

Volume XCI, Number 1

Pasadena, California

September 22, 1989

She's a Glamour Gir

Vivian Chow, a senior at Caltech, has been named one of *GLAMOUR* magazine's Top Ten College Women for 1989. Chow, who will earn both her bachelor and master degrees within four years, is featured in the October issue of *GLAMOUR*.

Chow, a computer science major, was chosen by *GLAMOUR* because of her accomplishments in science and technology. She worked as a computer programmer for a film company and designed a graphics package for a brokerage firm in Hong Kong, her birthplace. A member of Tau Beta Pi with a 4.0 G.P.A., Chow's senior thesis will be an ongoing project to link the telephone and computer. She is captain of the debate team, has won championships in badminton and basketball competitions and is an active member of the Caltech Chinese Students Association.

"College students have become increasingly focused in recent years. To recognize this development, for the first time we've selected winners who have excelled in a specific area of study," says Ruth Whitney, *GLAMOUR*'s editor-in-chief. "In addition to their academic achievements, they have prepared themselves for careers in their chosen fields with extensive extracurricular activities and 'real world' experience. Each possesses that vital combination of talent and drive necessary to shape tomorrow's society."

Chow says she "would like to finish school in four years so that I can start working in industry, applying by knowledge in computer science to solve problems in real life. Thus a parallel B.S./M.S. degree is an ideal choice for me."

Chow, who has lived in the United States for five years, tells *GLAMOUR*, "I have to thank my parents for giving me the chance to study in the U.S. Because of limited facilities and fundings, college students in Hong Kong often are forced to pursue fields that are not necessarily their interest. My stay in the U.S has given me the opportunity to pursue an education in areas that I am truly interested in, namely computer science."

Freshmen, here is Your

Welcome to Caltech, frosh. Now that you're here, you'll need to know where to go to satisfy your wants and needs. The map below has most of the important places in the area around Tech. The Lyttle t will have more extensive information, but this will do for now.

Restaurants:

1 Tarantino's- a very good italian restaurant. All-you-can-eat calzone on Wednesday nights.

2 BJ's Deli and Sandwiches-Chris Campo's sandwich shop. Good prices but they tend to be a little small.

3 Souplantation- Soups, salads, and muffins, all-you-can-eat. Go there for lunch and a couple of hours.

4 Eddie's Market- Very close, great sandwiches. If you're brave, try the Buffalo Breath. 5 Jack-in-the-Box- A typical fast

5 Jack-in-the-Box- A typical fast

food place. Sometimes has good \$.99 deals.

deals. 9

6 Beef Bowl- Only two different dishes, teriyaki chicken or the beef bowl, but the food is O.K.
7 Carl's Jr.- A decent variety of

food and all-you-can-drink sodas. 8 Burger King- The same as the

rest of the U.S., except no spooners.

Other

9 Ralph's- A cheap supermarket, but it's a long walk.

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Vivian Chow shows expertise with both the computer and the telephone.

