Rocket Girl
Dr. Keith Andrew and Dr. David Barnaby

Over the last three years, high school senior, Kristen Donahue from Waterloo, Ill., has been working with WKU astronomy faculty member, Dr. David Barnaby, on various astronomy research projects.

Ms. Donahue’s project, “First Measurements of Size and Surface Temperature for the Eclipsing Binary Star 1ES 1959+650#5”, was completed in spring 2005 and won first place at the Illinois Science Fair. Ms. Donahue has won first place for two consecutive years and most recently won a trip to NASA’s 2005 Space Academy.

Using images collected at the department’s Bell Observatory, Ms. Donahue constructed a detailed light curve for the short-period binary star. From the eclipses evident in the data, she was able to show that the component stars have nearly identical temperatures but are unequal in size. This proved that the system was of the W UMa class of contact binaries.

Ms. Donahue is now writing her results for an online journal. Last year, Ms. Donahue’s project “Applying Newton’s Laws: Measuring the Density of Saturn” also won first place at the Illinois Science Fair. Ms. Donahue has also received awards from the Office of Naval Research, the US Metric Association and an invitation to the National Science Fair in Washington D.C.

Now in her senior year, Ms. Donahue has her eyes set on analyzing an active galaxy, thereby contributing to one of the core projects pursued by WKU astronomers.

Department Recognizes Retiring Faculty
Dr. Doug Harper

The Department of Physics and Astronomy would like to recognize Dr. Doug Humphrey and Mr. Clarence Wolff who retired at the end of the 2004-05 academic year. Together they provided over 75 years of dedicated service to students in our department.

Dr. Humphrey joined the faculty in 1965 after receiving his doctorate in physics from Ohio University in Athens, OH. He taught virtually every subject offered in the department at some time during his tenure on the faculty. His area of research expertise was experimental nuclear physics and he was a key contributor to the early success of the WKU Applied Physics Institute. Dr. Humphrey was a strong proponent of improving the laboratory experiences for our students. He was a principal investigator on a National Science Foundation grant that supported the modernization of the physics laboratories to their current state.

In recognition of his many years of service to the students of the department, the Society of Physics Students recently established a fund at the College Heights Foundation to support an annual award to be given in Dr. Humphrey’s name. The award is given to the junior or senior physics major with the best record of service both within the Department of Physics and Astronomy and to science outreach in the community. Donations to this fund can be made through the College Heights Foundation.

Mr. Wolff joined the department in 1969 after receiving his master’s degree in physics from Western Kentucky University in Math and Science Education. Mr. Wolff taught a variety of classes but he specialized in courses for future teachers. He was the supervisor for numerous student teachers. For many years, Mr. Wolff played a leading role in advising students in various science disciplines who desired to teach at the secondary level. Prior to joining the WKU Department of Physics and Astronomy, Mr. Wolff taught algebra, chemistry, general science and physics at Bowling Green High School (BGHS) in Bowling Green, Ky. During part of his time at BGHS he also served as head of the Science Department and assistant principal.