



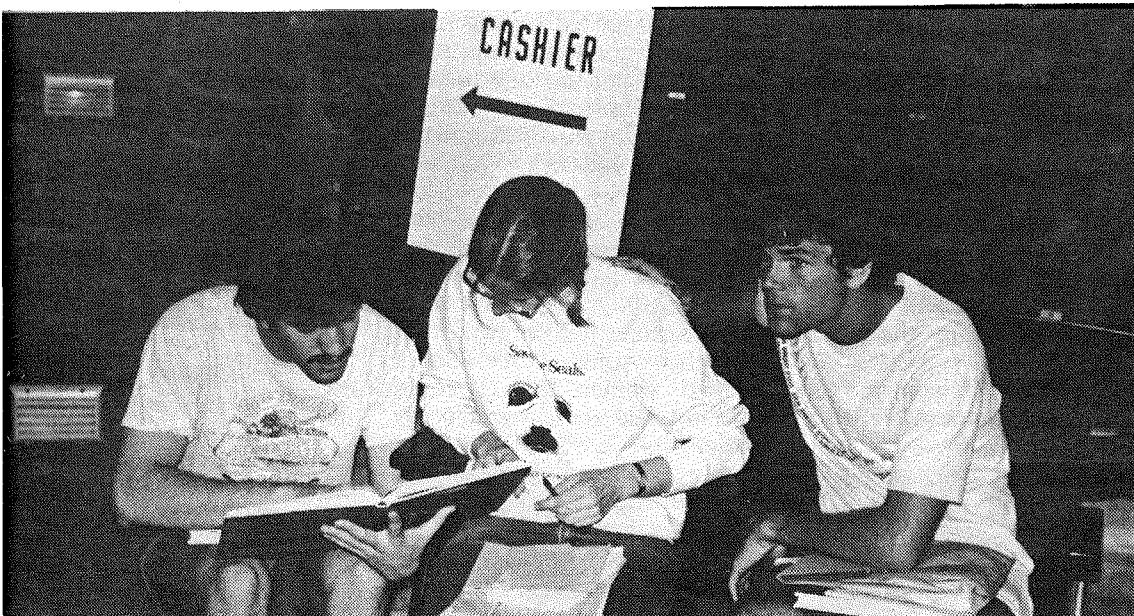
# THE CALIFORNIA TECH



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NUMBER 2



Registration '84

## Pauling Preaches Peace

by Julian West

Linus Pauling lectured about peace and nuclear disarmament before a packed house in Pasadena last Thursday.

About 150 people turned up at the Pasadena Episcopal Church on North Euclid to hear the two-time Nobel Laureate. The audience had donated up to \$25.00 apiece to Southern California Freeze Voter '84 in order to attend.

In his opening remarks, Marvin Schachter, the chairperson for the evening, commented that Pasadena was an appropriate location for the event. The Caltech campus would have been even more appropriate, however, since Dr. Pauling is still listed in the Catalog as a professor emeritus and he was introduced by Dr. John Roberts, a professor of Chemistry at Caltech.

A special guest appearance was also made by Institute President Marvin Goldberger, who should otherwise have been at Frosh Camp. Dr. Goldberger spoke briefly about the respect that Pauling commands from scientists, politicians, and the general public.

Pauling is the only person to have won two unshared Nobel prizes, one in Chemistry and one in Peace.

In a speech as full of wry humour as of facts, Pauling laid the blame for nuclear escalation upon the American government and people. He believes that the initiative for arms reduction must come from the United States, principally because new arms systems have always been built first by the U.S., then copied by the U.S.S.R. "three or four years later."

Pauling remarked that the four-year lag seemed to apply even to the Olympic boycotts of 1980 and 1984.

If the Americans decided not to construct a new weapon, Pauling suggested, the Soviets could follow suit. Such an occurrence actually took place when the Americans said that they would not test a Hydrogen bomb until after the Soviets

next exploded one. The Soviets countered by offering to halt their testing until a Western power began testing again. The cease-fire continued for two years before France broke the agreement.

This example demonstrates the plausibility of the argument that the Soviets will accept peace initiatives from the West. They are truly frightened of the Americans, Pauling claimed, and would be willing to make sacrifices of their own in order to gain concessions from the U.S.

Pauling made the point that the more complex nuclear weapons become, the greater the likelihood of an "accidental" nuclear war. As flight times of missiles become shorter, decision-making time dwindles, so that sudden decisions now threaten to decide the fate of the earth. A halt in the nuclear arms race would take us away from the brink of disaster.

But a second advantage of a nuclear freeze, Pauling pointed out, was that it would relieve the strain which defense spending puts on the national economy. In fact, since the Soviet GNP is only half that of the American, the strain on their economy is much greater, if they wish to "keep up" in the arms race.

This provides a further incentive to a warlike America to escalate the arms race, because it is willing to sacrifice some American prosperity in order to damage the Soviet economy.

The Soviets, on the other hand, would be interested in slowing the arms race.

Pauling suggested that each country should worry about its own prosperity instead of trying to inflict damage on the other. He quoted Bertrand Russell as saying that the world would be a much better place "if we were willing to work half as hard to make ourselves happy as to make other people miserable."

Pauling blamed the U.S. government, not the American people, for taking the initiative

in the arms race. He believes that most Americans want peace.

"Why do the American people allow all this to go on?" he asked. "Because the government lies to us over and over again."

Pauling ended the talk by urging his listeners to work for peace. "It is the American people and the American government who must do the job," he said.

## Stone to Speak On Human Rights

by Hossein Mohammad

Dr. Jeremy Stone, director of the Washington based Federation of American Scientists and a personal friend of Soviet physicist Andrei Sakharov, will come to Caltech this Monday, Oct. 1, to speak at Baxter Lecture Hall at 8:00 pm.

The internationally known physicist will speak on the problems and benefits of linking the subject of human rights to that of arms control in negotiations with the Soviet Union.

Dr. Stone, an atomic physicist who is also a former research associate at the Harvard Center for International Affairs, has been in personal contact with Andrei Sakharov for many years. He is now considered as an important liaison to the exiled Soviet physicist.

Last May, *The New York Times* published a letter from Dr. Sakharov to Mr. Stone, asking the American physicist to help Yelena G. Bonner, Mr. Sakharov's wife, leave the Soviet Union for medical treatment. Shortly after that, Andrei Sakharov reportedly started a hunger strike in pro-

test of the Soviet refusal to issue the exit visa.

Jeremy Stone has been a long-time proponent of measures to curb the arms race. The Federation of American Scientists, which he is the director of, is an organization founded by atomic scientists to help control the arms race.

The issue of tying arms control negotiations with the Soviet human rights situation was on the ballot in last June's California Primary elections. California voters approved Proposition A, which argued progress in arms control should be linked to progress in Soviet human rights, because the existence of democratic institutions is the most effective way of preventing nuclear war.

Dr. Stone's visit to Caltech has been arranged by the Caltech World Affairs Forum and the Caltech Y, with funds appropriated by the Distinguished Speakers Committee at Caltech. The talk is entitled "Human Rights and Arms Control; the Connection".

## Current Campus Computing

by John Beahan

There are a wide variety of computing facilities available on campus, and even trying to give a general description of most of them would prove difficult, both for reasons of space and in terms of finding someone who has had experience with all of them to write an article.

For this reason, this article will not contain any "how to" information about campus systems, but just general information on usability and friendliness.

There are several types of computers used on campus, with the VAX being the most popular for serious work, and the PDP-11 being used in many instances for special-purpose processing. There are also four Data General machines, and a large number (greater than 200) of personal computers of different types used for everything from games in the student houses to serious small-scale research.

For general student personal use (work unconnected with any class or project) the largest machines now available are three of the four Data Generals, but there are a number of Hewlett-Packard Chipmunks which are also usually open for general use.

Any student may get an account on one of the DGs or get permission to use any of the

Chipmunks, unless a CS class has preempted them all.

I am told that, due to their recent installation, undebugged utilities, lack of documentation, and general hostility toward the user, the Data Generals are extremely difficult to use at times, and serious or intensive use of them is virtually impossible.

This is partly for the above reasons, but it seems that they are also a problem because of the environment they were designed for. They are normally business machines, and are almost completely incapable of the sort of multiuser, CPU-intensive processing needed by many students. Their response time is hopeless if more than a few (one?) users are executing a program at one time, although they are fine for word processing, or will be, once a debugged and documented editor appears.

The HP Chipmunks are another option for the casual user, since they offer a personal, debugged, well-documented programming environment and are large in memory and speed compared to almost any other personal computer.

There are drawbacks associated with them, of course, including: small disk space (compared to what some students use); relatively slow execution time; lack of com-

munication with other machines or access to networks; lack of the varied and large-scale utilities often available on a large machine, although the Chipmunks do have a great deal of software for their size.

The general situation is that if you want to do much more than play games or do word processing you may have a lot of trouble doing it on generally used machines. In practice, almost all student computing is related to a class, project, or research interest, and for any of these three areas, other facilities are available.

New students who have an idea for some kind of use for a computer, whether it is a CS project or just a convenient FFT, should talk to the appropriate faculty member (CS prof for a CS project, etc.) about getting an account on a machine other than those open to all students.

This is usually not at all difficult in practice, and anyone wishing to do serious or large-scale work can probably interest some professor in it and get access to quite acceptable facilities.

