

Curriculum Vitae
 Andrew F. Boden
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Present Position

Deputy Director – Caltech Optical Observatories
 Astronomy Department, California Institute of Technology (Caltech)

Research Interests

Stellar Astrophysics (Pre- and Post Main-Sequence Stars), Star Formation, Circumstellar & Circumbinary Material, Exoplanets; Galactic Disk Elemental Evolution; Galactic Disk and Halo Condensed Dark Matter.

Education

- PhD Physics 1993, University of California at Los Angeles (UCLA) Thesis: “Observation and Reconstruction of B Mesons in p -Si Collisions at 800 GeV/c” (Fermilab E-771)
- MS Physics 1990, UCLA
- MS Electrical Engineering 1989, UCLA Thesis: “Creation of Magnetic Bremsstrahlung Radiation Sources Using the Meissner Effect”
- BS Physics 1982, North Georgia College

Professional Experience

- Sept 2008 – present: Deputy Director, Caltech Optical Observatories, Caltech Astronomy
- Jan 2007 – Sept 2008: Deputy Head of Science Staff, Infrared Processing and Analysis Center (IPAC)/Caltech
- 2000 – Sept 2008: Deputy Director, Michelson Science Center; Member of the Professional Staff, Caltech
- 2000 – Present: Adjunct Professor of Physics and Astronomy, Georgia State University
- 1999 – 2000: Staff Scientist, Technical Group Supervisor (Acting), and Interferometry Science Center Project Scientist (Acting), IPAC/Caltech
- 1993 – 1998: Senior Member Technical Staff, Jet Propulsion Laboratory (JPL)
- 1988 – 1993: Graduate Student Researcher, UCLA
- 1987 – 1988: Member Technical Staff, Hughes Aircraft Company (El Segundo, CA)
- 1982 – 1987: Scientist, Nichols Research Corporation (Huntsville, AL)

Refereed Publications in Past 12 Years:

- **A. Boden**, G. Torres, G. Duchêne, et al 2011, “A Surprising Dynamical Mass for V773 Tau B”, *Astrophysical Journal (ApJ)* 747, 17 (arXiv:1112.1018).
- R. Torres, L. Loinard, A. Mioduszewski, et al 2011, “VLBA determination of the distance to nearby star-forming regions V. Dynamical mass, distance and radio structure of V773 Tau A”, *ApJ* 747, 18 (arXiv:1112.0114).
- C. Beichman, C. Lisse, A. Tanner, et al 2011, “Multi-epoch Observations of HD 69830: High-resolution Spectroscopy and Limits to Variability”, *ApJ* 743, 85 (arXiv:1108.4704).
- J. van Eyken, D. Ciardi, L. Rebull, et al 2011, “The Palomar Transient Factory Orion Project: Eclipsing Binaries and Young Stellar Objects”, *AJ* 142, 60 (arXiv:1106.3570).
- K. von Braun, T. Boyajian, S. Kane, et al 2011, “Astrophysical Parameters and Habitable Zone of the Exoplanet Hosting Star GJ 581”, *ApJ* 729, 26 (arXiv:1102.0237).
- R. Akeson, R. Millan-Gabet, D. Ciardi, et al 2011, “Radial Structure in the TW Hya Circumstellar Disk”, *ApJ* 728, 96.
- S. Dzib, L. Loinard, A. Mioduszewski, et al 2010, “VLBA Determination of the Distance to Nearby Star-forming Regions. IV. A Preliminary Distance to the Proto-Herbig AeBe Star EC 95 in the Serpens Core” *ApJ* 718, 610 (arXiv:1003.5900).
- N. Elias-Rosa, S. Van Dyk, L. Weidong, et al 2010, “The Massive Progenitor of the Type II-linear Supernova 2009kr” *Astrophysical Journal Letters (ApJL)* 714, 254 (arXiv:0912.2880).
- **A. Boden**, R. Akeson, A. Sargent, et al 2009, “Interferometric Evidence for Warm Dust in the DQ Tau System”, *ApJL* 696, 111 (arXiv:0903.2521).
- F. Fekel, **A. Boden**, J. Tomkin, & G. Torres 2009, “HR 8257: A Three-dimensional Orbit and Basic Properties”, *ApJ* 695, 1527.
- G. van Belle, G.T. van Belle, M. Creech-Eakman et al 2008, “The Palomar Testbed Interferometer Calibrator Catalog”, *Astrophysical Journal Supplements (ApJS)* 176, 276 (arXiv:0712.0718).
- M. Massi, E. Ros, K. Menten, et al 2008, “Interacting coronae of two T Tauri stars: first observational evidence for solar-like helmet streamers”, *Astronomy & Astrophysics (A&A)* 480, 489 (arXiv:0712.0718).
- R. Akeson, K. Rice, **A. Boden** et al 2007, “The Circumbinary Disk of HD 98800 B: Evidence for Disk Warping”, *ApJ* 670, 1240 (arXiv:0708.2390).
- **A. Boden** 2007, “Calibrating optical/IR interferometry visibility data”, *New Ast. Rev.* 51, 617.
- **A. Boden**, G. Torres, A. Sargent, et al 2007, “Dynamical Masses for Pre-Main Sequence Stars: A Preliminary Physical Orbit for V773 Tau A”, *ApJ* 670, 1214 (arXiv:0706.2376).
- S. Dong, A. Udalski, A. Gould et al 2007, “First Space-Based Microlens Parallax Measurement: Spitzer Observations of OGLE-2005-SMC-001”, *ApJ* 664, 862 (arXiv:0702240).

