



THE DILATED TIMES

Version 4.1

The newsletter of the Drew University
Society of Physics Students

November 1994

Schedule of Upcoming Events

Friday, November 11 Science Day

Monday, November 14 4:00 PM In HS-244 Dr. Thomas O. Philips from AT&T Bell Laboratories of Whippany, New Jersey will give a talk on the "Physics of Cellular Telecommunications"

Monday, November 21 Humanities Quiz Bowl

Monday, December 12 Holiday Taco Party

Ballistic Quotes From the Past

(A Compilation of Quotes From Over the Past Few Years)

Dr. Supplee

- Newton was certifiable. A real nut. Glad I never met him.
- This isn't a proof, it's a post-facto realization!
- If I add these equations the cutest thing happens...
- Here I can write whatever I want because I've got the chalk.
- Great! You've got Newton's Second Law. You push it - it moves!
- I wish I could make t (time) constant someday.
- Some of you got semi-snagged...
- Let me write this down ... before I fall down.
- If the Wednesday section of lab got a different value from the Tuesday lab we'd have to close the Physics department!
- If you can't solve an equation put a box around it and it's alright.
- I've done some [strange] things ... but not here.
- When in doubt, find a [calculator] button and push it when no one's looking.
- When you don't know it's Friday, you know you need it TO BE Friday!
- O.K., I've never seen an atom, so you can model it however you want.
- Let me rephrase your question and then I'll bet I don't know the answer.
- [We're going to skip chapter seven but] you might enjoy turning the pages.

Dr. Andrew

- Holy cow!
- Neat-o!

Dr. Boeshaar

- Nothing is *really* **NOTHING!**
- Suppose I bring the walls of the universe in...
- I'm lazy. I always take the fast approach.
- Momentum never sleeps.
- I can make it go to zero. I have the power to do that.

Dr. Fenstermacher

- It's an infinitesimal lump, but nonetheless...
- This is sort of like saying it's easy if it's easy.
- Ampere ... His name will always be current.
- [on neutrons:] ...makes them rather insidious ... because they can sneak up on you and glob up on you...
- If you let go of the glob of charge, it goes whsshh and flies away - and does work for you.

Dr. Carter

- We saw the answer by inspection, but let's suppose we're stupid.
- Don't be a slave to your notation.
- ...and the boy said "Why even say 'Fish'? Anyone who walks by knows you sell fish." That's why we use "bra-ket" notation.
- There is conservation of mathematical difficulties in this world.
- These particles have a half life of 10^{-23} seconds. Ephemeral little beasts.

Dr. Candiotti

- That answer is possibly right, but it's wrong!
- Maybe I'll tell you the secret of the course...
- Infinity to the zero [power] is Santa Claus.
- Infinitely small is Santa Claus. (???? I'm not sure what this means but he did say it in class)
- There is a number which is its own cosine. It's different than being your own grandmother.
- It's better to use letters than numbers. The numbers tend to slobber all over the page.

Dr. VanWyk

- >>SQUISH<< That's what they pay faculty for.
- I almost never solve linear equations in public.

(Note From The Editor: Keep your ears open to catch some of your teachers catchy quotes. Submit your quotes over E-mail to MLEFAND.)

**A REMINDER to all New SPS
Members from the Secretary/Treasurer**

Applications and membership dues are due in to Dr. Fenstermacher A.S.A.P. Once again the membership dues are \$15, out of which \$13 gets sent to the National SPS and you receive the PHYSICS TODAY magazine along with the American Institute of Physics SPS Newsletter. The other \$2 goes towards our yearly activities. Old members of SPS are also to be reminded that when you receive your SPS invoice in the mail, to bring it along with your membership dues to Dr. Fenstermacher so that your membership in the SPS can be renewed.

NOTICE NOTICE NOTICE NOTICE

SPS Scholarships and other various Physics scholarships are posted outside Dr. Fenstermacher's office on the SPS bulletin board.

In The Works

by Mike Lefand

On the SPS drawing board for the 1994-95 year are plans to initiate our first outreach program. The first phase of the program will include several visits to local elementary schools to perform magical demonstrations for the students. The second phase of our potential program would be to establish a pen-pal system between the elementary school students and our very own SPS members. Once the final details are officially worked out we will be looking for volunteers to help make this special SPS event a success. More details will follow.

On November 21 SPS will be holding a contest of the scientific minds on the Drew University campus. The contest is called "The Humanities Quiz Bowl" which will be testing how much of a liberal arts education a Physics, Chemistry, Biology, and Math/Computer Science major receives at Drew.

Holiday Humor

IS THERE A SANTA CLAUS?

(from a post to the HUMOR newsgroup)

As a result of an overwhelming lack of requests, and with research help from that renowned scientific journal SPY magazine (January, 1990) - I am pleased to present the annual scientific inquiry into Santa Claus.

1) NO KNOWN SPECIES OF REINDEER CAN FLY.

BUT there are 300,000 species of living organisms yet to be classified, and while most of these are insects and germs, this does not COMPLETELY rule out flying reindeer which only Santa has ever seen.