Although I may have given the opposite impression, the campus computing facilities are actually very good, it is just that most of the better machines are restricted to

*continued on page 5*

# An Interview with Women's Group Founder

This is an interview with Felice Borisy, a junior in Dabney House and founder of the Undergraduate Women's Group here at Caltech.

by Irene Replode

**IRENE:** What is the undergraduate women's group?

**FELICE:** The undergraduate women's group is a group affiliated with the OWC (the Organization for Women at Caltech) but by and for undergraduate women only.

**IR:** What about graduate women? Are you going to expand and form another group just for grad and undergrad women? After all, there are not very many women on this campus.

**FB:** No, I don't see that as necessary because we are a part of the OWC. As a group, we

plan our own functions and do our own things. But we are part of the OWC, which graduate students also belong to and which can serve as a base for doing things with them.

I thought a long time before deciding whether or not to affiliate with the OWC. And there are some people who might think that they don't want to be part of a political organization, but this women's group is not political.

We leave that completely to the OWC. We are a support group. That is what we are. We have fun, we talk, that's what we do.

The reason we're joined with the OWC is because every single woman who made it to Caltech, and every single woman who's going to go somewhere else in her life, has reached that chance through the works of groups such as the OWC that have gone out there and tried to give women a chance. And so I feel that it's important to respect the feminist groups as well, because that's how we got where we are.

**IR:** What is the purpose of the group? Is it just a forum for undergraduates?

**FB:** I think it's something more than a forum. It provides a chance for undergraduate women to be with undergraduate women — from other houses as well as their own. I think there are many important things that we need, such as a chance to just talk with other women, not have any men nearby.

For me it's relaxing, it's a very different feeling. I feel less tense when I know that there's not someone that might be thinking that I'm a possible target.

I don't care what people think — women do have a different way of relating with each other than with men. So, it gives you a chance to do

things and feel things that are different than you normally get to feel and do at Tech.

I think we are a forum in a sense of we're going to have rap sessions and stuff like that every now and then — maybe once a month or so — and it's a chance to talk with other women.

But it's also a chance to have fun with women, just plain fun — you know, doing things you like to do, but with women only.

**IR:** Do you think the house system kind of segregates the small number of women from each other and doesn't let them interact?



**Felice Borisy**

**FB:** I think that because everyone gets really hung up on their house, they don't get to know the women from other classes in the other houses and I think they also gradually lose contact with even the women in their own class.

So that's definitely very true. And I think that this group will act as a bridge so that they can get to know each other, together, with no house bias at all.

**IR:** What caused you to start the group?

**FB:** I needed women around me —

**IR:** So it was a personal reason.

**FB:** It was really a personal reason. I knew that there had been this need for a long time. But I had, like so many other women here, a boyfriend that I spent almost all of my time with. And I was just blind to

the problems. I thought, what more could I possibly want than a boyfriend?

Stupid me!

Then I started having trouble in that relationship, and suddenly I had no one to turn to because I had put all my energies into this relationship and my homework. That was about it.

I'd party with people, but all of my energies — friendship energies — had gone into this relationship. And I didn't want to be turning just to guys, that was the wrong source. So, I wanted women that I could turn to, and there weren't any there.

have a rap session every month. We're going to try and get someone at least semi-professional to lead that, but so far there's been no progress in that direction.

We also like to do things more just oriented towards fun. We're going to have a

**continued on page 5**

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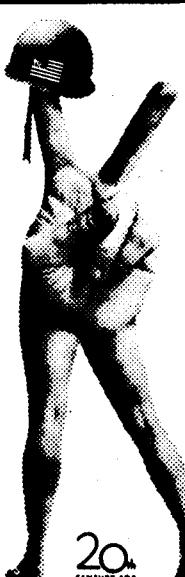
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**letters****Penthouse and Hypocrisy**

To the Editor:

Mr. Kulwickas accurately pointed out the moral equivalence of *Penthouse* and the Miss America Pageant ("Miss America and *Penthouse*", *Polemic* vol. 1, no. 1). I wonder why, then, he goes on to draw diametrically opposed conclusions about the two institutions.

While he denounces the Pageant as a "meat market", hardly a term which could imply any form of support, he seems to find nothing shameful about the magazine. On the contrary, he accuses its op-

ponents of practicing "puritanical hypocrisy." It appears from a strictly logical point of view, that Mr. Kulwickas is the hypocrite here.

Mr. Kulwickas defends Ms. Williams' right to pose for nude photographs. He does not mention her right to suppress the publication of the same. That she did not intend for the photographs to be published in *Penthouse* is evident. If her body is truly her own, why could not the publishers have complied with her wishes?

— Julian West

**A Twist of Logic**

To the Editor:

Brian Toby, in his article entitled "Whose Country is it, Anyway?" (*Polemic*, vol. 1, no. 1) states that we "can elect the Mondale/Ferraro team, two outspoken people, who respect the wishes of the majority of our country" noting in support of his statement that "the majority of delegates at the Republican convention support a nuclear freeze and oppose a constitutional amendment outlawing abortion." Using Toby's "illogic" we could therefore necessarily conclude that because the delegates unanimously supported Reagan that so do all Americans, which is demonstrably not the case given one Brian Toby.

He goes on to state "Don't be misled by the polls putting Walter Mondale and Geraldine Ferraro far behind. Elections are won by Electoral College votes and the races in the states with largest number of the Electoral College votes are primarily ones where the polls are close."

Besides the fact that the state by state polls conducted so far give President Reagan an even more commanding lead than do the national polls, and that the only place in which Mondale is in the same ballpark as Reagan is in Minnesota (Mondale's home state) and the District of Columbia which isn't even a state, neither of which I would

characterize as having large amounts of Electoral College votes, one wonders what is Toby's point?

He wouldn't be suggesting a strategy in which Mondale, by concentrating on taking the big ticket states, would be able to take these states by very slim margins (through some miraculous event) and so despite the fact that the popular vote would go overwhelmingly to President Reagan, Mondale would clinch the Presidency, would he?

One wonders who really respects "the majority wishes of this country." Afterall, "Whose Country is it, Anyway?"

— Steve Pitts

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# Humanities at Caltech

by John Beahan

As everyone knows, this is a technical institute, and because of this fact, one of the common assumptions made about Caltech is that its Humanities & Social Sciences department is the pits. Of course, since the preceding statement is in fact true, that assumption is at least partly correct.

Admittedly, compared to Harvard, or even other less imposing schools, much of the HSS division is probably second rate, although I am told that there are portions of it, such as the Economics department, which are among the best. The important thing is to not allow this to blind you to the good sides of Caltech Humanities.

The first notable aspect of Caltech humanities, and the one which is considered beneficial by most Techers, is that if one is willing to spend a little time talking to other students, one can usually find at least a few humanities and social science courses in which

one can get a passing grade with absolutely minimal effort.

This may sound like more of a put-down than an item of praise, but given the realities of course loads and personal interests here, the situation might be far worse if this were not the case. I am assuming in saying this that, in spite of the professed philosophy of "a well-rounded education" being given to every student with or without his or her consent, it is foolish to try to teach people material they are not interested in, and insane to require that they be good in that area.

The second, and in my opinion, too often overlooked, aspect of Caltech HSS is that if one is willing and interested in the nontechnical areas, one can in fact find many excellent courses in the humanities and related fields, at least on the introductory level.

One of the things I often hear is "Humanities are BS," and since the people holding this opinion are usually the ones whose interest in them is

low and take the easy ones, it is not at all surprising that they feel this way.

I wish to emphasize, though, that just as in physics or math, the course material depends on the professor and the professor's intent, not the course title or catalog description. One of the driest course descriptions I ever read turned out to be the most fascinating class I have yet taken here.

Be aware also that some professors sympathize with the heavy course loads of the students and specifically structure their courses so that the individual student can more or less decide how much work to put into it, and if you are hoping for a challenging and interesting class, this can be a disenchanting experience.

Talk to other students to find out which courses are right for you, and not just in the HSS areas, since I have found this to be the most reliable method of determining the worth of a course, although even "most" is not "very".

## Birnbach on Caltech Life

by Chris Mihos

Ladies and gentlemen, I have just read the review of Caltech in Lisa Birnbach's *College Book*. Now while some of the things Birnbach says are true, many of the statements serve only to continue the unfortunate calculator-carrying stereotype of the Caltech student.

Birnbach includes a description of what she sees as the "typical" Caltech student: "You know the type: T-shirts bearing computer-language witticisms revealing pale arms, bell bottoms, and, to complete the fashion picture, a low-grade chin growth." People like that do exist here at Caltech, but we also have our share of the people who don't know a byte from a bit, people who appreciate a good tan, and people who do like to have a lot of fun partying during their free time. We even have people who like to party during their worktime. Birnbach's stereotype is an insult to the Institute and the students.

Birnbach's comments about women at Caltech are equally inane. She includes a quote from someone in administration: "[Women] have had an enormous effect. Most of the students aren't oblivious to them." I have a hard time figuring out why this quote is used in the first place. I don't care if you're talking about Caltech, USC, or UCLA, most students aren't oblivious to women wherever they go to school. Birnbach also says that one of the best things about going to Caltech if you're female is the 5:1 male/female ratio. I'm sorry, but I just don't believe that anyone is truly happy with the 5:1 ratio, no matter if they're male or female.

A best/worst list is also included in the article. Birnbach says that the best house is Lloyd and that the worst is

Ricketts. Now I'm not even going to touch the subject of who's best and who's worst, but it seems to me that someone who has spent only two days in one of the houses is not at all qualified to make an intelligent judgement about the houses.

