

Badly Abused

Social Phones Disappear

by Judith Greengard

Free social phones have washed into the past along with the trolley system, the nickel candy bar, and "the real thing" in Coca-Cola. Third term, last year, *Telaid* came to Caltech—a system purchased by physical plant to check up on which extensions were responsible for which part of the \$60,000 to \$80,000 of message units on the institute's phone bill. As a test of software versatility, several extensions were monitored for a period of from four days to one month. One of these was a house social phone; another was the Ricketts summer house phone. According to Messr. Grennan, ASCIT VeeP, the house social phone in question cost \$128 for the month of June. Dixie Handage of physical plant could not immediately locate the records to confirm this, but adds that the message units from the summer phone for one month totalled \$280, of which \$57.75 was racked up by one student calling one number in Glendora.

Robert Phelan, whose fund has been paying for this, considers this to be a flagrant abuse of the phones, and he's correct in pointing out that the phones were never intended for general use.

According to Gang, the lounge phones were originally unrestricted social phones, but were reduced to institute extensions because of abuse. House officers were given phones to be used for house business. Eventually, one officer in each house gave up his phone to be used for a social phone. These are the phones whose installation is in jeopardy.

Robert Phelan, caught by a budget squeeze, cannot continue to subsidize personal phone calls

by individual house members—to the tune of roughly \$5K per annum—nor does he want to monitor the house officers' phones to check for excessive use. These phones are, after all, under the honor system.

The fate of the phones will be decided at an IHC meeting next Wednesday. The situation has developed slowly because neither the master's office nor the housing office was aware of the full implications of the situation until interviewed by a muck-raking *Tech* reporter.

The question of what is to be done is, in the words of Jim Mayer, "a bag of worms". He agrees that some method of calling out is necessary, but his budget cannot support the old system. He points out that no

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Frosh got their first taste of food service cooking last Saturday at the outdoor meal held in Ricketts-Fleming court. More frosh orientation photos on page three of this issue. Photo by G. Bone

Rotation Guidelines

Rotation is nearing its end, so here are a few reminders about procedures to follow.

Friday's (tonight's) dinner is at 6:00 p.m. rather than 6:30. Saturday's lunch will be the meal after which each house will make its presentation rather than the evening meal. New students will be expected to talk to the upperclassmen after lunch. It will be a waited meal and begin promptly at 12:30 in all houses. Attendance at the evening meal is still required. This will be served cafeteria-style in the North complex and in Chandler, served from 5:30 to 6:30. Those rotating in the south houses on Saturday are expected to eat in Chandler.

Each new student shall submit a list of four houses he is willing to live in to the Resident Associate of the house to which he or she is temporarily assigned (Off campus students give the list to the RA of the first house rotated through). This must be done by 8:00 p.m.

Students will find out which house selected them at 8:00 p.m. Sunday night. Each house will have a list of its freshmen, with pictures, in its lounge.

On Monday or Tuesday, students will move if assigned to a different house. *Take linens with you and give your room key to the new occupant of your room.* Be tolerant of those who may move late, there are difficulties with time and many will not be able to move out when you want to move in.

For those off campus students who want to move in to the houses, including those in the Blacker/Dabney Basement, notify your house president and he will make sure you are on the waiting list for that house.

Murder and Rape Decline

by Mojo

Most of you will be happy to know that the Caltech campus is a safer place to live than it was two years ago. This is the report from Lee Chapman, Director of Security for Caltech.

While the FBI reports that crime for the nation has increased up to 20% in some areas, theft and crime on the campus is down as much as 46%. The total value of losses across campus was down 46%, with the number of losses down 43%. The net value, meaning losses not covered, was down 26% and the net number down 42%. These figures are comparing this last fiscal year with the previous one. Thefts from students living on campus amounted to \$9,107 last year as compared to \$15,243 for the

previous year, a significant improvement.

Mr. Chapman attributes the improved security to an increased rapport between security and the students. "The students at Caltech are losing the antagonism once held for peace officers in general, as a result the officers are able to get to know the

student body better and easily locate intruders." The addition of students as actual members of the security force has also played a major part.

Mr. Chapman complimented the students, and stated that upperclassmen are still needed to help man the student force. Two

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Equipment Recovered

Nearly \$5000 worth of stolen electronic equipment was recovered by the Pasadena Police Department last Sunday. The equipment, \$4610 worth of Tektronix oscilloscopes and plug-in modules, was stolen from a trailer operated by Mobilscope, Inc. in the yard behind Physical

Plant. It was apparently taken sometime between September 9 and 10. Security found the bottom of the door to the trailer pried open.

The equipment was recovered by the PPD when the mother of a 16-year-old narcotics suspect

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News Briefs

Health Center Open

The Health Center is now open during the school year for 24 hours a day from Monday thru Saturday. (8:00 a.m. on Monday thru 12:00 noon on Saturday, to be more precise.)

A flu clinic will take place on Friday Oct. 10. It is free for students and student spouses. Staff and faculty pay \$3.00. The hours for this are 9:00 a.m. to 12:00 p.m. and 1:00 p.m. to 5:00 p.m. Contact Personnel at ext 2375 for scheduling. Flu season can be a real disaster for the victims. Immunize now!

An allergy clinic will be held on Tuesday and Friday only from 1:30 to 4:00 p.m.

All problems relating to Blue Cross Insurance are handled at the Health Center. Please come in between 9:00 & 12:00 Monday thru Friday and see Patti or call ext. 2394.

There is also a Weight Control and Exercise Program on Wednesday, Oct. 15 from 12 to 1:00 p.m. Please contact Patti at ext 2394 for more information.

Classical Note

The Musicale is a room with a good stereo and lots of classical records. It is located in the basement of the old houses by the music offices. Keys are \$1.00 for the year. If you want one, locate Keith Neerman or leave a note in the O/C Ricketts box.

