


From: "Gary White" <gwhite@aip.org>
Subject: **Research Opportunities For your Physics Students, and More ...**
Date: January 9, 2008 1:47:30 PM EST
To: <griff@physics.wm.edu>
Reply-To: gwhite@aip.org
1 Attachment, 687 KB 

Greetings!

Merry New Year from the Society of Physics Students!

There are three immediate things that you, your faculty and your students should know about:

- 1) \$200 travel award deadline for April APS meeting is today (Wednesday!), January 9, see http://www.spsnational.org/meetings/calendar/2008/08_aps_april.pdf.
- 2) "Absolute Zero" is coming to PBS and NOVA---this week and next, see local listings and <http://www.pbs.org/wgbh/nova/zero/index.html>.
- 3) Your physics department has an opportunity to work with SPS and NASA Goddard Space Flight Center (May, 2008 - September, 2009). If you're interested, give me a heads-up by January 20th. Proposals are due Feb 1....details follow

SPS has partnered with NASA to offer a 1.5 year opportunity to a physics department whose institution is affiliated with an associated SPS Chapter.

We believe this collaboration will benefit your:

1. Department -- by increasing research activity in space science;
2. Faculty -- by offering opportunities to form valuable relationships with the NASA Goddard Space Flight Center, and to initiate/enhance undergraduate research; and
3. Students -- through on-campus scientific research and summer research internships in the Washington, DC, area.

The attached Call for Proposals provides more details. Please let us know of your intent to submit a proposal by January 20. An email from the SPS Advisor and Department Head would suffice. (Formal proposals are due Feb. 1).

Other things on the horizon:

- 4) SPS Internships available in Washington, DC, area for summer---work with NASA, NIST, SPS, APS and others, \$3700 stipend, plus housing, travel, Feb. 1 deadline! --- <http://www.spsnational.org/programs/internships/>.
- 5) Hundreds of summer research opportunities for physics students, in dozens of fields, at www.the-nucleus.org.
- 6) Teaching fellowship deadline is January 14th ---Knowles Science Teaching Fellowship provides up to five years of support for those with a physics degree who want to teach high school science <http://www.kstf.org/>.
- 7) AIP's Top Ten Physics Stories of 2007 <http://www.aip.org/pnu/2007/split/850-1.html>.
- 8) Hear 2007 Nobel Prize winner John Mather at the NSBP meeting in Washington, DC, Feb. 20-23 <http://www.nsbp.org/conference/>.
- 9) SPS Outreach Catalyst Kits (SOCKs) are available for chapters (only a few left!)---contact krand@aip.org if you want to start an outreach effort in your chapter.
- 10) Physics Jeopardy for SPS chapters premieres in Baltimore on January 19-23---JOIN US!

The registration fees for this meeting are reduced quite a bit for first-timers and faculty with students...see <https://www.aapt.org/events/secure/prereg.cfm>.

There are a lot of interesting things planned for this meeting:

- A poster session and reception and physics Jeopardy game (1/20/08), 5-7pm;
 - Student research and outreach presentations (1/21/08);
 - A review of the upcoming NOVA special "Absolute Zero" (1/23/08); and
 - Visit by Vera Rubin, whose work led to the discovery of dark matter (1/22/07);
- and much more...

Planning on being there?...then send me a note at gwhite@aip.org and I'll see about getting your chapter added to the Jeopardy game list...If you can't make it to Baltimore, MD, this month, no worries! Look for more Physics Jeopardy at a meeting near you in 2008 as part of the SPS Future Faces of Physics drive.

11) Finally, view the fun football and spandex video that last year's SPS interns made at <http://www.youtube.com/watch?v=kW3Ra3f1amE>. Better yet, make your own physics video and win the world's smallest trophy and \$1000; see details below...

Take care,

Gary

Details about the physics video contest:

World's smallest trophy to be awarded in NanoBowl Video Contest

<http://www.physicscentral.com/nanobowl/index.html>

Science students at all levels are invited to explain physics through football

The American Physical Society is offering the smallest trophy ever made, and \$1000 of (normal sized) cash, to the winner of the Physics Central NanoBowl Video Contest. To enter the NanoBowl video contest, make a video that uses football to illustrate some aspect of physics. Upload the video to YouTube with the tag "nanobowl." The deadline is February 3. Representatives of the APS will choose a winner, and award the trophy and prize money.

The possibilities are endless. You could talk about air pressure inside the ball, the rotation of a spiral, the impact of a tackle, acceleration in a breakaway touchdown run, or anything else you can imagine.

Physicist Harold Craighead and colleagues at Cornell University's Nanobiotechnology Center created the NanoTrophy that will go to the contest winner (or winners, in the event of a group entry). At 2.4 millionths of a meter across, with features measured in nanometers (billionths of meter), the NanoTrophy is 50 times smaller than the diameter of a typical human hair.

The trophy is much too small to be seen with the unaided eye, or even under an optical microscope. The details of the Nanotrophy can only be revealed under super high magnification scanning electron microscopes and other powerful imaging devices.

Because it's so small, the trophy is imbedded in a larger pattern that's visible under an ordinary microscope, which in turn is part of a 12 millimeter pattern visible to the naked eye. Don't worry, along with the trophy, we'll be providing a scanning electron microscope image of the trophy so that you'll be able to see what you won.

Physics Central NanoBowl Video Contest Rules:

- * The contest is free and open to anyone with an interest in physics and football, but we strongly encourage physics students at all levels to enter.
- * We recommend that the videos be two minutes or shorter. But if you feel you really need some extra time, go for it.
- * All videos must be received by February 3, 2008.
- * Submitted videos may be used by the American Physical Society in its activities, including posting videos on the Internet.
- * Please submit your video via YouTube.com.
- * Tag your YouTube video with the term 'nanobowl' and send an email to physicscentral@aps.org with 'nanobowl' in the subject line to alert us to your video's existence.

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For further details about the Physics Central NanoBowl and the nanotrophy, visit the Physics Central website (www.physicscentral.com/nanobowl).

Sincerely,

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