Birnbach also discusses drinking and drugs in her review. Maybe she was high herself when she wrote this, I don't know. But she calls beer the favorite drink, noting "the importance of alcohol is negligible." I will be the first to admit Caltech is not quite Party U, but I wouldn't call alcohol a "negligible" factor. Then she says "Favorite drugs: Pot; LSD; Speed." Pot and speed—maybe, but LSD? And whatever happened to those snowy May nights?

On the topic of sports: "Sports: Fencing." That's it. Just fencing. Tell that to our 8-1 football team last year. Tell that to our baseball team, to our basketball team, or to our water polo team. And I think she also misses the importance of the Interhouse sporting events which probably tend to attract more people than our intercollegiate sports.

Now not everything Birnbach says is out of line. She is correct when she says that the humanities offerings are not the Institute's strong points, but I don't think that anyone here is really after a strong degree in the humanities. And she does manage to appreciate Tommy's for the Mecca that it truly is.

Birnbach's review is disappointing to say the least—I think insulting is a better word for it. It is filled with misconceptions, stereotypes, and ignorant judgements. Birnbach manages to write what really is a setback in the efforts to change Caltech's image, and it is unfortunate that this

review had to come out while the Institute is trying its hardest to improve campus life and attract a wider range of interests in the student body. In fact, it is unfortunate that this review came out at all.

# Hobbit at Tech

by Julian West

Théâtre Sans Fils' production of *The Hobbit* uses the Japanese Buraku technique of giant, life-size puppets to bring Tolkien's tale to life.

If you (like most Techers) missed the chance to see this production when it appeared in LA this summer as part of the Olympic Arts Festival, you have another opportunity when it plays Beckman this Thursday at 8:00.

The listed prices of \$11 and up may seem daunting, but it's really only \$7.50 — \$6.50 — \$5.50 for Caltech students, with \$5.00 rush tickets available on the day of performance.

Théâtre Sans Fils, whose home base is Montréal, have both French and English tapes for the production. This will presumably be an English performance, but the French is perfectly comprehensible, even if you have no French. This is particularly true if you have read the book (and who hasn't?)

The plot of the play is necessarily edited, but remains faithful to the original. Purists might be upset, on the other hand, by the interpretation of some of the characters.

This is especially true of Bilbo, who ambles too whimsically to a cute, but repetitive,

musical line.

Smaug, on the other hand, is well conceived and realized as a 10 meter long puppet! In fact, the "special effects" are the high point of the production — especially the spiders who "spin" glowing webs and seem to dance through the air.

But the real magic of the play lies with the young pupeteers. 48 puppets are carried about the stage at one time or another, by only five people. Dressed in black, the humans soon fade out of the conscious mind into the black backdrop.

One of the highlights of the production this summer was an invitation for the audience to come up on stage and see some of the puppets up close. This offer, which was accepted by most viewers, included an opportunity to touch and manipulate the excellent figures.

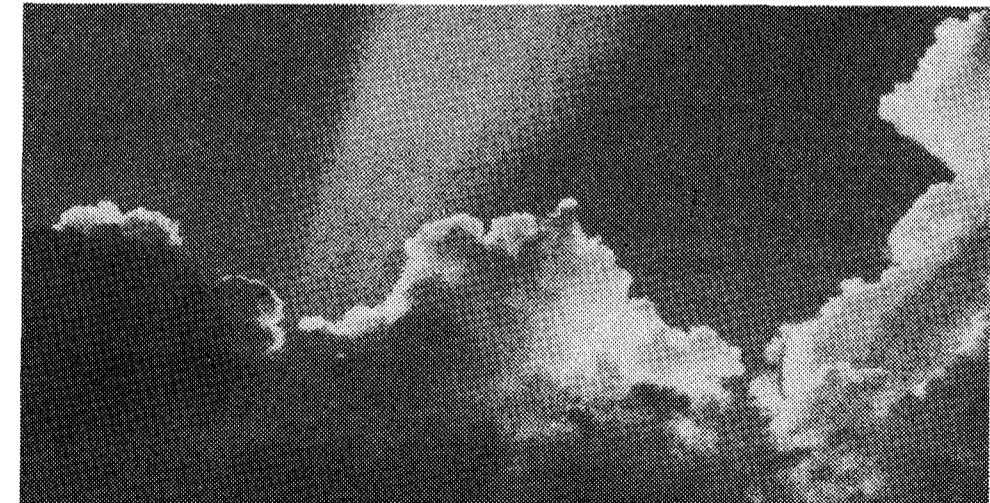
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## Interview

from page 2

volleyball game and we had a barbecue. I think we'll do stuff like go out to dinner one night and to a museum one afternoon perhaps, maybe go shopping.

I know that some of these things sound really typically female, but the truth is that I like to do them, and there are a lot of people I've talked to who like to do them, so we'll do them — but we'll do other things too, you know.

If someone's just going mountain climbing and there's a big enough interest, we can do that. We can do anything we want to do.

IR: You're not afraid to do it just because of some stereotype...

FB: No, you know, one of the nicest things about doing these things that some people stereotype and say, "See, that's so female," is that you can't do it with the guys because they're afraid to, or they're not interested.

So it's just nice to do that. And the other really important thing about the group is starting Oct. 6, for the first month, the month of October, we're going to have the Y lounge open for undergraduate women only, every Saturday afternoon from 1 to 6 pm.

IR: So you can just drop in?

FB: You can just drop in. You can bring your homework, you can bring a book to read. There might be munchies there, we might have someone talking for an hour or two, there'll always be someone there. And it'll be a really nice comfortable place where you can get away from guys for a while.

Then after that first month while the freshmen have a chance to get used to the school, we're going to switch over to the OWC women's room — that's in the basement of the old houses.

IR: A lot of people saw the posters for the barbecue. How did that go?

FB: It was great. It worked out really well. Almost all the freshmen women showed up, and there were a lot of upperclass people. It was really good. We also had the RAs — the female RAs — from each of the houses, or at least a lot of the houses, show up.

And I think that was a really good plus to it. And, just everyone had a good time. People weren't grilling each other with rotation questions, they were just talking. And when I was talking with some freshmen women they were already saying things about how they felt about being here in a pretty much all guys school.

And I think the group is going to work out. I mean, I feel really good about it and the barbecue was just great.

IR: Has there been a lot of support — from the male students, from the administration — or has there been a lot of heckling?

FB: The administration supports the group very highly. The Master is very much behind it. He let us use his house and he thought it was a really good thing to have there.

The Y is very much for the group. The rest of the administration, I don't know. There's been no heckling from them.

Guys are a different matter. I've found some really interesting responses from the guys — and they all vary. Some guys say, "Well, why can't we have a group for guys?" And, you know, they can have a group for guys. If someone wanted to organize it, that's all there is to it.

IR: There's no reason for you to do their work.

FB: Yeah. Other guys have said, "Well, you know, isn't

that kind of illegal — having a group for women only?" But the point is that we're not doing any specific activity that guys would want to do in particular. I mean, we're not, say, a swimming club saying that we're for women only. We're a group whose first and primary purpose is to be for women only, to be away from guys.

And I think it would spoil the purpose completely to have guys there. But, one thing I really want the guys to know is that I think that our group serves a function that benefits everyone — not just the

*continued on page 8*

## Student Computing Facilities

from page 1

specific purposes, and one must obtain authorization to use them.

Once an account is obtained, say on the CSVAX, the resources available are excellent, and I have never encountered a problem any more serious than slow response time — during the day before a CS 181 assignment is due, when there are twenty-odd users each running the largest program you would ever want to encounter.

The range of experimental and research facilities in the Caltech CS department is very broad, including everything from personal workstations to graphics terminals with bit pads, not to mention a lot of custom-made hardware like the Cosmic Cube.

Although some may complain that the Caltech CS department has nowhere near the facilities of many other top schools, with about one tenth as many students, who could expect equal facilities.

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### What companies are participating.

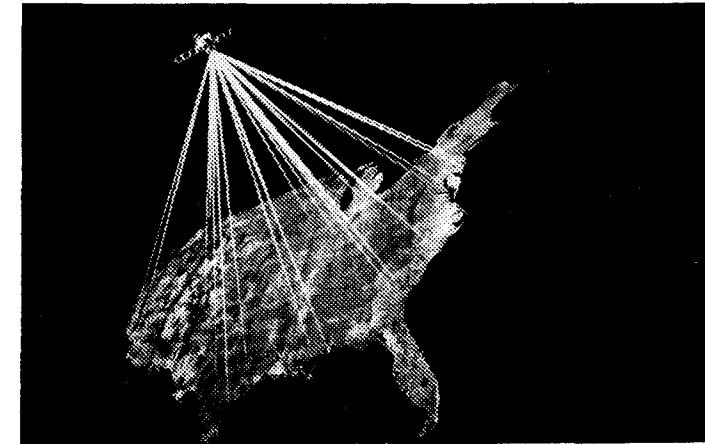
Among the companies telecasting live to your campus are Sperry Computer Systems (formerly Sperry UNIVAC) including all domestic operating units, nine divisions of Tektronix, Inc., five groups of Combustion Engineering, Inc., the Federal Aviation Administration and three operations of the National Security Agency. There will also be a special presentation, "Space Station...The Next Logical Step," by NASA.

Featured speakers include Polly Rash, Director of Marketing at Satserv (formerly with Public Service Satellite Consortium), Dr. Russell Drew, Vice President of Student Career Development of IEEE, and Dr. Marvin Centron, author of *Jobs of the Future*.

