

DAVID ANDREW SCHAFFNER
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CURRENT RESEARCH AND RESPONSIBILITIES

- Investigation of MHD turbulence in a wind-tunnel configuration on the Swarthmore Spheromak Experiment (SSX).
- Comparison of spectra in laboratory with both spacecraft measurements and simulation.
- Examination of intermittency and its relationship to magnetic reconnection, ion heating.
- Maintenance of the SSX: vacuum, high voltage banks, diagnostic and data acquisition systems.
- Supervision of undergraduate students for ten-week summer research projects related to the SSX.

EDUCATION

2006 UNIVERSITY OF CALIFORNIA, LOS ANGELES, USA
B.S. *summa cum laude* in Physics (Minor Mathematics)
Department Highest Honors

2007 UNIVERSITY OF CALIFORNIA, LOS ANGELES, USA
M.S. in Physics

2013 UNIVERSITY OF CALIFORNIA, LOS ANGELES, UCLA
Ph.D. in Physics

EMPLOYMENT

2013-present Postdoctoral Research, Plasma Physics, Dept. of Physics and Astronomy, Swarthmore, PA

2009-2013 Graduate Student Researcher, Plasma Physics, Dept. of Physics and Astronomy, UCLA

2007-2009 Graduate Student Researcher, High Energy Physics, Dept. of Physics and Astronomy UCLA

2006-2010 Teaching Assistant, Dept. of Physics and Astronomy, UCLA

FIRST-AUTHOR/CO-AUTHOR PUBLICATIONS

Laboratory sources of turbulent plasma: a unique MHD plasma wind tunnel. M. R. Brown and D. A. Schaffner. Plasma Sources and Science Technology. **23** 063001 (2014).

Temporal and Spatial Turbulent Spectra of MHD Plasma and an Observation of Variance Anisotropy, D.A. Schaffner, M.R. Brown and V.S. Lukin. The Astrophysical Journal **790** 126 (2014).

Observation of turbulent intermittency scaling with magnetic helicity in an MHD plasma wind tunnel, D.A. Schaffner, A. Wan and M.R. Brown. Physical Review Letters **112** 165001 (2014).

Turbulence analysis of an experimental flux rope plasma, D.A. Schaffner, V.S. Lukin, A. Wan, M.R. Brown. *Plasma Physics Controlled Fusion* **56** 064003 (2014)

Turbulence and transport suppression scaling with flow shear on the Large Plasma Device.
D.A. Schaffner, T.A. Carter, G.D. Rossi, D.S. Guice, J.E. Maggs, S. Vincena, and B. Friedman. *Physics of Plasmas* **20** 055907 (2013).

Modification of Turbulent Transport with Continuous Variation of Flow Shear in the Large Plasma Device.
D.A. Schaffner, T.A. Carter, G.D. Rossi, D.S. Guice, J.E. Maggs, S. Vincena and B. Friedman. *Physical Review Letters* **109**, 135002 (2012).

AWARDS AND HONORS

2006-2012	University Fellowship
2007	UCLA Physics and Astronomy Summer Research Mentorship Award
2006	UCLA Graduate Division Chancellor's Prize
2006	UCLA Physics and Astronomy Department Fellowship
2005	National Undergraduate Fellowship
2004	E. Lee Kinsey Award
2002	F.I.R.S.T. Paul Allaire Award

ACTIVITIES

Served as referee for *Physical Review Letters*, *Physics of Plasmas*, and *IEEE Transactions on Plasma Science*
Founding member and organizer for the Young APS-DPP Community
Member of the Young CMSO (Center for Magnetic Self-Organization)
Member of the American Physical Society
Member of the American Geophysical Union
Participant in the American Institute of Physics "Adopt-A-Physicist" program