Summer Intern in Plasma Physics at the University of Michigan
Summer 2018
Ann Arbor, MI

This is a BMC only opportunity. The selected student will participate in the LILAC Summer Funding Program.

Carolyn Kuranz, Bryn Mawr College ’01
University of Michigan
Center for Laser Experimental Astrophysical Research, Project Director
Project Dates: May – August
APPLICATION DEADLINE: March 22nd 12:00PM
Application: https://brynmawr.qualtrics.com/jfe/form/SV_0N9ERJXCNEEkiOx

The Center for Laser Experimental Astrophysical Research (CLEAR) models and creates hot, dense plasma to study the physical mechanisms that matter for astrophysical phenomena including supernova explosions, supernova remnant evolution, and the collisions of shock waves with molecular clouds. Our work involves both experiments and theory of astrophysical systems and plasmas. We model, design and create plasma experiments, analyze data and develop new diagnostic techniques.

Internship students will be assigned a modeling, diagnostic, or data analysis project to be completed over the course of the summer depending on interest and mutual goals. Students are expected to work 30 - 40 hours per week for 8-12 weeks with a minimum of 8 weeks and a pay rate of $13/hr. Travel expenses will be paid by LILAC. All students will become familiar with experimental and theoretical background and methods. Specifically, students with a data analysis project will be analyzing data using MATLAB (Prior experience with MATLAB is useful, but not required) and provide detailed records of results and methods. Diagnostic projects will likely be undertaken with a group of students to develop and test diagnostic methods and detail results. Modeling projects will involve learning to run 1D radiation hydrodynamics codes, analyze the data, and present results in a meaningful way. Your intellectual and career interests will be factored into the design of your specific project to the best of my ability.

In addition, I will assist students in meeting with faculty members at the University of Michigan in Physics and Engineering depending on student interest. This internship opportunity would be ideal for a Bryn Mawr rising junior or senior physics or STEM major with an interest in attending graduate school.

I graduated from Bryn Mawr in 2002 with an A.B. in Physics. Upon graduation, I entered the PhD program in Applied Physics at the University of Michigan where I studied experimental plasma physics. I graduated in 2009 and became a member of the Research Faculty where, in addition, to my own research I advise graduate and undergraduate research. I am currently an Associate Research Scientist and the Project Director of Center for Laser Experimental Astrophysical Research (CLEAR). CLEAR consists of 2 other faculty members, 2 postdoctoral fellows, 10 graduate students and 10 – 15 undergraduates working on multiple projects within the Center.