PR Wants YOU!!

The Public Relations Office is looking for students to give guided tours of the campus to visitors. The pay is \$2.50/hr on weekdays and \$3/hr for Saturday tours. Contact Chris Orlovski,

Public Relations Office (located between Noyes and the Coffee-house).

You're Warned!

Just a note to remind you that on Monday, October 6, Security will start issuing warnings for anyone parking in the Athenaeum or on the Olive Walk. On Tuesday, they will start writing tickets. Take note.

Sighted Cowan, Sank Nakazono?

This week the Caltech Gamers present World War II naval miniatures action. Due to the graduation of Bob Cowan, this year's target will be Barry Nakazono. As usual, we will meet in Dabney Hall (not house) Lounge at 7:30 p.m. on Saturday.

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Editorial

We Need Frosh!

As *The California Tech* buckles down to another year of publishing assorted information and misinformation, we of the newly reorganized Editorial staff (Read the masthead, Turkey!) are once again searching for that fine material that goes into a first-class staff of reporters and stringers. Working on the *Tech* can be both rewarding and frustrating. We don't promise anybody any sort of joyride when they sign on. We are looking for people to convert the weekly fish wrap into a publication that Tommy Techer looks for at Friday lunch. Who are the candidates? The first people that come to mind are all you FROSH—you're 200 strong and gaggles of those interest sheets listed an interest in Newspapering. Next are all you upperclassmen, who seem to be under the impression that the *Tech* is a lost cause. A little locomotion of the derriere can go a long way to increase quality. What do you get out? Three freebie units of A and, (shades of Eliza Doolittle!) perhaps a little \$\$\$\$. Where can I join this fabled endeavor? Drop by the *Tech* Offices in Winnett or contact Ken Yoshida in Dabney, Mojo Jones in Ruddock, or Sandy McCorquodale in Ruddock. After all, what's a GPA?

Caltech Forum

Once again in a late Tuesday night decision, the IHC has gone to the table and come back chewing on its knees.

During rotation for the last several years (at least five of personal experience) Blacker House has held its rotation meeting in various locations on campus. Typical examples are the Trustee's Room in Millikan, the Brown's house, the lounge on the fourth floor of Lauritsen, etc. The main goal of this program was to provide a little interest or at least to somewhat lessen the burden of boredom associated with rotation for freshmen and upperclassmen alike. No free drinks were given freshmen (in fact even the upperclassmen paid), no special treatment; it was just a nice way to get to know the freshmen. Now, without prior warning, the IHC has decided to outlaw this practice. Why? Some mumbled garbage about a false image being given to the freshmen. One IHC member I asked said the freshmen were being led to believe that Blacker partied here and there every night. Bullcrap. The freshmen were told that this was done for rotation. Were the IHC members confused by this when they were in Blacker for rotation? Other houses have the image of a party everynight during rotation. Shall we outlaw beer and soft drinks for this image it conveys? The phrase "unfair advantage" as always is heard. Any other house could have gone to these same places; Blacker has no special privilege.

Basically it seems that other houses were too lazy to do something of this kind, and in the IHC's world of petty politics this was reason enough to declare the practice illegal.

Time and time again the IHC has failed to deal adequately with rotation rules and procedures. There are so many special interests that on the picking procedures and the gag rule the decisions have waived and waffled until they rested (at least for today) on conclusions that satisfy only a minority of the people. And now this. The question begs to be asked. Is rotation too big for the IHC to handle?

Wayne Dickenson
Stephen Walton
Blacker House

The CALIFORNIA Tech

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A new diagnostic technique is being developed from an old one at Caltech. It will save the eyesight of people with a wide variety of incipient retinal diseases.

The objective of the work is to make the technique sensitive enough to detect retinal illnesses long enough before symptoms appear so that they can be treated successfully, Dr. Derek Fender, who has contributed much to the understanding sight, said recently in disclosing his research.

"Many retinal diseases, if caught early enough, are reversible," Dr. Fender explained. "But in almost every case, by the time the disease can be diagnosed, it is too late to reverse it. It's most unfortunate to have the know-how to cure a disease but not to be aware of what's wrong until the disease has progressed too far."

The method involves the use

Photographers Greg Bone, Bobby Bus, Rich Feldman, Gerald Laib, Chris Wheeler.

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NEW EYE-SAV_{ER}

of an electroretinograph, which is a device that records electrical waves generated by the retina as it is stimulated by light, much as an electroencephalograph records brain waves. The retinal waves (ERGs) can be examined to reveal incipient retinal illnesses, in a fashion similar to the use of the EEG in diagnosing brain ailments. The ERGs are measured on the eye's surface. They are generated by the layers of cells in the retina as the cells transmit electric signals to the optic nerve.

When the electroretinograph was first introduced some 40 years ago, high hopes were held for it as a diagnostic tool. But for several reasons it evolved only into a tool that confirmed diagnoses. Retinal waves, being very weak (only 50 millionths of

a volt in intensity), are difficult to measure. Other stronger electric signals from contracting facial or eye muscles can "drown" them out. Also the wave patterns are complex changing with the amount and color of light going into the eye, the shape of the light pulse and other factors.

Another major problem with the method used in detecting and measuring the waves. It was done by putting an electrode on the eyeball (usually supported by a large contact lens). Bright flashes of light were used to generate the retinal waves. The contact lenses and bright lights were quite uncomfortable.

In improving the electroretinograph, Dr. Fender
Continued on Page Three

Quasar Quest

The discovery of four quasars that are among the nearest of those bodies to the earth was reported at the 146th meeting of the American Astronomical Society.

The discoveries were made as part of a sky survey for bright quasars, Richard F. Green, Caltech grad student, told the meeting at San Diego State University.

