CLAIRE E. DORMAN

Department of Astronomy & Astrophysics
University of California at Santa Cruz
1156 High St.
Santa Cruz, CA 95064

E-mail: cdorman@ucolick.org
Phone: (831) 459-2774
Web: http://ucolick.org/~cdorman/

EDUCATION

2015 — University of California at Santa Cruz
Ph.D. (anticipated), Astronomy & Astrophysics
Adviser: Professor Puragra Guhathakurta

2012 — University of California at Santa Cruz
M.S., Astronomy & Astrophysics

2009 — University of California at Berkeley
B.A., Physics, 4.00 GPA

2007 — Ohlone College
A.S., Physics, 4.00 GPA

RESEARCH EXPERIENCE

2009-present — Graduate Student Researcher (Adviser: Puragra Guhathakurta), UC Santa Cruz Department of Astronomy & Astrophysics (A & A)
Characterizing the structure of the Andromeda Galaxy via resolved stellar population photometry and kinematics

2008 — Undergraduate Researcher (Adviser: Carl Haber), Lawrence Berkeley National Laboratory
Designed software for the Library of Congress to digitize the audio data in wax cylinders

2008 — NSF REU Intern (Advisers: Andrea Ghez and Sylvana Yelda), UCLA Dept. of Astronomy
Searched for hypervelocity stars near their suspected birthplace at the Galactic Center

TECHNICAL SKILLS

Proficient in Python (including Numpy, Scipy, scikit-learn, Matplotlib), IDL, Unix, and LaTeX
Working knowledge of LabView, HTML, MATLAB, R, C++, SQL
Coursework in machine learning, data mining, algorithms, and statistical modeling

TEACHING EXPERIENCE

2014 — Workshop Leader, Science Internship Program
Designed and led workshops on the research process and science communication for high-school students conducting summer research at UC Santa Cruz

2013-14 — Instructor, Castilleja School
Designed and co-instructed two inquiry-based seminars on astronomical research

2012 — Instructor, UC Santa Cruz Dept. of A & A
Designed and instructed an Introduction to the Universe course for non-science majors

2010 Teaching Assistant, UC Santa Cruz Dept. of A & A
Ran discussion sections, wrote homeworks and grades, and lectured occasionally for Astronomy 5 (cosmology for non-science majors)

2009 Instructor, Elite Educational Institute
Taught Geometry, Algebra II, and SAT Math courses to 7 classes of 20 students each

2009 Course grader, UC Berkeley Dept. of Physics
Graded weekly problem sets of 50 students taking second-semester Quantum Mechanics

2008 Undergraduate Student Instructor, UC Berkeley Dept. of Physics
Led four hours of discussion section each week for Physics 8A (mechanics for biology and pre-med students); held weekly office hours; graded exams

2008 Volunteer Teaching Assistant, Castlemont High School
Helped inner-city students learn to read their textbook in a remedial afterschool biology class

2006-2007 Teaching Assistant, Ohlone College
Designed and taught discussion sections for Algebra I and Introductory Chemistry courses, as one of the school's first three teaching assistants

2006-2007 Tutor, Ohlone College Tutorial Center
Worked one-on-one with students failing algebra, chemistry, or calculus courses

ADVISING EXPERIENCE

2012-2014 Undergraduate senior thesis adviser, UC Santa Cruz Dept. of A & A
Students: Christopher Powers, Mykhaylo Shumko, and Amanda Ausman

2010-2013 Science Internship Program mentor, UC Santa Cruz Dept. of A & A
Mentored high school students Amy Cohn, Sanika Kulkarni, and Christina Jansen as they completed research projects through a full time summer internship program.

SCHOLARSHIPS & FELLOWSHIPS

2011-14 National Science Foundation Graduate Research Fellowship
Tuition and stipend for three years

2009-15 Eugene Cota-Robles Fellowship, UC Santa Cruz
Tuition and stipend for three years

2008 Ruth-Mary Larimer Scholarship, UC Berkeley Dept. of Physics
Awarded to top student in the junior class

AWARDS & HONORS

2012 Student Award for Excellence in Mentoring, UC Santa Cruz Dept. of A & A
Awarded annually to a graduate student for outstanding work mentoring undergraduate research

2010 Excellence in Teaching Award, UC Santa Cruz Dept. of A & A

Awarded annually to a graduate student for outstanding work as a teaching assistant

2009 Department Citation, UC Berkeley Dept. of Physics
Top graduating senior in the Physics department

2009 Commencement Speaker, UC Berkeley Dept. of Physics
Invited to speak at the Physics, Astronomy, & Engineering Physics commencement ceremony

2007, 2008 Dean's Honor List, UC Berkeley College of Letters & Science
Top 4% of full-time students in the College

