

Adriane Steinacker
Associate Adjunct Professor
Department of Astronomy and Astrophysics

INTERESTS AND EXPERTISE

Magneto-hydrodynamical (MHD) simulations of protoplanetary accretion disks and the interaction between turbulent accretion disks and planetary cores

ACADEMIC HISTORY

1995 University of Bonn, Ph.D. in Astronomy
1991 University of Bonn, Diploma in Physics

POSITIONS HELD

2000-05 Postdoctoral Researcher at NASA Ames Research Center, Mountain View, CA
2003-06 Astronomy Lecturer, UC Santa Cruz
1999-00 Research Assistant, Astronomy Department of the Ruhr-University, Bochum, Germany
1999 Postdoctoral Researcher, Institute for Astrophysics, University of Jena, Germany
1997-98 Postdoctoral Fellow of the German Research Foundation (DFG), Institute for Astrophysics, University of Jena, Germany
1996 Postdoctoral Fellow of the Max-Planck-Society (MPG), Jena
1991-95 Graduate Student Researcher, Astronomy and Astrophysics, Max-Planck-Institute for Radioastronomy (MPIfR) Bonn, Germany

HONORS AND AWARDS

2007 UCSC Award for Excellence in Teaching
2000-02 NRC Postdoctoral Fellow

EXTERNAL RESEARCH SUPPORT (\$20,000 and over)

1997-98 Fellowship of the DFG (Deutsche Forschungsgemeinschaft), \$50k USD (approx).
2002-05 NASA (P.I.) Director's Discretionary Fund Award: "The Interaction of Short-Period Planets with MHD Turbulence" (NASA Ames Funding \$80,000).

RECENT PUBLICATIONS (selected)

"Type I Planetary Migration with MHD Turbulence." G. Laughlin, A. Steinacker and F. Adams, *Astrophysical Journal*, **608**, 489L (2004).

"3D-MHD Simulations of an Accretion Disk with Star-Disk Boundary Layer." A. Steinacker and J.C.B. Papaloizou, *Astrophysical Journal*, **571**, 413 (2002).

"The Influence of Gravitational Acceleration of the Supernova-Driven Parker Instability." A. Steinacker and Y. Shchekinov, *Monthly Notices of the Royal Astronomical Society*, **325**, 208 (2001).

"On the Solution of the Radiative Transfer Equations." J. Steinacker, R. Hackert, A. Steinacker and A. Bacmann, *Journal of the Society of Quantitative Radiative Transfer*, **73**, 557 (2001).

"Global Three-dimensional Magnetohydrodynamic Simulations of Accretion Disks and the Surrounding Magnetosphere", A. Steinacker and Th. Henning. *The Astrophysical Journal*, **554**, 514, (2001).

"Bubbles in Galactic Haloes", Y. Shchekinov, R.-J. Dettmar, A. Schroer, and A. Steinacker, *Astronomical and Astrophysical Transactions*, **20**, 237 (2001).

"The Helium Valley: Comparison of Impulsive Solar Flare Ion Abundances and Gyroresonant Acceleration with Oblique Turbulence in a hot Multi-Ion Plasma." J. Steinacker. J.-P. Meyer, A. Steinacker and D. Reames, *The Astrophysical Journal*, **476**, 403 (1997).

“Stochastic Particle Acceleration at Parallel Astrophysical Shock Waves.” R. Schlickeiser, A. (Campeanu) Steinacker and I. Lerche, *Astronomy and Astrophysics*, **276**, 614 (1993).

“Alfven Wave Transmission and Stochastic Particle Acceleration At Parallel Astrophysical Shock Waves.” A. (Campeanu) Steinacker and R. Schlickeiser, *Astronomy and Astrophysics*, **263**, 413 (1992).

UNIVERSITY SERVICE

Administrative appointments

2007- Chair, Undergraduate Curriculum Committee.
 2005-06 Undergraduate Curriculum Member

Other Professional Activities

2006-07 Organizer of the “Planet and Star Formation Meeting”, joint U.C. Santa Cruz and NASA Ames Research Center
 2006- Undergraduate Academic Advisor for the Astronomy and Astrophysics Department, U.C. Santa Cruz

Participation in public lectures or forums

2004 “*Stairway to Heaven – A 2500 year Quest to Measuring the Universe*,” Lick Observatory, Mt. Hamilton, Summer Visitors Program
 2004 “*Meteor Showers and the Formation of the Solar System*,” Villa Montalvo, Saratoga
 2005 “*Titan: Revealed?*,” Lick Observatory, Mt. Hamilton, Summer Visitors Program
 2006 “*World in Limbo: Icy Bodies beyond Pluto*,” UCSC Women’s Club, Intercampus Meeting
 2006 “*Destination Moon*,” Villa Montalvo, Saratoga

Teaching

			# students
Summer 07	Astro3	The Solar System	16
Spring 07	Astro80d	Historical Astronomy	69
Winter 07	Astro2	Overview of the Universe	273
Fall 06	Astro16	Life in the Universe	42
Summer 06	Astro3	Solar System	18
	Astro80d	Historical Astronomy	37
Spring 06	Phys6B	Introductory Physics II	185
	Phys6M	Introductory Physics II Lab	185
Winter 06	Astro2	Overview of the Universe	168
Fall 05	Astro2	Overview of the Universe	111
Summer 05	Astro3	The Solar System	29
	Astro80d	Historical Astronomy	26
Spring 05	Astro2	Overview of the Universe	195
Fall 04	Astro3	The Solar System	88
Summer 04	Astro4	The Stars	33
Fall 03	Astro4	The Stars	108
Summer 03	Astro2	Overview of the Universe	37