The finds are of value in the understanding of how quasars are distributed in the universe. Green's survey is part of a larger study on this problem being done by Green's adviser, Dr. Maarten Schmidt, astronomer of Caltech and the Hale Observatories who is widely known for his work on quasars.

Nearby quasars are especially important because it is easier to find cosmic objects associated with them for which reliable distances can be determined. There is a question about the distance scale for quasars. Bright ones are important because they are essential in determining the spatial distribution of quasars in the universe.

One of the "nearby" quasars appears to have a nebulosity, or cloud, around it similar to those found around a few other quasars. To some astronomers this means that quasars could be violent events in the nuclei of galaxies.

The most distant of the four new quasars is roughly 2.7 billion light years from earth, according to Green. Most quasars are very much farther away, measured by the red shift yardstick. They are considered to be the most distant, energetic objects in the universe. Many quasars radiate radio waves as well as light waves, but the four new quasars have not been detected in radio surveys.

Green's optical survey covers more than a year of observing three to five nights a month. He photographed some 300 different fields of the sky, which includes one-fourth of the sky, with the 18-inch Schmidt telescope at Palomar Observatory. It is a facility of the Hale Observatories, operated by Caltech and the

Carnegie Institution of Washington.

Each piece of film representing one of the 30 fields of view has on it an average of 20,000 stars down to the 17th magnitude. Most quasars are fainter than 17th magnitude, and so were undetectable in this survey. To help separate the bright quasars from all the other objects in the fields, Green employed a technique developed 30 years ago by Drs. Fritz Zwicky and Milton Humason at the Hale Observatories, who were looking for blue stars.

Quasars are blue objects. They are white dwarfs, which are the nearby dying remnants of stars (they're blue because they are very hot). Green sought first to separate the blue objects from the rest and then to separate the quasars from the white dwarfs and other blue stars in our own galaxy.

He made two exposures of each piece of film, one of three minutes with a blue filter and one of 24 minutes with an ultraviolet filter. The telescope was moved very slightly between exposures so that the finished film showed each object in pairs very close together.

If an object was brighter than the ultraviolet exposure than the blue, it was either a quasar or blue star. Spectroscopic examination by Green on the 60-inch telescope and Dr. Schmidt on the 200-inch Hale Telescope, both at Palomar, then separated the quasars from the stars. The four new quasars emerged from examining the spectra of 325 blue objects.

Only 30 of the 300 fields have been examined so far. Up to the present time, Green has scanned the film with his eye and a microscope. Soon the results of this monumental task will be done automatically with a photometric cell and a computer scanning technique.

A byproduct of the search has been Green's discovery of more than 100 new white dwarfs. When the survey is completed, he expects that more nearby quasars will be disclosed.

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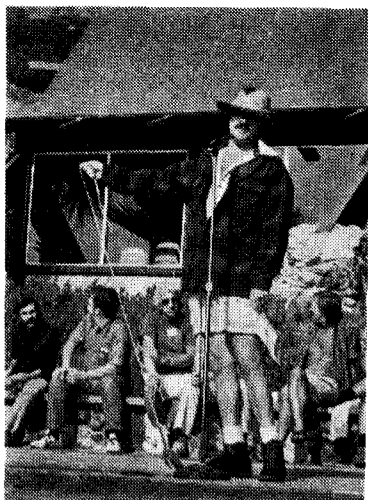
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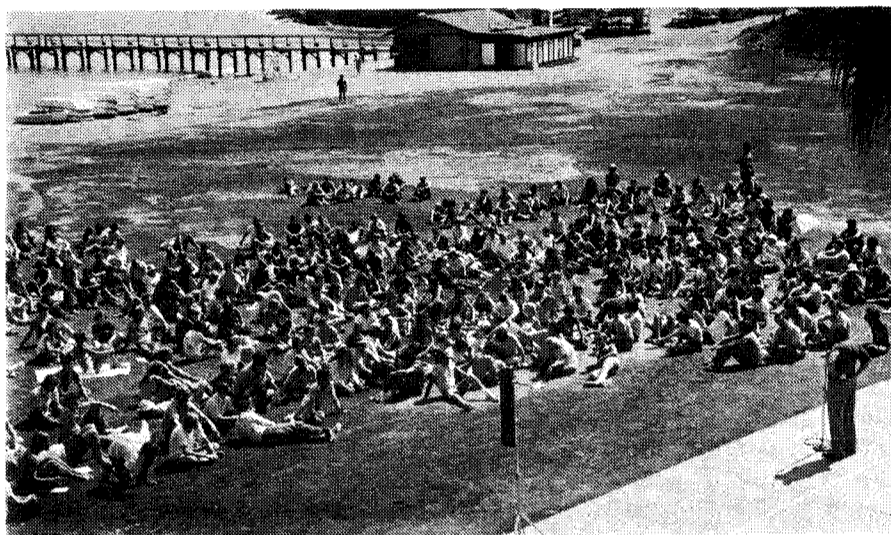


Frosh Camp 1975

Upperclassmen displayed most of the exuberance at Frosh Camp this year. Having been through Camp before, they knew how to have fun, while the frosh milled around looking confused and hostile to the lectures and discussions.

Most eventually discovered respite from the weighty pressures of Camp, however. Swimming, hiking, volleyball, football, basketball, and frisbee were the major activities, but a few enterprising people managed to find "liquor stores" in the wilds of Camp Fox. Oceanings were also popular, and awarded to the power-mad leader and lazy dishwasher in the group.

Photos by G. Laib



Eye Saver

Continued from Page Two

professor of biology and applied science here, and his graduate student, Arthur Koblasz, have eliminated the discomfort of large contact lenses, have greatly amplified the retinal waves, have tuned out unwanted signals, and have adapted a mathematical method of analyzing the waves that is very sensitive and powerful. The work is supported by the National Eye Institute of the U.S. Public Health Service.

