

# JOHN F. BEACOM

Department of Physics  
The Ohio State University  
191 W. Woodruff Ave.  
Columbus, OH 43210

phone: (614) 247-8102  
fax: (614) 292-7557  
beacom.7@osu.edu  
<http://physics.ohio-state.edu/~beacom/>

**Research Focus:** Theoretical Nuclear/Particle Astrophysics and Cosmology, Neutrinos

## Positions Held:

2011—present: Director of the Center for Cosmology and AstroParticle Physics (CCAPP)  
2010—present: Professor  
2007—2010: Associate Professor  
2004—2007: Assistant Professor  
Department of Physics and Department of Astronomy, The Ohio State University  
2000–2004: David N. Schramm Fellow in Theoretical Astrophysics  
Fermi National Accelerator Laboratory  
1997–2000: Sherman Fairchild Postdoctoral Scholar in Theoretical Physics  
California Institute of Technology

## Education:

1997: Ph.D. Physics, University of Wisconsin (Advisor: Prof. Baha Balantekin)  
*Semiclassical Analysis of Solar Neutrino Data*  
1991: B.S. Physics and B.S. Mathematics, University of Kansas, each with Departmental Honors, Highest Distinction, and College of Liberal Arts and Sciences Honors

## Selected Professional Awards:

2013: Fellow (lifetime designation), American Physical Society  
2009: Alumni Award for Distinguished Teaching, The Ohio State University  
2009: Outstanding Referee (lifetime designation), American Physical Society  
2008: Arts and Sciences Outstanding Teaching Award, The Ohio State University  
2005–2011: National Science Foundation Faculty Early Career Development (CAREER) award

## Selected Professional Activities:

- Grant, manuscript, and personnel reviewer for agencies, journals, and institutions worldwide
- Elected to Chair line, Division of Astrophysics, American Physical Society, 2012–2016
- Divisional Associate Editor for Astrophysics, Physical Review Letters, 2015–2018
- Member of the INSPIRE (SPIRES) Advisory Board Committee, 2011–present
- Leading the many and varied outreach activities of CCAPP: organizing public lectures, providing science content for diverse audiences, partnering with local organizations, and more, 2011–present

*April 3, 2015*

**Selected Refereed Publications** (out of more than 100, which have more than 6500 citations):

- *Demystifying the PeV Cascades in IceCube: Less (Energy) is More (Events)*  
Ranjan Laha, John F. Beacom, Basudeb Dasgupta, Shunsaku Horiuchi, and Kohta Murase  
Phys. Rev. D **88**, 043009 (2013) [arXiv:1306.2309 [astro-ph.HE]]
- *The Diffuse Supernova Neutrino Background*  
John F. Beacom  
Ann. Rev. Nucl. Part. Sci. **60**, 439 (2010) [arXiv:1004.3311 [astro-ph.HE]]
- *Upper Bound on the Dark Matter Total Annihilation Cross Section*  
John F. Beacom, Nicole F. Bell, and Gregory D. Mack  
Phys. Rev. Lett. **99**, 231301 (2007) [astro-ph/0608090]
- *On the Normalisation of the Cosmic Star Formation History*  
Andrew M. Hopkins and John F. Beacom  
Astrophys. J. **651**, 142 (2006) [astro-ph/0601463]
- *GADZOOKS! Anti-neutrino spectroscopy with large water Cherenkov detectors*  
John F. Beacom and Mark R. Vagins  
Phys. Rev. Lett. **93**, 171101 (2004) [hep-ph/0309300]

**Selected Recent Invited Conference Talks:** (out of more than 60):

- *Frontiers in Particle Astrophysics*  
HAWC Inauguration, Puebla, Mexico, March 2015
- *Lost in Space*  
TEDx Ohio State University, Columbus, Ohio, February 2015
- *Neutrino Astronomy: No Longer a Dream*  
Astroparticle Physics (TeVPA/IDM) Conference, Amsterdam, Netherlands, September 2014
- *Diffuse Supernova Neutrino Background*  
Shanghai Particle Physics and Cosmology Symposium, Shanghai, China, May 2014
- *The Mysterious Neutrinos — Clues from Astrophysics and Cosmology*  
April Meeting of the APS, Denver, Colorado, April 2013

**Professional Activities—Postdocs and Students:**

- People who worked with and/or were mentored by me as postdocs include Kev Abazajian, Nicole Bell, Gianfranco Bertone, Mauricio Bustamante, Sheldon Campbell, Basu Dasgupta, Shunsaku Horiuchi, Kohta Murase, Carsten Rott, Jennifer Siegal-Gaskins, Michael Stamatikos, Haojing Yan, Hasan Yüksel, and Pengjie Zhang
- People who worked with and/or were mentored by me as graduate students include Shin'ichiro Ando, Julián Candia, Patrick Crotty, Warren Essey, Bonnie Fleming, Dan Hooper, Shunsaku Horiuchi, Thomas Jacques, Rubab Khan, Matt Kistler, Brian Lacki, Ranjan Laha, Shirley Li, Amy Lien, Greg Mack, Kohta Murase, Kenny Ng, Sergio Palomares-Ruiz, José Prieto, Tijana Prodanović, Ben Shappee, Eric Speckhard, Louis Strigari, Casey Watson, and Hasan Yüksel