STELLA S. R. OFFNER

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PROFESIONAL PREPARATION

- (2009) **Ph.D. Physics (expected)**, University of California at Berkeley
- 2005 **M.A. Physics**, University of California at Berkeley
- 2003 **B.A. Mathematics, B.A. Physics with Honors**, summa cum laude, Wellesley College

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APPOINTMENTS

- 2004-present Graduate Student Researcher in Astrophysical Fluids Research Group, U. C. Berkeley
- Fall 2003 Graduate Student Instructor, Electricity & Magnetism, U. C. Berkeley

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REFEREED PUBLICATIONS

- **Offner**, S. S. R. & Krumholz, M. R. 2008, "The Shapes of Molecular Cloud Cores in Simulations and Observations", ApJ, in press.
- **Offner**, S. S. R., Klein, R. I., & McKee, C. F. 2008, "Driven and Decaying Turbulence Simulations of Low-Mass Star Formation: from Clumps to Cores to Protostars", ApJ, 686, 1174.
- **Offner**, S. S. R., Krumholz, M. K., Klein, R. I., & McKee, C. F. 2008, "The Kinematics of Molecular Cloud Cores in the Presence of Driven and Decaying Turbulence: Comparisons with Observations", AJ, 136, 4040.
- Shestakov, A. I. & **Offner**, S. S. R. 2007, "A Multigroup Diffusion Solver Using Pseudo Transient Continuation for a Radiation-Hydrodynamic Code With Patch-based AMR", JCP, 227, 2154.
- Krumholz, M. K., McKee, C. F., Klein, R. I., **Offner**, S. S. R., & Cunningham, A. J. 2008, "The Formation of Massive Star Systems by Accretion", Science, submitted.
- Dassanayake, U. M., **Offner**, S. S. R., & Hu, Y. 2004, "Critical Role of Flow-Modified Permittivity in Electrorheology: Model and Computer Simulation", *Phys. Rev. E*, 69, 2.

PAPERS IN PREPARATION

- **Offner**, S. S. R., Klein, R. I., McKee, C. F, & Krumholz, M. R. "The Effects of Radiative Feedback on Low-Mass Star Formation."

FELLOWSHIPS & AWARDS

- 2007 **Kavli Institute of Theoretical Physics Graduate Fellow**, Santa Barbara
- 2003 **Department of Education Research Fellowship**, U. C. Berkeley

- 2003 **Wellesley College Trustee Scholar, Phi Betta Kappa, Sigma Xi**
- 2003 **Phyllis Flemming Physics Prize for Outstanding Physics Major**, Wellesley College
- 2002 **Research Experience for Undergraduates**, Department of Physics, Harvard University
- 2002 **Jerome K. Schiff Fellowship for Undergraduate Research**, Wellesley College
- 2001 **Summer Undergraduate Research Fellowship**, National Institute of Standards and Technology, Gaithersburg, MD
- 2000 **Wellesley Summer Research Grant**, Wellesley College

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SELECTED COMPUTING GRANTS

- 2009 **LRAC**, 'Progress Towards A Comprehensive Theory of Star Formation: From Brown Dwarfs to High Mass Stars and On To Giant Molecular Clouds'", Co-I, awarded 1.6 Million CPU hours
- 2008 **ERCAP**, NERSC "The Effects of Radiation Transfer on the Formation of Low Mass Stars", Co-I, awarded 1 Million CPU hours
- 2007 **LRAC**, SDSC "Progress Towards a Comprehensive Theory of Star Formation – From Brown Dwarfs to High Mass Stars and on to Giant Molecular Clouds", Co-I, awarded 1.1 Million CPU hours.
- 2005 **LRAC**, SDSC "Progress Towards a Comprehensive Theory of Star Formation – From Low to High Mass Stars and on to Giant Molecular Clouds", Co-I, awarded 0.7 Million CPU hours.
- 2004 **LRAC**, SDSC "Progress Towards a Comprehensive Theory of Star Formation – From Low to High Mass Stars and on to Giant Molecular Clouds", Co-I, awarded 1.1 Million CPU hours.

CONFERENCE PRESENTATIONS & PROCEEDINGS

- "Radiative Transfer Simulations: Low-Mass Cores, Disks, and Protostars", Offner, S. S. R. 2008, *5th Spitzer Conference*, Poster Presentation.
- "Kinematics of MC Cores in Driven and Decaying Turbulence: Comparison with Observations", Offner, S. S. R. 2007, *Star Formation Through Cosmic Time Workshop*, Oral Presentation.
- "Turbulent Core Kinetics: Simulation vs. Observation", Offner, S. S. R., Krumholz, M. K., Klein, R. I, & McKee, C. F. 2007, textitStar Formation Through Cosmic Time, Poster Presentation.
- "Effects of Driven and Undriven Turbulence on Low-Mass Star Formation", Offner, S. S. R., Krumholz, M. K., Klein, R. I, & McKee, C. F. 2007, *Structure Formation in the Universe*, Poster Presentation.
- "A Multigroup Radiation Diffusion Test Problem: Comparison of Code Results with Analytic Solution", Shestakov, A. I, Harte, J. A., Bolstad, J. H. & Offner, S. S. R. 2006, in Nuclear Explosives Code Developer's Conference, Conference Proceeding.
- "High Resolution Study of Self-gravitating Cores and Stars in Turbulent Molecular Clouds " Offner, S. S. R., Klein, R.I., & McKee, C. F. 2005, *Protostars and Planets V*, Poster Presentation.

INVITED TALKS

- "AMR Studies of Star Formation: Simulations and Simulated Observations." Institute for Nuclear and Particle Astrophysics Seminar, Lawrence Berkeley National Laboratory, October 10, 2008.
- "Numerical Studies of Star Formation." Physics Colloquium, Sacramento State University, October 19, 2006.

TEACHING & COMMUNITY SERVICE

- Summer 2006-Spring 2007 Patten University/ Prison University Project, Instructor, Algebra
  - Planned and delivered interactive lessons on algebraic concepts
  - Prepared and graded assignments and exams
- Summer 2005 Patten University/ Prison University Project, Teaching Assistant, Math 50
  - Worked individually with students following a self-paced review of arithmatic skills
  - Graded assignments and exams
- 2003-present Society for Women in the Physical Sciences at U. C. Berkeley
  - Mentored graduate and undergraduate female students pursuing careers in physics and astronomy
- Fall 2002-Spring 2003 Wellesley College, Physics Teaching Assistant and Tutor
  - Staffed the physics "help room" and provided course work assistance to students registered in Electricity and Magnetism
  - Tutored undergraduates and high schools students in physics and mathematics on an individual basis