To magnify the waves so that differences in their patterns could be detected, the Caltech scientists decided that a larger electrode was needed, since the signal magnification is partly determined by electrode size. They fitted the electrodes outside the eyelids and attached eye cups to goggles. The cups surround the entire eye and lids and are filled with artificial tears

whose acidity matches that of the patient's own tears. The transparent fluid serves to conduct the electric signals to a silver electrode mounted in the eye cup.

The eye is so comfortable in this environment that it blinks perhaps only once every five minutes, Fender said. This greatly reduces the unwanted waves generated by contraction of muscles of the eye and eyelids.

The eye looks through the fluid, not at a bright flashing light but at a wide screen on which light gently scintillates. If the eye's fovea (central area) is being examined, only the central part of the screen will scintillate. If peripheral vision is being tested, then only the outer part of the screen scintillates.

The randomly scintillating light strikes the retinal receptors, which transduce the light (with a photosensitive bleaching chemical) into an electrical impulse. The impulse is passed along in

sequence to the other kinds of cells in the retina—the horizontal, bipolar and ganglion cells. Each of these cell types comprises a layer in the retina. From the ganglion cell, the pulse moves along the optic nerve to the visual cortex.

If two flashes of light are directed into the eye, one very shortly after the other, the ERG of the second one will be smaller than the ERG of the first. That is because the light-sensitive chemical in the retina's receptors does not recover instantly from the bleaching action of the light. Thus the wave pattern is a changing one.

Dr. Fender's system takes this into consideration, and he explains, "This is where our form of analysis begins to unbutton the problem. The eye behaves in a non-linear way. The behavior changes with time."

He analyses the wave patterns mathematically by applying the Wiener-Lee functionals. The

mathematics plus the randomness of the scintillations on the screen combine in a powerful way to screen out unwanted electrical signals and to elucidate the shape of the waves.

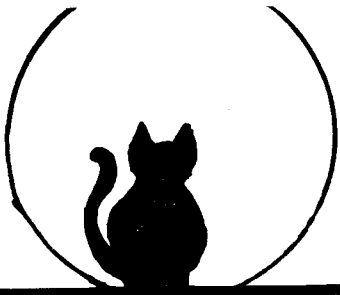
From the math Dr. Fender developed a diagram that not only gives a detailed picture of the waves' contours, but also gives the relative arrival times of the waves from the four different layers. This begins to tell what the different layers inside the retina are doing. According to Fender, "The receptor cells signal first, then the horizontals, next the bipolars and finally the ganglia."

The biologist and his group have begun testing people who have pathological eye conditions. The first such person was an albino, who has very little pigment in his receptors. As a result he's like a person who's continually coming into a light room from the dark. Bright light bothers him. Tests have been

done also on several color-blind people.

Eventually Dr. Fender hopes to work on hereditary eye diseases, examining the eyes of several generations of persons with Tay-Sachs disease, for example. This would be a good way to test the sensitivity of the method, he said. He is working toward being able to give clinicians an instrument that can be used with a contour map listing eye diseases corresponding to certain wave patterns. Dr. Fender is working in collaboration with the Doheny Eye Foundation of Los Angeles in the testing of persons with pathological eye problems, including glaucoma.

"I don't think there's any virtue in this research if all we can do is to tell someone he's going blind," Dr. Fender emphasized. "That won't buy him very much. But if we can tell him he's in jeopardy and needs treatment, then it will all be worthwhile."



Techer After Dark

by Pam

The new heading for the entertainment column resulted from attempts to upgrade and revamp the *Tech*. The previous entertainment editor was quite disillusioned with the response to his efforts (i.e. none), so possibly this new heading will cause readers to think of this column differently.

Tonight the Preservation Hall Jazz Band performs at Beckman Auditorium. Student tickets are \$4.00. If at all possible make this because the group is amazing.

For those cinematically inclined, the ASCIT movie tonight is "Cool Hand Luke." There are also two French flicks at the L.A. County Museum of Art: "Purple Noon" ("Plein Soleil"), and "The Five Day Lover" ("L'Amant de Cinq Jours"). Admission is \$1.50 for students with I.D. The Museum is located at 5905 Wilshire Blvd.

Two comedy-music shows are at the Ice House until Oct. 5: Tim Morgon and Lawrence Beezer. It's within walking distance of campus, on Mentor just north of Colorado Blvd. Call for reservations and show times at MU1-9942.

Joan Sutherland will sing on Oct. 5 at Ambassador Auditorium, Ambassador College. Student tickets will be sold on a rush basis for \$3.50 at 7:00, and performance begins at 7:30.

The Chamber Symphony Society of California will begin its bicentennial series with harpsichordist Anthony Newman performing Bach, Handel and Vivaldi. This happens Oct. 22 at 7 p.m., Dorothy Chandler Pavilion, LA Music Center. Tickets are \$2.50 for students and are available by mail from the Music Center box office.

Perhaps of interest to more people... the Allman Brothers with Elvin Bishop will be at the Forum October 20. The Beckman Ticket office can provide assistance along those lines.

It is unfortunate that I cannot actually review anything at present, being new to the area, but hopefully the information will be helpful.

News Briefs

Continued from Page One

day, Oct. 4. If you liked last week's Alien Space, you'll love this. It's the same sort of game without as much crawling on the floor.

Bridge Trolls!

The first meeting of the Caltech contract bridge club will be at 7:00 p.m. Saturday in Winnett Lounge. The attendance at the organizational meeting will probably determine the fate of the club, so *be there!*

To the Bridge Trolls—

You may *not* meet Saturday in Winnett without reserving it with Flora first.

Women Meet

All CIT women students and wives of students are invited to join the Caltech Women's Club. To receive a copy of the Club's Bulletin and for information about its activities call Jo-Ann Curtright, 795-3009 or Joan Zukowski, 351-8259.

