

Department of Physics
COLLEGE OF ARTS AND SCIENCES

SUMMER RESEARCH OPPORTUNITIES
FOR UNDERGRADUATE WOMEN

APPLICATION DEADLINE: March 1, 2014

The Department of Physics is pleased to offer the following research project for the summer of 2014. Interested students are urged to contact the faculty member(s) directing the project that most interests them. By contacting the faculty member, you can discover more about the project, learn what your responsibilities will be and, if possible, develop a timetable for the twelve-week research period.

Research in Experimental Particle Physics

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Project Description

The student will analyze data from the LHCb experiment at CERN. A student joining this effort will learn some particle physics and will learn to use the ROOT framework to study decays of particles containing heavy quarks. We are probably looking for a student who has completed at least the usual sophomore level physics courses, but we will also consider very well motivated students with excellent performance in freshman physics and math courses. No prior experience with computer programming is necessary. We will help you teach yourself what you need to know. We have had very good high school students work with us successfully the past few summers,

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and we've had a steady stream of undergraduates work with us as well. The student will work as part of a team including faculty, post-docs, graduate students, and probably other undergraduates. Two previous WISE students have continued working with us past the end of the summer program and extended their work to complete Capstone Projects. One was the principal analyst of a paper published in Physical Review D (**Measurement of the mass of the D^0 meson**, <http://prd.aps.org/abstract/PRD/v88/i7/e071104>) Another started working with us last summer and continues to work with us now. We anticipate similar opportunities will be available to a WISE student who works with us this summer.