

ASCIT Party Dead and Buried

By Lee Sunderlin

The students of Caltech showed their true colors (ranging from white to green) at last Friday's Halloween party. The site was appropriately eerie and dim, the room was as dusty as a reopened coffin, and the stereo made one shiver—actually vibrate.

Certain costume types were common. Many Page people dressed up as morons, which was an easy change. Togas were popular among Ruds. Diapers and dresses were seen on Lloydies (especially the officers). A few tried the shock tactic of coming as themselves. Tech editors (including a retired one, his mind obviously gone, who tried to catch 6 Kilojoules of frozen pumpkin) scared everyone with little effort.

Technology was evident in many outfits, including Martians with strobe antennae and a glower-in-the-dark Darth Vader. Most, though, wore whatever could be scrounged up, although there were many inventive creations. It was questionable whether the black robes and pointed hats of the Ricketts clergy were costumes or working clothes.

The music played was a fair mixture of styles. The food was good, if limited in quantity for a horde of Tech students off meal service. The bar did a good job of keeping up with the crowd, in both serving and consuming. The only minor flaw was the dust. All in all, it was a well-executed (in more ways than one) event.



"Hi there. I'm a student at Caltech, and I was wondering if you would like to dance."

Professor Claims... Master Keys a Menace to Building Security

By Tracy Furutani

"We don't need masters. No students nor faculty should have them except those in the conduct of [their] work." Gasps of amazement are heard at the thought of Caltech students without master keys (which allow one entrance to buildings and most rooms therein), yet those are the words of Dr. Charles H. Wilts, professor of applied physics and mastermind of the Steele Laboratory lock system.

Recently, there have been a rash of thefts in Steele, ranging from typewriters and calculators in offices to major

pieces of lab equipment. Though no clear evidence has implicated the use of master keys, Dr. Wilts is concerned. His objective in creating the present lock system was to protect the over two million dollars worth of equipment in the labs.

"The lock is supposed to provide security for the offices and labs. If it doesn't, then it fails as a lock."

With that in mind, Dr. Wilts examined many different lock systems for Steels. Sargent, whose locks adorn the old buildings on campus, offered their "unpickable", hard-to-duplicate Keso lock, for which Dr. Wilts and a student promptly manufactured master keys with a file and a drill. After a while, he came upon the "Medeco" lock whose unique characteristics render it virtually impossible to pick and difficult to make master keys for.

Last year, however, a student gave a presentation in Engineering 10 in which he showed how to make masters for Medeco locks, and Dr. Wilts alleges this was done "solely to allow students to have access to rooms which, under the Honor System, they would never need to enter." According to Dr. Wilts, three of these masters may have been created and may still be in circulation, endangering "the security of the research labs." If the masters are lost or stolen, outsiders who find them may know their use, because of their distinctive shape, and rob the labs, Dr. Wilts fears. So far, the BOC and the Dean of Students have given him little help in accounting for the masters or even outlawing their possession, so now he is letting the issue gather dust, for the alternative is to re-key the entire building—certainly an unpleasant task.

Caltech Builds Two More Labs

By Doug MacKenzie

In just a little over a year, Caltech will have two more buildings to add to the academic stature. They are the Watson Laboratories of Applied Physics (just east of Beckman Auditorium) and the Braun Laboratories of Cell Biology and Chemistry (just south of the Freshman Chemistry Labs). Construction was started for both buildings in the beginning of the year; completion is expected two years after that and is holding to schedule.

Watson Laboratories has been budgeted at \$5.8 million while the larger Braun building will cost \$10.6 million; as of now, both buildings are within their budgets. Major funding for the Watson Lab has come from the Thomas Watson family while C. F. Braun and the American Cancer Institute

are helping with the costs of the new biology-chemistry lab. Incidentally, C. F. Braun and Co. are also the architects of the new bio-chem lab, while Helmuth, Obata, Kassabaum and Co. are the architects of Watson. The Gust. K. Newburg Co. is the contractor for both the buildings.

Watson Laboratories will be a two-story building with no basement, covering about forty thousand square feet. The structure will be square with its offices looking out onto a courtyard with a fountain in the center of the building. The approximately twenty-five labs will be on the outer side of the square. In addition, the physics building will house two classrooms and a conference room.

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OWC Holds Fall Meeting

By Margie Farrell

The organization for Women at Caltech held a fall meeting last week, and their purpose was to hear progress reports and to get nominations for the organization's Executive Committee. Members also talked about their plans for this year.

The OWC's main accomplishments over the summer were getting the administration to appoint an affirmative action committee and helping to get raises for staff members. They were also officially recognized as an organization by the Institute, which means the OWC now has a budget to work with. In addition, their membership has increased to about 150 people.

First on the agenda was voting for next year's Ex-Comm. This committee directs the organization's activities, and its members are elected to represent women from all segments of the Caltech community. It was explained at the meeting that this year the OWC would elect a total of ten members from among faculty, staff, students, and JPL. Ballots and campaign statements will be mailed to OWC members.

Each committee gave an update on its work. First Helene Schember, of the publications committee, talked about the OWC's new monthly newsletter, called "One:One". The first issue contained articles on a sex discrimination suit against the Institute, the OWC's goals and achievements, and general items of interest to Tech women. Schember said she thinks "One:One" should "lighten up" by not printing

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Olive Walk Journal

By Arley Anderson

The Student Investment Fund is now midway through its second year of existence. The summer has been a lucrative one for the Board with the value of the fund increasing from \$65,500 in early June to \$84,000 in mid-October. The most impressive gains were made in high-technology stocks with both Tandem Computers and Computervision more than doubling in value.

With the election close at hand, the Board sees the short-term direction of the stock market as uncertain. This view

has led to the sale of our riskier high-technology stocks, especially those which grew appreciably during the summer. At the last meeting of the Board, the suggestion "Let's sell half and when we see which way it goes, we can buy it back or sell the rest," was frequently made and just as often acted upon. The result was that the Board moved from a position of 55% stock, 45% cash equivalent to 40% stock, 60% cash equivalents. The remaining stock is in diverse but solid companies like Exxon, ITT, Northrop and GTE with a small portion in the speculative growth stocks AMD and

Western Digital. As the market firms up, the Board plans to use its highly liquid position to take advantage of the new direction the market takes.

The Board would like to thank those people that have been attending our meetings for their participation and would like to invite any interested people to attend our future meetings. The next meeting will be Monday, November 17 at 7:30 pm in the Trustees' Room next to Millikan. Dr. Quirk of the Economics department has been invited to speak then on an asset valuation and its relation to stock price.

EDITORIAL

When considering the academic nature of Caltech, we are forced to consider the efficiency of the learning process here given the many time constraints and eccentricities students are faced with. At last year's student/faculty conference there was a general consensus among both students and faculty members that undergraduates are subject to a veritable "firehose" of information and ideas, all of which must be assimilated in order for them to do well. Yet underunited courses persist, occasional weasel-like T.A.'s continue to relish in the meticulous deflation of homework sets, and some of the core curriculum still seems pointless. The more we think about the academic problems here, the more injustices we seem to turn up, but curiously enough, the average student at Tech is hard-pressed to arrive at viable solutions to the problems.

The truth in this situation is that the academic climate at Caltech is static. It is Caltech's *nature* to be demanding. Despite recent cosmetic changes in the physics curriculum and the plethora of ombudsmen in the various divisions, the present state of mind of Techers in regards to their classes is no different than that of Techers fifty years ago (a continuous thread of discontent can be seen clearly by reading past editorials and commentaries from *The Tech*). Caltech is a constant; what can be variable are our personal perceptions of this place.

But our perceptions are what defines our reality. The impressions our minds take are dynamic entities and as such, they manifest themselves in all modes of our behavior. As a result of very subtle body language and other praetersensory communication, we transmit these perceptions to our associates. What begins as one isolated impression in an individual can soon reflect in a large number of people, unless we check its spread. Thus we can see that when a student has, for instance, a negative impression of a professor, he will unconsciously transmit this impression to his peers, and their impressions will be channeled to the professor, who begins to act negatively in accordance to his perception. The degree to which this occurs depends only on the strength of the original impression.

