

The Dilated Times

The newsletter of the Drew University Society of Physics Students

November, 1995 Volume 6, Number 1

SPS Calendar

Saturday, November 4--Zone 3 Meeting

Friday, November 10--Science Day

Wednesday, December 13--Christmas Taco Party

Quotes from the Professors (and others)

Dr Supplee:

"It's frightfully stupid, but if you don't think of it, you won't think of it."

"This isn't even a real animal. It has its mouth open."

"The principle of superposition is the break of a lifetime."

"We got it wrong once, but the other $n-1$ times we got it right."

"Examining the pure essentials and ignoring the ambiguousness of certain terms thereof, Newton's first law of motion says, 'An object will continue to move in a straight line, unless it doesn't.'"

Dr Kass:

"There's no way that a littler box can be bigger than a bigger box."

And as a special bonus, Russ Castonguay:

"Everything is distributive."

"I was doing fine until I screwed up."

Make sure you continue to keep listening for gems of wisdom from your science professors, and email them to MBREWER. Thanks!

Hello to Physics Alums

With this issue of the Dilated Times, we shall begin mailing it to all physics alums. This comes from a suggestion from Rick Fuest ('68) to better involve our alums with activities of the department. While the Dilated Times is, strictly speaking, a newsletter of the Drew Chapter of the Society of Physics Students, it is a good approximation to a departmental newsletter and regularly features our ongoing activities.

Please write to me with reactions, possible articles from the outside world, and changes of address. We welcome your involvement in the department, and contributions to the newsletter.

Bob Fenstermacher

SPS Advisor and Professor of Physics

Department Welcomes New Faculty Member

Another historic moment in the department occurred this fall when the full-time faculty count went to four. [Dr Dave Baum](#) joins Drs. Boeshaar, Supplee and Fenstermacher to bring the department closer to the size of the typical liberal arts college physics department. Dave comes to Drew from Towson State University in Maryland after holding teaching positions at several other schools including Kansas State University and Colgate. His PhD is in experimental solid state physics from Syracuse University where he investigated persistent photoconductivity at low temperatures. He is a musician interested in ancient brass instruments, and once hosted a weekly radio program, Bach Cantatas. Dave was advisor to SPS at Towson State and we look forward to his involvement here at Drew. He is currently teaching Phys 1 and 2 and will be responsible for the ongoing development of the general physics laboratory.

Carter to Co-Direct RISE

Dr. Ashley Carter, Adjunct Professor of Physics and Dana Fellow in RISE, has been named co-director of RISE along with Dr. James Miller, recently retired professor of chemistry. Carter and Miller will assess the current state of RISE and continue planning for its future. This follows the untimely death of RISE founding director Dr. George de Stevens, in September.

Dr. Carter continues to be a number one asset to the physics department, teaching math-physics this term, and thermodynamics next spring. He is also currently advising three senior students on independent study projects.

Drew Hosts Fall SPS Meeting

On Saturday, November 4, Drew will be hosting a Society of Physics Students Zone 3 meeting which will draw over fifty students from other SPS chapters in New Jersey and Pennsylvania. Among the day's events are presentations of student research projects, a panel discussion about the pros and cons of physics internships, and a keynote lecture by Nobel Laureate Russell Hulse.

Dr. Russell Hulse is the recipient of the 1993 Nobel Prize in Physics. His talk is entitled "The Discovery of the Binary Pulsar" and is about the research which led to his prize. The entire Drew community is encouraged to attend Dr. Hulse's lecture which will be taking place at 10:00 a.m. in S4 of the Hall of Sciences.

Participants in the conference will be able to tour Drew's physics facilities, particularly the observatory newly equipped with a powerful 16 inch telescope and guidance software. This meeting will provide a setting in which individuals interested in physics can share research they have done and learn about exciting opportunities in physics.

SPS National Council Meeting Report

On Thursday September 28, the 1995 SPS Council began a weekend of meetings at the American Center for Physics building in College Park, Maryland. Each of the 18 geographic zones of SPS sent one advisor and one student member of SPS to represent their zone. The representatives met with the SPS director, Dwight Neuenschwander, and SPS Supervisor Sonja Lopez. This year, as in recent years, the Zone Councilor and Associate Zone Councilor are both from Drew. The Associate Zone Councilor from Zone 3 is our chapter's Activities Director, Christian Alavanja. Dr. Fenstermacher is our Zone Councilor and is also serving a three year term as the SPS President. As SPS President, Dr. Fenstermacher ran the business meetings which took place during the weekend.

