

Benjamin A. Cook - *Curriculum Vitae*

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EDUCATION Princeton University, Princeton, NJ 2010 – 2014
A.B. Astrophysical Sciences
Thesis: *The Cosmic Distribution of Baryons and Dark Matter*
Adviser: Prof. Neta Bahcall

Keene High School, Keene, NH 2006 – 2010
Class Valedictorian

PUBLICATIONS **Cook, B. A.**, Williams, P. K. G., Berger, E. 2013, ApJ in press; [[arXiv:1310.6758](https://arxiv.org/abs/1310.6758)]
Trends in Ultracool Dwarf Magnetism. II. The Inverse Correlation between X-ray Activity and Rotation as Evidence for a Bimodal Dynamo

Williams, P. K. G., **Cook, B. A.**, Berger, E. 2013, ApJ in press; [[arXiv:1310.6757](https://arxiv.org/abs/1310.6757)]
Trends in Ultracool Dwarf Magnetism. I. X-ray Suppression and Radio Enhancement

Pâris, I., Petitjean, P., Aubourg, É., et al. 2013, A&A in press; [[arXiv:1311.4870](https://arxiv.org/abs/1311.4870)]
The Sloan Digital Sky Survey quasar catalog: tenth data release

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

EXPERIENCE

Teaching Teaching Assistant to Prof. Neta Bahcall Spring 2013
AST 204 - *Topics in Modern Astronomy*

Teaching Assistant to Prof. Gáspár Bakos Fall 2012
AST 205 - *Planets in the Universe*

Research Senior Thesis (Princeton University) Fall 2013 – Spring 2014
Topic: The distributions of dark matter and baryons in the universe.
Adviser: Prof. Neta Bahcall

Astronomy REU (Harvard University) Summer 2013
Topic: The X-ray activity/rotation relation in ultracool dwarfs
Advisers: Drs. Edo Berger and Peter Williams

Junior Research Paper (Princeton University) Spring 2013
Topic: Type II quasars in the BOSS survey
Adviser: Prof. Michael Strauss

Junior Research Paper (Princeton University) Fall 2012
Topic: Photometric analysis of asteroids with the HATNet survey
Adviser: Prof. Gáspár Bakos

Undergraduate Summer Research Program (Princeton University) Summer 2012
Topic: Galactic luminosity and mass functions from simulations
Adviser: Dr. Renyue Cen

OUTREACH

Instructor – *The Marvelous Universe* – Princeton Wintersession Course (Jan. 2014)

American Astronomical Society – Astronomy Ambassador Training Workshop (Jan. 2014)

Volunteer presenter – *Mars and Beyond* exhibit – Boston Museum of Science (Aug. 2013)

Volunteer host for Peyton Observatory public observing nights (2012-present).

Volunteer math tutor, Prison Teaching Initiative (Spring 2014)

SKILLS

Computing

Programming Languages
Python, C, Java

Electronic Presentation
 \LaTeX , HTML

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

Leadership

Princeton University Ticketing Manager: Fall 2010 - Present
Trained and supervised other students in daily ticketing office operations

President of Princeton Society of Physics Students: Spring 2012 - Winter 2014
Organized colloquia and group activities; authored club constitution