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## Cross Sections Summer 1999

Department of Physics and Astronomy

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# Physics Highlights

SUMMER 1999

Welcome back for Fall term 1999! If you've been away from campus, or buried under classes and research, here's a little information on what we've been up to in the physics department over the summer.

- More ink for the superheavies-- [Dr. Witek Nazarewicz](#) made the news this spring when he helped work out the theoretical models for [possible superheavy elements](#), shedding light on the "terra incognita" of the periodic table. He co-authored the paper, "Structure of Odd-N Superheavy Elements," which appeared in the August 9, 1999 issue of *Physical Review Letters* and is referenced in an August 6 [Physical Review Focus](#) article on two new elements. Dr. Nazarewicz will talk about these elements on September 24 as part of UT's Science Forum. The presentation will be at the Thompson Boling Arena (Dining Room A) at noon.

- Teaching the teachers-- [Dr. Stuart Elston](#) instructed a "Laboratory-Based Hands-On Workshop" for Knoxville area high school physics teachers July 13-14. The workshop gave teachers a better grounding of basic E&M concepts, which many college students have difficulty with, as well as some hands-on work in the photoelectric effect, which often appears on AP tests. Dr. Elston has recently worked with Bearden High School's physics and physical science faculty and students through UT's "Scholars in the Schools" program.

- Rockets, Paul Lewis style--Paul Lewis, director of the [Teachers Resource Distribution Center](#) and astronomical wizard of the physics department, spent a lot of time this summer teaching all ages about rockets in both his aerospace education class for teachers and his Kids U class for elementary school students. Mr. Lewis will coordinate the astronomy viewing sessions for the public this fall, as well as extra-credit viewing sessions for students enrolled in UT's astronomy courses.



**Rocket makers in Paul Lewis' aerospace education class.**

- A little hands-on learning-- From June 7 through August 13

the department hosted 14 upper-level physics majors through the [Science Alliance Summer Research Fellowship program](#). This program allows students from UT and around the world to work on a research project with one of our faculty members, culminating in a presentation at the end of the summer.

- Finding photons and winning awards--Dr. Panos Datskos is a member of the Oak Ridge National Laboratory team that won a 1999 R&D 100 award for developing the micromechanical quantum detector (MQD), a miniature photon detection device. The R&D 100 awards are presented for the 100 most significant technological innovations of the previous year, as judged by R&D Magazine.
- Back to business as usual--The familiar face in the department head's office is Dr. Lee Riedinger, who spent much of his summer working on the UT-Battelle proposal for management of the Oak Ridge National Laboratory. Dr. Riedinger helped make the formal presentation to the Department of Energy on August 16 and 17. The [UT-Battelle team](#) will find out in December if they've won the contract.
- The labs, they are a'changin'-- The Physics Interactive Learning Laboratory (PhILL) has moved from Room 512 in the Nielsen Physics Building to Room 203 and will be in operation for the fall semester.
- New kids in town--We'd like to welcome our new physics graduate students for the Fall 1999 term. They are:

- Mickhail Batygov
- Wei Jiang
- Zhanwen Ma
- Chad Middleton
- Scott Ness
- Hyo-In Park
- Oscar Restrepo
- Malachi Schram
- Hojung Sin
- Izabel Szlvfarska
- Nick Tantawy
- Alexander Thesen
- Wei Tian
- Josh Williams

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Please send comments to [cal@utk.edu](mailto:cal@utk.edu).