Are You Good At Sitting?

During this academic year, there will be a limited number of opportunities for *paid* work as gallery sitters (attendants) and substitute. The number of hours per week will be assigned according to the individuals' availability during gallery hours (12-5, Tuesday through Sunday) and the number of regular sitters employed. If you are interested, please contact Madeline Shea, in

NSF has announced Fiscal Year 1976 competition for its Student Originated Studies program. Grants are awarded to groups of five to twelve students to conduct 10-12 week interdisciplinary studies of environmental and other societal problems. Projects proposed are to be student originated, planned and directed, and are to be conducted under leadership of one of the students.

Key changes for the 1976

Lloyd, and submit a copy of your schedule of free time sometime this weekend.

SS Meets

Oct. 11

The Student Shop check-in meeting will be held at the shop (Winnett Basement) on Saturday, October 11. 1:00 p.m. for old members, 2:00 for new.

Legalize Heroin!

The Libertarian Forum will hold an organizational meeting Thursday, October 9 at 7:45 p.m. in Clubroom 1 (Winnett). The LF exists to encourage interest, discussion, and knowledge of libertarianism—the political philosophy of minimal government and maximal individual freedom familiar to readers

NSF Dumping\$\$\$

SOS program include: Student stipends of up to \$90 per week. (This is an increase of \$10 per week.) Design studies for improving the safety, efficiency, repairability, and/or longevity of consumer products are included among supportable topics; and student teams must consist principally of undergraduates.

Proposals must reach NSF by November 10, 1975, so panic and get to work immediately. Recipients to be announced in March, 1976.

Two relevant documents, *Guide for Preparation of Proposals, SOS (E-76-42)* and *Guide for Project Operation, Student-Oriented Programs (E-76-46)* are available from Central Processing Section, National Science Foundation, Washington, D.C. 20550. The program manager for SOS is Alexander Barton; his telephone is (202)-282-7900.

of Heinlein's *The Moon Is A Harsh Mistress* or Rand's *Atlas Shrugged*.

All interested persons are invited to attend. For further information, contact D. Miller (13 Blacker) or R. Pfeiffer (242 Ruddock).

Nominations are officially open for *The California Tech* Editor.

Five Years Ago: October 1, 1970

—Tech staffer Malcolm Handt reviewed the preview week's on campus orientation, and pronounced it 'successful.'

—The Tech continued to print a series of articles dealing with how to handle Selective Service hassles (remember the draft?).

—The immortal 'Throop Beat' got underway for the year with one 'millikan troll' on the byline. The column, which was named after the administration building from whence came most of the information, contained various information, opinion, and scandal of interest to members of the Caltech community.

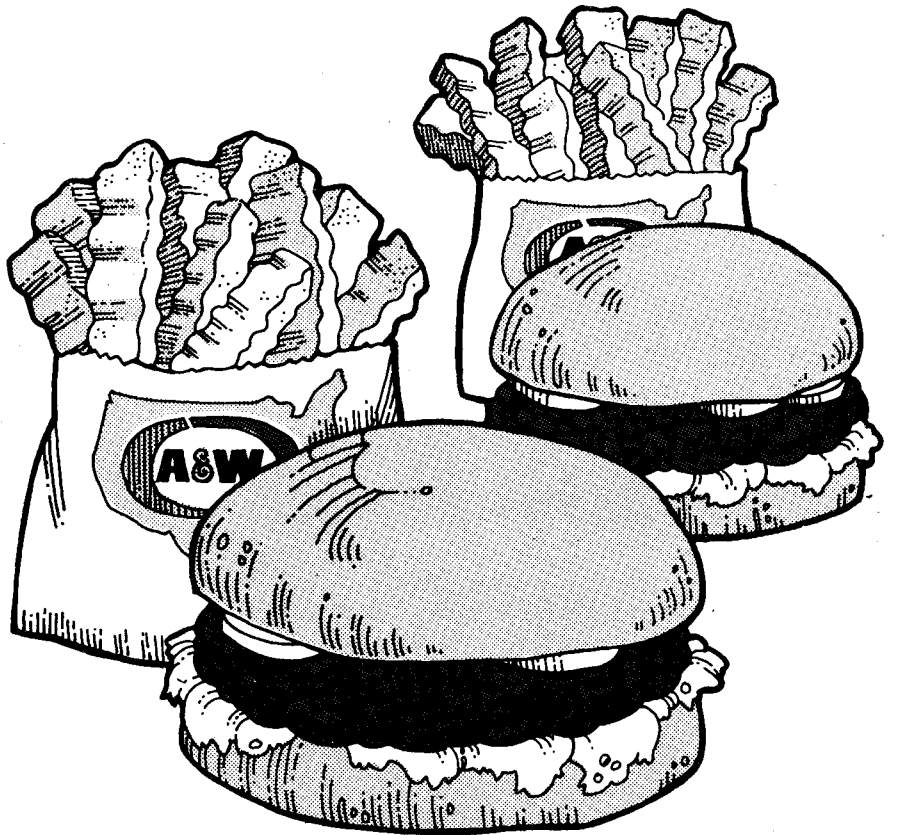
—Such activities as the Gle Club, the Cycling Club, and the Coffeehouse got their program under way for the year.

Ten Years Ago: Sept. 30, 1965

—The editors wrote an editorial in defense of Initiation (which existed in those days) describing it as 'a time to have fun.'

—Optimism ran high among the footballers with the arrival of an outstanding class of players including freshman quarterback Tom Burton, who was a four year star. (In fact, he was late offered a tryout with a pro team a rarity for Tech.) Over 40 players showed up for the team.

—Beckman Auditorium announced its fall schedule of events, which included a performance of Euripedes' play, "The Trojan Women."



