

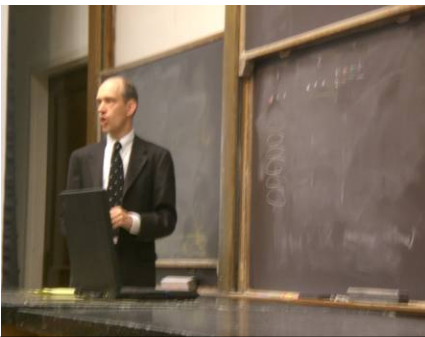
SPS Zone 12 Meeting Wrap Up

On Friday April 11th, students from across Zone 12 packed up and began their journeys for St. Louis and the SPS Zone Meeting. On Saturday, the students gathered together at Washington University in Saint Louis to begin an activity-packed weekend.

Events kicked off with a talk from Dr. Mark Alford, who gave a talk called “What does quantum mechanics tell us about the universe?”



Students and faculty from the University of Kansas pack up for the drive out to St. Louis.



Dr. Mark Alford answers questions about his talk.

Next, in a more casual setting, students assembled for an intense game of physics Jeopardy. Answering questions about “past faces of physics”, “in the lab” and “extreme planets,” the schools had a chance to show off their physics knowledge. The team with a mixture of students from UMSL, Wash U, and Kansas swept the board.

To test their brains once again, students worked out answers to ‘Fermi questions’ during a lunch break. A Fermi question is one which would be impossible or extremely difficult to have an exact answer, so must be quickly and roughly calculated. Among other things, the students concluded that Hillary Clinton may have been a slightly misspeaking when she claimed that she says a million words a day. Using different strategies, teams agreed that 50 or 60 thousand words would be a more accurate conjecture.



Students at WashU prepare a game of Physics Jeopardy.

The second speaker at the zone meeting was John Rigden. Dr. Rigden, an honorary professor at Washington University, spoke about the history of physics in his talk “Newton didn’t just plunk it down.” He began his presentation by clearly stating that his talk would have no equations, as it is important to be able to communicate physics to the general public, including, he believes, your grandmother.

Sunday morning began with tours through some of the state-of-the-art laboratories at Washington University. During an ‘open-house’ setup by the different laboratories, students had the opportunity to explore facilities such as the High Energy Cosmic Ray Astrophysics lab, the Laboratory for Ultrasonics, and the Extraterrestrial Materials Lab.



Dr. Kelton speaks to Zone 12 Students

The first talk of the second day of the Zone meeting was given by Ken Kelton. Bringing along some of his sword collection as props, he spoke on “Metals, civilization and physics.” Taking the audience on a journey of history and the use of metals, he described the impact of metals and metal working on different civilizations and how these processes have themselves changed and thus changed our society. Dr. Kelton also described some of the research that is done in the Laboratory for Materials Physics Research, for which he is the principle investigator.

The weekend’s scheduled events wrapped up on Sunday afternoon with a lively talk by Carl Bender about the similarity of classical and quantum mechanics when observed in the complex plane. Upon concluding remarks and a variety of awards for the students, many began their journeys back to their respective Universities. Some

students, however, made their way over to the APS April meeting to continue their weekend of physics.



Students view St. Louis from the top of the Gateway Arch

For those who opted for a longer stay in St. Louis also had the opportunity to explore the city of St. Louis. The Art Museum, the City Museum, and the Gateway Arch were favorite attractions. In the unlikely setting of a tiny tram car from the top of the arch, students from the University of Kansas met Nancy Ellen Abrams. Abrams is the coauthor of the book, *The View from the Center of the Universe*. That Monday evening, the author, who is a cultural

philosopher and writer, and her husband would be giving a public lecture on the content of the book and theories behind it. Abrams described to the students about the interesting subject of cosmology and its relationship to the development of cultures. She and her husband hold the view that “humans are significant and central to the universe in unexpected and important ways.” Many participants of the APS April meeting were able to attend the evening lecture to learn more about this interesting subject.

The April APS meeting for undergraduates wrapped up on Monday afternoon after students talks, awards, and one last game of Physics Jeopardy. Students are looking forward to the next opportunity to meet again at future SPS Zone meetings.



Students meet with author Nancy Ellen Abrams at the Gateway Arch