Business items discussed at the meetings included national membership figures, an upcoming dues increase, reports from the editors of [The Journal of Undergraduate Research in Physics](#) and [Quantum](#) magazine, the election of Melba Newell Phillips as an honorary Sigma Pi Sigma member, and the 1996 projected budget for SPS. The councilors also discussed and adopted an SPS mission statement.

The zone representatives broke into small groups to discuss the role of SPS at the local and national levels. The first topic was the benefits SPS provides that a strictly local physics club could not. All groups stressed the importance of SPS as a national professional organization that students join as a first step to becoming part of the professional scientific community. The second topic was the role of SPS in making the value and adaptability of a physics education more clear to the community. This is important because it encourages employers to consider hiring a person with a physics background in physics for a wide variety of positions. The last topic was suggested goals for the national organization and for local chapters. These suggestions included specific plans for increased communication between chapters in each zone, a request to create a poster which will illustrate the applicability of a physics major to a variety of careers, and a request that the national organization contact college career offices to make them more aware of the variety of career opportunities available

to students with a physics background.

The meeting also gave students and faculty members from different areas of the country and from different types of colleges and universities to interact and share ideas. After most of the work was done, representatives had some time to talk and relax during a trip to the Smithsonian museums in Washington D.C. Informal topics of discussion ranged from the content of specific courses at different schools to successful ideas for zone meetings. East coast dwellers were awed to hear tales of ten-hour drives to weekend long zone meetings in sparsely populated western states. Students from all parts of the country also found that they shared the same textbooks, familiar lab disaster stories and a similar enthusiasm for physics and SPS.

Physics on the Internet

The American Institute of Physics has a Physics Careers Bulletin Board. Every month, AIP will sponsor six different on-line mentors who will be ready to answer your questions about such topics as how they got where they are, what courses or degrees you will need to fulfill your career goals, and how to combine physics with other career interests. You can get advice from physicists working in different fields, such as industry, manufacturing, computers, education and journalism, who have different degrees. To access the bulletin board, telnet to pinet.aip.org and login with the ID and password "CAREERS", or use the URL address: <http://www.aip.org/aip/careers/careers.html>.

If you are looking for information on graduate school programs, the National Academy of Sciences has posted the results of a survey of graduate schools at <http://www.nas.edu/nap/online/researchdoc>.

Drew Students in the Field

This summer, five Drew physics majors interned at various locations around the country. On October 5, Larry Barisciano, Mike Marotta and Jonathan Paley presented papers on their summer research, and Christian Alavanja and Maurie Brewer presented their research on October 12. Larry Barisciano worked at the University of Virginia and spoke on "Resistance Versus Temperature Characteristics and Charge Density Waves of Doped NdSe₃." Mike Marotta spoke about his research at Penn State on "The Fracture Process of Brittle Carbonaceous Foam." "Measurements of 8B Breakup Relative Energy Distributions and the Rate of the 7Be(p,γ)8B Reaction" was the subject of Jonathan Paley's research at the University of Michigan. Christian Alavanja spoke about her work on "The Fabrication of Diode Lasers" at Bell Laboratories, and Maurie Brewer discussed her research at SRI International on "Mass Spectrometry of DNA Oligomers."

Steve Gausepohl: '92

A Drew Alumnus shares his Graduate experience.

Mr. Gausepohl came back to Drew on October 23 to give a talk and have lunch with the senior physics majors. Over lunch Steve discussed the options of a physics graduate in the 90's and the life of a physics graduate student. In the afternoon, he gave a seminar titled "Flux Penetration in Novel Josephson Edge Junctions" about his graduate research at the University of Virginia. We were glad to have Steve back at Drew for the day and grateful to him for sharing his experiences.

Thoughts of a First-Year Physics Student

Hello. My name is Kevin Misset, and I am a first-year student here at Drew. My goal at Drew is to become a Mathematics Major and Physics Minor. I first encountered physics in high school, where I became fascinated by its theories and intricacies. That by a simple procedure one can determine a ball's flight characteristics, with only a few givens, is quite remarkable. I think a lot about how the physical sciences attempt an explanation of natural laws. I have been able to satisfy my curiosity because of my experiences in the Math and Physics departments. Though challenging, the course-work and professors are the reasons for my continuing to enjoy my academic experience.

With every new challenge I meet I feel more confident in my abilities as a student, and researcher. It is in large part due to the faculty and staff of Drew University that I am comfortable in my new surroundings.

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