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CALTECH BOOKSTORE

Bibliophilia

The Caltech Library extends a warm welcome to new students and faculty. Did you know that there are about forty libraries and reading rooms on the campus? This is a special characteristic of library resources at Caltech. There is actually no real central library collection. Even the collections in the Millikan Memorial Building are mostly individual subject collections.

There are some centralized collections and library services in Millikan. The Reserve book service is on the first floor, for books and publications which have been assigned for specific reading by professors. Here you will also find a collection of records and some listening equipment.

On the second floor is the general reference collection and the union card catalog of holdings in most campus libraries. Readers' Services Librarian, Rod Casper, and his staff will be glad to help you find your way to the various collections. On this floor you will also find an extensive collection of telephone books and indexes to Caltech dissertations. The interlibrary loan office is here, for the convenience of faculty and graduate students.

You can sign up here for the intercampus vehicle which operates between Caltech, UCLA and USC. It also stops at the Norris Medical Library (part of the USC School of Medicine, located near the County Hospital) and the Clark Library (part of the UCLA system but located elsewhere, specializing in 17th and

18th century English civilization). Schedules have been expanded to include two evening returns, so that you can spend a long day at UCLA or USC.

On the fourth floor is the Humanities and Social Sciences Library. This has many books of general interest, like a small public library. Here you will also find a large collection of college catalogs and information on scholarships and grants.

On the fifth floor is the government documents collection. Mrs. Casebier will be glad to find you find specialized information in your subject field. Here also is the microform center. Many publications are now available on microform, and we have readers and printers available. This room is closed at 5 p.m. and on Saturdays and Sundays (due to lack of staff), so arrange to visit it during regular weekday hours. This floor also has humanities journals.

The upper floors are science oriented: 6—Engineering; 7—Mathematics and Physics; 8—Chemistry; 9—Biology. Each floor has its own card catalog and there is a librarian on the 6th floor, Mrs. Lyons, and on the 8th floor, Mrs. Rowlinson.

In the basement is the photoduplication facility. The staff there can also provide a cheap but excellent binding for your term papers, dissertation, etc. This room is open from 8 a.m.—4:30 p.m., Monday—Friday. A self-service copying machine is on the first floor.

The charge-out of books you want to borrow is on the first floor. In order to avoid long lines you can fill in the new edge-notched circulation card on the floor where you find your material. Then bring the card and book to the ground floor. The attendant will ask you for your Caltech I.D. card, which establishes your right to borrow. If you are not carrying any books or briefcase, you will not be stopped.

The Millikan Library is a natural magnet for students from other schools, ex-Caltech students and alumni, employees of local companies, etc. We do our best to discourage these people from using the facilities, especially evenings and weekends, so that members of the Caltech community will have priority of access. It is primarily for the

Continued on Page Eight

The CALTECH Coming Events

"The seduction is over and the rape has begun." Another school year has indubitably started.

It's early yet, though, and our first activity of the term isn't until next week. In the meantime, I'd like to present you with a calendar of confirmed program events for this fall. These are by no means all that will be forthcoming. Every event listed below, plus those still being arranged, will be discussed each week right here in this column (assuming the Tech survives!).

Noon Discussions—Y Lounge

- 14 Oct: Dr. Kip Thorne (Astrophysics, Black Holes, Cosmology)
- 22 Oct: Dr. Gerald Edelman (Nobel Laureate, BioChemistry; Visiting Buchman Lecturer from Rockefeller University)
- 27 Oct: Dr. Lee Hood (Biology—Attention, PreMed students)
- 28 Oct: Dr. Ray Owen (Dean of Students; Biology)
- 4 Nov: Dr. Charles Cantor (Fairchild Scholar; BioChemistry)
- 18 Nov: Dr. Robert Sinsheimer (Biology Division Chairman; will speak on "Ethics of Genetic Engineering")

Evening Lectures

- 14 Oct: Dr. N. Puthoff (Parapsychology); 7:30 p.m., Winnett Lounge; accompanying three-day display in Baxter.
- 21 Oct: Dr. Norman Brooks (Environmental Quality Lab)

and Dr. John Cobb (Claremont Theologian); 7:30 p.m., Winnett; discussion on "Energy, Environment, and Conscientious Lifestyles".

25 Nov: Dr. Guyford Stever (Director, National Science Foundation); 8:00 p.m., Ramo Auditorium.

Evening Jazz Concerts—7:30 p.m., location to be announced.

20 Oct: Bebop Era
3 Nov: Swing Era
17 Nov: Free Form Era
All with the original musicians of the late 30's—early 40's.

Philharmonic Concerts

8:30 performances; transportation provided; cost about \$1.50 per evening; seats for both A and B series on 23 Oct; 30 Oct; 6 Nov; 11 Dec; 18 Dec; plus more second term.

Finals Decompression Chambers 13 and 14 Dec., Winnett Center.

For more information about any of these events, read the Tech in future weeks, or contact the Y office on the second floor of Winnett.

One more item: if any of your readers would like to attend Y's Fall Planning Meeting Saturday, Oct. 11, from 10 a.m. to 4 p.m., you are welcome to do so. Check with the office details.

Meanwhile, the word is "maintain".

—Alan Silverst

Equipment

Continued from Page One
reported several strange looking pieces of equipment in her hot to the PPD on Saturday. P. then identified it as the equipment stolen from the Mobilscope trailer and notified Campus Security. The suspect has been picked up.

The equipment, originally signed to William Blogget, consisted of 2 oscilloscopes a about \$1200 in plug-in modules for them, and one VOM owned by Mobilscope.

Phones

Continued from Page One


other services are provided to the houses.

Should the Institute General Fund partially subsidize the house phones? The institute phone bill is between \$600 and \$800,000, of which \$60 to \$80,000 are message units. The house phones, serving 800 students account for less than 10% of the units accrued (extrapolated from the minimal figures Physical Plant could locate). Equally critical, however, is that the Institute is not exactly drowning in the green stuff.