If the mind conjures an image of failure and does not immediately destroy it, the impression will be transmitted to other minds, and the net result will be that the initiator of this perception will experience failure in all pursuits. When we undergo defeats in school and operate under unpleasant emotions, we will almost always seek the external to explain our tempest. The irony is that our troubles spring solely from our impression of our world. As the Sufi master, Inayat Khan, so elegantly phrased it, "The mind is its question, and is itself its answer. Thus miseries are attracted especially by those who fear miseries; disappointment is brought about by those who expect a disappointment; failure is caused by holding the impression of failure."

Just as we can induce the negative by a negative

impression, so we can induce the positive with positive impressions. Herein lies the answer to our troubles. We must train our minds to reflect the negative impressions and cultivate our concentration to bring to bear positive perceptions. Thus, we will certainly expel what we currently call the negative aspects of Tech life, and if we go farther with our positive visualization, we can all manage here quite contentedly. The mind is the question which is its answer.

—Stuart Goodnick

LETTERS

Pillars of Virtue

To the Editors:

I am very grateful to the group of students who on 21 and 22 October 1980 participated in the restoration of Jud Fine's sculpture, *Horizontal Pillar*. The sculpture was originally installed in September by the artist on the Court of Mankind.

On the weekend of 12 October, a group, without authorization, removed the sculpture and placed it between Dabney Hall and Gates Building. Though there was some care taken to not destroy the pillar, the artwork was damaged.

The sculpture was specifically built for the Court of Mankind which contributed essential aesthetic and intellectual information. Nevertheless, the artist was willing to compromise and to accept the imposed location so long as the sculpture was installed according to his specifications, involving a realignment on the site and a restructuring so that the pillar was straight and horizontal.

When those who were responsible for the removal of the sculpture from the Court of Mankind refused to complete the action they instigated, a group of students reacted immediately and volunteered to restore the artwork. Unfortunately, before the work could be begun, someone attempted to burn the pillar, and because of this maliciousness, 30 feet in length had to be cut off. Still,

through all of this, the artwork has grown immeasurably.

The artist and I appreciate the integrity, spirit, and effort of the very special individuals who righted *Horizontal Pillar*. Thank you.

—Michael H. Smith
Director, Baxter Art Gallery

Mellow Out

To the Editors:

C'mon now. What's all the stir about? I refer to the article by Chuck Nichols (10 Oct.) and the heated reply it generated. I rather enjoyed the article; it was a marvelous piece of satire which I know for a fact wasn't totally boring. It seems a shame that any subtle attempts at humor, however gently prodding they might be, produce immediate outcries of sexism, immaturity, etc. etc. In fact, I am rather offended that 'an outraged reader' (outraged??) has such a low opinion of the men (and maybe the women, too?) of Caltech that she thinks we need morals spelled out in words of one syllable. If the publications in the *Tech* were taken with a grain of salt, sometimes even a handful, I believe far fewer people would walk around feeling as if they had been personally stepped on. (Of course, then the editors wouldn't have anything to print...)

Don't take everything so seriously. Give us a break.

—CJH

P.S.: Chuck—your advice on slinking was really excellent. Thanks!

Thanks to Students and Faculty

To the Faculty, Staff, and Students,

Thank you for the beautiful flower arrangement for David's funeral.

We would like to extend our thanks to the young people who administered CPR to David.

Also thanks to all the students, faculty and staff who expressed their sympathy to our family.

David chose Caltech because of the high excellence of the school plus the individual attention he would receive. This was evident to us in the concern shown for him and for our family.

Sincerely,
—Shirley, Larry, Juanita,
Mark and Edith Bagnall

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THE CALTECH Y fly-by

Today, Friday, November 7 is NOON CONCERT day. Out on the Quad, classical flutist Jean Goodlow will entertain our loyal Noon Concert crowd. Jean will be accompanied by classical guitarist Anisa Angarola. P. Pat hopes to see you there.

Saturday, November 8: the Y will provide transportation for a DAY HIKE up to Mt. Waterman. Bring lunch and water behind Winnett at 8:00 A.M., and Uncle Mike will take care of everything else.

Friday, November 14 will be another in a long and outstanding series of NOON CONCERTs. This week, P. Pat Productions brings to you Blue Guitar, a modern jazz band. Bring your lunch out on the Quad, and let's all get funky.

Announcement from the Bookstore

Nov. 14

THE CALTECH BOOKSTORE
WILL BEGIN RETURNS
OF OVERSTOCK TO PUBLISHERS

Plan to buy
Fall Quarter texts
SOON!



by Alan Loh

Here I am, back again, to write yet another column for the *Tech*. You see, after a while of working on the paper, you get so that the *important* issues covered in the *Tech* don't seem so important anymore. You get a little funny in the brain. This is what "Jelloh" is all about. Last term it was "Gift of Fire" and "A Grand Tragedy." It is meant to be entertainment only—mostly mine, though. I hope you enjoy it too. This one is offered to M. who encouraged me to write. It's a fiction—like the last two. I wouldn't call it a poem. The Muses were insufficiently invoked.

Aldine Bembo

(A fiction by Alan Loh with two faces)

Have you seen her,
Murray Bold? That's her.
The new one, she's
a stylish type.
Face, hair, and eyes,
not like your average.
Bembo, I think.
Her name's Aldine.
Here she comes.
Let's give her a smile.
Surely, she sees...
Our intents
so transparent.
She looked away.
Murray Bold,
you struck out again.
Well, a cold one, isn't she?
That Aldine Bembo.
Who does she think she is?

She says to herself,
Leave me alone.
You don't understand me.
These mindless games,
these hollow strategies,
spare me the shallow.
I want more.
I need love.
Where is love?
Where is that love
Romantically inclined
and savagely entwined,
Action-packed and
meaningful.
It must be meaningful.
Got to be!
Romeo and Juliet
Antony and Cleopatra
Superman and Lois Lane
Oh, what's that?
You want me...
to go to a movie with you?
No, no, thanks anyway.
No, I feel too lonely,
too miserable and lonely.
I don't want to talk to you.
Why don't you leave me
alone?



Personal

Sin,
The time approaches for
the fulfillment of past pledges.
The moment but awaits your
convenience. To ask or to give
is to receive. However, the ut-
most shall be done to make it
more pleasurable to give than
to receive.

—me



"OH, WELL I'M THE LONE RANGER AND HE'S THE
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Quick fry the tofu for one minute and stir in the molasses. Add this mixture to a blender with juice, water, and bitters, and puree. Pour over ice.

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In seeking out an improved method for isolation of 1,4,6-hexatriene from frozen smog, a minor impurity detected by gas/liquid chromatography of great significance has been reported by Caltech professor of environmental scatology Aaron Waterman. The discovery involves the first confirmed isolation of an air-borne steroid in the history of science. Structural analysis, reports Waterman, reveals a strong resemblance between the new hormone, which he calls lemielone, and the female hormone androsterone. Further investigation over a three-year period indicated that the concentration of the hormone in air varies considerably from sample to sample, with a relative maximum occurring in the early fall. With only this data to go on, Waterman and his colleagues launched a \$173,281 investigation to determine the source of the mysterious impurity.

Dr. Waterman successfully synthesized the new steroid from estrone, and studied its properties. He characterized it as "a non-toxic gooeey off-white fluid with a slippery feel". Tests on rabbits, rats, and chimpanzees showed no change in the behavior or physiology of the subjects. The hormone showed very high volatility for a steroid, however, suggesting a hypothesis that the airborne environment provided a vector for a previously unknown human hormone, perhaps even that the first of a class of "social hormones" had been found.

Dr. Waterman next tested twenty Caltech student volunteers, ten males and ten females, with varying concentrations of lemielone in air. Only small, possibly insignificant results were observed in the subjects. Mystified, Waterman returned to his laboratory with samples of air from throughout the world. No lemielone appeared in any other samples, leading him to conclude that the source was somewhere in Los Angeles.

All the time this research was in progress, the researchers had been complaining that their home lives were not what they could be. In discussing this seemingly insignificant fact in the coffee room one after-

noon, it was suggested that perhaps this could be due to some previously unnoticed effect of the baffling steroid. After convincing themselves of the validity of this surmise by stealthy double-blind tests in the night, the researchers guessed the true origin of the hormone. It was being generated right here at Caltech, and the female members of the Caltech community tested earlier had already been under the effect of lemielone when tested. Follow-up studies showed that female volunteers from outside the Caltech area became surly and moody when they inhaled even small concentrations in air.