10 The Pantry- The closest supermarket, and no matter what the signs say, it's still the Pantry.

11 Winchell's- The local 24 hour doughnut place. Not great, but it's close.

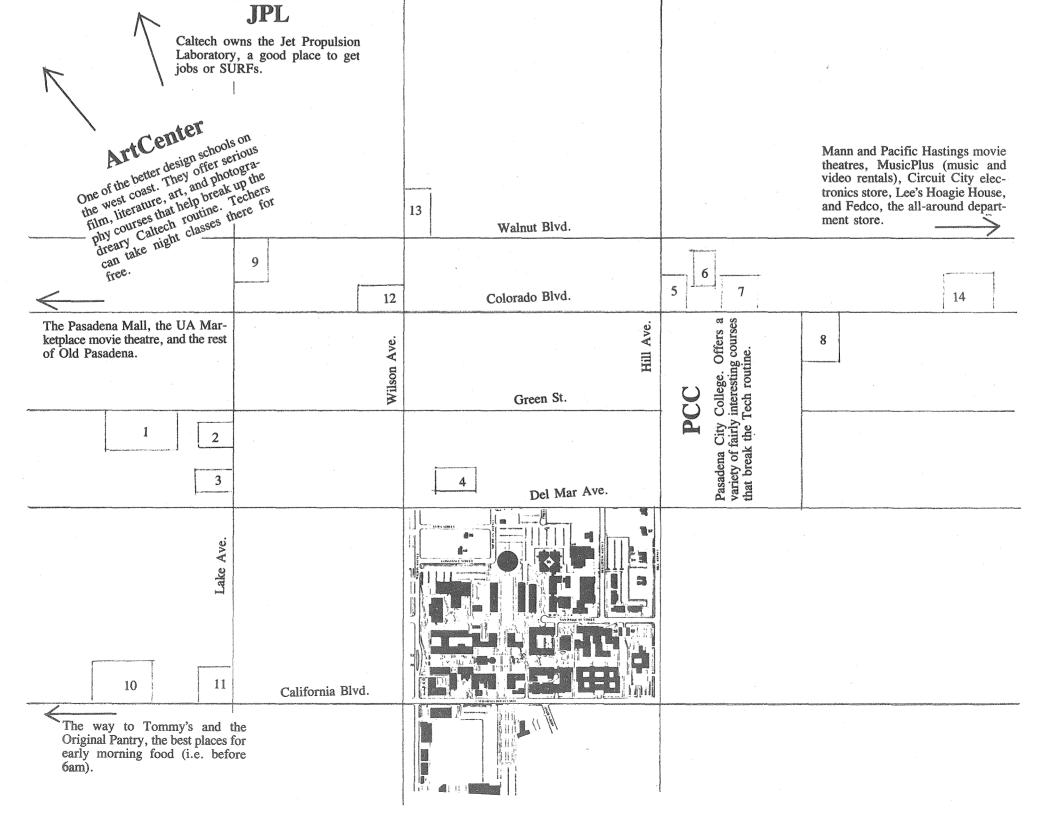
12 The Academy- A six theatre complex that shows double features

for \$2 (\$1 on wednesdays). It sometimes takes a while for movies to get there.

a and a start

13 Pooh-bah's- A record shop with a wide selection of new, used, imported, and domestic records and CDs.

14 Pak-Mann- The best arcade in the area. Has Ironman Ivan Stewart's Off-Road Challenge. Full Pull!



Editors:

At the end of third term, AS-CIT members were asked by the BOD to vote on a dues increase. At the time, it struck me as a rather haphazard request. The arguments supporting the increase were halfhearted. The only reasoning I can remember was, "Well, these are our operating expenses, this is our budget, and we want to fund more clubs. Oh yes, and we're due for more money." Okay, fine and dandy. I probably wouldn't even have noticed the extra money once my tuition bill came. But I thought about it for a minute. "Wait, I thought, "What happened to that big surplus we had?"

For those of you who weren't here then, about a year and a half ago, the big issue of the ASCIT presidential campaign was "What will we do with this budget surplus of \$20,000?" Personally, I never understood why this was a big problem, but I suppose that there has to be SOME issue to debate if we're going to hold debates. However, that was the last I heard of that money. I heard many, many ideas, but I never heard, "Okay, we decided that we're going to spend our excess money on a thingy." So what did you spend the money on, guys? And why has our horrifying surplus turned into barely scraping by?

When I saw the election publicity, I was struck by two things: first, the amazingly large size of the increase, and second, the absolute lack of debate. There was no discussion of what would happen if dues were not raised. Why didn't the increase get proposed in such a way that there would have been a chance for a real discussion?