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of computer sciences, plus majors in aviation management, math, physics and all other technical degrees. Admission is free. High achievers and above average grades are welcome. And no registration is required.

In addition to the company presentations, question and answer periods and featured speakers, there will be special door prizes including BPI-SOURCE T-shirts, TI Scientific Calculators and a surprise Grand Prize. We'll also have helpful information on each company to take with you.

The BPI-SOURCE presentation is Oct. 9 at Dabney Lounge and will include a live morning telecast at 9:00 a.m. PST and a live repeat approximately 3 hours later. Choose the telecast that best fits your schedule. Pick up further information including presentation schedules at the placement office or call:

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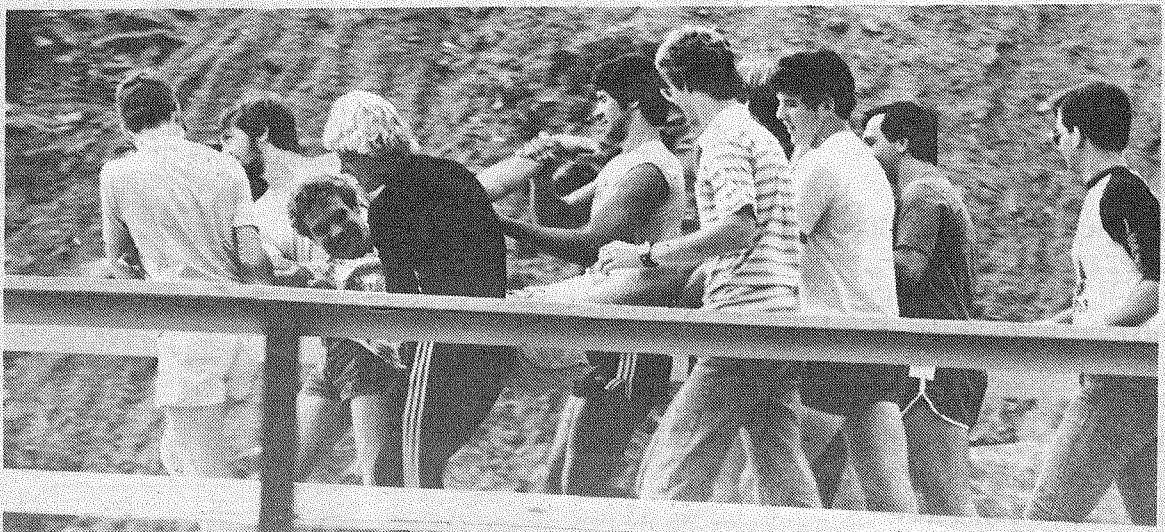
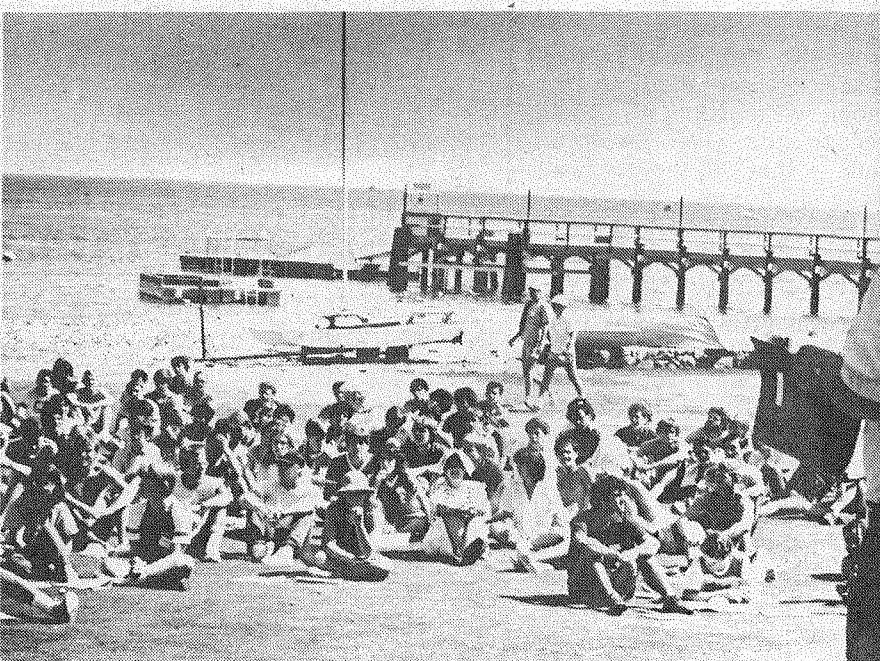
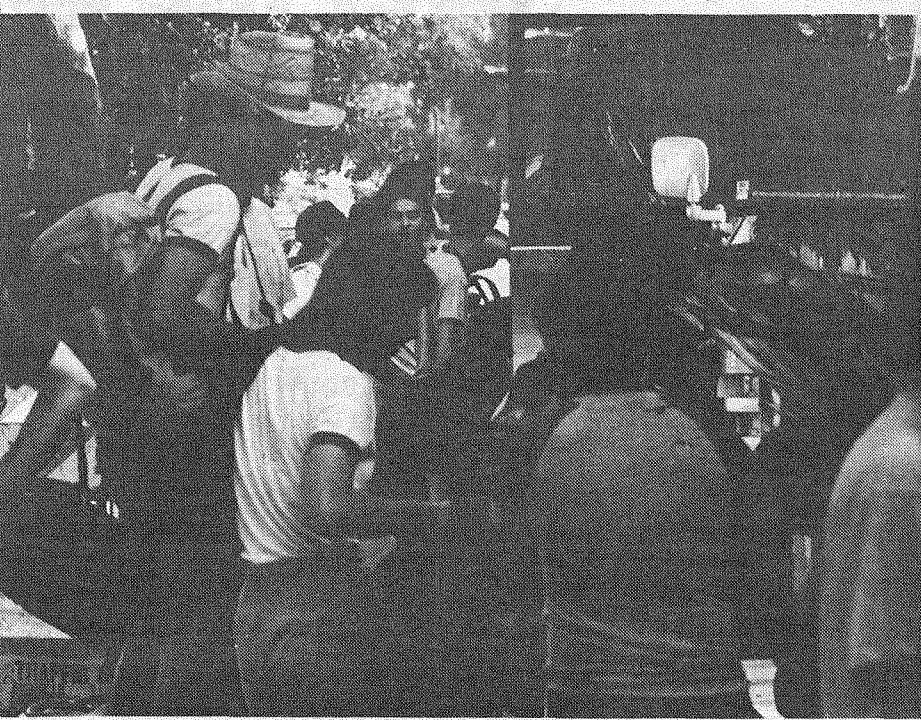
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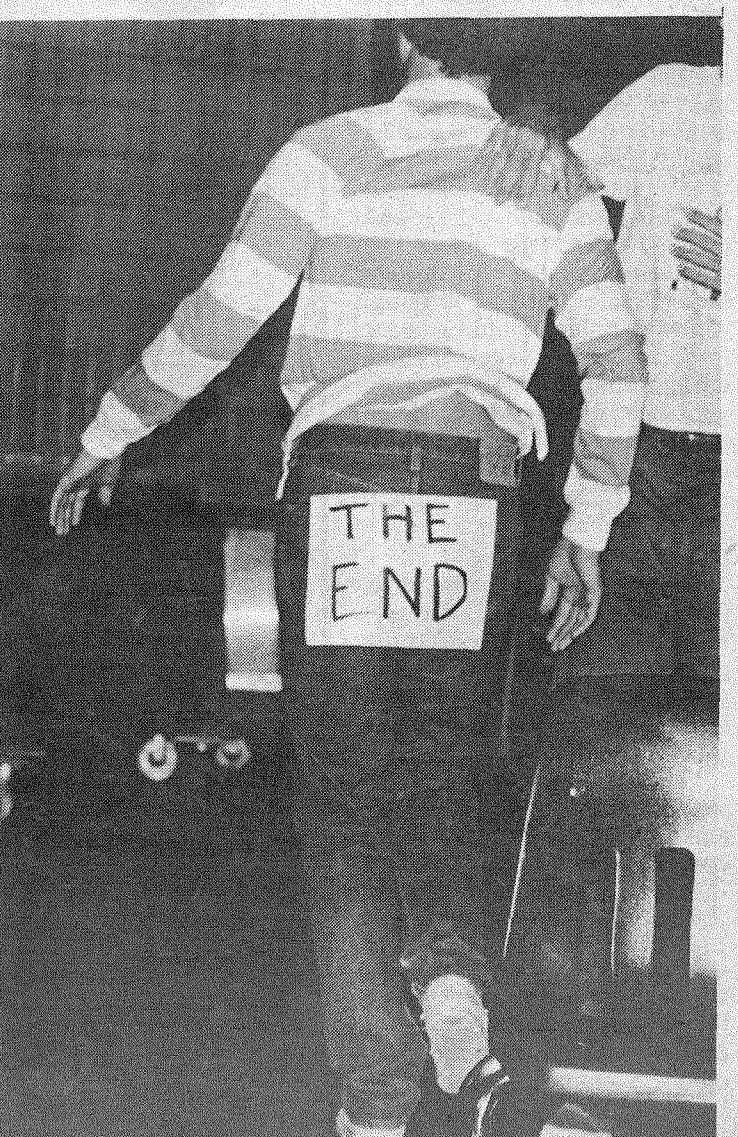
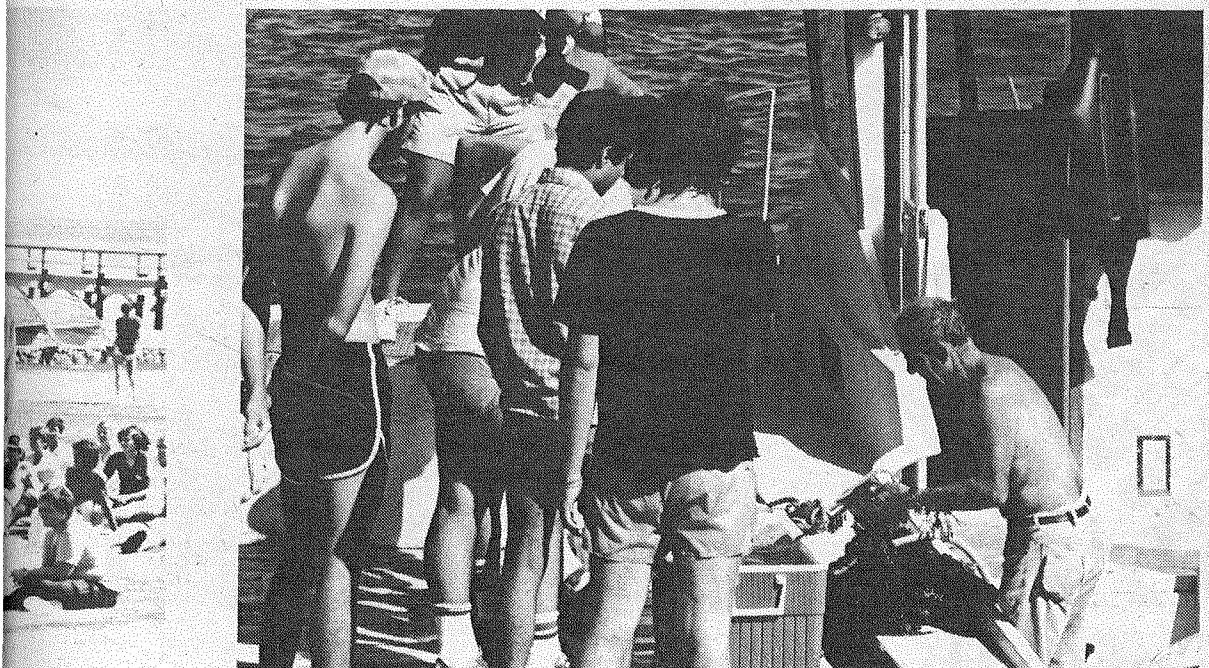
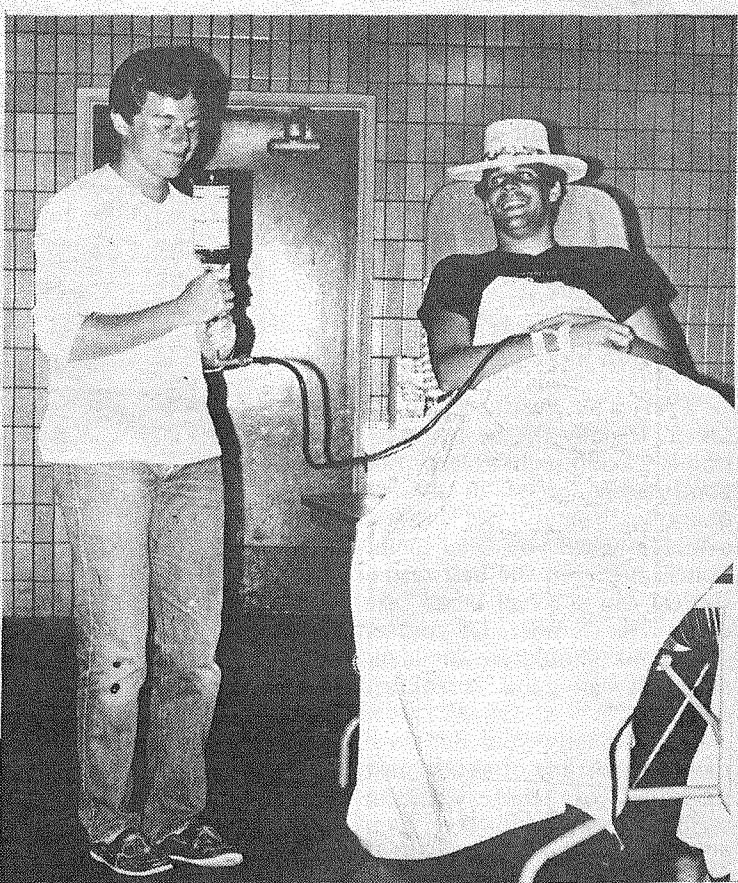
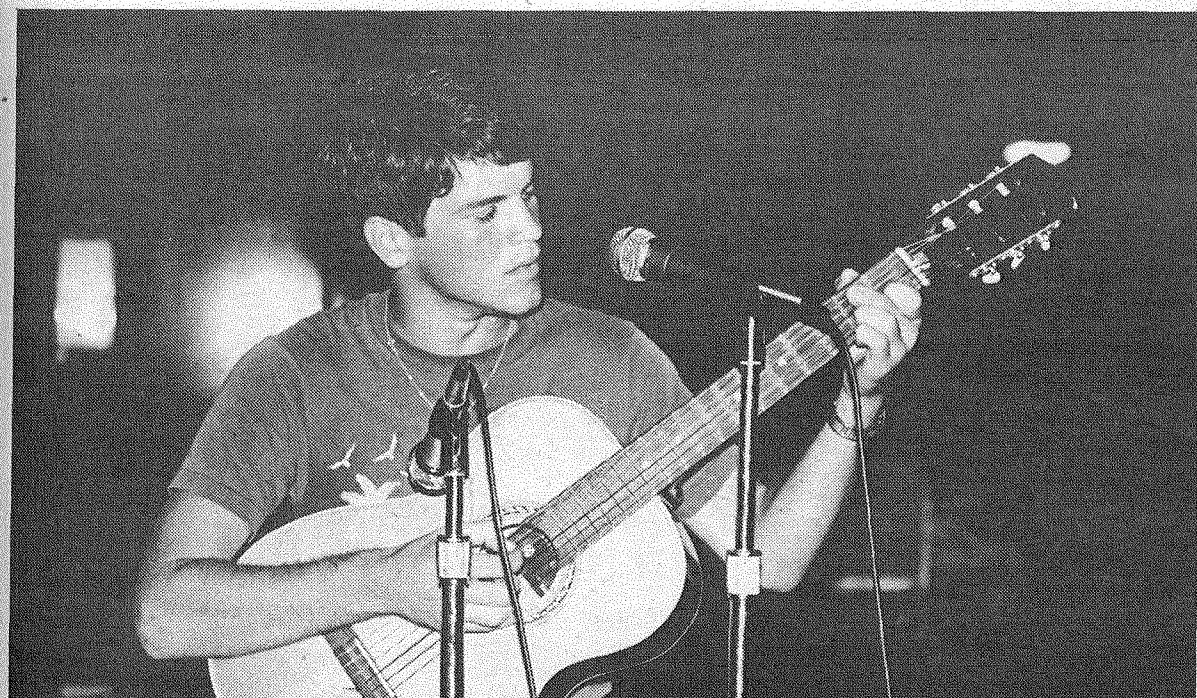
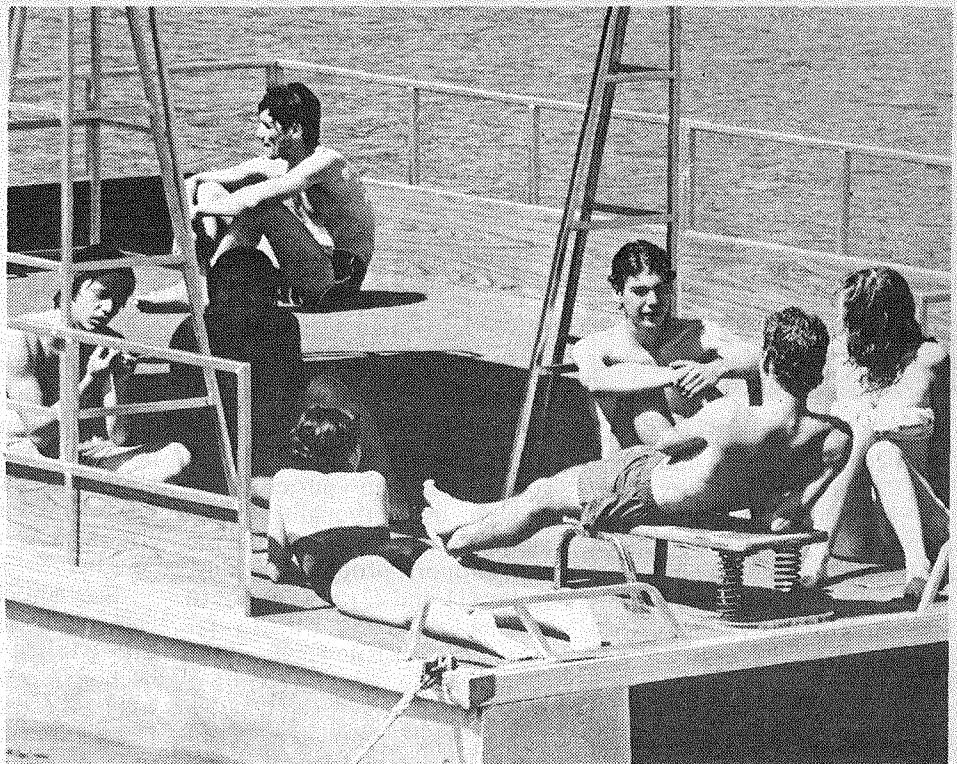
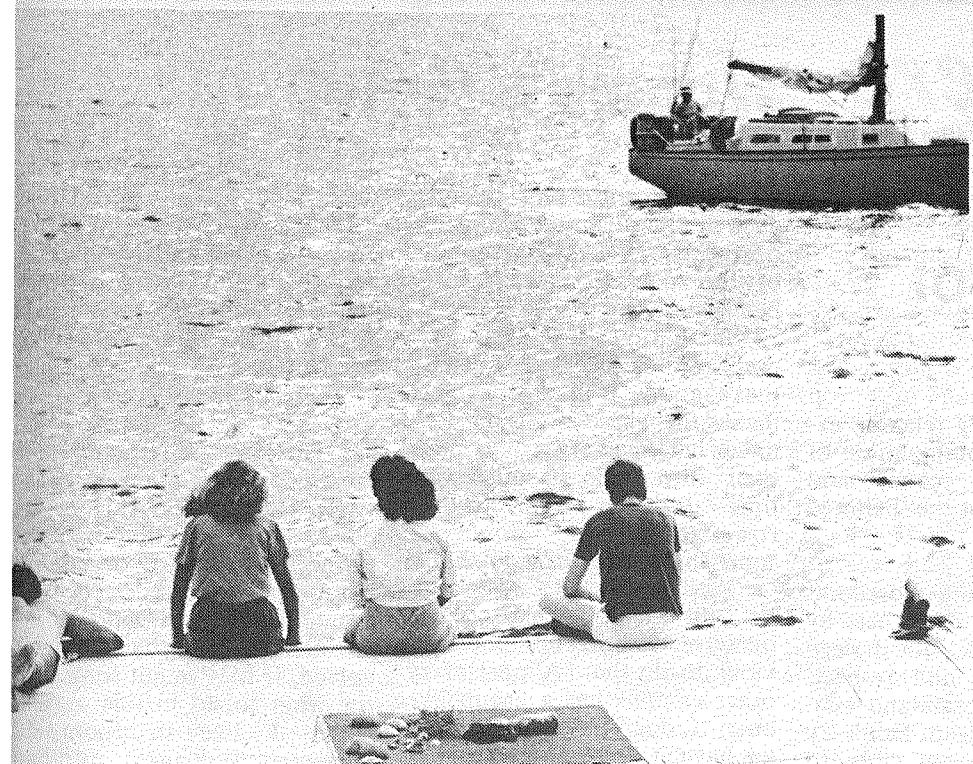
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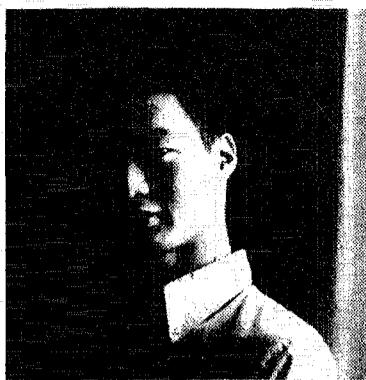
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# Frosh Camp 1984

