

A. Stevie Bergman

CONTACT	stevie@princeton.edu asteviebergman.com
EDUCATION	<p>Princeton University, Princeton, New Jersey Commenced September 2014 <i>PhD candidate, Physics - Observational Cosmology</i> Adviser: William C. Jones, SPIDER Collaboration</p> <ul style="list-style-type: none">• MA awarded in 2016• Prethesis: <i>Preparations for the Second Flight of the SPIDER Polarimeter</i>• Cryogenics, detectors and focal plane packaging, instrument integration, atmospheric and magnetic modeling, data analysis. <p>Smith College, Northampton, Massachusetts BA - Physics, Highest Honors Graduated cum laude, May 2009 Adviser: Gary N. Felder</p> <ul style="list-style-type: none">• Minor in Astrophysics• GPA: 3.82• Honors Thesis: <i>Study of Non-Minimally Coupled Inflation of the Early Universe Using Phase Portraits and Poincaré Maps</i> <p>St. Edmund Hall, Oxford University, England <i>Junior Year Abroad - Physics</i> October 2006 to June 2007</p>
HONORS AND AWARDS	NSF Graduate Research Fellowship, Awarded in 2015 Joseph Henry Merit Prize for first year of study, Princeton University, 2014 Frank A Waterman Prize for Outstanding Senior in Physics, Smith College, 2009 Finalist, Vanderbilt Prize for Undergraduate Research in Physics & Astronomy, 2009 Phi Beta Kappa and Sigma Xi, Elected by Smith College in 2009 President, Smith College Society of Physics Students, 2008 to 2009 Smith College First Group Scholar (Top 10% of Class), 2007 and 2009 Dean's List, Smith College, 2006, 2007, and 2009 ¹
PUBLICATIONS	AS Bergman, <i>et al.</i> 280 GHz Focal Plane Unit Design and Characterization for the SPIDER-2 Suborbital Polarimeter. LTD Proceeding, submitted to Journal of Low Temperature Physics . arXiv:1711.04169 (2017) R Gualtieri, <i>et al.</i> SPIDER: CMB polarimetry from the edge of space. LTD Proceeding, submitted to Journal of Low Temperature Physics . arXiv:1711.10596 (2017) J Nagy, <i>et al.</i> A New Limit on CMB Circular Polarization from SPIDER. Astrophysical Journal , Vol 844, 2, id 151, 7 pp. (2017) J Hubmayr, <i>et al.</i> Design of 280 GHz feedhorn-coupled TES arrays for the balloon-borne polarimeter SPIDER. Proceedings of SPIE , Vol 9914, id 99140V 14 pp. (2016) JF Dufaux, AS Bergman, G Felder, L Kofman, J-P Uzan. Theory and Numerics of Gravitational Waves from Preheating After Inflation. Physical Review D , 76:123517. (2007)
GRADUATE RESEARCH TALKS	<i>Construction and Characterization of the SPIDER-2 280 GHz Focal Plane Units</i> Low Temperature Detectors , Japan July 20th, 2017 <i>The SPIDER Instrument: Measuring the Cosmic Microwave Background from the Stratosphere</i> Smith College , Invited Speaker September 2017

¹Full list of honors and awards available upon request.

Magnetic Shielding of SPIDER Receivers
Princeton University, Gravity Group **October 28th, 2016**

In-flight atmospheric loading analysis for SPIDER
Princeton University, Gravity Group **October 16th, 2015**

*The SPIDER Sub-Orbital Polarimeter:
Measuring the oldest light in the universe from a balloon*
Smith College, Invited Speaker **October 2015**

PAST RESEARCH **Complex Scalar Field Dynamics with BPS Domain Walls**
Fulbright Fellow, Indonesia **October 2013 to July 2014**
Affiliate: Professor Bobby Eka Gunara, Institut Teknologi Bandung

Testing and Commissioning Inner B-Layer Upgrade, ATLAS Pixel Detector
Assistant Researcher at CERN, Switzerland **Summer 2013**
Adviser: Professor Emlyn Hughes, Columbia University

Non-Minimally Coupled Inflation of the Early Universe
Thesis Research, Smith College **Summer 2008**
Adviser: Gary Felder, Smith College

Simulating the Errors in Large Surveys of Weak Gravitational Lensing
Caltech Summer Undergraduate Research Fellowship **Summer 2007**
Adviser: Professor Alan Weinstein, California Institute of Technology

String Landscape and Gravitational Waves from the Early Universe
Research Assistant, Smith College **Spring 2006 to 2007**
Research culminated in *Phys. Rev. D*, 76:123517 2007.

OUTREACH,
TUTORING, AND
TEACHING

Physics Tutoring and Teaching

- Assistant Instructor, Physics 101, Princeton University, Fall 2017
- Master Tutor, Introductory Physics Courses, Smith College, 2006 to 2007, 2009
- Teaching Assistant for upper-level E&M course, Smith College, Fall 2008

Outreach Speaker (Recent)

- Conference for Undergraduate Women in Physics, Princeton, January 2017
- Princeton OpenLabs, Princeton, October 2016
- Young Scholars Institute, Trenton, NJ, October 2016

These Vibes Are Too Cosmic, WPRB Princeton 103.3 FM
Creator, Producer, and Co-Host **May 2015 to present**
thesevibesaretoocosmic.com
Airs two hours per week, featuring science news, local outreach events, and interviews with Princeton and visiting researchers from across the sciences. Weekly posts on accompanying website and bi-weekly podcast.

Prison Teaching Initiative
Prison Tutor **January 2017 to present**
Approximately once-weekly tutor for college and high school level physics and math courses at local New Jersey prisons.

Princeton Citizen Scientists
Head of Research and founding member **August 2016 to 2017**
Graduate student group that researches, writes on, and speaks about the science behind policy issues such as nuclear proliferation, climate change, and human rights.

OTHER WORK
EXPERIENCE

United States Peace Corps, Uganda
Secondary Science Education Volunteer

February 2011 to April 2013

- Secondary School Mathematics, Physics, and Computer Teacher
- GirlTech Uganda, Creator and Co-director, August 2012.

<http://www.Facebook.com/GirlTechUganda>

Professional development program for girls in science and technology. Operated annually since creation, currently in line for expansion Africa-wide.

- Secondary Science Education Technical Peace Corps Volunteer Trainer, Dec. 2012

US Dept Of Justice, Vaccine Injury Compensation Program, Washington, DC
Vaccine Litigation Paralegal

August 2009 to December 2010

LANGUAGES AND
SOFTWARE

Python, C/C++, Solidworks, Ansys HFSS Electromagnetic, and *Mathematica*.
Conversational French, Indonesian, and Acholi (of Uganda).

REFERENCES

- Prof. Bill Jones, Princeton University, +1 609 258 4413, wjones@princeton.edu
- Prof. Emlyn Hughes, Columbia University, +1 212 854 0796, ewh42@columbia.edu
- Prof. Gary N Felder, Smith College, +1 413 585 4489, gfelder@smith.edu