Once he had established the effects of lemielone, Dr. Waterman turned his attention toward finding the source of the steroid. He began a campus-wide investigation and mapped concentration against time for several hundred locations. At last it became clear that neither the females on campus nor the males were the source, as had been suspected, but merely the victims. At one point, an extensive cloud of lemielone was detected spreading over the west end of campus, and Waterman concentrated his efforts at the calculated point of origin. His diligence was rewarded two weeks later when a second event occurred. He traced the origin to the fume hood vent above a certain lab in the Beckman Behavioral Biology Building. A Professor X working in that laboratory has been questioned by the Faculty Committee for Honor and Decency. Under threat of revocation of his honor, Professor X claimed to be using the hormone, which he had developed secretly, to break up various social entanglements involving members of his predominantly female research group. He claimed he hadn't realized the incredible potency of the hormone and had not intended to affect other members of the campus community. A grand jury of faculty members has been formed to determine whether the plot actually involved a conspiracy to prevent male and female graduate students from allowing their private lives to interfere with the progress of science.

In a recent news release it

was revealed that Professor X has sold exclusive rights for the manufacture of lemielone to an undisclosed drug firm in Switzerland. Plans include marketing the hormone as an air freshener for women's locker rooms, feminist meetings, and third world countries. Meanwhile, undergraduates at Caltech have filed a class action suit against the Institute for damages to student morale and interfering with their honorable pursuit of happiness. Further details will be printed as they become available.

—Chuck Nichols

Bread not Bombs Key for Salvation

By James Mayhem

Jack Nelson, author of *Hunger for Justice*, held a noon discussion recently on the problem of world hunger. During his discussion, entitled *Bread not Bombs*, Nelson showed concern over the apathy towards and even exploitation of the billion people who are starving today. He believes that the world hunger problem is the result of certain trends in the international exchange markets and in the military and foreign policy decisions of advanced nations.

The trend in international trade is, and always has been, that goods and services flow to and are produced for those who can pay for them. As a result, many underdeveloped nations produce goods for export rather than for consumption at home. This problem is especially serious in the area of food production because in most poor nations, a small portion of the population (three to five percent) owns eighty percent or more of the arable land. These fortunate few have dictated that the land be used to produce fruits, sugar, coffee, etc., instead of basic foodstuffs because the former can be sold abroad at a large profit. It is true that the money obtained by exporting food provides funds for development, but it is also true that the benefits of the development accrue to the rich elite rather than the country as a whole. The net of international trade on poor nations has been to provide a means by which the rich elite of these nations can isolate themselves from the problems faced by hungry people not far away.

The production and sale of military weapons also affects the hunger problem to a great extent. Money and resources used for the purchase or production of weapons lessen the amount of money and materials available for meeting basic needs. In poor countries, the diversion of funds from food to weapons has a disastrous effect. Even so, the United States alone has sold over twenty-five billion dollars worth of weapons to poor nations in the past ten years. Generally, these weapons are used by the powerful rich of these nations to keep the poor in check and to stave off reforms which would help the poor.

Mr. Nelson also indicts the advanced countries, particularly the United States, for having a callous attitude toward the poor in their foreign policy. In the past, the United States government has interfered with land reform attempts in several underdeveloped nations, notably the Dominican Republic and Guatemala. The reason for this interference is that land reforms undermine not only the rich elite of poor nations, but also work against the interests of large U.S.-owned food corporations. When the United States interfered, it did so on the side of the rich, preventing the land reforms the poor people of these countries needed.

Another trend in the foreign policy of the United States which greatly alarms Mr. Nelson is the open acknowledgement by military analysts of the potential for using food as a weapon. The United States has been exporting surplus food for so long that many countries, notably underdeveloped nations, are dependent on the United States for supplies of basic foodstuffs. The United States

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The Dread Lulu Warns Xerox Users

For those Xerox users who sometimes forget to read the directions for payment which are posted above the Xerox machine, here is a story which might help you remember.

Once upon a time, in a Y office far, far away, there was a nocturnal spirit by the name of Lulu Lee Ann who was the caretaker of a Xerox machine. Life was hunky-dory while the Xerox machine disciples offered up their names on a charge sheet and a quad form when they used the machine at night or on the weekends. However, the disciples of Xerox began to get lazy and irreverent, forgetting to offer up their signatures on the charge sheet and on quad forms in gratitude for the gifts of Xerox. Lulu was quick to anger at this unpardonable ignorance and is now seeking to remedy this offense. If the number of unaccounted users of Xerox continues to be as high as it has recently been, Lulu feels that she can do nothing but gobble up the machine at nights and on weekends, making it impossible to use during those times when the disciples are most likely to forget to account for themselves. (Note: Lulu hates change and cannot be bribed by leaving money—Lulu wants signatures during the night and weekends.) Lulu will of course regurgitate the machine during the weekday business hours when there are attendants pre-

sent to help the disciples remember to account for themselves.

Please remember to write your name on a charge sheet and fill out and sign a quad form when you use the Xerox machine during non-business hours. The instructions to do this are posted above the machine in large, easy to read letters. Don't let Lulu take Xerox away from the true, obedient disciples.

Saturn and the Mind of Man

by M. L. Goldberger

All tickets for the Sunday Nov. 9 Beckman Auditorium panel discussion, "Saturn and the Mind of Man," have been distributed. Fortunately, KLCS, Channel 58, will televise the symposium live at 4:30 p.m. Additionally, arrangements have been made with JPL to back-feed the Channel 58 program into the Institute's close-circuit television system, thus making the discussion available for viewing at the following places:

Ramo Auditorium
Winnett Lounge
Athenaeum Lounge
155 Arms
Millikan Board Room
119 Kerckhoff
248 Lauritsen

In addition, Bruce Murray will be hosting an evening in early January under the auspices of the Caltech Y, at which time the videotape of "Saturn and the Mind of Man" will be shown, along with a discussion of the recent discoveries made by the Voyager spacecraft.

Tuesday, November 18th, could be the day you begin fulfilling your professional ambitions.

If you're about to graduate with a degree in Computer Science, Engineering, Mathematics or Physics, you owe it to yourself to talk with the LOGICON representatives here on campus Tues., Nov. 18th.

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Up From the Well

Dear Mom and Dad:
 I haven't written to you before about this because I couldn't believe it myself, but there's been some sort of mistake. Somehow, even though I got on the plane to Los Angeles and followed the directions, I ended up at some other university that calls itself "Caltech". I was originally confused because of all the papers I read and signed for registration that had "California Institute of Technology" headers on the tops; they must have been taken from the campus where I was supposed to go.

It took me a long time to realize the mistake; first, the workload wasn't quite as tough as it was represented to me, though I attributed this to the fact that it was only the first part of the term. Still, I spent

all my free time up in my room studying Ph I assignments and doing extra problems (sometimes I made up my own). It wasn't 'til I got some graded assignments back that people started calling me a "cut throat", whatever that may be.

However, about a week ago, having already taken all my midterms and having run out of papers to write, I happened to walk through the student house corridors (they are called "alleys") and stopped to look into some of the rooms as I passed by. It was then that the first real suspicion of something wrong hit me: *no one was studying!* There were about five people in a room, only they didn't have any books with them and they weren't talking about our calculus class. They were just

sitting around, talking about anything that popped into their heads; some of them had some funny plastic bag which they were breathing into and passing around.

Needless to say, I was bewildered. I knocked gently on the open door and asked them if they needed any blue books?

After putting on some dry clothes I started looking around more carefully. I dug up a copy of the student paper; it had articles about parties and bonfires and all sorts of crazy stunts. Why, they even had a rock and roll concert blaring out over the campus; it was so loud that even with the door closed I could discern the seventh-harmonics of the stringed instruments they were playing. (Incidentally, I noticed that nearly everyone has a stereo here; one night I was taking a test and noticed the walls oscillating at 1.4 cycles per second. I thought it was one of those earthquakes that Mom told me to look out for when I flew out here.)

The clincher came when, over dinner, I tried to strike up a conversation with a senior about quantum mechanics, but couldn't elicit anything from him. Finally, I told him I had a 4.28 G.P.A. and asked him what his average was? He told me (I swear, these are the words he used), "I don't give one tiny fuck about my G.P.A., or yours either. Why don't you go to Jorgasm and enjoy yourself?" Unfortunately, I took him at my word; as soon as I stood up to leave dinner (prematurely, I admit) I was assaulted with every imaginable form of food and/or beverage, some of them in the most revolting forms possible. (There were these brown cylindrical things, about 4mm thick and 120mm across, which are called "pux"; about twenty of these hit me, the rest came close.)