- D. Ciardi, G. van Belle, **A. Boden** et al 2007, “The Angular Diameter of λ Boötis”, ApJ 659, 1623 (arXiv:0612723).
- M. Zhao, J. Monnier, G. Torres et al 2007, “Physical Orbit for Lambda Virginis and a Test of Stellar Evolution Models”, ApJ 659, 626 (arXiv:/0612135).
- D. Trilling, J. Stansberry, K. Stapelfeldt et al 2007, “Debris disks in main sequence binary systems”, ApJ 658, 1289 (arXiv:/0612029).
- G. van Belle, D. Ciardi, & **A. Boden** 2006, “Measurement of the Surface Gravity of η Boötes”, ApJ 657, 1058 (arXiv:/0701120).
- **A. Boden**, G. Torres, & D. Latham 2006, “A Physical Orbit for the High Proper Motion Binary HD 9939”, ApJ 644, 1193 (arXiv:/0601515).
- R. Millan-Gabet, J. Monnier, R. Akeson et al. 2006, “Keck Interferometer Observations of FU Orionis Objects”, ApJ 641, 547 (arXiv:/0512230).
- G. van Belle, D. Ciardi, T. ten Brummelaar et al. 2006, “First Results from the CHARA Array. III. Oblateness, Rotational Velocity and Gravity Darkening of Alderamin”, ApJ 637, 494 (arXiv:/0509827).
- R. Akeson, **A. Boden**, J. Monnier et al. 2005, “Keck Interferometer Observations of Classical and Weak-Line T Tauri Stars”, ApJ 635, 1173 (arXiv:/0508561).
- **A. Boden**, A. Sargent, R. Akeson et al. 2005, “Dynamical Masses for Low-Mass Pre-Main Sequence Stars: A Preliminary Physical Orbit for HD 98800 B”, ApJ 635, 442 (arXiv:/0508331).
- J. Monnier, R. Millan-Gabet, R. Billmeier et al. 2005, “The Near-Infrared Size-Luminosity Relations for Herbig Ae/Be Disks”, ApJ 624, 832 (arXiv:/0502252).
- **A. Boden**, G. Torres, & C. Hummel 2005, “Testing Stellar Models With An Improved Physical Orbit for 12 Boötis”, ApJ 627, 464 (arXiv:/0502250).
- M. Swain, G. Vasisht, R. Akeson et al 2003, “Interferometer Observations of Subparsec-Scale Infrared Emission in the Nucleus of NGC 4151”, ApJ 596, L163.
- M. Colavita, R. Akeson, P. Wizinowich et al 2003, “Observations of DG Tauri with the Keck Interferometer”, ApJ 592L, 83.
- G. Torres, **A. Boden**, D. Latham, M. Pan, & R. Stefanik 2002, “Testing models of stellar evolution for metal-poor stars: An interferometric-spectroscopic orbit for the binary HD 195987”, Astronomical Journal (AJ) 124, 1716-1737 (arXiv:/0205511).
- B. Lane, **A. Boden**, & S. Kulkarni 2001, “Interferometric Measurement Of The Angular Sizes Of Dwarf Stars In The Spectral Range K5-M4”, ApJ 551, L81-L83.
- C. Hummel, J.-M. Carquillat, N. Ginstet et al. 2001, “Orbital and Stellar Parameters of Omicron Leonis From Spectroscopy and Interferometry”, AJ 121, 1623-1635.
- B. Lane, M. Kuchner, **A. Boden**, et al. 2000, “Pulsation Detection in the Classical Cepheid ζ Geminorum”, Nature 407, 485-487.