Physical Plant has assured the Tech that far more detailed dollars and cents figures will be available next week, and the Tech will be there to report them.

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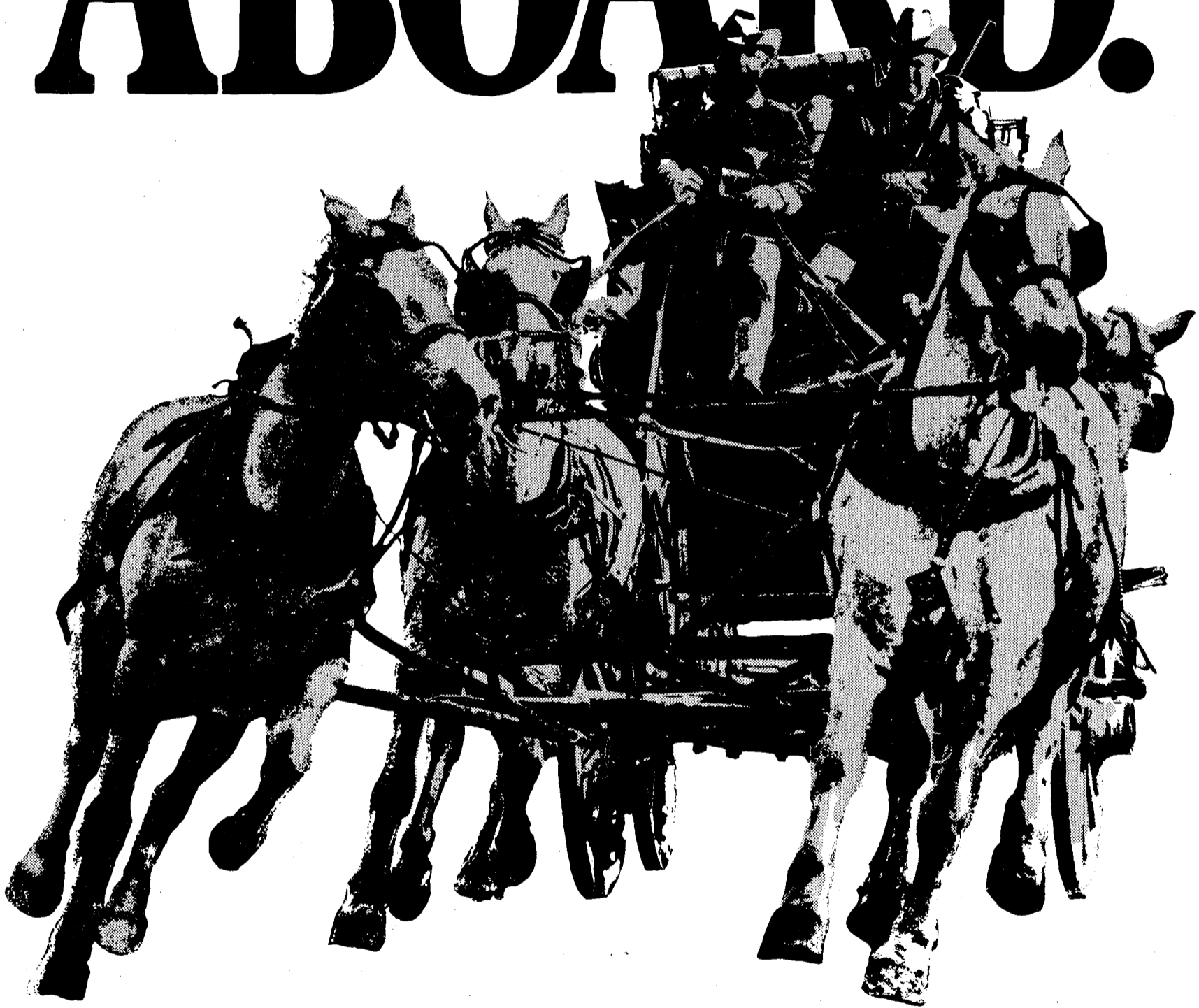
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UCLA Events

by Etaoin Schroedlu

A few weeks ago I found in my mailbox at UCLA a very helpful brochure, "The Performing Arts at UCLA-1975-76" (and I don't use the word brochure lightly: it has 30 pages), which gathers together in one place the relevant information on the artistic, musical, theatrical, and miscellaneous events scheduled for appearance at UCLA this year. For benefit of the interested, I will provide some information on these events. Forthwith, the first quarter events:

Oct. 3, Royce Hall, 8:30 p.m., Freddie Hubbard Quintet, Jazz. The blurb Hubbard is "one of the best known, most highly respected trumpet players in the world." (I don't know jazz, so I'm not qualified to comment.) Tickets \$6.50-\$2.50 (students).

(A note on student tickets: I don't know which programs, if any, sell student tickets to non-UCLA students. If it's that important, you'd better call the UCLA Ticket Office beforehand; information on such points tends to become obsolete quickly, in any event. Bring your photo-ID, as this identification is required of UCLA students and so presumably of any students.)

Oct. 4, Royce, 8:30, Pinchas Zukerman and members of the Los Angeles Philharmonic, Chamber Orchestra Series. Zukerman conducts and performs on the violin; orchestra is 40-piece. Program includes Bach (Brandenburg Concertos no. 2 and 3) and Mozart. Tickets \$7.50 to \$2.50 (student).

Oct. 5, Schoenberg Hall, 8:00, Frans Brueggen and Alan Curtis, Early Music Series. Brueggen performs on the recorder and Curtis on the harpsichord. Program includes works by Frescobaldi, Castello, and Couperin. Tickets \$6.00 and \$2.50 (student).