2) THERE ARE 2 BILLION CHILDREN (persons under 18) IN THE WORLD.

BUT since Santa doesn't (appear to) handle the Muslim, Hindu, Jewish & Buddhist children, that reduces the workload to 15% of the total - 378 million according to Population Reference Bureau. At an average (census) rate of 3.5 children per household, that's 91.8 million homes. One presumes there's at least one good child in each.

3) SANTA HAS 31 HOURS OF CHRISTMAS TO WORK WITH.

This is due to the different time zones and the rotation of the earth, assuming he travels east to west (which seems logical). This works out to 822.6 visits/second. This is to say that for each Christian household with good children, Santa has 0.001 second to park, hop out of the sleigh, jump down the chimney, fill the stockings, distribute the remaining presents under the tree, eat whatever snacks have been left, get back up the chimney, get back into the sleigh and move on to the next house.

Assuming that each of these 91.8 million stops are evenly distributed around the earth (which, of course, we know to be false but for the purposes of our calculations we will accept), we are now talking about 0.78 miles/household, a total trip of 75.5 million miles; not counting stops to do what most

of us must do at least once every 31 hours, plus feeding & etc.

So Santa's sleigh must be moving at 650 miles/second, 3,000 times the speed of sound. For purposes of comparison, the fastest man-made vehicle on earth, the Ulysses space probe, moves at a poky 27.4 miles/second. A conventional reindeer can run, tops, 15 miles/hour.

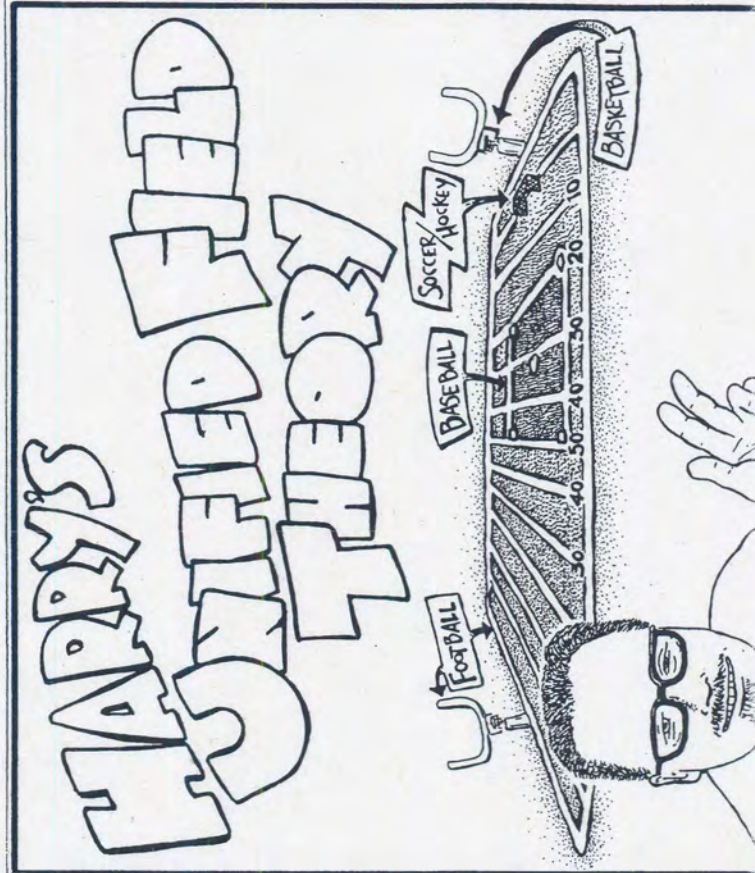
4) THE PAYLOAD ON THE SLEIGH ADDS ANOTHER INTERESTING ELEMENT.

Assuming that each child gets nothing more than a medium-sized lego set (2 lb.), the sleigh is carrying 321,300 tons, not counting Santa, who is invariably described as overweight. On land, conventional reindeer can pull no more than 300 lb. Even granting that "flying reindeer" (see #1) could pull 10 TIMES the normal amount, we cannot do the job with 8, or even 9 reindeer. We need 214,200. This increases the payload - not counting the weight of the sleigh - to 353,430 tons. This is four times the weight of the ocean-liner Queen Elizabeth.

5) 353,000 TONS TRAVELING AT 650 MILES/SECOND CREATES ENORMOUS AIR RESISTANCE.

This will heat the reindeer up in the same fashion as a spacecraft reentering the earth's atmosphere. The lead pair of reindeer will absorb 14.3 QUINTILLION joules of energy. Per second. Each. In short, they will burst into flame almost instantaneously, exposing the reindeer behind them, and creating deafening sonic booms in their wake. The entire reindeer team will be vaporized within 0.00426 of a second. Meanwhile, Santa, will be subjected to centrifugal forces 17,500.06 times greater than gravity. A 250-lb. Santa (seems ludicrously slim) would be pinned to the back of his sleigh by 4,315,015 lb. of force.

If Santa ever DID deliver presents on Christmas Eve, he's dead now.



The Dilated Times

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