2007 Valedictorian and Commencement Student Speaker, Ohlone College
Top graduating student

2007 Outstanding Student in Mathematics, Ohlone College
Awarded annually to two students for outstanding performance in mathematics courses

PROFESSIONAL EXPERIENCE

2014 Completed the Summer Schools in Statistics for Astronomers, Statistical Modeling of Cosmic Populations, and Bayesian Computing for Astronomical Data Analysis at the Pennsylvania State University

2012-2014 Elected liaison between faculty and graduate students, UC Santa Cruz Dept. of A & A

2010-2014 Head Teaching Assistant, UC Santa Cruz Dept. of A & A
Design and run support program for Department teaching assistants

2013 Mentorship Training Workshop participant, Monterey Bay Regional Mentorship Alliance

2012 Classroom Diversity Workshop participant, Center for Astronomy Excellence

2011 Professional Development Program participant , Institute for Scientist and Engineer Educators

2011 Teaching Astro 101 Workshop participant, Center for Astronomy Excellence

2010 Organized prospective graduate student visit, UC Santa Cruz Dept. of A & A

2006 Certified Level 2 Tutor, College Reading and Learning Association

JOURNAL PUBLICATIONS

2014 **Dorman, Claire E.,** Guhathakurta, P., Seth, A., et al. *"A clear age-velocity dispersion relation in Andromeda's stellar disk."* ApJ, submitted.

2013 **Dorman, Claire E.,** Widrow, L. M., Guhathakurta, P., et al. *"A new approach to detailed structural decomposition from the PHAT and SPLASH surveys: Kicked-up disk stars in the Andromeda galaxy?"* ApJ, 779, 103

2013 Boyer, M. L, Girardi, L, Marigo, P, incl. **Dorman, Claire E.** *"Is There a Metallicity Ceiling to Form Carbon Stars? -- A Novel Technique Reveals a Scarcity of C stars in the Inner M31 Disk."* ApJ, 774, 83

2012 **Dorman, Claire E.,** Guhathakurta, P., Fardal, M., et al. *"Kinematics of Andromeda's Inner Spheroid."* ApJ, 752, 147

2012 Rosenfield, Philip; Johnson, L. C.; Girardi, Léo, incl. **Dorman, Claire E.***"The Panchromatic Hubble Andromeda Treasury. I. Bright UV Stars in the Bulge of M31."* ApJ, 755, 131

2012 Dalcanton, Julianne J.; Williams, Benjamin F.; Lang, Dustin; incl. **Dorman, Claire E.** *"The Panchromatic Hubble Andromeda Treasury."* ApJS, 200, 18

2012 Tollerud, Erik J.; Beaton, Rachael L.; Geha, Marla C.; incl. **Dorman, Claire E.** *"The SPLASH Survey: Spectroscopy of 15 M31 Dwarf Spheroidal Satellite Galaxies."* ApJ, 752, 45

SELECTED CONFERENCE PRESENTATIONS

2013 **Dorman, C.,** Widrow, L., and Guhathakurta, P. *"Detailed Structural Decomposition of M31: Kicked-up Disk Stars in Andromeda's Halo?"* Submitted to PASP

2013 **Dorman, C.,** et al. Talk, Structure and Dynamics of Disk Galaxies conference, Little Rock, AR

2013 **Dorman, C.,** et al. Talk, The Physical Link Between Galaxies and their Halos conference, Garching, Germany

2013 **Dorman, C.** Talk, Graduate Research Symposium, Santa Cruz, CA

2013 **Dorman, C.,** Guhathakurta, P., Seth, A. Special Session Talk, 22 1st AAS Meeting, Long Beach, CA (2013AAS...22131106D)

2013 **Dorman, C.,** Guhathakurta, P., Widrow, L., et al. Poster, 221st AAS Meeting, Long Beach, CA (2013AAS...22114609D)

2012 **Dorman, C.,** Guhathakurta, P., Widrow, L., Foreman-Mackey, D. & Gilbert, K. Poster, The Great Andromeda Galaxy conference, Princeton, NJ

2012 **Dorman, C.,** Guhathakurta, P., Fardal, M., et al. Poster, 219th AAS Meeting, Austin, TX (2012AAS...21934608D)

2011 **Dorman, C.,** Guhathakurta, P., Howley, K., et al. Friday Lunch Astrophysics Seminar Hour (FLASH) talk, UCSC

2011 **Dorman, C.,** Howley, K., Guhathakurta, P., et al. Talk, 217th AAS Meeting, Seattle, WA (2011AAS...21720703D)

2010 **Dorman, C.,** Howley, K., Guhathakurta, P., et al. Space Telescope Science Institute May Symposium, Baltimore, MD

2008 **Dorman, C.**, Ghez, A., Yelda, S. Poster, 213th AAS Meeting, Long Beach, CA (2009AAS... 21341505D)