LETTERS

What really irritates me, however, is the aftermath of the election. The dues increase was marginally defeated, much to the irritation of the BOD. Instead of asking WHY the increase might have been defeated they simply assumed that we, like the typical taxpayer, were knee-jerking against a "tax increase" and were too stupid to comprehend the esoteric issues involved. Personally, I don't rule out a dues increase, if someone would bother to convince me that one was necessary. However, the BOD's next action was to raise the cost of copies on the ASCIT copier, from 4 cents to 7 cents per copy, on the grounds that our dues were being "wasted" on subsidiz-ing the copier. This was done without warning at the last meeting of the year. Conveniently enough, by the time that anyone had a chance to protest this, it will be a fait accompli. In fact, copies are now not seven cents, but eight cents. Presumably, this is so that all copiers on campus will charge the same rate. Richard Reid has posted a nice little note above the ASCIT copier that says that doubling the cost of each copy is made up for by the increased convenience of being able to use our new copy cards at Millikan and by the knowledge that our dues will no longer be "wasted" by subsidizing our copier. Pardon me? Why is subsidizing the service that I use "wasting" my money, and subsidizing a club that has six members and doesn't pay club dues a smart use of my money? I belong to one AS-CIT subsidized club, and frankly, they'd get a lot more money from me if I contributed my ASCIT dues directly. Tell me, what do I get from ASCIT that is worth the money that I pay each term?

As I said, I'm not completely unwilling to believe that ASCIT needs more money. However, I would appreciate it if the BOD would bother to get some input from the people they are supposed to serve. Maybe we want to subsidize the copier and maybe we don't. Why don't you ask and find out? Meanwhile, I'm going off campus to do my copying.

Sincerely,

Elaine Lindelef Dabney House 1-58



Lloyd President Jack Prater and Mr. RF Dwight Berg engage in a vicious game of siamese nose picking.



The Inside World The Inside World

The Inside World was brought to you by: Blacker: Lieven Leroy, Noam Bernstein, Walker Aumann, Kevin Archie Dabney: David A. Edwards Lloyd: Steve Carson and Randy Stevenson

DABNEY

Welcome frosh! There's no turning back now. Now we can tell you how we really feel about Caltech now that you're already trapped for seven days of the most nightmarish experience you'll ever have (next to first term finals week): ROTATION. Upperclassmen: rotation meeting Sunday at 4. Be there or be square. And never fear-my campaign promise will hold true: something stupid every night of Rotation.

Welcome also to our new RAs. They don't know quite what to make of us yet, and we're even more unsure of them, but as long as they keep feeding us ice cream and don't look into my windows at (shall we say) inopportune moments, everything will be just fine. Of course, with the new setup it's the room 7 crowd that has to be quiet. Thank God Rus and Alex moved out.

Though it was kind of sedate here over the summer, I was able to glean a little bit of material, since most of the people who usually make asses out of themselves stayed here and did so right in front of me. I also was able to get a little reading done over the summer, and it's just amazing what you read in the paper these days. Just take a look at some excerpts from the:

Dabney House Classified Ads WANTED TO BUY. Will pay top dollar for secondary sex characteristics. Need leg and facial hair, muscles, and a deep voice. Will match anyone's prices. Call Erich at 578-9769.

CLEANING SERVICE. We'll come into your room, no matter how messy, and leave it sparkling clean. Vacuuming and dusting, and we'll beat Housing's exorbitant prices. Bed assembly also available on request. Call B&D Cleaning Service at 356-9136 and ask for Bo or David.

