October 1992

Upcoming Events

October 26  Daniel S. Goldin visits Drew. Breakfast by invitation, and all are welcome to hear him speak at 9AM in HS-244.

October 29 - November 1  Dr. Fensterramer and Amy Perkins represent our zone at the national meeting of SPS in Dayton, Ohio.

November 22  Trip to NY. Plans include A Brief History of Time, The Movie, dinner in the city, and catching the laser light show at Hayden(sp?) Planetarium.

Also coming up,

Amy Perkins will speak about her summer internship.
A former Drew student will speak about micro-motors and the transition to graduate school in engineering from undergraduate school for general physics.

HOW I SPENT MY SUMMER VACATION

by Amy Perkins

"I liked my summer. It was fun. I did many interesting things. I learned lots and lots. I made a whole bunch of new friends."

I've used this same standard introduction for previous writing assignments since the third grade. Now that I have reached the junior level in college (Drew University, no less) I guess that it behooves me to expand upon these basic precepts, and give a more detailed description of the most memorable summer in my life.

Last April I was fortunate to be chosen as one of six research interns at the Maria (pronounced Muh-ri-a) Mitchell Observatory on Nantucket Island, Massachusetts. The program was under the guidance of the newly appointed director Dr. Eileen Friel. This program is partly funded by National Science Foundation grants. The facilities on Vestal Street included the Maria Mitchell Birthplace, the Science Library, the National Science Museum, and cottages for housing the interns.

The Maria Mitchell Association was established as a living memorial to a remarkable nineteenth-century astronomer. "Born in 1818, she learned the night sky from her father William Mitchell who was an amateur astronomer. One night while using her small telescope on the roof of the Pacific National Bank where her father worked, she spotted something unfamiliar. She confirmed it was a comet and reported it to the scientific community in Boston. The news spread and soon Maria was off to Europe to receive a gold medal from the King of Denmark for her accomplishment.

She became America's first woman professional astronomer when she was hired at the newly founded Vassar College in 1865. She taught a generation of women before her death in 1889 and her students and family created this Association to carry out research and education as a living testament to Maria Mitchell." (Maria Mitchell Observatory *Public Night*, 1992)
Continuing a tradition begun in 1906 when Maria Mitchell's telescope was set up in the yard of the Mitchell House for "Moon Evenings," the Astronomy department schedules Open Nights to allow the public to view the skies. Collections of historic telescopes, as well as more modern telescopes, are used during these nights. As an intern I set up telescopes and showed visitors such astronomical objects as: planets, binary stars, star clusters, galaxies, and the lunar landscape. Videos of NASA space probes' data of planets were also shown on these evenings. During the summer many outstanding astronomers were invited to the Island as speakers for these weekly public lectures.

As interns we all had the opportunity to interact personally with these guest astronomers and benefit from their expertise regarding our own particular project. The astronomers and their topics are as follows: Philip Pinto - supernovae, Robert Noyes - solar physics, Ann Boesgaard - stellar composition, Hans Boesgaard - building large telescopes, Bruce Carney - structure of the Galaxy, David Latham - search for planets outside the Solar System, and Peter Boyce - science policy and the SETI project.

Across from the Vestal Street Observatory is the Science Library. It was started with the collection of Maria Mitchell's own books and her Vassar lecture notes. Today this library contains over 9500 volumes and research journals. I made frequent use of the library in order to gather information about the particular group of stars I concentrated on for my project. In addition, I read many books and journals pertaining to the subject of Jupiter in order to assist the teaching staff in planning for children's summer classes.

Since 1913, a photographic telescope has been used to record the histories of variable stars. Over 7800 photographs tracing star variations have been taken and are stored in the Observatory. To continually update this collection, all of the interns were scheduled to take photographic plates of set fields in the sky.

While we participated in all areas of the Astronomy department, the primary focus was on research projects. Every project was unique and on the cutting edge of current astronomical studies.