Photos by Min Su Yun and Chris Meisl







It's an embarrassing sin we all succumb to now and then, but I've learned to enjoy it.

Sleeping in class should be avoided, of course. There's really no point in going to a class and sleeping. You don't learn anything, you embarrass yourself and the lecturer, and sometimes you wind up with a nasty crick in your neck. I definitely do not recommend it.

But you and I know that sometimes, after reaffirming our lust for lecture learning by going to class, we sit down and shortly find a strange feeling come over us. Call it boredom. Our pens start to creep, our eyes start to close, and soon we are certifiably asleep.

But what can be done? In-class sleeping is disrespectful, but walking out of the classroom (while it is still possible) is even more disrespectful.

Preventive measures can be taken. Usually the best protection is a good night's sleep. But good sleeps come in limited quantities, and are rarely available when you need them. Sometimes even the best-rested student can contract a bad case of in-class slumber. Of course, stimulants should be avoided, although a good breakfast often helps.

Occasionally you will have the good fortune of sitting next to one of those solemn vigilantes sworn to keep you awake, who will save you at the drop of an eyelid with a friendly nudge or whisper, and if necessary, a firm jab in the back of the neck with a 0.5mm mechanical pencil. I imagine services of this sort could be arranged in advance, but they would probably be very expensive. Vigilante action sometimes doesn't work, and often distracts the class. I've seen advertisements for devices (designed for freeway driving) which you place behind you ear to keep you awake. These devices sound an alarm when your head tilts forward. Such an alarm could be very distracting, and wouldn't work if you sleep with your head upright (as sometimes I do).

The only real solution is this: when you feel drowsy, simply quietly and respectfully go to sleep. It's the best thing you can do, in respect for the lecturer. If you do it right, he won't even notice.

There are two rules to sleeping respectfully: (1) Don't make noise. (2) Don't look like you are sleeping.

I can't help you if you snore. But for goodness' sake, whatever you do, don't snore thinking that you aren't. As for (2), avoid at all costs the chin-on-chest stance. The various

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# Notes from here Women's Group

by Mike Chwe

## Boredom Control

techniques of chin support would be an article in itself. If you lean back in your chair far enough, as in thoughtful contemplation, you can avoid the chin-support problem entirely. Rules (1) and (2) also apply to waking up in class, which is far more embarrassing if done thoughtlessly.

So when you feel sleep overcome you, relax and quietly go to sleep. I must admit that I find falling asleep in

class a profoundly relaxing experience. The combination of abstract beauty, calm, and fellowship cannot be bettered elsewhere.

So, anticipating boredom, you might hedge your bets by sitting in the back. But if sleep beckons, quietly and respectfully take the Dreamland exit. Don't flirt with sleep. Don't try to pull yourself out only to stumble back into slumber. Relax. You need the rest.

from page 5

women on campus but the men as well. Because it takes some of the strain away, and some of the loneliness away, from being secluded females.

So that you can deal with everyone better and I think that's good. I think that just makes the whole atmosphere so much healthier. The quys have their own little groups. Any time six quys want to get together and go off somewhere, they can do that.

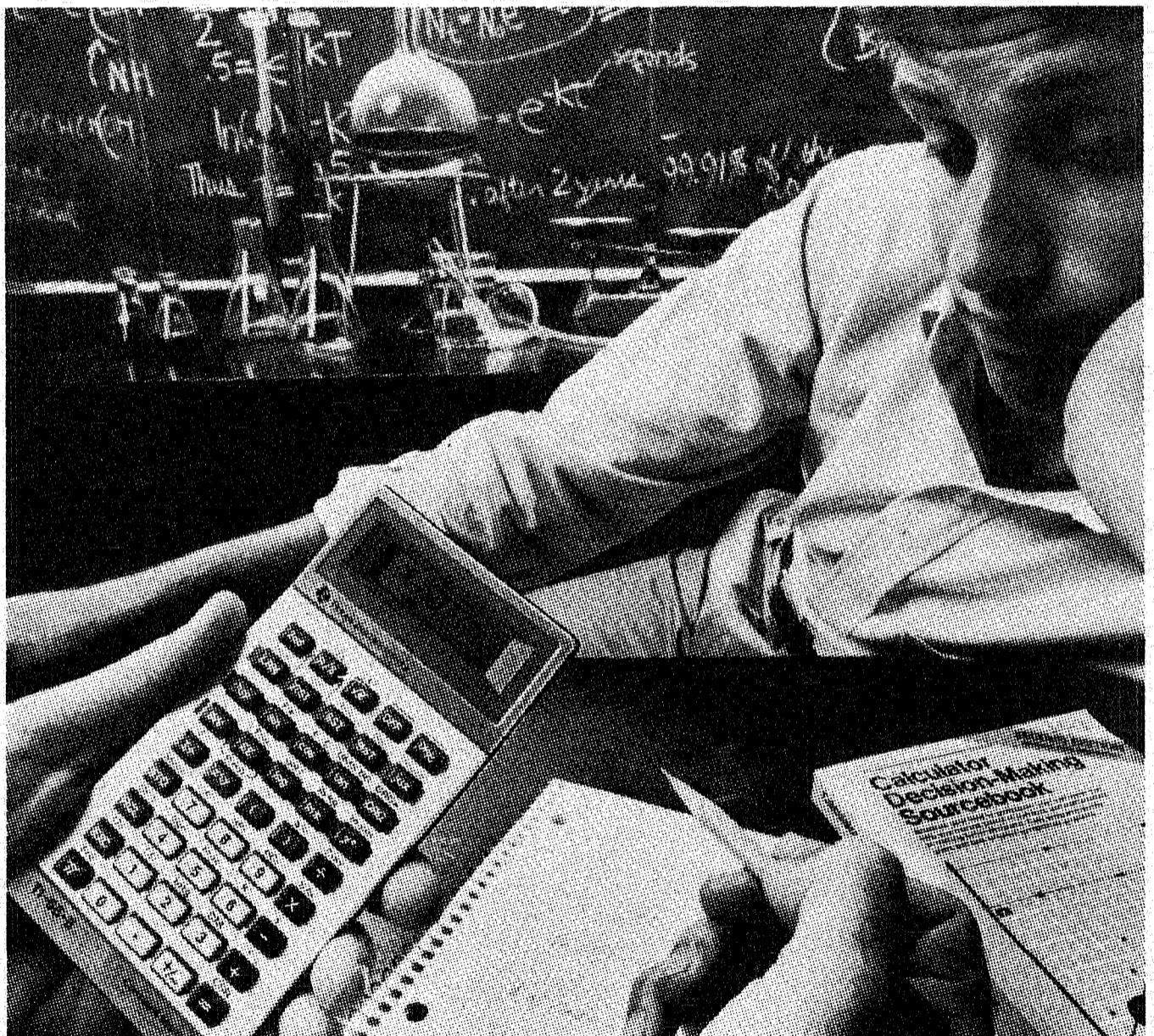
Well, we have to work a little bit harder and make ourselves a little bit more obvious to do that. Almost every other campus has a group like ours. I don't understand why we haven't had one earlier.

