

## Jasmine Therese Brewer

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<b>Objective</b>	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.
<b>Academics</b>	University of Colorado at Boulder Anticipated Graduation: May 2015 Major: Engineering Physics Minor: Mathematics Cumulative GPA: 3.939
<b>Honors</b>	Presidential Scholar, University of Colorado at Boulder 2014 Goldwater Scholarship Nominee, 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)
<b>Publications</b>	[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." <i>Undergoing peer review, Physical Review Letters</i> .  [2]. Joseph A. Shaw, Paul W. Nugent, Sean Nicolaysen, and Jasmine Brewer. "Balloon-borne multispectral imaging of vegetation to detect CO <sub>2</sub> gas leaking from underground." <i>In preparation</i> .
<b>Research</b>	<b>Nuclear Theory and Computational Hydrodynamics, 2013 – Present</b> Dr. Paul Romatschke, University of Colorado at Boulder <u>Objective</u> : 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.  <b>Liquid Crystal Materials Research Center, 2012 – 2013</b> Dr. Ivan Smalyukh, University of Colorado at Boulder <u>Objective</u> : 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.  <b>Optical Remote Sensing Laboratory, Summers 2012 and 2013</b> Dr. Joseph Shaw, Montana State University ( <i>NSF Research Experiences for Undergraduates program, 2012</i> ) <u>Objective (2013)</u> : Design and implement quantitative image analysis algorithms capable of automatically analyzing data for an airborne imaging system used to detect leaks at CO <sub>2</sub> sequestration sites ([2]). <u>Objective (2012)</u> : Develop an electronic system to optically detect the aurora borealis.  <b>Colorado Space Grant Consortium, 2011 – 2012</b> <u>Objective</u> : Design an electronic system to record atmospheric data during rocket flights.