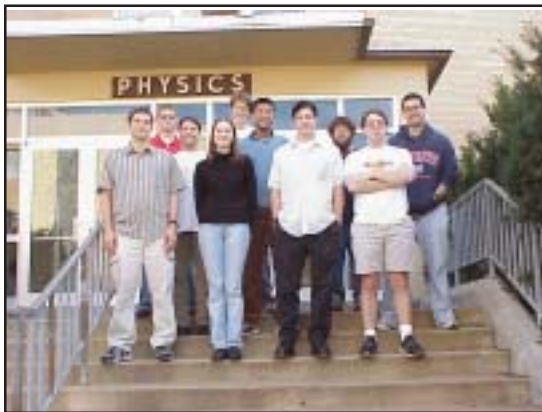


## Report from the SPS

### From Lea Ann Cozort, President of SPS

I have really enjoyed the task of being SPS president this year, and am happy to report that the UMR chapter of the Society of Physics Students continues its legacy of fun and successful physics activities! To start the fall semester off on the right foot, the SPS and Physics faculty gathered for a picnic at Schumann Park on a cold, rainy day in October. **Kurt Koch, Christopher Lloyd, Travis Yates, B. J. Fendler, Joe Eimer, and Lea Cozort** served as cooks and hosts. After a meal of chips, hot dogs, and hamburgers, we had the traditional volleyball grudge match between the SPS members (on one side) and Physics Professor **Greg Story** (on the other). This year, because of bad weather, the game had to be moved to the UMR multi-purpose building, where we still got stomped by Dr. Story. (Despite the painful practice over STUCO free day weekend!)

Also, as many readers of **Matter 'n Motion** know, the SPS organizes an annual road trip to Argonne National Laboratory in early November to attend the undergraduate research symposium that takes place there. This past November, Travis Yates, B. J. Fendler, Kurt Koch, Joe Eimer, and I attended. Along with listening to great presentations given by undergraduate students involving their research activities, we took advantage of the opportunity to travel



into Chicago for a little more fun. FYI - hotels in downtown Chicago are warm, and glass elevators intrigue physics majors! Finally, as the end of the semester came flying at us, a number of SPS members met on a Saturday afternoon at the local bowling alley for some last minute stress relief. Coordination and high scores obviously weren't the goal, but the turnout was unbelievable. As for other club activities, several speakers were invited to our semi-weekly meetings. Some came to us from the physics department, others from various departments on the UMR campus.

This semester we hope to have more speakers and possibly take a field trip to another university to visit with the SPS chapter there. Also, we will be participating in the annual phonathon, volunteering in the "Bridging the Gap" event for local girl scout troops, judging for the Missouri Science Olympiad, recruiting potential freshmen, and making the Society of Physics Students a better-known organization on campus. For other interesting facts or to contact us personally, go to <http://www.umn.edu/~sps>.

*Editors note: SPS Officers for the 2001-02 school year are: President: Lea Ann Cozort (Fall '01 and Winter '02); Vice President: Charlie Glaus (Fall '01 and Winter '02); Secretary: Kurt Koch (Fall '01 and Winter '02); Treasurer: Travis Yates (Fall '01) and Christopher Lloyd (Winter '02); Recycling: B. J. Fendler (Winter '02).*

## UMR Researchers Study Jet Engine Emission in England

A group of researchers and students from the University of Missouri-Rolla traveled to England this past summer to test emissions from the exhaust of a jet engine as part of a joint project with NASA and the British government. **Dr. Donald Hagen**, professor of physics at UMR, is among the team that traveled to a British government testing facility in Farnborough, England. Hagen is the director of UMR's Cloud and Aerosol Sciences Lab (CASL), a key research laboratory of the UMR Physics department. During the first phase of testing last summer, the researchers studied the combustor of a Spey jet engine, testing particulates in its emissions. "This summer the entire jet engine was tested," says Hagen. The test was run under the same conditions as before to show how the rest of the engine affects emissions. Among the researchers from UMR

were two graduate students and a group of five undergraduate students. "These undergraduates worked on individual projects in the lab here at UMR, and then were able to travel to England to see those projects integrated into a large multi-faceted research effort," says Hagen, "UMR's part of this project is to characterize particulate emissions in the exhaust," By studying the emissions as they travel through the entire jet engine, Hagen says, they are able to define what emissions are like under different operating conditions of the engine.

"Most particulates are smaller than the wavelength of light," Hagen says, "but they do affect the environment." CASL researchers determine the size and concentration of different types of particulates in the emissions.

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