

## **Biographical Outline**

### **Adam Frank**

Department of Physics & Astronomy  
University of Rochester  
Rochester, NY 14627-0171

#### **ACADEMIC HISTORY**

1995-96 Hubble Fellow  
1992-94 Postdoctoral Research Associate. University of Minnesota  
1992 PhD Physics, University of Washington, Seattle  
1990 MS Physics, University of Washington, Seattle  
1984 BA Physics, cum laude, University of Colorado, Boulder

#### **POSITIONS HELD**

2004 - Professor, University of Rochester  
2000 - Associate Professor, University of Rochester  
1996 - Assistant Professor, University of Rochester  
1996 - Scientist, Laboratory for Laser Energetics, University of Rochester

#### **AWARDS**

2009 Best American Science and Nature Writing  
1999 AAS SPD Popular Writing Award for a Scientist  
1997-2002 NSF CAREER Grant

#### **SELECTED ACTIVITIES**

2006-11 SOC IAU Working Group on Planetary Nebulae  
2009 Co-Chair, Rochester Workshop on Planetary Nebulae  
2008-11 AAS Working Group Laboratory Astrophysics  
2003-04 Chair SOC 5<sup>th</sup> Conference on High Energy Density Laboratory Astrophysics.

#### **Recent Products**

AstroBEAR AMR MHD Multi-physics code: Public website/Wiki  
<http://bearclaw.pas.rochester.edu/trac/astrobear>

Huarte-Espinosa, M., Carroll-Nellenback, J., Nordhaus, J., Frank, A., Blackman, E. G. 2013. *The formation and evolution of wind-capture discs in binary systems*. Monthly Notices of the Royal Astronomical Society 433, 295-306.

Huarte-Espinosa, M., Frank, A., Blackman, E. G., Ciardi, A., Hartigan, P., Lebedev, S. V., Chittenden, J. P. 2012. *On the Structure and Stability of Magnetic Tower Jets*. The Astrophysical Journal 757, 66.

Frank, A., et al 2014, *Jets and Outflows From Star to Cloud Observations Confront Theory*, review chapter to appear in Protostars and Planets VI,

Carroll-Nellenback, J.J., Shroyer, B., Frank, A., Ding, C. 2013. *Efficient parallelization for AMR MHD multiphysics calculations; implementation in AstroBEAR*. Journal of Computational Physics 236, 461-476.

Balick, B., Huarte-Espinosa, M., Frank, A., Gomez, T., Alcolea, J., Corradi, R. L. M., Vinkovic, D. 2013. *Outflows from Evolved Stars: The Rapidly Changing Fingers of CRL 618*. The Astrophysical Journal 772, 20.

Suzuki-Vidal, F., and Frank A., et al 2012. *Laboratory astrophysics experiments studying hydrodynamic and magnetically-driven plasma jets*. Journal of Physics Conference Series 370, 012002.

Lebedev, S. V., and Frank A., et al 2012. *Experimental studies of supersonic radiatively cooled plasma jets*. EAS Publications Series 58, 133-136.

Li, S., Frank, A., Blackman, E. 2012. *Consequences of Magnetic Field Structure for Heat Transport in Magnetohydrodynamics*. The Astrophysical Journal 748, 24.

Carroll, J. J., Frank, A., Blackman, E. G. 2010. *Isotropically Driven Versus Outflow Driven Turbulence: Observational Consequences for Molecular Clouds*. The Astrophysical Journal 722, 145-157.

**Collaborators:** E. Blackman (UR), Jack Thomas (UR), Hugh van Horn (UR), Jon Bjorkman (U Toledo), Chris Davidson (U Minn), Lee Hartmann (CfA), Mario Livio (StSci), A. Noriga-Crespo (IPAC), Kenny Wood (CfA),

**PhD Advisor:** Bruce Balick (U Wash),

**Post-doc:** Tom Jones (U Minn)

**PhD Students:** Guy Delamarter, Tom Gardiner, Alexei Poludnenko, Andy Cunningham, Kris Yirak.

**Post-Docs Advised:** Peggy Varniere, Tim Dennis, Martin Huarte-Espinosa

### ***Synergistic Activities***

In addition to scientific research I am also attempting to communicate the excitement of science to a wider audience. I am co-founder of National Public Radio's *13.7 Cosmos and Culture Blog* and regular on-air science commentator for NPR's *All Things Considered*. In addition I contribute semi-regularly to the New York Times. Below are three examples of recent work.

Welcome to the Age of Denial, NY Times, 8/21/2013

Cracking the Quantum Safe, NY Times, 10/13/2012

Alone in the Void, NY Times, 7/24/2012