

RU Physics/Physical Science Alumni Newsletter—Fall 2009

In This Issue

Current RU Physics News

Selu Observatory

Alumni Spotlight

New Physics Scholarship Fund

Help SPS/Sigma Pi Sigma fund our latest research!

Contact Information

Dr. Walter Jaronski
wjaronsk@radford.edu
Dr. Rhett Herman
rherman@radford.edu
Dr. Brett Taylor
betaylor@radford.edu
Dr. Jack Brockway
brockway@radford.edu
Ms Libby Watts
lwatts@radford.edu

Welcome to the inaugural issue of the RU Physics/Physical Science Alumni Newsletter. This newsletter will go out to our alumni and friends a few times each year to keep you informed of what is happening with our program.

RU Physics News

Since the early 1990s Radford University has offered two options with the Physical Science Major, the Physics Option and the Physical Science Option. In the summer of 2006 the State Council of Higher Education for Virginia (SCHEV) reclassified what had been called the Physical Science Major at RU to the Physics Major. The “new” Physics major was given two concentrations, the Physics Concentration and the Physical Science Concentration. The Physics concentration is designed more for those who wanted to continue their physics education through graduate school. The Physical Science Concentration is geared more towards those who wanted to teach in a K-12 school or take advantage of our 3:2 Engineering agreement with Virginia Tech. We are excited about our program but are always evaluating it. With that in mind we hope to announce further enhancements to the RU physics program in the very near future.

Selu Observatory

When Dr. Jack Brockway came to RU in 2005 his job included not only teaching our introductory and advanced astronomy classes but also primary responsibility for the Selu Observatory. When he arrived he found an old but useful Questar-7 telescope at the Observatory, along with an old computer and lots of problems. He worked diligently over the next few years to update the Observatory and acquire funding for a new telescope. He achieved success in the summer of 2008 and obtained a 14.5-inch RCOS telescope along with a variety of components. In August he finished fully automating the dome, allowing students and researches to access the telescope remotely.



Physics major Laura Sweat next to the live monitor in the observatory dome.

The Observatory is located a few miles from Exit 109 off I-81, where streetlights are far away and the skies are dark. Dr. Brockway opens the Observatory to the public every clear Friday night, starting one half hour after sunset during Daylight Saving Time and at 7 pm during Standard Time. These open sessions are scheduled for two hours but they usually run longer due to visitors' excitement. Read more about the Selu Observatory at <http://www.radford.edu/observatory/>.

New Physics Scholarship Fund

The RU Physics faculty established a new scholarship fund for RU physics majors. The scholarship is the “Physics Faculty and Alumni Scholarship.” All of the funds accumulated over the course of a year will be awarded to current or incoming physics majors. For winners who are current majors this will be recognition of their excellence. For incoming physics

majors this will be recognition of their potential as well as an added incentive to excel while here. Awardees of the scholarship must be current physics majors with a 3.0 GPA or incoming physics majors with a 3.0 GPA. Recipients for the scholarship will be chosen by the RU Physics faculty and two alumni. More than one scholarship may be awarded each year.

Since two alumni will help in the selection of the awardees we need your help. Please email Dr. Rhett Herman (rherman@radford.edu) if you would be willing to serve in this capacity. Materials will be mailed or emailed to you in the spring for your consideration.

For more information about this opportunity to support physics at RU please go to <http://www.active.com/donate/ruphysics>.

Alumni Spotlight—Noah Ashbrook (Class of 2006)

Noah Ashbrook is an Earth Science Teacher at Virginia High School in Bristol, VA. He is also the head of two Engineering clubs, one at Virginia High School and also one at Virginia Middle School.

We caught up with Noah (electronically of course) recently and asked him a few questions. We asked him what was really cool about his current job. His answer was, *“I get to work with students in the subject area I've been passionate about since I was their age.”* Noah said that the classes he took at RU allowed him to be certified in grades 6-8 math, 6-8 science, and Earth and Space Sciences. He said *“This opened the door for a potential 8 positions just in teaching.”* Now that's a useful degree!

We asked him if his job was something that someone with just **any** degree could get:

“Obviously it's going to be hard getting a science teaching job with a degree in some other field, but having my degree definitely helped me get where I am today. Many future teachers are concerned about getting Education degrees, and this may work for lower level K-12 teaching, but a shift in thinking has started to occur for secondary schools.

With NCLB, SOLs, and AYP breathing down every school's neck, some school districts are starting to look for teachers with a degree in the subject area, and an endorsement in education, rather than education itself.”

We asked Noah how he got his job:

“My degree was actually the reason I got my job teaching. I interviewed against three other people for my position, all of which had degrees in education. During my interview I was asked, “Why did you get a degree in science and not in education?”

I told them “If you ask any teacher on the planet, ‘How do you become a good teacher?’ they will tell you the only way is to be in the classroom. You cannot learn to teach from a class, you learn to teach through experience. This being the case, I have the option to get a degree in the subject matter I'll be teaching, or in teaching itself.

If I got a degree in science I'd know the subject matter and have to learn to teach through experience. If I got a degree in education, I'll 'learn' how to teach from a class then have to relearn how to teach through experience anyway, not to mention I won't be

as familiar with the subject material. So why would I get a degree in something I can't learn to do until I'm already in a classroom?"

After getting my job, I was told the deciding factor to hire me was the answer to that question. The science degree helped, not the education degree."

Noah said that he made the right call with his career choice:

"I think I'll stick with teaching. I enjoy this job tremendously, the benefits are good, the retirement is good, the time off is awesome; and I really enjoy sharing my knowledge and passion with today's youth."

When asked what he thought of RU for someone who would like to do the same thing as he does he answered,

"Radford University would be great for anyone who would like to do the same thing as me. Radford prepared me for my job and other jobs similar to mine. The degree I have allowed me to work as a teacher, but also work in the field of study. I wasn't strictly tied to one particular thing. This gave me the option to explore different jobs while still being qualified for them."

Finally, when asked if he would recommend RU and his specific degree choice for a high school junior/senior he answered, "Already have. ☺"

Help SPS/Sigma Pi Sigma Raise Funds for Arctic Research

The Society of Physics Students and its honor society Sigma Pi Sigma are helping to raise funds for our students to travel to Barrow, Alaska in early March for a Physics 450—Arctic Geophysics class. The purpose of this trip is to study the sea ice, gather information about its (surprisingly-thin!) structure and thickness, and contribute to the ongoing research on the health and future of the polar ice cap.



March 2008: RU students and equipment on the sea ice just offshore from Barrow.

To help the students offset costs SPS/SPS is sponsoring a fundraising raffle. First prize is a \$4,000 travel voucher while second prize is a \$1,000 travel voucher. Both vouchers were generously donated by University Travel in Blacksburg. Tickets are \$100 each. If you would like to buy a ticket please contact Dr. Rhett Herman, rherman@radford.edu, (540)831-5441. You may also make a tax-deductible donation of any amount to assist our students. The drawing will be held on February 1, 2010 so act quickly!

PS—Let us know how you are doing! Please email Dr. Rhett Herman (rherman@radford.edu) with an update. We would love to hear from you.