Somehow, I have ended up at a place where serious, studious people aren't appreciated at full face value; not only that, but undoubtedly I will be far behind everyone at California Institute of Technology, since for two days now I haven't done any studying.

Could you please send me the instructions to get to C.I.T. again? The only thing that could have gone wrong is when I tried to compute the bus route from the airport that minimized the cost*time product on my HP-65; I might have forgotten to allow for seasonal variations in arrival time. The longer I stay here, the more I'll get behind in physics, and if that goes on for too long I won't be able to graduate in three years as I had planned to.

I'll write to you soon. Meanwhile, I intend to talk to some of the students here and find out where this place really is.

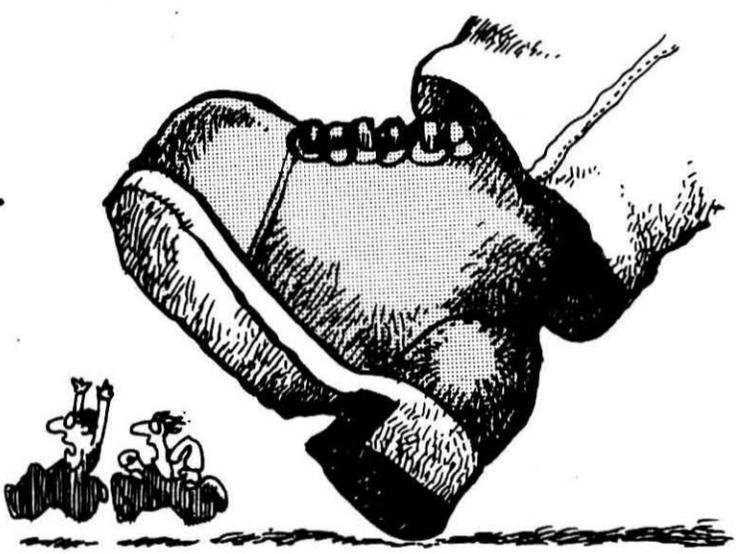
-J.R.

P.S. - someone just handed me a funny shaped thing that is burning on one end and smells vaguely like alfalfa. Do you know what it might be?



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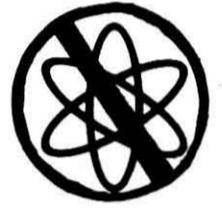
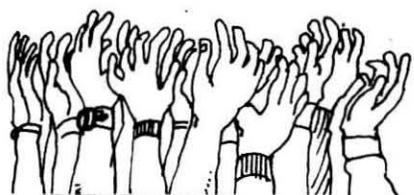
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ENTERTAINMENT

MOVIES plays SPECIAL EVENTS

Classical Flutist to Grace the Quad



Flutist Jean Goodlow will perform classical pieces today at noon on the Caltech Quad.

Today's noon concert will feature Jean Goodlow, a classical flutist who is a recent graduate of Cal State L.A., with a B.M. degree in Performance.

She has performed with the Pasadena Chamber Symphony, and with various opera orchestras in the area, as principal flutist, and has taught classical flute for several years.

While still in school she has performed as a soloist with the L.A. Women's Chorus, in concert at the Women's Building, and for the National Conference of the National Organization for Women, as well as for numerous private or charitable events.

Ms. Goodlow's repertoire includes a wide range of traditional and classical music in addition to the contemporary. She has spent the last two years doing research to find flute pieces written by women composers, and is in the process of recording an album of music by women composers, which will be released within a year.

Anisa Angarola is providing the accompaniment for the concert at Caltech. She is a classical guitarist presently teaching at El Camino College and is a student of Pepe Romero.

Candid Tryouts are Complete

By Joe Balke

Tryouts for the musical *Candide* were held Saturday and Sunday, October 25th and 26th in the basement of Beckman. For people who were interested in non-dancing parts, the tryouts consisted of singing and reading various parts of the script.

The turn-out on Saturday was only about 20 people, but Sunday brought in almost twice as many. The final cast is made up of 55 people (27 men,

28 women). The show was written with the intention of having individual actors double-up on the smaller parts (there are over 100 actual roles) and just enough people showed up to perform the play without excessive doubling.

The show is scheduled for performance in late February. According to the director, the amount of time that remains between now and then will be just the necessary amount to come up with a polished performance of a play of such magnitude.

Death Mechanic is a Classic Thriller

The Death Mechanic, by A. D. Hutter. Signet paperback; 184 pp.; \$1.95.

The Death Mechanic is a consolidation of an entertaining detective thriller offering a critical look at justice and a psychological novel probing the criminal mind. It's the story of a mass murderer and the frantic chase to capture him. The frightening realism of the plot expands our awareness of current events which often pose striking similarities to the novel. It also forces us to look at these events through an intriguing perspective, for the story is quite frequently seen through the eyes of the murderer, Henry Yates. The fear, the confusion and warped logic of a psychopathic killer is laid out in front of the reader, adding a dimension which separates it from a mundane hero-saves-maiden-in-distress plot so common in other detective novels.

The setting is Berkeley of the 1960s in the midst of the upheavals of the Free Speech Movement and Anti-War protests of Northern California. The sense of excitement is sustained in the novel by taking advantage of the counter-culture activities of the era. The author, A. D. Hutter, does this by weaving into the plot, the psychic wakefulness and the drug enlightenment of the Berkeley he remembered when he went to college there. In this environment, with its host of attractive miniskirted young women, garage mechanic Henry Yates, driven by powerful impulses (traced to childhood events) evolves from fantasizing about women, to peeping into bedrooms through parted curtains, eventually to physically participating in his fantasies by raping and brutally killing women.

The panic of the town is experienced through the eyes of Keith Clark, a British criminology student, and Alison Collins, a graduate student who is a near victim and the center of Keith's interest in apprehending the killer. Alison meets Keith at a party and later goes home with him. Waking up in the middle of the night, she decides to take leave of her impromptu lover, and goes out to the garage where secretly awaits a patient psychotic. When assaulted by the Death

Mechanic, Alison screams, and Henry has time only to take her purse. Now he knows her name and address from the purse's contents and is determined to kill her—the only person who would be able to identify him. Alison is humiliated and treated with indifference by the police, so her only hope is to unite with Keith in finding the killer to end the foreboding threat. Their efforts unite them even closer together, and adds elements of a tender love story to the thrill of the chase.

The subsequent hunt is perceived from a variety of angles, both major and minor. These are viewpoints biased by the fear of the would-be victim, the emotional motivation of the novice criminologist, the indifference of the police lieutenant, and the sarcasm of an insecure and lonely cashier who is just a passing observer. Quite frequently, as the story mounts to a significant event, the viewpoint volleys from that of the hunter to that of the hunted. The tension which is built up with the logical deductions of Keith as he gets closer to his target melts to pity in the reader when the perspective leaps into the fear and confusion of Henry Yates. The ending of the novel ingeniously combines riveting action with a complex psychological twist.

The Death Mechanic is at once exciting while thought-provoking and emotionally stimulating. However, the novel's major asset is its realism. The fogs which oftentimes hide the prowling efforts of Henry Yates turns the reader to think about similar events which could now be occurring somewhere outside of the limited reach of our sensory perception. This novel is not a brute-force attempt to thrill the reader. It displays the finesse of good detective work, then additionally expands to become a psychological thriller. The insight into the mind of a psychopathic killer is vaguely reminiscent of Dostoevki's Raskolnikov in *Crime and Punishment*, and the impact of it is comparably frightening. A. D. Hutter does an extraordinary job in relaying the vivid emotional turmoil which pervades the mind of the otherwise unthinking Henry Yates.

A. D. Hutter is a practicing psychoanalyst and a professor of English at UCLA. Hutter sees the detective novel as an important influence on major modern writers from Henry James to Nabokov, Borges, and Alain Robbe-Grillet. His training includes several years of observation at mental hospitals. This no doubt has helped to convey authenticity to the character of Henry Yates. *The Death Mechanic* has been a lesson for Hutter, for in writing it he was forced to try to place himself in the shoes of the criminal; to think like a psychotic. The novel also provides a lesson to the reader. Its realistic setting opens up our awareness of the real world, and its insights teach us something about the awesomeness of the human mind.

