University of California, Santa Barbara** - Santa Barbara, CA
- MESA Summer School* **August 2013**
- Served as a ‘Super TA’ for the second weeklong workshop on the MESA stellar evolution code
- MESA Summer School* **August 2012**
- Attended (and TA’d for) the first weeklong workshop on the MESA stellar evolution code
- Summer Teaching Institute for Associates (STIA)* **June 2011**
- Attended weeklong workshop on effective teaching strategies in preparation for teaching my own course in the Summer 2011 term

WORKSHOPS
GIVEN

- Hebrew University of Jerusalem** - Jerusalem, Israel
- MESA Bootcamp* **January 2014**
- Gave 2-day workshop on using MESA for beginners - targeted to grad students, postdocs, and professors (~ 15 participants)
- Pomona College** - Claremont, CA
- MESA Bootcamp* **January 2013**
- Gave daylong workshop on using MESA for undergrads taking stellar evolution (~ 8 participants)
- California Institute of Technology** - Pasadena, CA
- MESA Bootcamp* **September 2012**
- Gave daylong workshop on using MESA for beginners - targeted to grad students, postdocs, and professors (~ 15 participants)

TEACHING
EXPERIENCE

- University of California, Santa Barbara** - Santa Barbara, CA
- Instructor - UCSB* **August - September 2011**
- Taught calculus-based intro physics course (Phys 2) during summer session as the instructor of record
 - Used research-based interactive engagement strategies during class (discussions, interactive demos, etc.)
- Instructor - School for Scientific Thought* **September - October 2010**
- Designed and taught course on relativity for high school students from Santa Barbara area (weekly 2 hr classes, lunch with students afterwards)
 - Visited local high schools to pitch course to students
 - Helped train future instructors for SST in later years
- Teaching Assistant*
- Phys 232 - Stellar Evolution (graduate)
 - Winter 2012, ~ 15 students
 - Wrote assignments integrating computational stellar evolution activities using MESA into weekly homeworks, advised students during individual final projects using MESA.

- Phys 120 - Physics of California
 - Fall 2009, ~ 15 students
 - Graded homeworks & exams, and held office hours (3 hr/wk)
- Phys 215A&B - Quantum Mechanics (graduate)
 - Fall 2008 & Winter 2009, ~ 30 students each term
 - Graded homeworks & exams and held office hours (3 hr/wk)
- Phys 131 - Intro to General Relativity
 - Spring 2008, ~ 10 students
 - Graded homeworks & exams and held office hours (3 hr/wk)
- Astro 1 - Intro to Astronomy
 - Fall 2007 & Winter 2008, ~ 300 students each term
 - Taught three weekly sections, graded homeworks & exams, and held office hours (3 hr/wk)

Private Tutor

November 2010 - October 2013

- Tutor students (typically in high school & college) in math, physics, and computer science classes (~ 2 hr/wk).

Cornell University, Ithaca, NY

Course consultant - CS 100

September 2004 - May 2006

- ~ 300 students each semester
- Held weekly office hours, graded exams & weekly assignments, and co-taught (with TA) weekly lab sections.

OUTREACH ACTIVITIES

Graduate Assistant Coordinator - CSEP

January - September 2013

- Served as an advisor to undergraduates in summer research internship programs [EUREKA](#) & [UC LEADS](#) and their mentors.
- Duties included interviewing program candidates, helping students find research groups, organizing professional development seminars.

Astrobites

- Writing glossaries (star types & outburst classification) for astro-ph digest website, www.astrobites.com

Santa Barbara Astronomical Unit

- Gave a talk on supernovae targeted at local amateur astronomers
- Participated in star parties to help familiarize the public with astronomy
- Visited local primary/secondary schools to introduce astronomy and talk about careers in science

SOFTWARE SKILLS

- Fortran, Ruby, Python, C++, Java, Mathematica, Modules for Experiments in Stellar Astrophysics (MESA), Tioga (plotting), FLASH (hydro), yt(visualization)
- Experience compiling and running software on the Hyades supercomputer at UCSC, Triton supercomputer at the San Diego Supercomputing Center, as well as various XSEDE machines (Kraken, Lonestar).

LANGUAGES

English - native
Japanese - intermediate