



## THE DILATED TIMES version 2.0

The newsletter of the Drew University  
Society of Physics Students

April, 1991

### CALENDAR OF EVENTS

Saturday, April 13:

Spring Saturday- show off your knowledge of Physics to prospective freshmen. Angular momentum, high voltage apparatus, and various other phenomenon will be the stars of the SPS table.

Saturday, April 27:

SPS Picnic- Food, Fun, and Physics all crammed into one afternoon. Try one of those infamous SPS sausages, or try your bat against Dr. F's fastball.  
Time: TBA Place: Lewis Morris Mem. Park

Wednesday, May 1:

SPS Banquet- the climax of the year's calendar. Dinner in the faculty lounge is capped off by Sigma Pi Sigma Honor Society inductions, presentation of the 1991 department awards, and a guest speaker. Semi-formal attire is required (special nights call for special dress).  
Time: TBA Place: The Commons

### YES, THEY ACTUALLY SAID IT.....

"Ampere... His name will always be current." - Dr. Fenstermacher

"I'm lazy. I always take the fast approach" - Dr. Boeshaar

"I've done some [strange] things.... but not here" - Dr. Supplee

"...and the boy said 'Why even say 'Fish'? Anyone who walks by knows you sell fish.' That's why we use 'bra-ket' notation." - Dr. Carter

"It's better to use letters than numbers. The numbers tend to slobber all over the page." - Dr. Candiotti

"There is conservation of mathematical difficulties in this world"  
-Dr. Carter

### NEW OFFICERS

The election results are in! Here are the 1991-92 officers.

President:	Sandy Sweller	Secretary/Treasurer:	Leith Dwyer
Vice President:	Steven Gausepohl	Activities Director:	Bill Kimler



## BIRTHDAY FEATURE

Wolfgang Pauli (April 25, 1900 - December 14, 1958)

Pauli received his PhD in physics at the University of Munich in 1922. After stays in Copenhagen and Gottingen, studying with names such as Niels Bohr and Max Born, Pauli finally accepted the professorship of physics at the Federal Institute of Technology, Zurich.

He was highly respected for his deep insight into the newly formed quantum theory. He is best known for the 'Pauli exclusion principle' which he formulated in 1924. This stipulates that since an electron can spin in only two ways, then each quantum orbit can not hold more than two electrons. Through the exclusion principle, Pauli introduced a new quantum number ( $s$ ), which could hold values of  $+1/2$  or  $-1/2$  which corresponded to the possible 'spin' of the electron. It was for the introduction of the exclusion principle that Pauli was given the 1945 Nobel Prize in Physics.

Pauli's second accomplishment was in presenting a solution to a problem in beta decay (a type of radioactivity in which electrons are emitted by the nucleus). He suggested the existence of a neutral particle which would carry away the excess energy after the electron is emitted, keeping in bounds with the law of conservation of energy. This particle, later called the 'neutrino', was later observed in 1953 by Frederick Reines.

(Taken from the Biographical Encyclopedia of Scientists, Vol. 2, 1981)

## ELEMENTARY PARTICLES, MY DEAR WATSON

A visiting professor from Reed College, Dr. David Griffiths, came to Drew last month to evaluate the program here and to give a guest lecture on his area of expertise, elementary particles. Griffiths took the opportunity of his visit to Drew to sit in on Mechanics and Quantum Mechanics classes. He also worked in time to have lunch with the "Majors" (the students with a declared major in Physics) and attended a student presentation in Advanced Lab.

The talk that Griffiths gave was titled "A Folk History of Elementary Particles: From the Muon to the Gluon" and was attended by members of the Physics and Chemistry Clubs. The lecture was surprisingly down to earth and quickly laid out an understandable structure for the classification of differing elementary particles. Any speaker that can explain the reasoning behind the discovery of Omega Minus through simple algebra deserves a gold star or two.

Griffiths is also known at Drew as the author of the E&M textbook used in Phys 105,106. His interest in Electricity and Magnetism theory sparked an insight to different types of Intro to Physics students. He noticed that most students can gain a firm grasp on classical mechanics since much of the theory is physically intuitive, while when they are introduced to E&M theory the logic seems confusing. Other students don't stand as solid with mechanics, but then excel in E&M. What kind of physicist are you?

## MAJORS PLAN TRIP

On April 20, when the early morning dew appears on the grass, the "Majors" plan to begin their trip to Maryland and Washington D.C.. The University of Maryland is sponsoring "Physics for Students II" which will give the graduating seniors an opportunity to give presentations on their independent studies, before they talk at the SPS National Convention in Washington D.C. on April 22. There should be some good stories after this one.



## AND THEY'RE OFF!

It's April. That means that finals are just around the corner and summer break isn't too far away. A recent poll of the members of SPS found that many students were already planning ahead.

Leith Dwyer: Leith is going to the Wyoming Infrared Observatory to participate in undergraduate research in Infrared Interferometry. Her impeccable credentials, devotion to physics, and her ability to say Infrared Interferometry ten times fast helped land the position. Congratulations Leith!

Jen Salus: Jen is looking forward to a fun filled summer as a "Director/Advisor type person for a camp for 3rd and 4th graders. And I'll probably be doing sports director things for them." Good thinking, Jen! Get to those budding physicists when they're young. It's never too early to start learning about kinematics. Mold their minds like clay, Jen!

Sharon Dawso: Sharon had only two words to describe her summer plans... "Organic Chem". Yep, that's right folks, Sharon will spend the better part of June and July learning the ins and outs of covalent bonding. When asked "Is there a history of insanity in your family?", Sharon replied, "I have to take it for that 'Bio' major". Well, if you must, you must. But you don't see anyone taking Chem over the summer for a 'Physics' major, do you? Good luck anyway, Sharon!

Sandy Sweller: Sandy has big plans to go to Lehigh University to join an undergraduate research program in Non-Linear Optics. Wow! Who would have guessed that there even was such a thing? This means that Sandy will be using high energy lasers. When asked if these lasers were strong enough to do any bodily damage, she said "Well, I guess I'll find out soon enough". Good luck, Sandy, and remember, no matter what... Don't look directly into the beam!

Steven Gausepohl: Steve was practically drafted by SUNY StonyBrook to aid in their undergraduate research program on contemporary physics topics. Although the offer sounds tempting, Steve is required to allow other interested schools a chance to top it. Well, no matter what school Steve chooses, there are going to be twelve or thirteen other research teams in tears. Good luck, Steve! Don't worry, they'll get over it.... somehow.

Mike Richichi: Mike is going to be a representative of the Drew Physics department at the Governor's School in the Sciences. Mike will be a counselor to a number of High School Juniors/Seniors. This will not be Mike's first year at "Gov' School", so it will be old hat. When asked about after the summer, Mike said, "I'm going to Disneyland!.. Oh, and Grad School too."