—Juanito Villanueva

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Horizontal Pillar Reoriented at Last

By Leslie Grate

The Horizontal Pillar has caused much tension and concern among members of the Caltech community, leading to its movement by a group of students. Their protest has sparked an exchange of words between the art department and the students, but it also raises a question. How can opposing views on the placement of such art be heard before final authorization of its placement is given?

The present art exhibit, of which *The Horizontal Pillar* is a part, has been in planning for two years. During this time the Art Gallery Director, Mr. Smith claims he followed the proper authorizational procedure as spelled out at the time.

Mr. Smith states, "The procedure was to go through the art department division channels to let the department know what was planned. It was then taken to Physical Plant to see if the chosen spot (Court of Man) was available at the proposed time. From there it came back to the division chairman and the campus provost for approval.

"Throughout the planning there was, to my knowledge, no notice given to the students as to what was proposed. Consequently, there was no way for them to let their views be known before construction began. When the Ruddock House president came to me with the student views, I told him I had gone through proper channels and that it was too late to stop the Pillar's construction.

"I agree with the students in that their complaints should be heard, but the problem is that no set authorization system exists. If there were a set system they could react to it, but at present there is none and a situation like *The Horizontal Pillar* could happen again."

By Charles W. Hershey

The story of the movement of *Horizontal Pillar* from the Court of Man seems to be complete. The artwork has been repaired and installed in its new location to the artist's satisfaction.

Almost four weeks ago, the artwork, *Horizontal Pillar*, by Jud Fine was moved by a group of students from its location on the Court of Man to a smaller grass area between Gates and Dabney Hall. The artist, though not pleased with this development, announced that he would be satisfied with the new location if the piece was adjusted to his specifications.

Approximately three weeks ago, another group of students burned part of the pillar on one end.

In order to preserve the Caltech intellectual environment as one in which new and varied ideas can be freely expressed, several students volunteered to help repair and install *Horizontal Pillar* in its new location.

On Monday, October 20, Jud Fine inspected the artwork and its new surroundings to determine what changes would have to be made.

During a few hours each afternoon of the 21st and 22nd, the pillar was adjusted according to Jud Fine's directions. A piece thirty feet in length was removed from the charred end of the pillar. Some of the wooden stands supporting the pillar were rebuilt to accommodate the different slope of the ground in its new location, and the pillar was realigned along a new diagonal. The work was completed by a dozen or so students working off and on under the supervision of Baxter Art Gallery personnel.

On Friday, October 24th, Jud Fine again inspected the piece and approved of its final condition, saying that he was very pleased with the work done by the students.



Photo by K. Gant

Tightly nestled twixt Dabney and Gates, Jud Fine's *Horizontal Pillar* once again exposes the trials of Western Civilization.

Gerald Durrell Fights World Animal Extinction

By Dave LePoire

That man should not let any species of animal drift into extinction but should actively pursue to keep the animal and habitation environment was the theme of the first Leakey lecture of the season by Gerald Durrell. He states this should be done for maintenance of biological equilibrium (e.g. keeping forests from becoming deserts as is happening in the tropics), medical purposes (the near-extinct armadillo was recently studied and some material was found that could help alleviate leprosy and cancer), or any hidden reasons that we might not know about for some years.

Gerald Durrell's background is very important in understanding his positions. He grew up on Corfu (a Greek island) and formed a deep appreciation for animal life. He went to study at a zoo near London but was appalled at the techniques and attitudes he saw there. His profession became that of an animal capturer for zoos. He explained many of the techniques and incidents that occurred on his three expeditions to the tropics,

but when he later returned there, he noticed animals that once were abundant were being threatened by civilization in some manner. Knowing that very little was being done to save the animals and the habitation area, he founded the Jersey Wildlife Preservation Trust.

On the Preserve there are about 700 species of nearly extinct animals. Durrell and his staff try to increase the population size of each species by studying the wildlife nutrition and reproductive strategies of each. Once an animal is declared near-extinct, a collection team goes out and captures it. Care must be taken in getting a balanced population and a large enough gene pool. The animals are then subjected to an extensive quarantine so that disease does not enter the preserve. The animals are then acclimated to the Jersey weather by letting them choose a simulated natural habitat or the real natural surroundings. It is Durrell's hope that after a few years of studying, he will be able to return the animals to their natural habitat.

In the movie following the lecture, an example of one of their emergency find expeditions was shown. They were after the volcano rabbit, which is becoming extinct because of the population growth of Mexico City, and the increased agricultural requirements which are causing the removal of the natural habitat of the volcano rabbit. The rabbit is of scientific importance since it is believed to be one of the earliest evolutionary forms of a rabbit.

continued on page 12



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Relativity a Bust?

(or "Feed Him to the Den of Physicists")

To the Editor:

On 23 February 1979 the *California Tech* published a letter of mine that unsuccessfully defended the free expression of minority views, especially of alternatives to relativity and to evolution. Many "heretics" had complained earlier about the ill treatment they received when presenting important (*i.e.*, revolutionary) ideas. I found a good example of this in the October 1978 issue of *Wireless World*, pp. 44-45. But accepted theories are still beyond contention in American classrooms and research journals.

Wouldn't our college professors be far more productive if they taught modern science less as a religious dogma and more as a human activity which students *can* later revise? High schools might then be less inclined to drop courses in subjects where individual participation, alias democracy, is now prohibited by elitism and by authoritarianism. History tells me that science itself always did much better without group thinking under administrators, or their gross duplication of efforts and overflow of journal trivia.

The latest and most

interesting response to my letter came just last week from a physics major at Caltech (Paul Gloger, currently residing in San Marino). He called long distance to inquire about the international Relativity Reassessment Committee and to request additional information for you. The following material is difficult, if not impossible, to publish elsewhere:

1. Three of our members have developed scientific apparatus to measure absolute motion. After securing a regulated light bulb between two photocells that had been set about 30 cm apart in a closed tube, and after coupling the cells in opposition and to a microammeter, Raphael Godart of Belgium found a directional difference in current (*i.e.*, intensity) readings whenever the tube and its contents were slowly rotated as a unit. Ten years later, at the Catholic University of Louvain, J-L Lambert verified his result, which by then Godart had correlated with aphelian concentrations of long-period comets. Way back in 1958, J. A. Briscoe of England built a pair of

ultrasonic-coupled transmitters (British patent 15089/58-884830) to compare the speed of light in various directions with that of sound. Similar experiments, this time with revolving coupled-mirrors, which Stefan Marinov of Bulgaria performs in closed rooms, actually produced a value for the Sun's absolute motion that was later corroborated by measurements of the Sun's velocity relative to the 3° K cosmic background radiation.

2. We may have also discovered non-relativistic gravitational waves. My previous letter mentioned a diffraction pattern in solar deflections of starlight. (See Fig. 1) More solid proof is the work of Brian DePalma and Edward Delves of Pennsylvania. They made small objects a) rise higher, b) fall faster, c) rebound less, and d) retard nearby clocks more, by spinning them. Their effects have been repeated elsewhere but are still ignored.

3. Your readers accepted my claim that modern relativists misinterpret Fizeau's experiment. Briefly, Einstein had invoked Poincaré's

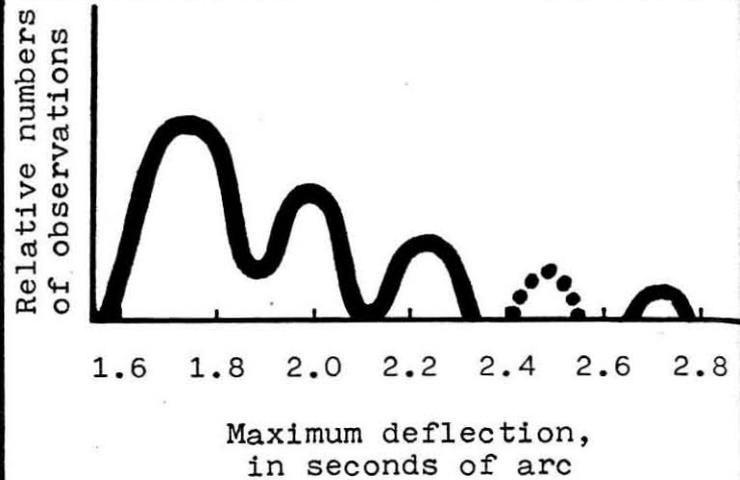


Fig. 1. Computed maximum angular displacements of Sun-grazing starlight during the 1919 thru 1959 solar eclipses fall within a smooth-curve diffraction pattern. This group effect is statistically significant because the experimental error averages less than 10 per cent. The dotted line encloses an area where some data are expected but have yet to be recorded. Optical results differ widely from the questionable relativistic analyses of similar measurements with Sun-grazing radio waves.

principle of relativity "to take for granted" [*sic*] that the velocity of light from a stationary source was the same *with respect to* flowing water (his italics) as Fizeau had measured earlier relative to motionless water. This argument is widely repeated. However, because Fizeau had accelerated the water from rest to another frame of reference, his light was Doppler-shifted to a different frequency for which the water has a different index of refraction. Had Einstein calculated this Doppler shift and then applied it to the coefficient of dispersion for water, he would have found the true velocity of the light relative to the flowing water.