CAREER OPPORTUNITIES. Attention all graduates from Caltech! Have nothing to do? Feel as if your diploma is not worth the sheepskin it's printed on? Need a real start in life? Want to travel to exotic locations and meet exciting new people? Then sign up with the L.A. County Fire Department to be a fireman! Put your Caltech educational experience to some practical use. Dial (213) 267-2433 for all the details. LATE-NIGHT ENTERTAINMENT. From the producer of the hit "Room 23 Noon Revue" of the 1987-88 season now comes "Room 19 Midnight Madness". All the laughter, screams, and yells that you came to know and love now returns in an all-new late-night time slot complete with moaning and sighing. Please do not disturb the actors during their performance. As an added bonus, every month there are special "Room 19 Full Moon Midnight Madness" nights, replete with howling wolves to accompany the soundtrack. CURE-ALLS. Having problems with stress, overwork, or social problems? Come to Dabney House, the House of Medicinal Magic. We have all sorts of substances that will make you forget even the most pressing of problems. The blues just seem to melt away under the influence of our excellent elixirs. Call the lounge at x6171 to get all the details. CREATIVE EXPRESSIONS. Hamkins "We Make the Unbelievable Believable" Storytelling Service is now open for business and ready to help you out of the stickiest jams. Have you ever been caught sleeping with a grad student working in Submillimeter Astronomy? Did you ever get caught with a condom wrapper in your trashcan? Well, we can help with these and so many other communication problems. Need to learn how to take all the credit for success and none of the blame for failure? Well, we can solve all these problems. Call 578-TATS and ask for Jon. LINGERIE. I am a struggling transvestite who desperately needs to save money. If anyone desires to purchase lingerie, please contact me and we will order out of the "Mellow Mail" catalog together. This will save us money on volume discounts. Please call Harold at 578-9769.

-Darbecued Steak

BLACKER

LATEST "REAL TIME" INSIDE WORLD FROM THE BENGTMOBILE AT BLACKER HOUSE (NO AUDIO)

Yo, mole-Types! Welcome back To The fold. IT's been a. . . memorable summer. Miguel is healing nicely, Thank you. He and a large sTone jeTTy had a disagreemenT aT approx. 5m/s. Rumors ThaT This 'accidenT' is a resulT of The war of secession in The recenTly esTablished Rose Villa are compleTely, uTTerly false, and he was already slipping when we pushed him anyway. Rose Villa's differences have been seTTled aT leasT Temporarily. ThirTy orcs meT Their demise during peace Talks, caughT in The crossfire. Cause of deaTh apparenTly The deTonaTion of a TacTical nuclear waTermelon afTer a misundersTanding involving Their deiTy.

For everyone's convenience, incoming Jennifers will be assigned a number, which They should use insTead of Their firsT names for The following four years.

Arcane graviTy experimenTs in Blacker Hovse have moved The graviTy well ouT of Hell and inTo Cannes. RecenT successes There using garlic ha-Nobody expecTs The Spanish InquisiTion!!! - ve forced iT inTo moTion down The hall, from Andrea's room, pasT Celina's, and off To EasTwick. People Travelling Through (131.215.131.169) Cannes kiTchen are advised noT To do so in groups of more Than Three, or They may become permanenTly sTuck, unable To achieve sufficienT velociTy To break ouT.

Our main weapon is surprise. . . surprise and fear. . . oh, never mind. .

Cannes has been pronounced clean following iTs recenT occupaTion by a vampire. The sTories about The effects of garlic on The undead have been confirmed. Large amounTs of garlic sTraTegically placed about The alley have succeeded in driving The fell beasT away afTer The hovse cleric failed To Turn iT. The cleric proceeded To fall unconscious. BTE was also affecT-ed by This occurrence. Service is now available wiTh a fresh new scenT.

The Blacker Hovse CenTer for EaTing and Sleeping Disorders celebraTes The success of iTs branches in Tunnel, Cannes, and Upper P by announcing The opening of several new branches. Service will begin as of firT Term in VaTican, Rose Villa, and EasTwick. Due To iTs pronounced success, The Upper P branch will be Temporarily ouT of service. In iTs sTead will reside Papa Cliff, who has vowed To defend his frosh from The heaThen hormonal masses DespiTe (no longer 131.215.128.19) all The hormonal nonsense, some people mainTained Their dedicaTion To serious science. . . a nighT of research esTablished The depTh and heaT conTenT of nearby ponds, alThough The reference seemed relucTanT To make The 19Th and final measuremenT (and I wasn'T bloody Thrilled wiTh The firsT eighTeen eiTher. . . oof (more senseless violence)). ConTour maps were once available from Blacker Hydrological Survey, Inc., buT mighT or mighT noT ever be available again aT any Time in The fuTure.

