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New Planetarium Update

The new planetarium is taking shape at the apex of the new building. It will be the first thing people see behind the glass walls at the Main Street entrance to the soon-to-be 3-building science complex (with Reed & Curie halls).

The lobby of this Main Street floor was designed around the theme “Science on Display” and will also include a greatly-expanded Museum of the Earth Sciences, monitors and display cases to showcase student and faculty

research, four introductory biology teaching laboratories, and a 125-seat lecture hall.

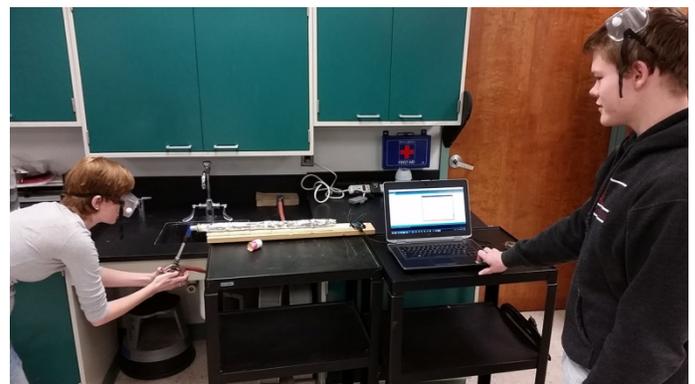
Things are on schedule to be completely finished by November of 2015. Departments will move around within the science complex over the next 2 months, with classes and labs being held in the new building in the spring 2016 semester. As of the writing of this newsletter the vendor for the suspended 33-foot-diameter aluminum projection dome, the new digital projector, and the Surround Sound audio system has been chosen, although the name cannot be publicly released yet.

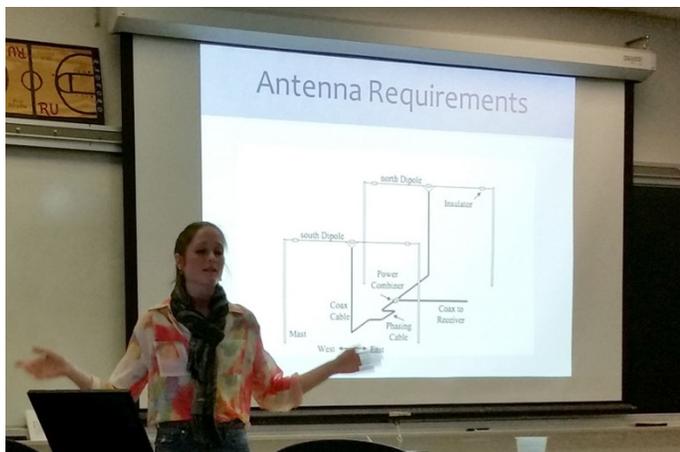
There will be a Grand Opening for the new planetarium in early April of 2016. More information about this event will be emailed to everyone as we get closer to that date.

Students Present Research

Three students presented their research to the Physics faculty and students at the end of the fall semester. Abigail Ballowe and Joe Ashley built a thermal sensor unit to study the propagation of a thermal wave in an aluminum bar.

Abigail and Joe did their work as a greatly expanded Honors project for the PHYS 330—Thermodynamics and Statistical Mechanics class. Their sensor design (top image) is based on the Arduino microcontroller and employees 12 DS18B20 digital temperature sensors. Their results matched the theoretical predictions to a near-ridiculous extent, and they obtained a thermal wave speed of $\sim 1\text{mm/sec}$, in accord with the accepted value.





SPS News

Jordan Eagle presented her work building a small radio astronomy antenna from a Radio Jove kit from NASA's Goddard Space Flight Center. A broken electronic component delayed the debut of her radio observations on a dedicated Ru website, but she will finish this work quickly this spring. With Jordan's interest in a career in radio astronomy she will soon have the site up and running, and RU will join the Radio Jove community of those making radio observations of our sun, Jupiter and its moon Io, and other sources of radio emissions in the 20MHz range. When the site is live an email will be sent to notify everyone to check it out.

The Society of Physics Students had a busy fall. They participated in the RU-sponsored "RU Scared" Halloween event for local kids. They set up a "Haunted House" in the introductory physics lab in Reed 119 for the October 25 campus-wide event. RU guides brought area kids over from Moffett Quad to experience the sights and sounds created by the SPS students.

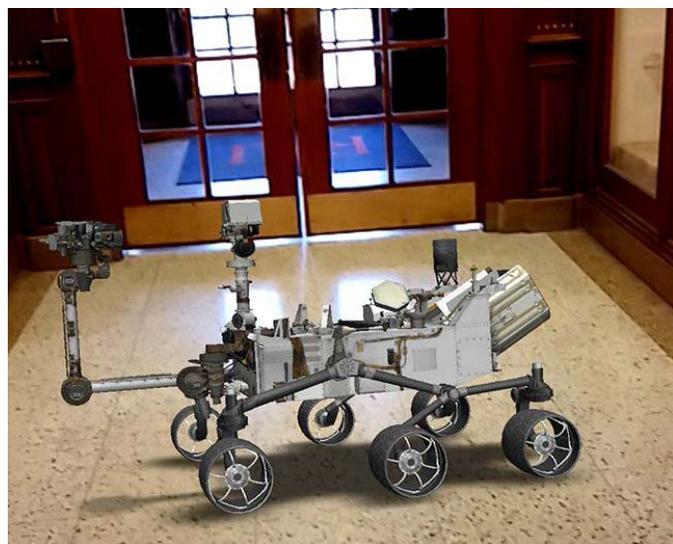


On November 24 the SPS met in Lynchburg, VA for a tour of Areva, Inc. This facility hosts a day trip every summer for the CSAT Summer Bridge physics track and sparked an interest in the SPS students for their own tour. The group met on the Monday of the week-long Thanksgiving Break and enjoyed Areva's hospitality.