The project I selected concerned the determination of the age of the open cluster NGC 3960. The data was supplied by Dr. Ken Janes, an astronomer at Boston University. We were linked by computer and communicated often. I used a Sun computer station in order to analyze the data. Programs were used to attempt to model the 'structure' of the star on the CCD (charge-coupled device, a type of special camera) data. From a plot of temperature and brightness for each star in the cluster, the age of the open cluster may be determined.

More details will be revealed to all those who attend my presentation at a future SPS meeting.

STAY TUNED

I MUST BE CRAZY!!!!
by Larry Barisciano

Everybody tells me that I'm crazy. They say that I must be a glutton for punishment. I want to be a physics major. If I were to walk up to the average student on campus and tell him or her this, the most likely reaction would be a gasp, a scream, or a relating of some high school physics horror story. So I want to pursue the so-called "major from hell." What's wrong with that? I want to learn how the world works and be able to explain it to all the English and music majors. I want to be able to watch a Nova film without having my eyes glaze over.

I came into college with high hopes and a strong desire to "accelerate" through the physics curriculum. Then I walked into Physics 11 and reality set in. For the first few classes, I just sat in a stupor as Dr. Supplee rambled on about vectors and motion. In high school this stuff was a piece of cake. Now, though, it seems as if everything I knew and understood a year ago has disappeared, and that great college feeling of knowing absolutely nothing has set in. After the third class, I was totally convinced that I was stupid and that everyone in the class knew what was going on except for me. It was like some bizarre horror movie where everyone around me was a superhuman robot programmed to make me feel like a total idiot.

Six weeks later, I can finally leave physics class without feeling like the fried egg in an anti-drug commercial. By some fluky miracle, I managed to get a 90 on my first test. I still think
Dr. Supplee is a lunatic who enjoys physics too much for his own good, but I finally understand what he says. So, what's it like to be freshmen planning to major in physics, you ask? It's absolute lunacy! With people like Dr. Supplee, Dr. Fenstermacher (score one for spelling!), and that great American Support Group, the Society of Physics Students, headed by Super-Bill Kimler there to help me along, I think I'll survive. Maybe one day I'll be standing in the front of an auditorium full of people giving a speech on relativity. Even more important, though, in the immortal words of Super-Bill, maybe I'll be able "to raise the awareness of physics on campus." If not, I'll certainly hemorrhage trying.

THE PAT IN THE HAT
by Mrs. Marilyn Perkins
&
John LaMarr

The sun did not shine.  
It was too wet to play.  
So we sat in the house.  
All that cold, cold, wet day.  
I sat there with Jimmy.  
We sat there, we two.  
And I said, "How I wish  
We had something to do!"  
Too wet to go out  
And too cold to play ball.  
So we sat in the house.  
We did nothing at all.  
So all we could do was to  
Sit!  
    Sit!  
    Sit!  
And we did not like it.  
Not one little bit.  
And then  
Something went BUMP!  
How that bump made us jump!  
We looked!  
Then we saw her step in on the mat!  
We looked!  
And we saw her!  
The Pat in the Hat!  
And she said to us.  
"I know it is wet  
And the sun is not shining.  
But we can do Physics  
Before you start dining."  
"And I know some Greek letters to write."  
said the Pat.  
"I know fine demonstrations."  
said the Pat in the Hat.  
"Cool, cool demonstrations.  
I could show them to you.  
And your mother,  
I know, will be glad if I do."  
Then Jimmy and I  
Did not know what to say.