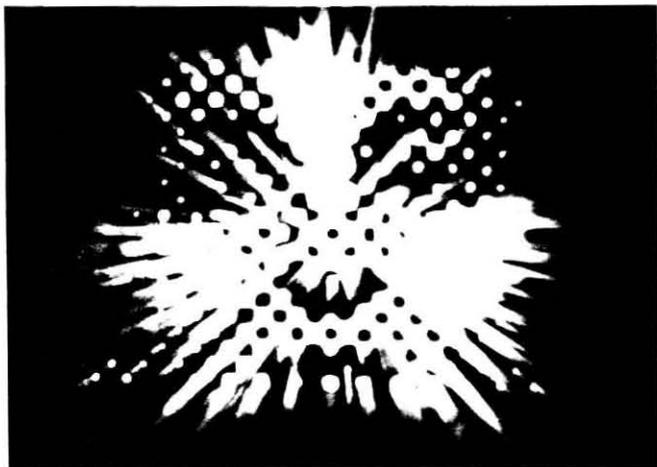
The Fizeau experiment is extremely important. Its data can be used to evaluate one space-time event from two different inertial frames of reference. Such logic strikes at the very heart of special relativity. Arthur Otis first discussed this point on pp. 69-70 of his book *Light Velocity and Relativity* (3rd ed.). In fact the color and, thus, the velocity of light from a stationary source must change greatly with respect to all material media that are set in motion at "relativistic" speeds (for which special relativity was

supposed to hold good).

Now I would like to show you how significant my discovery is: Einstein was not the first physicist to make the above mistake of assuming that electromagnetic forces on light (e.g., in a transparent liquid) and on charged particles are independent of relative motion or, more precisely, that such forces are *applied* instantaneously. J. J. Thomson and Lorentz likewise postulated variations in mass with velocity equivalent to constant force with velocity in Newton's law of acceleration, $F = ma$. (Experiments apparently told them only that acceleration varies with velocity.) But even before the Fizeau experiment, Faraday had established as fact that the *EMF* he and Henry first induced in a conductor of electricity depends on the speed and direction at which lines of magnetic flux are cut by the conductor!

Moreover, by arbitrarily having mass vary with velocity while charge remains constant, Thomson, Lorentz, and Einstein ignored the remarkable similarity between the

continued on page 9



COSMIC COALESCENCE

Where does science fiction end and reality begin? It's all in the mind's eye. Be it the creative imagination used to produce *Star Wars*, *The Black Hole*, and *The Empire Strikes Back*, or the more scientific approach of hypothesis testing and experimentation, the distant galaxies of science fiction coalesce into reality with the advanced technology now being developed at a company called TRW.

It was the Defense and Space Systems Group of TRW who made possible the Viking Lander biological experiment which looked for life on Mars and the High Energy Astronomical Observatory which looks for quasars, pulsars and black holes in deep space. Professionals at TRW-DSSG are now involved in such impressive technologies as high

energy lasers, communications systems, plus other future projects still considered science fiction.

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Relativity

from eight

simplicity of Newton's law of gravitation and Coulomb's laws of electrostatics and magnetism. Lorentz and Einstein compounded this problem with disunited fields when they stipulated different longitudinal and transverse masses for any moving body—even though mass is still defined as a scalar quantity!

A much better way to retain Newton's second law of motion would be to classically reset every mass constant (i.e., independent of velocity) and, instead, let each field force F be the true vector quantity, that varies directly with the speed and direction of its object. Using terms defined in the caption to Fig. 2, we have $F/F_0 = u/c$ and $F = F_0 \{c^2 + v^2 - 2cv \cos[n]\}^{1/2}/c$, ($n = \pi - \theta - \arcsin[\sin \theta v/c]$), where F_0 is the force expected on a body whose velocity v is zero. Here the magnitude of a force is proportional to the relative velocity of approach between waves (a property of

fields rather than of matter) and whatever obstructs them. Since fields are now known to transport energy at the finite speed of light, experimental physicists should further investigate this dependence of the magnitude and application time of every force, including the mysterious nuclear forces, on the velocity of an object. For instance, Equation 1 (above) reduces to: $F = F_0(1 - v^2/c^2)^{1/2}$ for charged particles in a 90° electric or magnetic field (where $\theta = \pi/2$ radians). Faraday's work readily shows that Equation 2 has considerable experimental preference over Einstein's arbitrary "equivalent", $m = m_0/(1 - v^2/c^2)^{1/2}$, a formula by which light must be considered massless. Besides, only Equation 1 can be related to macroscopic disturbances in material media. Dynamics should therefore be reformulated.

Sincerely yours,
Joseph A. Gilbert

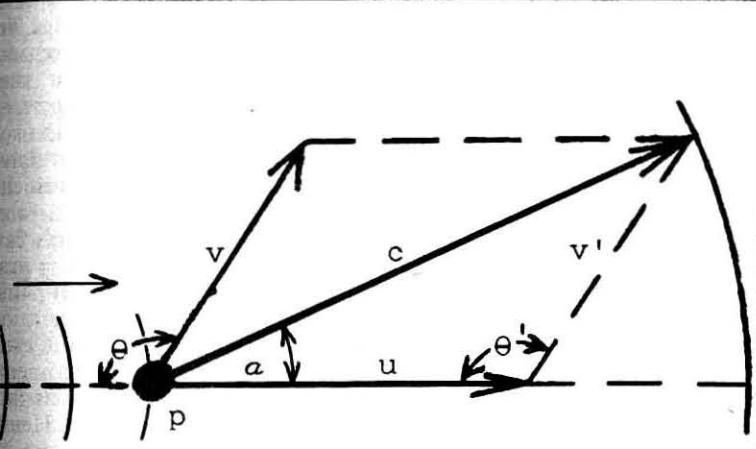


Fig. 2. A "relativistic" force varies in magnitude only. Given the velocity v of a particle p and its angle θ of incidence at the front of aether field waves traveling horizontally, we find the speed-of-light vector c (at angle $\alpha = \arcsin(\sin \theta v/c)$ by the sine law) along which a Huygens' principle secondary wavelet passes across p , and its component u ($= [c^2 + v^2 - 2cv \cos(\pi - \theta - \alpha)]^{1/2}$ by the cosine law) which is left to effect p after v is vectorially subtracted from c . Diffraction and interference phenomena prove that secondary wavelets can act along other paths than the perpendicular to their common envelope.



Voyager 1 Saturn Encounter Highlights

Times (except closest approaches) are those of receipt of data at the Deep Space Network stations. A video monitor for general viewing at all times are available from now through Thursday, November 13 in Winnett Lounge; others available at certain times are in these locations: the Athenaeum, Millikan Board Room lobby, 162A South Mudd, 155 Arms, Winnett Clubroom Two, Caltech Ticket Office, Baxter Hall first floor lobby, and 119 Kerckhoff. A large-screen (five-foot diagonal) video projection will be continuously available in Beckman Auditorium from 10 a.m. Tuesday, November 11, through 6 p.m. Wednesday, November 12.

—Gavin Claypool

Friday, November 7 — 5,000,000 miles and closing

6:38a-7:00a Seven photos of Titan [range: 4,920,300 miles]
9:03a-9:09a Two photos of Iapetus [6,605,200 mi.]