Oct. 7, Royce, 8:30, Buffy Sainte-Marie, Three Tuesdays in Royce series. Apparently they

couldn't think of any more descriptive series title for the stuff Ms Saint-Marie sings. I can't do much better. Tickets \$6.50, \$5.50.

Oct. 9, Royce, 8:30, Norwegian Boys Choir, "Royce-Rakers Non-Series." (And that's a quote.) Directed by Torstein Grythe, the Choir was judged the top boys choir in Europe in 1972. They will perform Norwegian works, classical songs, and folk songs from around the world. Tickets \$5.50 to \$2.50 (student).

Oct. 10, Royce, 8:30, Simon Preston, Organist. Preston is organist of the Cathedral of Christ Church, Oxford. Tickets \$4.50, \$2.50 (student).

Oct. 10-11, Schoenberg, UCLA Original Choreography. I didn't see any other details.

Oct. 11-12, Royce, 8:30 and 8:00 respectively, Los Angeles Philharmonic, "Happy Birthday, Johann Strauss." They don't say which performance is really an 'un-birthday' one. With Walter Goldschmidt conductor, Dr. Marcel Prawy narrator, Dorothea Chryst soprano, and Ken Remo lyric tenor. This is called a "gala, multi-media tribute to Johann Strauss, Jr., featuring the full Los Angeles Philharmonic" and will involve color slides as well as Strauss's music. Intended as an extravaganza. Tickets \$7.50 to \$5.00, \$2.50 (student).

Oct. 12, Pauley Pavilion, 8:00, Lhamo, Folk Theatre of Tibet, 'International' Series. Tibetan art is living in exile—"An expression of this heritage in song and dance—a stage spectacle complete with colorful costumes, masks, drums and cymbals." Tickets \$5.50 to \$2.50 (student).

Oct. 14, Royce, 8:30, Emmylou Harris, Three Tuesdays in Royce Series. They say "her sharp and sensitive singing... (is) unparalleled in country music today." If you don't want to believe the *Daily Bruin* on that, Robert Hilburn approves of Ms Harris's album *Pieces of the Sky*, in the *L.A. Times* Calendar, Sept. 21. Tickets \$6.50, \$5.50.

How to get to UCLA: Consult the *little t* when it arrives from the printer. Parking at UCLA:

you always can, if you pay \$1.00 (and can find someone to take it). You sometimes can at night and on weekends, free. (Sunday, always.) You always can, free, on side streets, e.g. those east of Hilgard (best are off the traffic lights at Westholme & Wyton.) For those of you without cars, you can always get to UCLA by bus (catch the 70 bus on Lake avenue west of Tech, ride it to the end of the line and walk left a block to catch the 83 to Westwood. Maximum cost 60 cents each way) and from it until a reasonable hour.

Football Sucks Frosh

by Joe Esker

It all started when I went to the men's locker room to do the standard football story, which consists of an interview with the coach and a few players, getting the usual impressions of the drudgery of practice, and an outlook on the future of the team. That was at 2:50 Monday afternoon. After making these intentions known, I was quickly pinned against a locker (the old "hand-on-the-throat" trick) by a senior quarterback, who will remain anonymous. It then came to me that the football team indeed was as desperate as rumor had it. So, in the journalistic spirit and out of pity for those lonesome souls, I gasped a nearly inaudible "Okay". You wouldn't believe how fast coaches can move. They had me in pads before I knew what happened.

With other new arrivals, the roster has catapulted to a whopping 23 players, which means that there are enough to mount a real defense to take some of the momentum out of the so-far unchallenged offense.

But not for long. The opinion held by most concerned is that with the great number of frosh playing, given a couple of years Caltech will have a winning squad. So things are just starting on the upswing, and they look hard to stop.

Soccer Wins

In a double break with tradition, the all-conquering Caltech soccer team elected not one but TWO "Co-Beavers of the Week", following their actually winning a league game. The team came across in great style with a 4-0 rout of the Occidental Varsity in a glorious Wednesday afternoon battle. Joel Okazaki and Loch Han were chosen "Co-Beavers" for their parts in the game. Okazaki provided 2 goals, while Han headed in one

Library

Continued from Page Six

purpose of stopping these non-Caltech people from taking library materials that the library is asking everyone for their I.D. By using the present charge-out system we are trying to stop the heavy loss of books and journals through unauthorized removal.

We do not have security gates which detect unchecked books, as you will now find in many libraries. We trust you and assume you have good intentions. Our staff is very understanding and reasonable, and you should have no difficulties if you are considerate of your fellow Caltech library user and check out the books properly and return them on time.

If you have any questions, suggestions or comments, I will be happy to meet you and talk with you. We want to be of help to you in your library usage.

—Mrs. Johanna Tollman
Director of Libraries

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more and assisted one of Okazaki's. Goalie Steven Trimberg and the entire defense played brilliantly, earning their first shutout of the young season. J. Hickey provided the fourth goal on a penalty kick, on a shot which literally ripped through the net, to the amazement of the Oxy players who were by the time quite upset over the imminent defeat by those "slipstick pushers". The entire team played extremely well, and the future looks good. The Beavers attempt to maintain their league leading pace on Saturday 10:00 here vs. Redlands. Fans are welcome (you get up for Math, don't you?).

Security

Continued from Page One

students are hired for about five hours a night and paid about \$2.25/hour. Last year a total student force of sixteen students was hired. Interested people should talk to Carl Lydick, Fleming or Lee Chapman, Keith Spalding.

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GUITAR CLASSES AT CALTECH
Caltech will again offer classical and flamenco guitar classes with guitarist Darryl Dening free to Caltech students only. Beginning and advanced students are invited to the class which will meet on Tuesdays from 4 to 6 PM in the Fleming Music Room starting on October 7. For further information contact the Student Relations Office (ext. 2297).

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