2900 College Ave. Apt. 10
Boulder, CO 80303
(406) 640 – 1916
jasmine.brewer@colorado.edu

Jasmine Therese Brewer

Objective

Earn a PhD in theoretical physics and pursue a career as a researcher in fundamental high-energy physics or nuclear fusion energy at a university of national laboratory.

Academics

University of Colorado at Boulder
Anticipated Graduation: May 2015
Major: Engineering Physics
Minor: Mathematics
Cumulative GPA: 3.939

Honors

2014 Barry M. Goldwater Scholar
2014 Astronaut Scholarship Foundation Finalist, University of Colorado at Boulder
Presidential Scholar, University of Colorado at Boulder
Merit Scholar, College of Engineering and Applied Science
Engineering Honors Program (EHP) Member, Fall 2011 – Present
Dean's List Recognition (Fall 2011-Present), College of Engineering and Applied Science
AP Scholar with Distinction and National Merit Commendable Student (2010)

Publications

[1]. M.B. Pandey, T. Porenta, J. Brewer, A. Burkhart, S. Zumer, and Ivan I. Smalyukh. "Chirality-mediated symmetry breaking and self-assembly of dipolar nematic colloids with tangential surface anchoring." *Undergoing peer review, Physical Review Letters.*

[2]. Joseph A. Shaw, Paul W. Nugent, Sean Nicolaysen, and Jasmine Brewer. "Balloon-borne multispectral imaging of vegetation to detect CO_2 gas leaking from underground." *In preparation.*

Research

Nuclear Theory and Computational Hydrodynamics, 2013 – Present
Dr. Paul Romatschke, University of Colorado at Boulder
Objective: Develop fluid dynamics simulations of flow characteristics, particularly elliptic flow, in cold atomic gases and plasmas in order to theoretically study their material properties and viscosity.

Liquid Crystal Materials Research Center, 2012 – 2013
Dr. Ivan Smalyukh, University of Colorado at Boulder
Objective: Use experimental methods, including video microscopy and fluorescence imaging, to study the interactions between particles in liquid crystal fields ([1]). Use theoretical methods and computer simulations to inform and extend experimental results.

Optical Remote Sensing Laboratory, Summers 2012 and 2013
Dr. Joseph Shaw, Montana State University
(NSF Research Experiences for Undergraduates program, 2012)
Objective (2013): Design and implement quantitative image analysis algorithms capable of automatically analyzing data for an airborne imaging system used to detect leaks at CO_2 sequestration sites ([2]).
Objective (2012): Develop an electronic system to optically detect the aurora borealis.

Colorado Space Grant Consortium, 2011 – 2012
Objective: Design an electronic system to record atmospheric data during rocket flights.