

## **Chapter Report**

Sigma Pi Sigma Quadrennial Congress

Chicago, IL

Nov. 6-8, 2008

Institution: Saint Peter's College

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Physics majors are hard to come by in our school. We were represented by half of the school's physics majors, five. Take that number, multiply it by one hundred, and then add another hundred. That was the attendance at the miraculous Sigma Pi Sigma Congress. Needless to say, the sight of that many devoted to our particular field was astonishing. It was quite amazing to be in a room full of the world's top physicists. The 2008 Quadrennial Congress of Sigma Pi Sigma gave insight to how important scientific citizenship is within the science community. Our SPS chapter at Saint Peter's College shared good ideas with many scientists, some that we feel quite strongly about. As we get closer to finishing this year, change is upon us. On Friday morning, our group registered for Breakfast with the Scientists. That morning, we were served eggs, bacon, sausage, potato, and cupcakes. To drink, there was apple juice, orange juice, cranberry juice, etc. Many of us liked the continental breakfast, but actually the best part was talking with the scientists of FermiLabs. One of the staff decided to sit with us, and he was talking about many research projects that students can be a part of. One of those projects was the D-Zero Experiment.

The D-zero refers to an interaction region along the accelerator ring of a collider detector. He mentioned how as an undergraduate student he applied to a number of internship programs, one being for FermiLabs. Later that year, he received a phone call asking him to come and work at FermiLabs during the summer. During that summer, he started working with the Collider Detector, and since then he has been a researcher in the D-zero experimentation building. Also, it was great to sit down and talk with our professors. Our professors at Saint Peter's College, (Dr. Jose Lopez & Dr. Wei-Dong Zhu) mentioned how great it was to see so many different scientists of all race and color sitting with one another. It doesn't matter where we all come from, but the key thing is to

work together to change the world. Being a part of this experience taught us to be productive scientists, and take opportunity of the moment we all share together, and note down some good ideas. I feel this is what made this congress special, and it allowed for us to meet one another, and establish a good relationship with other schools. Below are some pictures taken during the breakfast period.





Scientists probably have the greatest discussion at the breakfast, says Tony Maldonado (SPS Secretary at Saint Peter's College). Many of the ideas shared brought us closer together. For example, Mike Wilson (SPS President at Juniata College) mentioned that working together with other students we can get more people to be involved in physics research and education. This was truly amazing to see among physicists eating with one another, and talking about the importance of scientific citizenship. The theme of the conference followed us everywhere even when it ended. I feel like the congress welcomed all of us with open arms, and made us feel like a family. We are all different people, but we share one common goal. The goal was to inspire students to become better citizens by promoting science, mainly to help the younger generation to understand and love physics. It's important that during these rough times we never forget what we stand for, and how to make a difference in the community. As a student, I feel that my job is to help out those who don't have that sight or vision clear to them. Dr. Aziza Baccouche helped to burn that fire within me better. I truly want to be a part of this family of scientists, and help those who don't understand what the world is all about. Science is so important, and many people don't really understand this. Coming together as a group during the breakfast session to talk about these issues was very important. But, I feel it takes more to make us feel proud of the membership we have and how far we have come. The breakfast session allowed us to meet new people, establish relationships, share ideas,

learn from the research we do, and to appreciate the small time we share in a lifetime with each other. Below is a picture taken with Dr. Aziza Baccouche.



“For a first time attendee, the program was simply marvelous”, says Quincy Itheme. It allowed for an interaction between our peers, coming together to try and solve the world’s greatest problems. Finally, we heard talks from some of the most renowned in the physics field. The presentation given by Dr. Richard L. Garwin entitled “Talk Title: U.S. Science Policy at a Turning Point?” discusses the importance of science in a society, the need for reform in U.S. policies, and the reforms that could most help science in America. This talk highlighted most of the decisions by past and current presidents about the direction in which research should go. As a consultant to the federal government on matters of military technology and other scientific areas, and as someone with a long history of collaboration with the government on topics such as assessing missile threats to the United States and anti submarine warfare to technology in healthcare, his insights into policy are very insightful.

One area that stuck out is the need for immigration reform. When you think of science policy, immigration is not the first area of politics that comes to mind. The United States has two problems that result in a short supply of scientists: fewer citizens going into science and more foreign students leaving the U.S. after they graduate. To combat this second problem, Garwin says immigration laws have to be changed so that

the talented students that come here from over seas would become citizens upon graduation, thus encouraging them to stay here with the knowledge they have gained. Having the talent is not enough, as Garwin noted. We need to shift our nation's focus onto different areas. Much of our emphasis is on health care and things like that, which is fine, but it is often funded at the expense of basic research in physics and other sciences. Without this basic research, the next breakthroughs will not be made, at least, not made in the United States. The United States has long been a world leader in scientific discovery. Policy has been weakening that vital part of our nation. Brian McCullough says, "It also gave a few comments about how president-elect Barack Obama would direct research in the future". It seemed as if this talk, among many others, was an indirect endorsement of the president-elect.

As first time attendees, this congress was a relief. Never had we all imagined so many physics majors in one place at one time. Though this congress set out to promote scientific citizenship, there are still many problems. For example, the science community had a very big problem trying to reach out to the community. Nobel Prize winner Dr. Leon Lederman told us about 76 Nobel laureates endorsing Barack Obama. You would think something like that would make the news right? This is just an example of the many things that could be improved. Though there is a great deal of faith within the science community. If we all learned something from this congress, it's that we all need to work together and share ideas. Together, we can make a difference.