BOC Rep Needed Due to a recent vacancy, the

Board of Control is conducting interviews to fill one of the two Representative at Large positions. The responsibilities of the office include identifying areas of life at Caltech in which the application of the Honor system should be examined, as well as representing the undergraduate population at meetings of the Board.

Any interested undergraduate students are encouraged to sign-up, although, due to the necessities of the office, preference will be given to those students possessing some experience as a member of the Caltech Community living under the Honor System. Sign-ups will be posted in each of the seven undergraduate houses. First round interviews will be conducted on Thursday evening, October 5. For further information, contact Jerry Hauck at campus extension x6200.

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September 22, 1989

EDITORS Scott Kister Mark Lyttle Paul Socolow

PHOTOGRAPHS Matt Fetterman

SPORTS Chris Campo

PRODUCTION Nick Smith

BUSINESS MANAGER Sonny Arcilla

OFFICE MANAGER Gavin Claypool

Oh, you musT be Jennifer. . ."

Nova discoverer Celina (sil-EYE-na) Mikolyagamblepuddingiranovich was quiTe please wiTh her finding, buT a biT overwhelmed by all The media aTrenTion. She could noT be reached for commenT, as she was "cruising for Tacos and donuTs" wiTh friends who are now impliciTly famous (i.e. deserve loTs and loTs of respecT and perhaps large moneTary donaTions - make checks payable To The Blacker Hovse AnTi-Social Team).

HO'M has Too many bikes (even Huie says so), which seems To hinder The abiliTy of visiTors To find addresses on The whiTeboard. IT also has The monsTer cockroach from Hell, which appears To have done away wiTh Jama. UnforTunaTely, iT has shown no inTeresT in carrying away any of The resT of Bibi's sTuff WHICH IS ALL OVER THE PLACE (huff, huff, huff, ...)

FourTeen Techers were walking by The Mazda dealership minding Their own business when suddenly The Dark KnighT Threw himself on Top of Them. Local law enforcemenT compleTely misundersTood The siTuaTion. All we wanTed was a replacemenT for The laTe Hovse Car o'Blacker.

P.S. There is no liTTle T, dammiT!

- The Caped Canuck, ShadowsTar, walkera@beTwixT.cs.calTech.edu. and. . . oops, sorry, I have To go feed my flies.

x

xxxxxx&x(x*xx)

CIRCULATION Peyjen Wu Scott Kister

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The California Tech

Cross-Country Shows Promise

by Chris Campo Caltech's 1989 Cross Country Season began with a gunshot on the morning of Saturday, September 16, at Ralph B. Clark Regional Park. The Beavers participated in the 1989 Whittier Cross Country Invitational, with both the men's and the women's teams competing in the meet.

The Men

The men ran a four mile course over varying terrain: grass, pavement, and rolling trails. As a season opener, the meet was four miles instead of the standard five miles to let freshman runners make the transition from 3.1 mile high school courses to the longer college distances. Caltech's team did quite well, placing seventh in the meet, which hosted 25 teams. Caltech's freshmen performed excellently, and foreshadowed great things for the Beavers in the very near future.

Finishing 37th out of 150 runners for Caltech was junior Chris Campo with a time of 23:16. Not far behind, at 47th place with a time of 23:37 was sophomore sen-sation Dan Flees. Next for the Beavers out of the high school cross country powerhouse Arroyo Grande High was freshman John Freeman, finishing at 49th place in a time of 23:45. Another frosh, Dan Lipofsky, crossed the line in 23:50 finishing 51st overall. The fifth man for the Beavers was Scott Kister, finishing at 59th place with

a time of 24:07. Behind Tech's top five were Mark Lyttle (84th, 25:10), Paul Socolow (96th, 25:56), freshman Jonah Michaud (101st, 26:08), Kurt Storm (106th, 26:32), Mike Mahon (117th, 27:21), John Pham (123rd, 27:48), Dave Kim(130th, 28:37), Jason MacLeod(133rd, 29:10), Rick Oliver(143rd, 30:13), Steve McLaughlin (145th, 30:34), Mike Ida(146th, 30:37), and Mark Land (147th, 31:52).

