

Benjamin A. Cook

Curriculum Vitae

CONTACT INFORMATION

Mailing Address:
60 Garden St. MS 10
Cambridge, MA 02138

Email: bcook@cfa.harvard.edu
Homepage: www.cfa.harvard.edu/~bcook
Twitter: [@bacook17](https://twitter.com/bacook17)

EDUCATION

Harvard University , Cambridge, MA Ph.D. (<i>in progress</i>) Astronomy and Astrophysics	2014 – Present
Princeton University , Princeton, NJ A.B. Astrophysical Sciences – Magna cum laude Thesis: <i>Keep Calm and Baryon: The Distribution of Baryons and Dark Matter in the Universe</i> Advisor: Prof. Neta Bahcall	2010 – 2014
Keene High School, Keene, NH Class Valedictorian	2006 – 2010

AWARDS AND HONORS

Elected to Sigma Xi Science Honor Society (2014)
NSF Graduate Research Fellowship (2014 – Present)
AAS Chambliss Medal (2014)

TEACHING AND OUTREACH

Volunteer, Harvard Observing Program (Fall 2014 – Present)
Volunteer math tutor, Prison Teaching Initiative (Spring 2014)
Instructor, *The Marvelous Universe*, Princeton Wintersession Course (Jan. 2014)
Participant, AAS Astronomy Ambassador Training Workshop (Jan. 2014)
Volunteer, Mars and Beyond exhibit, Boston Museum of Science (Aug. 2013)
Teaching Assistant, Princeton AST 204 (Spring 2013)
Teaching Assistant, Princeton AST 205 (Fall 2012)
Volunteer, Peyton Observatory Public Observing Nights (2012 – 2014)

PROFESSIONAL ACTIVITIES

Author, [Astrobites](#) (2014 – Present)
Member, The Planetary Society (2014 – Present)
Junior Member, American Astronomical Society (2012 – Present)
Departmental Representative, Princeton Major Choices Advising (2012 – 2014)
Chapter President, Society of Physics Students (2012 – 2014)

PUBLICATIONS

Cook, B.A., Williams, P.K.G., Berger, E. 2014, “Trends in Ultracool Dwarf Magnetism. II. The Inverse Correlation between X-ray Activity and Rotation as Evidence for a Bimodal Dynamo”, *ApJ*, 785, 10 [[arXiv:1310.6758](#)]

Williams, P.K.G., **Cook, B.A.**, Berger, E. 2014, “Trends in Ultracool Dwarf Magnetism. I. X-ray Suppression and Radio Enhancement”, *ApJ*, 785, 9 [[arXiv:1310.6757](#)]

Pâris, I., Petitjean, P., Aubourg, É., et al. 2014, “The Sloan Digital Sky Survey quasar catalog: tenth data release”, *A&A*, 563, A54 [[arXiv:1311.4870](#)]

POSTERS

Magnetic Dynamos and X-ray Activity in Ultracool Dwarfs (UCDs): Constraining the Role of Rotation

223rd Meeting of the AAS, #441.10 – January 2014, Washington, DC

Chambliss Medal Winner

Magnetic Dynamos and X-ray Activity in Ultracool Dwarfs (UCDs): Constraining the Role of Rotation

The Fourth Tri-State Astronomy Conference at CUNY – September 2013, New York

RESEARCH EXPERIENCE

Research Exam Project (Harvard University) Fall 2015 – present

Topic: Galactic stellar halos and merger histories in numerical simulations.

Advisor: Prof. Charlie Conroy

Senior Thesis (Princeton University) Fall 2013 – Spring 2014

Topic: The cosmic distributions of baryons and dark matter.

Advisor: Prof. Neta Bahcall

Astronomy REU (Harvard University) Summer 2013

Topic: The X-ray activity/rotation relation in ultracool dwarfs

Advisors: Drs. Edo Berger and Peter Williams

Junior Research Paper (Princeton University) Spring 2013

Topic: Type II quasars in the BOSS survey

Advisor: Prof. Michael Strauss

Junior Research Paper (Princeton University) Fall 2012

Topic: Photometric analysis of asteroids with the HATNet survey

Advisor: Prof. Gáspár Bakos

Undergraduate Summer Research Program (Princeton University) Summer 2012

Topic: Galactic luminosity and mass functions from simulations

Advisor: Dr. Renyue Cen

COMPUTING SKILLS

Programming Languages

Python, C, Java

Electronic Presentation

L^AT_EX, HTML

Others

Linux/UNIX, *Chandra* CIAO, Mathematica, GIT, FITS