

“Hubfest: Physics Outreach Day for Mississippi’s Pine Belt Community”

2013 Marsh White Report

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On behalf of the University of Southern Mississippi’s Chapter of the Society of Physics Students, I would like to thank SPS National for giving our chapter the opportunity to utilize the 2013 Marsh White Award. Through funding from this esteemed award, our chapter was able to host “Hubfest: Physics Outreach Day for Mississippi’s Pine Belt Community” for the third consecutive year.

Each year, the Society of Physics Students here at the University of Southern Mississippi participates in physics outreach activities ranging from the elementary level to the collegiate level. Although this is a wide range of students to reach, there is still a large portion of the community that SPS rarely has the opportunity to communicate with. Hubfest is a festival held in Downtown Hattiesburg, Mississippi that is comprised of hundreds of vendors ranging from food trucks to artists to community organizations that brings in an average of approximately 30,000 attendees. It occurred to our chapter back in 2010 that Hubfest would be the perfect outreach event to reach the entire community. With the 2012 SPS National Theme of “Connecting Worlds through Science and Service,” we decided that using the 2013 Marsh White Award for such an event would be the perfect way to embody such an important theme in physics.

This year, Hubfest: Physics Outreach Day for Mississippi's Pine Belt Community was held on April 6, 2013 from 8:00am-5:00pm. Because the event was an all day affair, our chapter divided the event into morning, afternoon, and evening shifts with at least two SPS members present at all times. Typically, crowds begin swarming the streets during the afternoon, but this year beginning around 10:00am, our booth was surrounded by groups of approximately 30 people at a time. Our focus was low temperature physics, allowing us to conduct demonstrations with liquid nitrogen and lasers. The table was set with pamphlets advertising the USM Department of Physics and Astronomy, SPS National pamphlets, *Spectra* comic books compliments of the American Physical Society, and general swag including pens, stickers, and LEDs.



SPS booth at Hubfest



SPS Members Steven Kirkup and James Williamson ask audience to guess how many balloons can fit in liquid nitrogen

Our SPS chapter enjoys freezing a wide variety of items with liquid nitrogen including marshmallows, bananas, squash, apples, inflated balloons, carnations, and racquetballs. This year at Hubfest, the crowd enjoyed eating frozen marshmallows and guessing how many inflated balloons could fit into the liquid nitrogen container. The audience also enjoyed the physics behind popping balloons with lasers, a demonstration built by USM SPS member and Ph.D. student Tyler Reese.

I would like to thank SPS National once again for selecting our chapter for the 2013 Marsh White Award. As a result of your generosity, we were able to hold our all-time favorite SPS event. Any opportunity our chapter has to prove to the community that physics is fun is an event worth looking forward to. Hubfest: Physics Outreach Day for Mississippi's Pine Belt Community proved to be a success, allowing our chapter to not only "Connect Worlds" with a

population of many different interests, but also giving our chapter the opportunity to bond outside of the USM Department of Physics and Astronomy.



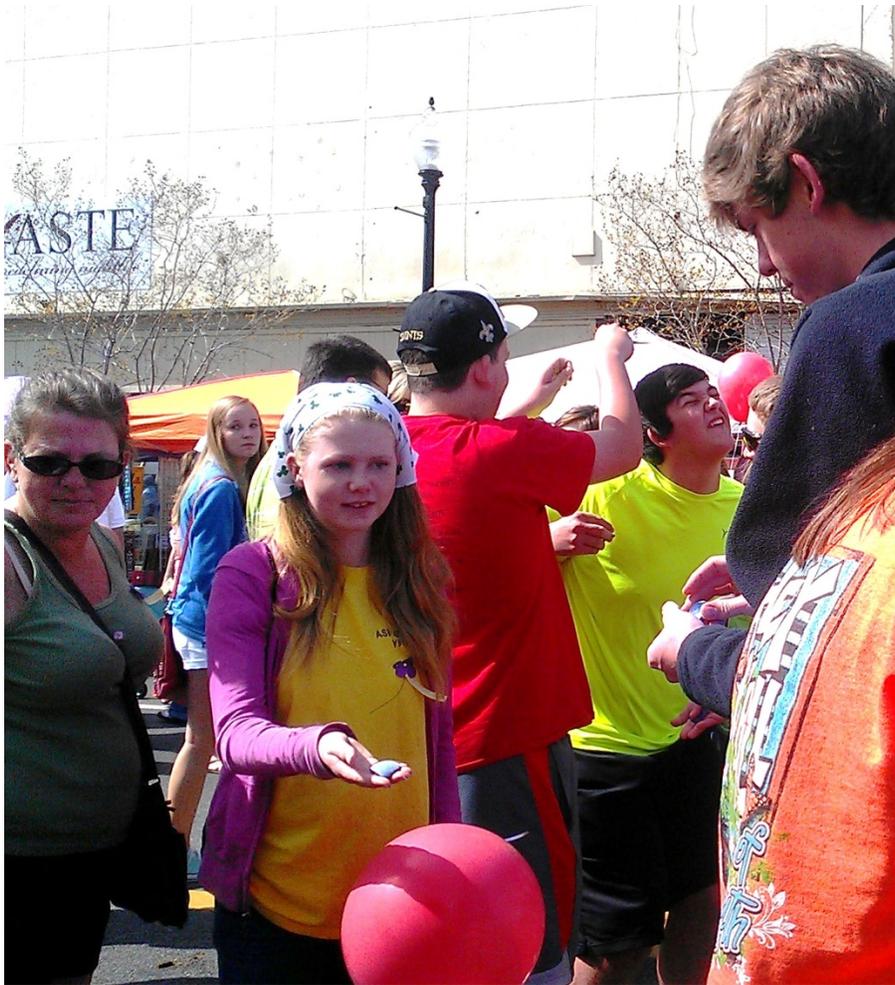
SPS member James Williamson serves up a liquid nitrogen frozen marshmallow to SPS President Amanda Palchak



SPS Member Thomas Wilson has a great time interacting with the audience at Hubfest



SPS Member Steven Kirkup passes out liquid nitrogen frozen marshmallows on a hot April day



Audience member holds a broken piece of liquid nitrogen frozen racquetball



Brrrrr! That liquid nitrogen is cold! SPS member Amanda Palchak has fun with the liquid nitrogen



SPS member and senior physics major Steven Kirkup (left) discusses liquid nitrogen with new members Thomas Wilson (middle) and James Williamson (right)

Expenditures

Booth	\$150
Supplies	\$73.52
Liquid Nitrogen	\$23.25
Total	\$246.77