Our mother was out of the house  
For the day.  
But our pet fish said, "No! No!  
Make that Pat go away!  
Tell that Pat in the Hat  
That PHILOSOPHY'S the way.  
Physics is useless.  
Physics is bad.  
Physics is fruitless.  
Mother would not be glad!"  
"Now! Now! That's not fair!  
That's not fair!" said the Pat.  
"Demonstrations are good."  
Said the Pat in the Hat.  
"Why, we can have  
Lots of good fun, if you wish,  
With one which I call  
Up-Up-Up-with a fish."  
"Stop that, Pat." said the fish.  
"This is no fun at all  
I'll be mad." said the fish.  
"I do not wish to fall!"  
"I've got some bad news," said the Pat  
to our pet.  
"There's something that I haven't mentioned,  
as yet.  
You surely like humor,  
so wipe off that frown.  
'Cause there's one thing I know,  
What goes up, must come down."  
With that the Pat threw  
The fish up in the air  
But when it came down  
The Pat was not there.  
The fish fell to the floor  
It fell with a splat.  
And what do you think  
The Pat said about that?  
"Oh dear!" said the Pat.  "Oh dear.  
What a tragedy.  
But that sometimes happens  
If one's playing with gravity."
Come on, I will show you
A new game that I know!
And we all shouted, "Oh, no, no, no, no!"
But The Pat in the Hat
Held up a red box.
A great red wooden box.
Without any locks!
"Now look at this trick,"
Said the Pat.
"Take a look!"
"This box is closed up with this
nice little hook."
She pointed this out with a tip of her hat.
"I call this game Schrödinger's Box."

Said the Pat.
"In this box are two cats
But I can't show them right now.
But they both DO exist."
Said the Pat with a bow.
"One is alive
And the other one dead.
Which one we will find
Well, it cannot be said."
So, Jimmy and I.
We both laughed at the thought.
That cats in a box
Won't behave as they ought.
But the Pat still continued
Undaunted, to say,
"These two cats have many more problems
today!"
Now, inside the box is a poisonous gas.
That was released when decay came to pass.
And we cannot know."
Continued the Pat.

"If this really happened",
Said the Pat in the Hat.
"So until we look
At the cat that's inside.
We won't know the answer.
We cannot decide.
Is it living or not?
We are not aware.
But then neither's the cat.
Which doesn't seem fair.
I think we should know.
And the cat should know, too.
Whether it is dead or alive!
Now, isn't that true?"

Just as The Pat
Began opening the box.
We suddenly heard
Mother's key in the locks.
So, The Pat packed up her stuff
Because now, as she knew.
When Mother comes home
Her time was all through.
Over to the window
Went the Pat.
While we sat
And out through the same
Went the Pat in the Hat.
"She's gone," we all said.
"She's just disappeared!"
We sighed with relief.
Then her head reappeared!
"My dears," said The Pat in the Hat
With a wink,
"I left you Schrödinger's box
Down under your sink!"

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CHEMISTRY CORNER
by Craig Watson

And here I am for another year at Drew and another year in SPS. But I don't even have a Physics course this semester!! I would like to keep in touch with Physics, so a couple classes in future semesters are definitely not out of the question. For now, I must concentrate on Chemistry.

It is with great reluctance that I turn over the Phreshman Physics Philes (since I am no longer a phreshman). I have no doubt, though, that the Philes will be handled ably by Larry. He is intelligent, eager, and witty. I must confess, however, that he possesses on feature which I am not impressed with: Larry dislikes Chemistry. C'mon Larry, Chemistry is THE central science. Where would we be without Chemistry? Have you even taken an aspirin? Medicine is chemistry in its healing form. What about fire? It has been vital for thousands of years and Combustion=Chemistry. What's your body made up of? Carbon molecules!!! -the basis of Organic Chemistry!!! Larry, give Chemistry a chance.

I am probing for the basis of this anti-Chemistry attitude among Physics majors. President Kimler must be brainwashing all potential Physics students. He may be sending subliminal messages in his amusing phone messages. And what about those filmstrips?- pure propaganda. Has he been spiking the hot chocolate again?
There is more than one department on the second floor of the Hall of Sciences!!
Hey, give Chemistry a chance.

Editorial note: The views expressed in this article most definitely do not represent the views of SPS, or its officers. In fact, its obviously full of factual errors. e.g. "Chemistry is THE central science." How Craig passed his freshman year with such a faulty view of the universe is beyond me. Don't they have special homes for people like him? If not they should! I believe even saying such things is illegal in some states. I truly pity him, for he will never truly appreciate the finer points of his beloved chemistry without accepting the integral role played by quantum PHYSICS. Please someone help this individual before it's too late.

A bad haircut can make anyone look dumb.