

Physics Students Converge at Grove City College

As professor Richard Leo switched between the polar characters of General Groves and physicist Robert Oppenheimer, the packed lecture hall of students actively re-lived the history of the atomic bomb. Feverish planning for several months was rewarded by the rapt attention of over a hundred college students from five different states. This dynamic presentation was just the beginning of a weekend filled with fascinating talks, insightful discussions, and great memories.

The February 2010 Zone 7 meeting of the Society of Physics Students (SPS), hosted by Grove City College (GCC), brought students together from the surrounding region to learn physics from plenary lectures, encourage student research, promote outreach to the community, and discuss issues of scientific citizenship. These goals were met by the excellence of the talks given, the expertise of the panelists, and the enthusiasm of the participants.

Friday evening began with a lecture on “Searching for New Physics at the LHC” by Dr. Justin Conroy (SUNY Fredonia). Dr. Conroy made the presentation both stimulating and accessible for undergraduate students as he discussed the strange physics hoped to be found at the Large Hadron Collider at CERN. This talk was followed by pizza and an opportunity to meet physics students from other colleges and universities. After dinner, retired Grove City College professor Richard Leo gave a talk in which he took on the roles of physicists involved in the development of the atomic bomb. This was followed by a rousing game of “physics jeopardy” and ice cream made with liquid nitrogen. The fun-packed evening concluded around 11 PM.

At 8 AM on Saturday morning, students presented their research in a poster session during breakfast. Fifteen students entered the competition, with first prize (\$50 to Think Geek) going to Evan Pease of Kenyon College, second prize (\$25) to Nirajan Mandal of Kenyon College, and (\$15) to Ashley Cetnar of Grove City College. The poster presentation encouraged students to develop professional skills by describing their research and learning about the work of others.

The morning was officially opened by a brief introduction to the conference from GCC president Dr. Jewell. This was followed by an amusing and insightful skit by Eastern Michigan University SPS chapter, entitled “121 Evening News: Einstein and the Bomb.” The skit, together with the previous night’s presentation by Prof. Leo, set the stage for a panel discussion of Scientific Citizenship by six professors from various fields including biology, mechanical engineering, philosophy, physics, and psychology. One of the focuses of the Society of Physics Students and the affiliated Sigma Pi Sigma Honor Society over the last two years has been scientific citizenship. So our goal was to provide an opportunity to foster thought and conversation among the attendees on the civic responsibility of scientists. After each professor made several brief remarks, attendees were randomly assigned “break-out” groups where provoking questions were considered through student discussion. Important topics were

discussed including the responsibility to be involved in society and ways that scientists can connect with the community.

Dr. Guillermo Gonzalez of Grove City College wrapped up the morning's activities with a talk on "The New Grove City College Observatory." Interested students were able to view sunspots and a prominence on the sun after the talk. Lunch was held in Old MAP cafeteria, coinciding with a graduate school expo. Five schools were represented: Case Western Reserve University, Ohio State University, Pennsylvania State University, University of Toledo and West Virginia University. After lunch, students from West Virginia University and Wooster presented their chapters' outreach efforts. Representatives from Wooster demonstrated a presentation on air pressure for elementary students complete with exploding balloons, expanding marshmallows, and liquid nitrogen, while WVU told about their ideas and preparation for their outreach in schools with lasers. The conference was concluded by Dr. Nancy Morrison (University of Toledo), who described her work in astronomy in a talk entitled, "The Jewels of Orion's Belt."

The 2010 Zone Meeting at Grove City College successfully embodied the missions of both the Society of Physics Students and Sigma Pi Sigma. The conference afforded students the opportunity to learn from excellent speakers, discuss scientific citizenship, present research and outreach efforts, and, of course, fun with liquid nitrogen. What's more, these opportunities were experienced alongside peers with whom the attendees ordinarily would have only limited contact. As in any scientific pursuit, the preparation was tedious but the result was everything for which we could have hoped.



Figure 1 Wooster Outreach



Figure 2 GCC Physics Major Carolyn Goodcase with her diffraction grating glasses



Figure 3 Speakers Dr. Conroy (left) of Fredonia University and retired Professor Leo of GCC (right)



Figure 4 Students interacting over lunch



Figure 5 Professor Leo as General Groves



Figure 6 Dr. Nancy Morrison of University of Toledo

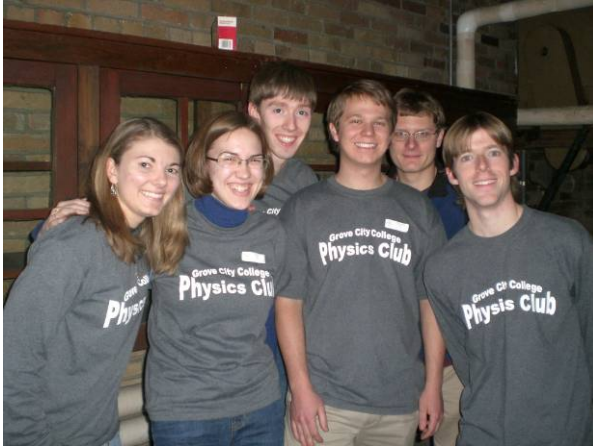


Figure 7 GCC Physics Club Officers (from left) Ashley Cetnar, Brianna Dillon, Adam Argondizzo, Ben Carlson, David Smith, and Shaun Mills.



Figure 8 panelists



Figure 9 ? of Kenyon College, second place in poster competition