IR: What events are coming up?

FB: On Saturday, October 6, the Y lounge will be open from 1 to 6 pm. Then on Wednesday, October 13 there'll be a volleyball game in the Ruddock courtyard at 4:30.

IR: Is anything happening before the sixth?

FB: This week is Rotation, so most people are going to be involved in rotation this Saturday. People should contact me if they're interested in becoming actively involved — helping organize. Anyone who is interested in being actively involved, if they've got some idea for what to do in this coming week, I live in room 26 Dabney, phone number 578-9617 or x6171.



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# Folk Music Starts Third Year

by Brian Toby

Tonight (Friday) at 8 pm the Caltech Folk Music Society starts its third academic year of concert organizing with an acoustic double-header featuring Thom Moore and Janie Cribbs, from the LA area, and Geoff Bartley, a Boston-based singer and guitarist.

Thom Moore and Janie Cribbs are both American by birth, but they first met in Ireland, where Janie was raised. There they founded first Pumpkinhead, and later Midnight Well, groups which made several top-ten hits in Ireland from Thom's songs. His songs are still hitting the charts there.

Thom and Janie are likely to be most familiar to Tech students as the central members of Train to Sligo,

which performs weekly in Pasadena at The Loch Ness Moister Pub. They also performed on campus last year during Interhouse, and at a Folk Music Society concert the previous year.

In this concert, Thom and Janie will feature many of their own songs, but may also toss in some Train to Sligo favorites.

Geoff Bartley will be making his first visit to Southern California, from his home in Boston. Geoff's trademarks are his tasteful blues guitar, inspired by the classics of Lightnin' Hopkins and his fine singing of his own songs and traditionally inspired material.

Bluesy harmonica solos add a special spark to his arrangements. Geoff also in-

cludes in his performances narrative (spoken) poetry, which blends in well with his evocative songwriting style.

In the last few weeks he has been getting a lot of attention from radio station KCRW and he recorded a program for KPFK.

The concert will take place tonight (9/28) at 8 pm in Dabney Hall. Tickets for the public are \$5 if purchased in advance, and \$6 at the door. However, there are a limited number of GSC-subsidized \$3 tickets available to Caltech students (maximum of 2 tickets per student).

Tickets and additional information are available from the Caltech Ticket Office behind the Beckman Auditorium or call 356-4652.

## Live From New York

by Ken Whang

IN CASE YOU DON'T KNOW ME, my name is Ken Whang, and previously I was editor of the *California Tech*, that extraordinary weekly of the California Institute of Technology, an issue of which is in front of you now.

And now, I'm three weeks a transfer at Columbia University, that institute of the liberal arts in the faraway urban wonderland of New York, New York.

So things are different.

People are different. I met people with major interests ranging from the sciences to English to philosophy to someday being president, and conversed on correspondingly varied topics.

Most of the students here care little about technical subjects and readily acknowledge

their ignorance, but are fairly open-minded and can enjoy thinking and talking intelligently about issues outside of their immediate field.

As a transfer, I come in on a sort of peculiar social situation. That Columbia ordinarily does not give transfers university housing doesn't help. (Finding an apartment at all in Manhattan was quite an adventure in itself which perhaps I'll recount some other time.) From off campus, I have to make a real effort to go out and meet people here, but the effort has been worth while. The parties and less-formal gatherings I've been to have been really social.

There don't seem to be many intermediate social entities between campus and individuals that hinder relationships. Students here move year to year from one dorm to another, and look beyond their immediate floors or suits for friendship. I've been lucky to start with a few initial ties from which to branch: a good friend of mine from high school is here and another transfer from Caltech just happens to be in two of my classes.

Academics are moving along smoothly as well. So far, I've found myself well-prepared for my classes here and usually feel more like I'm drinking from a water fountain, or even a straw at times, than from the Tech "fire hose period". That's turning out to be a nice change of pace. My thirst is being quenched, but not overwhelmed. Having drinks of a few different flavors tends to help. Because of the difference in graduation requirements, notably the Columbia core curriculum, I'll likely be taking a few classes during the summer in order to graduate in two years. As for my Caltech credit, they all transferred with me.

The biggest difference here has got to be the city itself. Columbia is situated uptown in a predominantly six to twelve story neighborhood, not too big by New York standards, but busy enough that you definitely feel the city's presence, like it or not. The campus is a little more compressed than you're standard Ivy League fare, and is never quite isolated enough to escape the sounds of traffic and construction. Aurally and visually, it is a continuously stimulating environment.

Of course, it's a convenient environment too. In a two minute walk I can get groceries, household items and lunch. In six minutes I can reach Riverside Park along the Hudson or hop on the subway to head downtown. (There's another park closer to my building, but it serves mainly as a demilitarized zone between here and Harlem.) So far this term, I've visited some great art museums, eaten in Chinatown, seen a Broadway show, and worn a good deal of shoe leather wandering through mid-and downtown Manhattan.

So things are different. Things are looking up.



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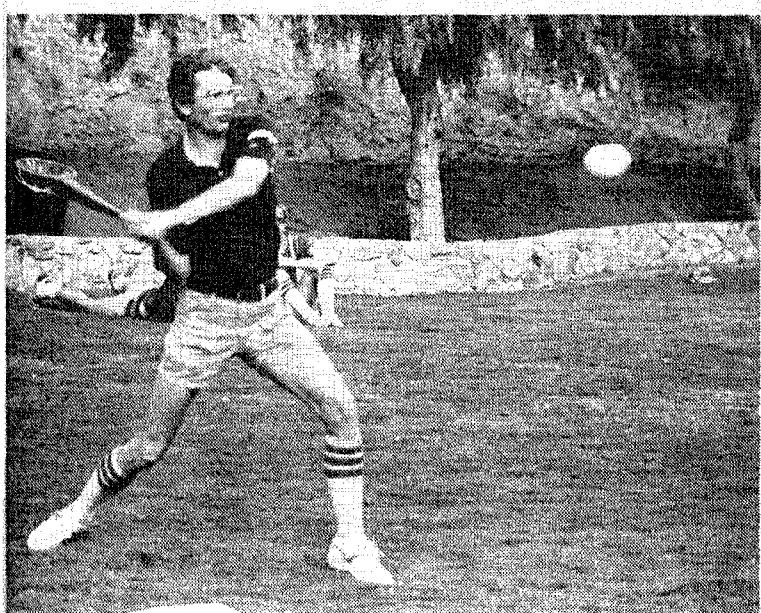
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## sports



Brennen at bat in traditional upperclassmen vs. faculty softball game at frosh camp. UC's won 13 to 12.

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## Weekly Sports Calendar

DAY	DATE	TIME	SPORT	OPPONENT	LOCATION
Sat.	9-29	All Day	Water Polo	Caltech Classic Tourney	Caltech
Sat.	9-29	9:30 am	Cross Country (M/W)	Occidental/La Verne	Caltech
Sat.	9-29	10:00 am	Soccer	Claremont-Mudd	Caltech
Sat.	9-29	1:30 pm	Football	Orange County Mariners	Caltech
Sat.	9-29	2:00 pm	Women's Volleyball	Clare-Mudd-Scripps	Caltech
Wed.	10-3	3:00 pm	Soccer	So. Calif. College	So. Calif. College
Wed.	10-3	4:00 pm	Water Polo	Rio Hondo	Caltech
Fri.	10-5	3:00 pm	Football	U. of La Verne JV	Caltech
Fri.	10-5	7:30 pm	Women's Volleyball	L.I.F.E.	Caltech

by Brian Warr

In Southern California the Cricket Season draws to a close just when the weather makes it perfect to play. Football, soccer and other unsubtle activities take over and enjoy the cooler and less smoggy air of Fall.

The Gentlemen of Caltech have had a frustrating Summer. Winning four matches and losing five, they did not play at their best. It was mainly the fault of the batsmen, who tended to collapse when facing accurate bowling. The Caltech bowlers were pretty consistent, with Rakesh enjoying particularly good form. His season's aggregate was 34

wickets at an average of 6.5.

The most recent match, against a colonial assortment from Hollywood, proved a most interesting encounter. Winning the toss and electing to bat, Caltech played with unusual certainty and calm.

The first four batsmen put on 103, thanks to Narashiman (26) and a superbly controlled innings of 48 from opener Santosh. Unlucky not to reach his fifty, Santosh had defended his wicket for 38 overs, easily a Caltech record.

The remaining batsmen scrambled some extra runs in the dying overs to reach the highly respectable total of 131-8.

In response, Hollywood got

off to an incredible start, scoring 58 for no loss off the first ten overs. Their batsmen made the most of the bad deliveries and began to totally dominate the game.

