

John Caleb Barentine

University of Texas at Austin
Department of Astronomy
1 University Station, C1400
Austin, Texas 78712-0259

Phone: 512-983-1075
Fax: 512-471-6016
Email: jcb@astro.as.utexas.edu
Homepage: <http://www.as.utexas.edu/~jcb/>

Education

Ph.D. Astronomy, University of Texas at Austin, 2013 (expected)

M.A. Astronomy, University of Texas at Austin, 2008

M.S. Physics, Colorado State University, 2002

B.S. Physics, University of Arizona, 1998

Employment

University of Texas at Austin, Department of Astronomy

Graduate Teaching Assistant (2008, 2012-present)

Graduate Research Assistant (2006-2011)

Apache Point Observatory, New Mexico State University

Observer, Sloan Digital Sky Survey (2004-2006)

Operation of the SDSS 2.5m telescope; development of procedures and documentation; quality assurance

Observing Specialist I/II, Astrophysical Research Consortium (2001-2004)

Engineering, operations, and remote user support, ARC 3.5-meter telescope

Engineering, basic maintenance and observing, New Mexico State University 1-meter telescope

APO liaison to the University of Colorado Center for Astrophysics and Space Astronomy (CASA) for development of the Near Infrared Camera Fabry-Perot Spectrometer (NIC-FPS)

Colorado State University, Department of Physics

Graduate Teaching Assistant (1999-2002)

Graduate Research Assistant (1999)

Intel Corporation Digital Imaging Operation

Summer Intern (1996)

Research and characterization of consumer digital cameras; design and specification work on the Intel Pocket PC Camera

National Solar Observatory

Research Assistant (1995-1999)

Research

- Distances to and metallicities of Galactic 21 cm high velocity clouds, APO/UT/UWisconsin, 2002-present (Supervisor: Bart Wakker)
- Spitzer/IRS observations of H₂ in planetary nebulae, UT, 2011 (Supervisor: Harriet Dinerstein)
- Secular evolution of spiral galaxies, UT, 2007-10 (Supervisor: John Kormendy)
- Mid-infrared spectroscopy of high mass starforming region NGC 7538 IRS 9, UT, 2007-09 (Supervisor: John Lacy)
- Modeling of C₂H₂ and HCN absorption in the ULIRG galaxy NGC 4418, UT, 2007-08 (Supervisor: John Lacy)
- High-precision photometry of the open cluster M67, CSU, 2000-2002 (Supervisors: Roger Culver, Eric Craine)
- Scanning Hall-probe microscopy of magnetic flux vortices in superconducting metals, CSU, 1999 (Supervisor: Stuart Field)
- Properties of solar active regions and contribution of various activity features to overall solar flux rate, NSO, 1998-99 (Supervisor: Karen Harvey).
- Acoustic holography of terrestrial lightning, NSO, 1997 (Supervisor: Charles Lindsey)
- Reduction and archival of raw helioseismic imagery collected at the South Pole during the austral summer of 1994-95, NSO, 1995-96 (Supervisor: Stuart Jeffries)
- Nature and origin of IC 349 (Barnard's Merope Nebula), NOAO, 1994-98 (Supervisors: Catherine Pilachowski, Ian Gatley)

Publications

Journal Articles

- "Detection of a Pseudobulge Hidden Inside the "Box-shaped Bulge" of NGC 4565" (with J. Kormendy), *Astrophysical Journal Letters*, 715, 176 (2010)
- "Capacitive position sensor with simultaneous, linear X-Y readout" (with S. Field), *Review of Scientific Instruments* 71, 6, 2603 (2000)
- "Barnard's Merope Nebula (IC 349): an Interstellar Interloper" (with G.A. Esquerdo), *Astronomical Journal*, 117, 1402 (1999)

Proceedings

- "Detection of a Distinct Pseudobulge Hidden Inside the 'Box-Shaped Bulge' of NGC 4565" (Galaxy Evolution: Emerging Insights and Future Challenges, UTexas, November 2008)
- "Distances to the High Velocity Clouds: A Forty-Year Mystery on the Way to Solution" (Frank N. Bash Symposium, UTexas, 2007)

Conference and Seminar Presentations

- "Long-Term Optical and Near-Infrared Spectroscopic Monitoring of Epsilon Aurigae During the 2009-11 Eclipse" (poster +12 coauthors), AAS 219, Austin, Texas (2012)
- "High Resolution Molecular Absorption Line Spectroscopy Of The Ultraluminous Infrared Galaxy NGC 441" (poster with J. Lacy), AAS 211, Austin, Texas (2008)

"A Gamma Ray Burst Fields Study In The Near-infrared" (poster with F. Hearty), AAS 208, Calgary, Canada (2006)

"The APO-PSI TNO Survey" (poster with G. A. Esquerdo, C. L. Neese), AAS 204, Denver, Colorado (2004)

"Near-Infrared Observations of Barnard's Meropë Nebula (IC 349)" (poster with G. A. Esquerdo), AAS 203, Atlanta, Georgia (2004)

"A Characterization Of The GNAT SciTech STAR Class 0.5m Prototype Telescope" (poster with R. B. Culver), AAS 200, Albuquerque, New Mexico (2002)

"Properties and Time Variability of Solar Activity Structures" (poster with K. L. Harvey), AAS Solar Physics Division 31, Lake Tahoe, Nevada (2000)

Education and Public Outreach

Instruction

The Lives and Deaths of Stars, UT, Spring 2012 (assistant)

Stellar Astronomy, UT, Fall 2011 (assistant)

Stellar Astronomy Laboratory, UT, Fall 2011 (instructor)

Astronomical Instrumentation, UT, Fall 2008 (assistant)

Astronomy Laboratory, CSU, Fall 2000-Summer 2001 (instructor)

Descriptive Physics, CSU, Fall 1999-Spring 2000 (assistant)

Advising

Undergraduate student: Justin Hickey (UT; 2012)

Outreach

Outreach participant, Apache Point Observatory (volunteer; 2001-2006)

Docent, Kitt Peak National Observatory (volunteer, 1994-97)

Telescope operator, Flandrau Planetarium, University of Arizona (volunteer, 1994-97)

Professional Activities

Member, American Association for the Advancement of Science (AAAS; 1993-present)

Junior Member, American Astronomical Society (AAS; 2000-present)

Member, Astronomical Society of the Pacific (ASP; 2002-present)

Honors and Awards

Asteroid (14505) Barentine, 2007.

2nd Place, National Outstanding Young Astronomer Award (Astronomical League, 1994)

1st Place, Student Poster Competition, 1994 AAAS Meeting (San Francisco, CA)

Arizona delegate, Honors Research Program, U.S. Dept. of Energy, Brookhaven National Laboratory (Upton, NY), 1994.