Unannounced visitors in Reed-Curie??

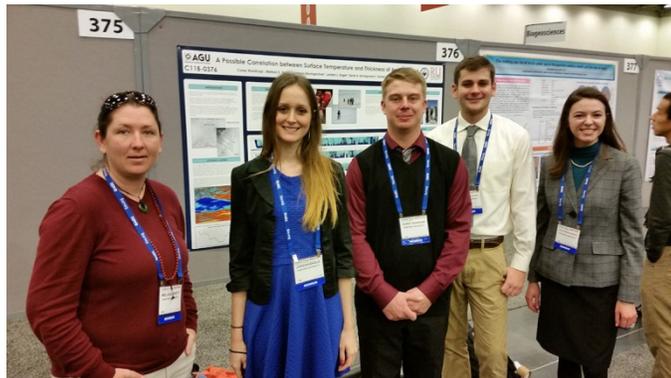


With the expansion of the Physics research effort, as well as the extensive new construction, some have reported seeing and hearing strange things these past few months. We thought we would share a couple of the photos that someone purportedly took of some "tourists" in the building.



Students present arctic research at AGU meeting

Four current RU students and one recent alumnus went with Dr. Herman to the Fall Meeting of the American Geophysical Union in San Francisco. The group was presenting a poster of the results from the Spring 2014 Arctic Geophysics research class.



Pictured above (l-r): Melissa Brett, Jordan Eagle, Corey Roadcap (graduated May '14), Cameron Baumgardner, Sarah Montgomery.

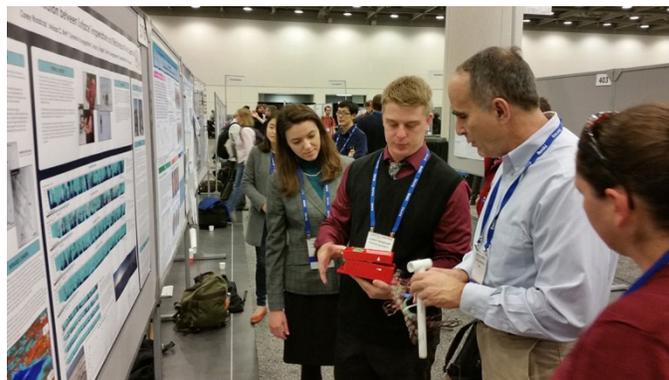
The group's poster was to be presented Monday morning, Dec 15. The group was supposed to be at the poster for some 2-hour block between 8:30am-12:30pm. However, once we put it up and people started coming by, it was a constant stream of people for the next 4 hours. That's pretty unusual, but showed the great interest in the poster and our results.

RU's Jordan Eagle has her AGU reflections published

Jordan Eagle applied for a received an additional grant from the National SPS office to help with her AGU travel expenses. A condition for her award was to submit her reflections on her time at the AGU meeting for potential publication on the national SPS website. Her reflection was very good, and the national organization has published it on their site. The summary at the end of her reflection is particularly good:

"This was the first AGU meeting I have attended and it was absolutely amazing to see scientists from all over the world networking and sharing data, new information, and ideas. There were thousands of people who had gathered to contribute various ideas and results that are shaping the future of science right now. The technology and knowledge that were

Pictured below are Sarah, Corey and Luna talking with Don Perovich, on the faculty at Dartmouth and also the US Army's Cold Regions Research and Engineering Laboratory (CRREL). Dr. Perovich is one of the top cryosphere researchers in the world and was very interested in our work.



One researcher from the NASA Goddard Space Flight Center was so interested in our work that she asked for a copy of our data. This could lead to a possible future collaboration with Goddard's Cryosphere Division.

The students are grateful for the travel funding they received to attend the meeting from RU's new Office of Undergraduate Research and Scholarship (OOURS).

spread at the meeting are constant reminders of how far humanity has come as an intelligent species. Conferences like this enable science to move forward in the rapidly changing and ever growing industry it has become. I look forward to future meetings that can further indulge me in the new and profound knowledge of the world that I gained from the 2014 fall meeting. I recommend and encourage every student to find opportunities like this that will nourish you in knowledge and experience and the company of colleagues and fellow scientists."

You can read Jordan's full reflection here:
<http://www.spsnational.org/meetings/reports/>

New Graduates

Two students graduated in December. Pictured below are Alex Henry (Physics) and Sarah Montgomery (Physics & Geology).



Both Sarah and Alex plan to enter the job market with their degrees. We are sure they will do well in each of their futures.

Contact Us

Let us know how you're doing, what you're doing, and where you're doing it!

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