Saturday, November 8 — 4,000,000 miles and closing

2:54p-2:58p One photo of Rhea [3,905,900 mi.]

Sunday, November 9 — 3,250,000 miles and closing

11:29p-11:42p Two photos of Dione [2,617,800 mi.]

Monday, November 10 — 2,400,000 miles and closing

1:46p-1:58p Four photos of Tethys [1,958,600 mi.]
3:48p-3:53p Two photos of Hyperion

Tuesday, November 11 — 1,400,000 miles and closing

9:41p Closest approach to Titan [2,500 mi. from surface]
11:11p-11:22p Titan-Sun occultation
11:12p-11:24p Titan-Earth occultation
11:22p Ring-plane crossing

Wednesday, November 12 — 600,000 miles; closing fast!

1:31p-1:36p One photo of S-12 (new satellite)
2:16p Closest approach to Tethys [258,000 mi.]
3:43p-3:47p Two photos of S-10 (new satellite)
3:45p CLOSEST APPROACH TO SATURN
[77,174 miles from cloud tops]
3:48p-4:12p Six photos of S-11 (new satellite)
5:42p Closest approach to Mimas [55,168 mi.]
5:50p Closest approach to Enceladus [125,840 mi.]
7:08p-8:35p Saturn-Earth occultation
7:22p-8:02p Saturn-Sun occultation
7:39p Closest approach to Dione [100,122 mi.]
8:44p-9:00p Ring-Earth occultation (expected duration)

Thursday, November 13 — 400,000 miles and growing

8:44a Closest approach to Hyperion [546,264 mi.]
11:25p Closest approach to Iapetus [1,537,400 mi.]

Friday, November 14 — 1,200,000 miles and growing

9:46a-5:58p 154 photos of rings



Amnesty Intn'l has Need of Support

By Randy Morse

Who are the Helsinki monitors, and why are they being imprisoned in the Soviet Union?

Some of the names you probably know: Yuri Orlov, Anatoly Scharansky, Andrei Sakharov. Others you are probably unfamiliar with: Tatyana Velikanova, Petro Rozumny, Yuri Litvin. There are many others. They're from Moscow, the Ukraine, and Armenia.

But who are they?

They are Soviet dissidents, men and women who put themselves at obvious risk to attempt to monitor violations of human rights in the USSR. They began doing this in May, 1976, under the provisions of the Helsinki Accords, which the Soviet Union signed in August, 1975. The Accords contain a provision to respect "freedom of thought, conscience, religion or belief," and to "act in conformity" with international commitments on human rights.

The West actually wasn't too wild about this agreement when it was drawn up. Observers figured this was just another scrap of paper that would have no bearing on the internal affairs of the Soviet Union. The Soviets probably figured the same thing.

Orlov and his compatriots surprised everybody. By early 1977, less than a year after the inception of the Soviet Helsinki Watch Group, they were challenging the regime as no dissident group had done before. They were able to do this largely because of the unique nature of the Accords. Part of the agreement was that compliance would be subject to periodic review. What was

continued
on page 12

Campus Paperback Bestsellers

1. **Shogun**, by James Clavell. (Dell, \$3.50.) Englishman's adventures in 16th-century Japan: fiction.
2. **Sophie's Choice**, by William Styron. (Bantam, \$3.50.) Star-crossed lovers and the nature of evil: fiction.
3. **Still Life with Woodpecker**, by Tom Robbins. (Bantam, \$6.95.) A sort of a love story: fiction.
4. **The Dead Zone**, by Stephen King. (NAL/Signet, \$3.50.) Terror tale of a man who sees into the future: fiction.
5. **Godel, Escher, Bach**, by Douglas R. Hofstadter. (Vintage, \$8.95.) Computer scientist's theory of reality.
6. **Shibumi**, by Trevanian. (Ballantine, \$2.95.) Intrigues of the perfect assassin and perfect lover: fiction.
7. **Memories of Another Day**, by Harold Robbins. (Pocket, \$3.50.) Saga of American labor movement: fiction.
8. **A Woman of Substance**, by Barbara Taylor Bradford. (Avon, \$2.95.) Successful woman & her children: fiction.
9. **Texas!**, by Dana F. Ross. (Bantam, \$2.75.) Life in Texas prior to statehood: fiction.
10. **Petals on the Wind**, by V. C. Andrews. (Pocket, \$2.75.) Children take revenge in horror sequel: fiction.

Compiled by *The Chronicle of Higher Education* from information supplied by college stores throughout the country. November 5, 1980.

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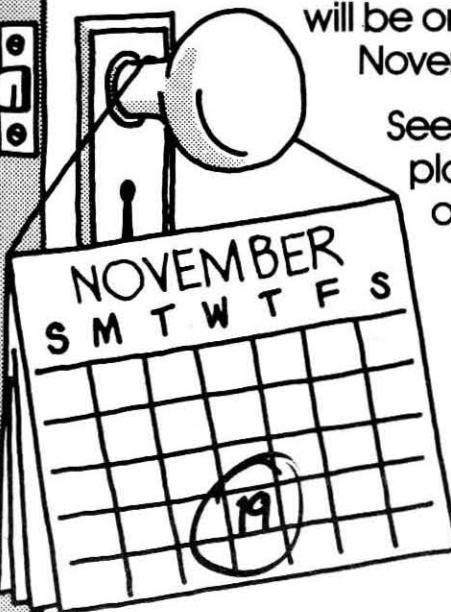
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MORE SPORTS THAN YOU WANT

Women's V-Ball Against the Net

By Lisa Grenier

The Caltech Women's Volleyball team was defeated by the Pomona J.V. team last Saturday. The teams were well-matched and the lead saw-sawed throughout the first game, which Pomona eventually won, 15-10. Caltech started out strong in the second game, but was narrowly edged, 16-14.

Norma Ofsthun and Sandra Loh contributed points and a sense of stability to the team, and Sue Fuhs had Pomona at their knees as she nabbed several aces. It looked like nothing could stop Caltech. Unfortunately, the volleyball team's major weakness was especially glaring Saturday, as server after server hit the ball into the net or out of the court. Once the team solves this problem the victories should begin piling up.



Moving so fast that they were blurs, the Women's Volleyball team members fought long and hard against the victors from Pomona last Saturday.

Cross Country Team Runs the Annual SCIAC Championship

By Gordo

Caltech's Cross Country Team ran in the annual SCIAC Championship meet recently, held this year at LaVerne's home course. In the Men's Varsity race, Caltech placed sixth among the seven schools. Although the team as a whole did poorly in comparison with past teams, the individual runners did quite well in general. Karl Clausing led the way once again with 16th place overall, perhaps a bit further out than he would have run had he not pushed so hard in the tough first mile and a half of the course. Second for Tech, and 29th overall, was Eric Korevaar, who ran as steady a race as ever. The big surprise for Tech came at third place, which Rob Murphy took. This

was the first time Rob had ever even run among the top seven, and in all ways an excellent race for him (he finished 34th). Shawn Larsen came next, fourth for Tech and 36th overall. Shawn has easily been Caltech's most consistent and improved runner this year. Paul Eskridge was fifth, rounding out the scoring; in 39th place, his time was faster per mile than it had been the week before on Whittier's faster course. Sixth and seventh were essentially split in a dogfight finish between Randy Field and Jim Drake, who pushed back LaVerne, finishing 40th and 41st. Rob Murphy, Jim Drake, Shawn Larsen, and Paul Eskridge all turned in excellent personal performances, as did Eugene Hu in the JV race, but the depth of previous years was gone, leading to our sixth place finish.

In the Women's race Caltech only had two runners, and thus did not score officially, but both runners still had strong races. Karen Close finished 12th overall, within one second of her nearest competitor, whom she valiantly tried to sprint down at the finish. Carlotta Paulsen ran 21st overall, again only a few seconds behind the previous finisher. The team now has a tough meet coming up, the NAIA District 3 Championship meet at Biola on November 8th. The winning teams in this meet will go on to run in the NAIA national championships in Kansas in mid-November. Last year Tech finished 5th in the District, and can't honestly expect to do any better this time, with its much thinner team. It's too cold in Kansas in November, anyway.

Swimming Beavers Take a Dive Into Occidental

By Lee Sunderlin

Caltech's water polo team played well against Occidental, but lost in the stretch, 14-7. It was a fair game against one of the best teams in the nation.