A double bowling change brought on Rakesh (8-2-18-3) and Nadeem (8-1-16-1). Their fine spells reduced Hollywood to 93-5 and brought Caltech back into the match. For half-an-hour the game became really tense, but as soon as Rakesh and Nadeem finished their allotment, the contest swung quickly against Caltech for the last time. Forty runs were added without further loss, making Hollywood deserved winners by 5 wickets.

by Berke Breathed

### BLOOM COUNTY



# announcements

## Build a Payload

The Student Space Organization (SSO) is having its first meeting of the school year on Monday, October 1 at 5:00 pm. It will be an open house in 210 Thomas. All freshmen and upperclassmen are welcome.

The SSO is an undergraduate organization that builds "Getaway Special" payloads for the Space Shuttle. One payload, that will fly next spring, will be demonstrated at the meeting. In addition, all aspects of the organization will be discussed. Anyone interested in any aspect can talk to the member(s) involved and begin to work on it. New members are needed to replace members who graduated last spring. For more information leave your name and address at x4766.

## Foreign Service

A foreign service career officer will be on campus at 2:00 pm, Monday, October 8 to talk about careers in the Foreign Service. He has served in Ethiopia, Pakistan, Zaire, Chad & Ghana. Most recently, he was American Consul at Alexandria, Egypt. Come to the Career Development Center, 8 Parsons-Gates to sign up for the group meeting in Sally's office.

## Guitar Classes

Caltech offers guitar classes with classical guitarist Darryl Denning on Tuesdays in Fleming Music Room starting October 2. The classes are free to Caltech students (and other members of the Caltech community, space permitting). Classical and Flamenco repertoires will be explored but the techniques gained can be used in other forms of guitar as well. Undergraduates can receive 2 units of academic credit if they choose. The schedule is as follows:

Beginning guitar, 4:30-5:30 pm. Intermediate, 3:30-4:30 pm. Advanced, 5:30-6:30 pm.

Private instruction can also be arranged. For further information call Mr. Denning at 213 (465-0881). Mr. Denning has had an international performance career and has recorded extensively. His latest recording, "Two Worlds of the Classical Guitar," is available at the Caltech bookstore.

## Yom Kippur

Yom Kippur services will be led by Rabbi Michael Perelmuter on Friday, October 5 at 7:45 pm in Dabney Hall Lounge.

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## Arms and Sakharov

On Monday, October 1 at 8:00 pm in Baxter Lecture Hall, Dr. Jeremy Stone, Executive Director of the Washington-based arms control group, The Federation of American Scientists, will give a talk entitled "Arms Control and the Sakharov Case: To What Extent Does Our National Security Depend On Human Rights."

## More Arms Talks

On Wednesday, October 3 at 7:30 pm in Baxter Lecture Hall, Marvin Schachter and Dr. Robert Nelson will give presentations describing the presidential candidates' positions and records on nuclear weapons issues, and will discuss the merits of the various arms control approaches now under consideration. In addition, the film "What About the Russians" will be shown.

## Nuclear Freeze

October 3, 7:30 p.m., Baxter Lecture Hall: *Why We Need a Nuclear Freeze and How This is Related to the Upcoming Elections*. Marvin Schachter and Dr. Robert Nelson will give presentations describing the presidential candidates' positions and records on arms control, and will discuss the merits of the various approaches now under consideration. The award winning film *What About the Russians?* will also be shown. Sponsored by the Caltech Nuclear Freeze Campaign.

## Orchestra Auditions

Comprised of musicians from both Caltech and Occidental, the Occidental-Caltech Symphony Orchestra is having auditions this week. The remaining auditions are on Monday, October 1 from 6:30 to 9:30 pm in the instrumental music office in the basement of Fleming House. Please sign up for an audition time on the schedules posted on the music office door. Contact Allen Gross at (213) 259-2574 or (818) 796-8966 if you have any questions.

## Chess Tourney

The Pasadena Chess Club invites Caltech students to join them on Friday nights. Membership is not required but is welcomed. Games are played at 1102 Oxley, South Pasadena (2-3 miles from campus). In addition, they are running the 37th San Gabriel Valley Open, a 6-round Swiss System tourney for which USCF membership is required. The tournament will be on October 5, 12, 19, 26, November 2 and 9. The entry fee is \$10 for adults, \$5 if under 18 or over 65. Bring your chess set and clock, and register from 7:05 to 7:45 pm on the 5th. Prizes and trophies will be awarded.

## Bridge Club

A recently-organized Bridge Club now meets weekly, Monday nights at 7:00 pm in the Red Door Cafe. Everyone is welcome! For more information call Jeff at x6627 or 449-7397.

## 24-Hour Xeroxing!

The Caltech Y's Xerox machine has been retrofitted with a magnetic card reader and will now be available to students on a 24-hour basis.

The machine is located in the hallway outside the Y office on the second floor of Winnett Student Center.

Use of the machine will require the purchase of plastic access cards from The Y office. Introductory prices during the first term are as follows:

50-copy cards: \$3.50  
100-copy cards: \$6.00  
200-copy cards: \$11.00

Single copies using The Y's office card will be available on a limited basis at 8¢ each as a courtesy. The Y will encourage students to have their own cards.

The magnetic card reader was installed with money provided last term by the Caltech Student Investment Fund. The idea for an all-night copier accessible to students was first developed by Tim Bracy, a member of The Caltech Y Excomm and later (in 1982) president of ASCIT.

## Fall Blood Drive

Caltech's fall blood drive will be held in Winnett Center Lounge on October 10 (1:00 to 5:45 pm), 11 (8:15 am to 1:00 pm), and 12 (9:45 am to 2:30 pm). As usual, the Blood Drive will include a competition between the Houses, with a ½-keg of beer or equivalent amount of soft drinks to the House with the highest percentage of donors. Try to make appointments in advance, although drop-in donors are welcome. For further information, or to make appointments, call Linda Martin, in Personnel (x6374).

## Ultimate Frisbee

Do you want to play Ultimate Frisbee? If so then meet on the Caltech football field at 3 p.m. this Sunday. Everybody and anybody are welcome. If you can't play Sunday but are still interested in playing then call Craig Zupke at 578-9768 or Dave Ruhde at x3776 (we both live in Ruddock House).

## Student Computing

The organizational meeting for the Caltech Student Computing Policy Committee will be Tuesday at 5 p.m. in 206 Booth. Anyone interested in the state of student computing at Caltech, from mainframes down to PC's is encouraged to attend the meeting. A permanent meeting time will be established at this meeting.

## GSC Volleyball

The meeting to organize this fall's intramural GSC volleyball league is scheduled for 7:30 p.m. Tuesday, October 2, in the Y lounge. All team captains are requested to attend. The league is open to all interested Caltech individuals. Posters with more information should be appearing around campus.

**Interested in Writing, Editing, Photography, Newspaper Layout, Graphic Arts, or anything else remotely related to newspaper production?**

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**Come to the Tech staff meeting Monday during lunch in: 127 Baxter**

## Watson Fellowships

Essays for the Watson Fellowships are due on Friday, October 19. Seniors interested in applying for these travel fellowships should talk to David Wales in the Deans' Office, 102 Parsons-Gates.

## Coordinate SMP

Graduate students or undergraduates are invited to apply for the position of SMP coordinator. SMP is a powerful symbolic manipulator at Caltech and currently marketed under license by a commercial firm. Currently, SMP runs under UNIX or VMS on VAX computers. It is written in the language C.

The SMP coordinator would be expected to install new releases on Caltech computers and act as a consultant to campus users. If s/he can develop SMP applications of interest to the campus,

The coordinator will be paid by the hour and provided a terminal and modem or network connection as well as an account on a VAX running SMP. Depending on the level of application development and user consulting, the job will be at the level of 5 to 15 hours per week.

Please send your applications to G. Fox, 158-79.

## Hillel Open House

The Caltech Hillel Jewish community holds an open house on Tuesday, October 2, from 4:30 to 6:00 pm in Winnett Lounge. Delicious refreshments. Welcome to all: students, faculty and staff.

## Chamber Singers

Auditions for Chamber Singers, Monday, Oct. 1, 9:45 p.m. in Flemming Basement. Info, call Don Caldwell, x6197.

## Tennis Turney

The First Annual XHMEIA (Chemia) Singles Tennis Tournament will be played beginning October 15. There will be men's intermediate and advanced divisions, as well as a women's division. All CIT/JPL personnel students, and immediate family are welcome. There is a \$2 entry fee (50¢ for faculty), payable after entrance form is received. For further information, contact Dan Zirin, Mail Code 127-72.

## PC-Troll For Money

Computing Support Services is developing a PC support program to assist the office of the Dean for Educational Computing. This program includes hardware and software support for the IBM PC, XT, and portable PC, as well as the DEC PC-350. We are looking for from four to six students to assist users in getting started on the PC's and to assist them in a consultative role when they have problems.

The student consultants will either maintain scheduled office hours (10-20 hours per week) or respond promptly to electronic mail requests. In addition to hourly pay, each student will be loaned an appropriate PC for his or her personal use.

Applications are invited from undergraduates and graduates. For further information, call C. B. Ray, x4620.

Expertise is needed in not only software but also hardware and applications. We will select consultants that between them have a good mix of knowledge in systems software, we need students interested in PC-DOS XENIX, other dialects of UNIX and the DEC proprietary operating systems.

**Caltech 107-51  
PASADENA, CALIFORNIA 91125**