- **A. Boden** & B. Lane, 2001, “A Preliminary Visual Orbit of BY Draconis”, ApJ 547, 1071-1076 (arXiv:/0001138).
- **A. Boden**, M. Creech-Eakman, & D. Queloz, 2000, “The Visual Orbit and Evolutionary State of 12 Boötis”, ApJ 536, 880-890 (arXiv:/9910245).
- **A. Boden**, B. Lane, M. Colavita et al. 1999 “The Visual Orbit of 64 Piscium”, ApJ 527, 360-368 (arXiv:/9905207).
- **A. Boden**, C. Koresko, G. van Belle et al. 1999, “The Visual Orbit of ι Pegasi”, ApJ 515, 356-364 (arXiv:/9811029).
- M. Colavita, J. Wallace, B. Hines et al. 1999, “The Palomar Testbed Interferometer”, ApJ 510, 505-521 (arXiv:/9810262).
- G. van Belle, B. Lane, R. Thompson et al 1999, “Radii and Effective Temperatures for G, K and M Giants and Supergiants”, AJ 117, 521-533.
- C. Koresko, G. van Belle, **A. Boden** et al 1998, “The Visual Orbit of the 0.002” RS CVn Binary Star TZ Triangulum from Near-Infrared Long-Baseline Interferometry” ApJ 509, L45-L48.
- T. Alexopoulos, L. Antoniazzi, et al (The FNAL E771 Collaboration) 1998, “A Measurement of the $b\bar{b}$ Cross Section in 800 GeV/c Proton-Silicon Interactions” Phys Rev D. submitted.
- F. Malbet, J.-P. Berger, M. Colavita et al. 1998, “A Protoplanetary disk around FU Orionis Resolved by Infrared Long-Baseline Interferometry” ApJ 507, L149-L152 (arXiv:/9808326).
- **A. Boden**, G. van Belle, M. Colavita et al 1998 “An Interferometric Search for Bright Companions to 51 Pegasi”, ApJ 504, L39-L42 (arXiv:/9804016).
- **A. Boden**, M. Shao, & D. Van Buren, 1998, “Astrometric Observation of MACHO Gravitational Microlensing”, ApJ 502, 538-549.
- T. Alexopoulos, L. Antoniazzi et al (The FNAL E771 Collaboration) 1998, “Differential cross sections of J/ψ and ψ' in 800 GeV/c p-Si interactions” Phys Rev D. 55, 3927-3932.
- T. Alexopoulos, L. Antoniazzi, et al (The FNAL E771 Collaboration) 1998, “Search for the Flavor Changing Neutral Current Decay $D0 \rightarrow \mu^+ \mu^-$ in 800 GeV/c Proton-Silicon Interactions”, Phys Rev Lett. 77, 2380-2383.

Teaching, Conference, Workshop, and Seminar Presentations/Articles Since 2000 (First Author Only):

- **A. Boden** 2008, “Review of Fundamental Properties Constraints from Long-Baseline Interferometry” (invited), Cool Stars 15, St. Andrews, Scotland (July 2008).
- **A. Boden** 2007, “Astrometry with Ground-Based Interferometers” (invited), IAUS 248, Shanghi, PRC (Oct 2007).

- Instructor: Interferometry Theory and Astronomical Applications Course, 2002 – 2006, Caltech.
- **A. Boden** 2006, “Dynamical Mass Measurements from Interferometers” (invited), and session chair (invited), Cool Stars 14, Pasadena, CA (Nov 2006).
- **A. Boden** 2006, “Calibration of Interferometer Data” (invited), VLTI Summer School, Goutelas, France (June 2006).
- **A. Boden** et al. 2005, “A Preliminary Physical Orbit for HD 98800 B” (poster #8474), Protostars and Planets V, Waikola, HI.
- **A. Boden** et al. 2005, “A Preliminary Physical Orbit for HD 98800 B”, 2005 Keck Science Meeting, Pasadena.
- **A. Boden** 2005, “Interferometric Measurements of Binary Stars” (invited), 2005 Michelson Summer School, Pasadena.
- **A. Boden** et al. 2005, “A Preliminary Physical Orbit for HD 98800 B” (poster), AAS 206.1419B.
- **A. Boden** et al. 2005, “A Preliminary Physical Orbit for HD 98800 B”, The power of optical/IR interferometry: recent scientific results and 2nd generation VLTI instrumentation, Garching, Germany.
- **A. Boden** 2003, “Interferometric Measurements of Binary Stars” (invited), 2003 Michelson Summer School, Pasadena.
- **A. Boden** et al. 2002, “The Keck Interferometer” (invited), 2002 JENAM Conference, Porto, Portugal.
- **A. Boden** 2002, “Finding Interferometer Calibration Stars” (invited), VLTI Winter School, Les Houches, France.
- **A. Boden** 2001, “The Keck Interferometer” (invited), Keck Science Meeting, Pasadena.
- **A. Boden** and A. Sargent, 2001, “The Keck Interferometer and the Caltech Interferometry Science Center” (invited), ADASS XI, Victoria, Canada.
- **A. Boden**, “Narrow-Angle Differential Astrometry: Theory and Data Analysis” (invited), 2001 Michelson Summer School, Flagstaff.
- **A. Boden** and A. Sargent, 2001, “The Keck Interferometer and the Caltech Interferometry Science Center” (invited), ESO Workshop on the Origins of Stars and Planets, Garching Germany.
- **A. Boden**, G. Torres, D. Latham, and M. Pan, 2001, “Metal-Poor Spectroscopic Binary Studies” (poster) AAS 198.6313B.
- **A. Boden**, “Wrap-Up: Astrophysics With Long-Baseline Interferometry” (invited), 2000 Michelson Summer School, Berkeley.
- A.F. Boden, B.F. Lane, M.J. Creech-Eakman, and D. Queloz, 2000, “Spectroscopic Binary Star Studies with the Palomar Testbed Interferometer II” (poster) AAS 195.11301B.

- M. Shao, **A. Boden**, M. Colavita, B. Lane, and P. Lawson, 2000, “Differential Astrometry of the 61 Cygni System with the Palomar Testbed Interferometer” (poster) AAS 195.8714S.

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