Oxy jumped to a 5-1 lead by the end of the first period. Caltech recovered and pulled to within two at 7-5 by halftime. Occidental, however, scored four goals in the next period while holding Tech scoreless; they coasted to victory from there. Caltech took long shots, and very few went in.

Caltech was led by Don Hendricks, who scored four goals in the second period and made many steals. Matt Wette, Dave Huff, and Arley Anderson also contributed points. Goalie Russ Burkhart made 13 saves, and Anderson won three out of four sprints to determine possession of the ball.

Caltech is moving into one of the strongest leagues in the nation. Coach Clinton Dodd believes that his team will be improving greatly as they gain experience, and may make the playoffs. Water polo is a good spectator sport, like soccer but faster, and the team needs support. Only ten people showed up for their last game, so get out there and cheer on Caltech's favorite water polo team.

SCIAC Results

Men

POMONA-PITZER	23
OCCIDENTAL	41
CLAREMONT-MUDD	90
REDLANDS	108
WHITTIER	134
CALTECH	154
LAVERNE	189

Women

CLAREMONT-MUDD	54
POMONA-PITZER	50
OCCIDENTAL	74
WHITTIER	84
REDLANDS 3 RUNNERS FINISHED	
CALTECH 2 RUNNERS FINISHED	
LAVERNE 0 RUNNERS FINISHED	

(The scoring is determined by the sum of the positions of the first five finishers for each team, low score winning. Thus, the Pomona-Pitzer Men's score of 23 was achieved by their first five runners finishing 2nd, 3rd, 5th, 6th, and 7th overall.)

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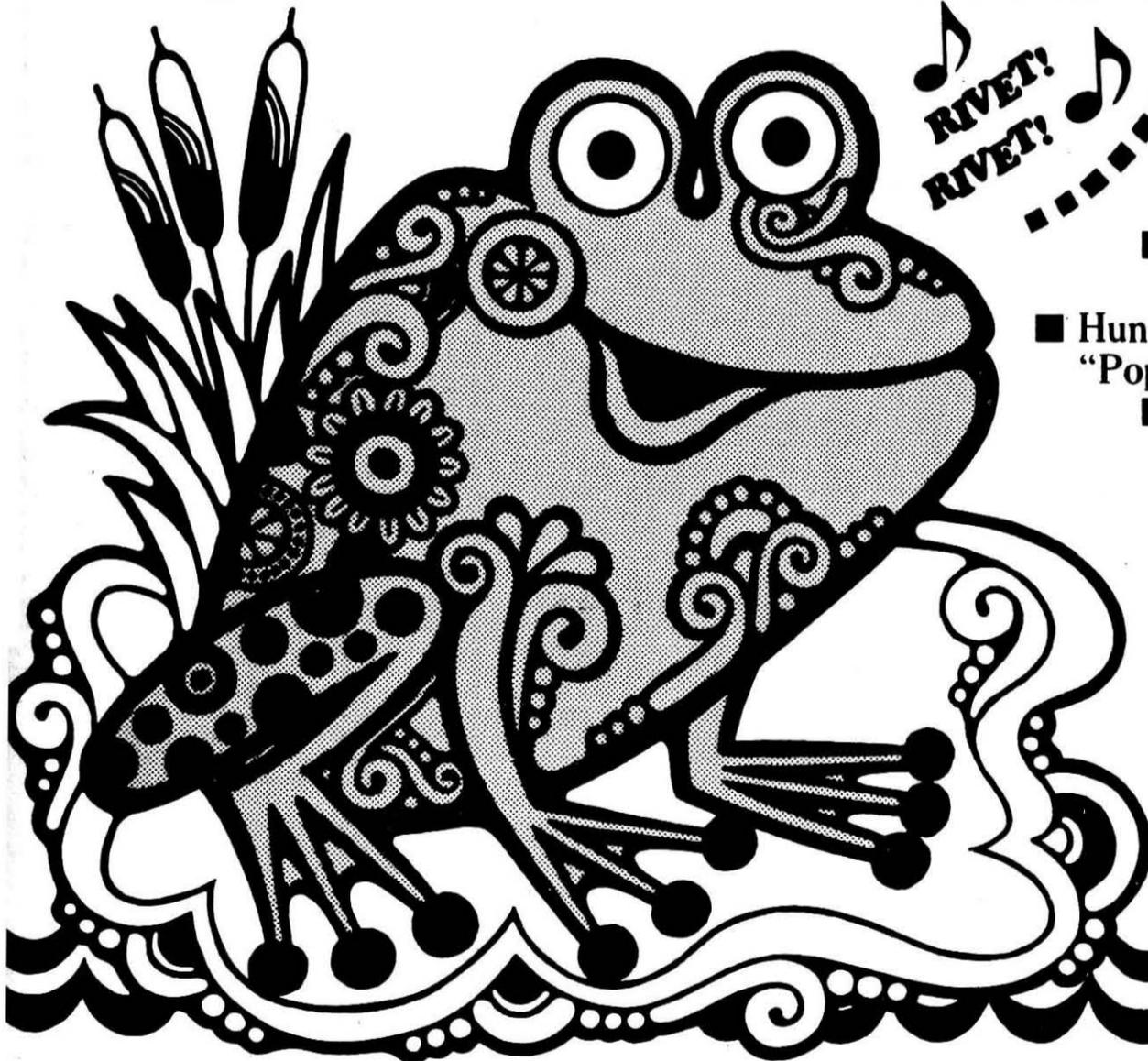
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Bread 'n Bombs

Engineering Women

The Society of Women Engineers has announced that they are accepting applications for eleven scholarships...

Students Not Forgotten

Dr. Bruce Murray will be giving a presentation on the Voyager II mission for the students of Caltech...

Learn CPR

CPR, or cardio-pulmonary resuscitation, provides artificial circulation and breathing to a person whose heart and lungs have stopped functioning...

Gay Discussion Group

There will be a meeting of the Gay Discussion Group tonight in Clubroom 2 at 7 p.m.

Praise Hymn

On November 23rd, Sunday at 8 p.m. the Neighborhood Choir and Orchestra under the direction of Ed Low will perform the work by faculty member, Richard J. Bing...

Lost

4" by 6" gray plastic card file box, in Winnett Center. If found, please contact Russell Schmalenberger...

Aye Maties

The Chess Club is currently holding meetings Monday nights at 7:30 pm in Winnett Clubroom 1.

Closed for Interhouse

The Coffeehouse will be closed on Saturday, Nov. 8. We recommend that our regular customers try the Green Elephant Bar & Grill...

For Better or Verse

A \$1,000 grand prize will be awarded in the Special Poetry Competition sponsored by World of Poetry...

from four

is thus in a position to begin dictating policy to these nations if it so desires.

Mr. Nelson sees only one way to correct the world hunger problem and to reverse the trend of food as a weapon.

Amnesty

from nine

more, the accords were published in Izvestia and Pravda, so that people knew what was in them.

By now you've figured out why the Helsinki monitors are being imprisoned. The arrests began in February 1977...

Well, fine, you say, but why is this article printed in The California Tech? What's it got to do with celebratory bonfires or Murph's voting preferences?

you can do about this.

Right about now, the Helsinki Review Conference is taking place in Madrid. It's a good time to bring whatever pressure we can bear upon the USSR.

Write to: (USSR Procurator-General)

USSR Moskva ul. Pushkinskaya 15a Prokuratura SSSR Generalnomu Prokuroru R. A. Rudenko

or to: (President Brezhnev)

SSSR g. Moskva Kreml Yego Prevoskhoditelstvu Predsedatelyu Prezidium Verkhovnogo Soveta SSSR L. I. Brezhnevu

OWC

from one

only articles dealing with problems, but they need more people to help write and distribute the newsletter.

The athletic committee report was probably the most relevant to student life. A survey last spring of women who used the athletic facilities indicated these facilities were generally inadequate.

provements will be made soon.

Other committee reports included staff options, which identifies problems and solutions for the staff, and career development for staff and students.

New Buildings

from one

Braun Laboratories will be a three-story building with a single basement that covers about seventy-five thousand square feet.

Gerald Durrell

from seven

The team in search of the rabbit enlisted the help of a local family and then proceeded to try various methods of capture.

Gerald Durrell believes the future of his project lies in his school for training the techniques to preserve these animals.

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