

Eric T. Johnson

CURRICULUM VITAE

Princeton University Observatory E-MAIL: ejohnson@astro.princeton.edu
Peyton Hall – Ivy Lane TEL: 847 650 0517
Princeton, NJ 08544 CITIZENSHIP: US

EDUCATION

Ph.D. Princeton University Astrophysical Sciences 2004 – 09/2009 (expected)
B.A. University of Chicago Physics *with Honors* 2000 – 2004

RESEARCH POSITIONS

- | | |
|---|---|
| 1. Staff Research Assistant, summer 2005
<i>advisor</i> Dr. Hui Li
Plasma Physics Group
Los Alamos National Laboratory | 2. Research Assistant, 2002-2004
<i>advisor</i> Prof. Joshua Frieman
Center for Cosmological Physics
University of Chicago |
|---|---|

AWARDS

First Year Fellowship in Astrophysical Sciences, Princeton University, 2004-2005

PUBLICATIONS

1. Modeling Porous Dust Grains with Ballistic Aggregates I: Geometry and Optical Properties. Shen, Y., Draine, B. T., & Johnson, E. T. 2008, ApJ, in press.
2. Cassini States with Dissipation: Why Obliquity Tides Cannot Inflate Hot Jupiters. Fabrycky, D. C., Johnson, E. T., & Goodman, J. 2007, ApJ, 665, 754.
3. Diffusive Migration of Low-Mass Protoplanets in Turbulent Disks. Johnson, E. T., Goodman, J., & Menou, K. 2006, ApJ, 647, 1413.
4. Extinction and Polarization by Graphite-Silicate Clusters. Johnson, E. T. & Draine, B. T. 2004, BAAS, 36, 1440. (to be submitted to ApJ)
5. SDSS J090334.92+502819.2: A New Gravitational Lens. Johnston, D. E., et al. 2003, AJ, 126, 2281.

RESEARCH TALKS

1. Dynamical Tides in the Atmospheres of Hot Jupiters. Seminar, Canadian Institute for Theoretical Astrophysics, Jan 2008.
2. Hot Jupiters: Dynamical Tides and Mass Loss. Theoretical Astrophysics Center Seminar, University of California, Berkeley, Nov 2007.
3. Supermassive Black Holes in Hydrodynamic and Magnetohydrodynamic Cosmological Simulations. Theory Group Seminar, Los Alamos National Laboratory, Aug 2005.

TEACHING

ETJ has given graduate-level lectures at Princeton University on the following topics.

1. Transiting Extrasolar Planets – Sep '08
2. Brown Dwarf Astronomy with the Sloan Digital Sky Survey – Apr '08
3. Theory of Central Engines of Gamma-Ray Bursts – Dec '07
4. Detection and Demographics of Extrasolar Planets – Jul '07
5. Atmospheric & Extraterrestrial Backgrounds and Extinction – Mar '07
6. Cosmic Magnetic Fields: Measurement & Origin – Nov '06
7. Big Bang Nucleosynthesis: Theory & Evidence – May '06
8. Galaxy Selection in the Redshift Desert – Feb '06
9. On “Creation of Universes From Nothing” (Vilenkin, 1982) – Dec '05
10. Principal Component Analysis in Astronomy – Apr '05
11. On “Synthesis of the Elements in Stars” (Burbidge, Burbidge, Fowler, & Hoyle, 1957) – Nov '04

RESEARCH INTERESTS

Eric’s studies have included interactions between extrasolar planets and their natal disks and parent stars, the geometry and optical properties of interstellar grains, magnetic feedback from active galactic nuclei on the intergalactic medium, strongly-lensed quasars, and the topology of large-scale structure in the Sloan Digital Sky Survey.

Current interests include tides and atmospheric circulation on hot Jupiters, the dynamics of planets embedded in gaseous and debris disks, the physics of interstellar grains, and astrophysical fluid dynamics in general.

REFEREES

Prof. Jeremy Goodman
jeremy@astro.princeton.edu
Princeton University
Astrophysical Sciences
Peyton Hall – Ivy Lane
Princeton, NJ 08544

Prof. Bruce T. Draine
draine@astro.princeton.edu
Princeton University
Astrophysical Sciences
Peyton Hall – Ivy Lane
Princeton, NJ 08544

Prof. Adam Burrows
burrows@astro.princeton.edu
Princeton University
Astrophysical Sciences
Peyton Hall – Ivy Lane
Princeton, NJ 08544