The highlight of the men's performance was that the top five Beavers finished within one minute, indicating that Tech has a wolfpack of top runners, something it has lacked for some time. Also noteworthy was the amount of high quality freshman runners, perhaps the best batch of frosh harriers to come into Tech in the past decade.

The Women

Caltech's female Beaver squad ran the standard five kilometers racing distance over the hilly Ralph B. Clark course, and showed that they are going to have to work to deal with their 1989 conference opponents. The Beavers finished 10th in a field of 23 schools, putting forth a good effort early in the season. The freshman girls showed great potential, and as their racing legs develop throughout the season, it is clear that they will develop into a highly efficient cross country machine.

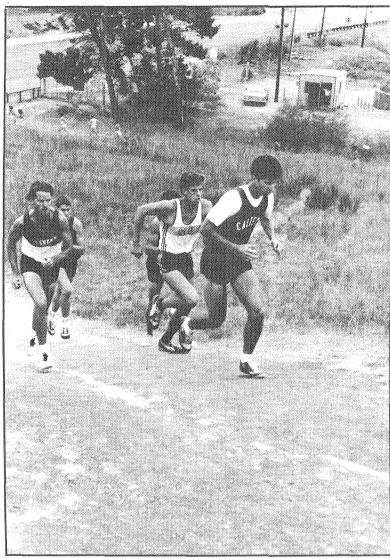
Finishing 33rd out of 123 runners in a time of 22:53 was seasoned veteran, senior Margi Pollack. Next for the Beavers, occupying the 82nd place was Aimee Smith, in a time of 25:30. Tech's next runner was freshman Anna George, at 92nd place in a time of 26:56. Erika Moilanen was 96th, with a time of 27:09. At 100th was sophomore Cathy Hafer, finishing in 27:48. At 103rd place was frosh Jessie Haldeman, with a time of 28:12. Valerie Jacox was the next Techer, finishing in 107th with a time of 28:18. Sophomore Maria Toronto finished at 115th in 31:27.

The women are young as a team, but as the freshmen runners mature as racers, the Beavers are sure to improve radically. One factor which worked against the Beavers was the absence of seasoned sophomore runner Mary Rowe, due to illness. Mary will be back in action for next week's meet.

Next Week

The Beavers journey to Legg Lake in El Monte on Saturday to run their first conference meet of the season. The course is very flat, and favors speedsters like Dan Flees and Scott Kister. With cooperation and teamwork, the men should be able to vanquish Whittier and La Verne, but Claremont may be out of reach. The women will be hard pressed to beat Whittier and Claremont, but a victory over La Verne is a strong possibility. This meet should provide more valuable racing experience for the women, to be used in dealing out defeat to their opponents in the conference meet at the end of the season. Special Highlight of the Meet: Freshmen get to meet Lupe- ask Coach O'Brien for details.





September 22, 1989

The Terminator, Dan Flees, powers up a hill at the Whittier Invitational.

TH

TRYOUTS

SUNDAY, SEPTEMBER 24, 1:00 - 4:00 P.M. MONDAY, SEPTEMBER 25, 3:00 - 5:00 P.M.

Pou are Cordially Invited

to the first annual

Caltech Freshman Mixer

On October 1, 1989 2 p.m. to 5 p.m.

Dancing, Refreshments, Raffle, Socializing

Shirt and tie for men Women dress accordingly

Your name must be on the guest list for admission. Due to limited space, please RSVP to the Caltech Y by September 28.

For more information please contact the Caltech Y at (818) 356-6163.

Sponsored by the Caltech Y No Charge LAEMMLE THEATRES **ESQUIRE COLORADO** 2588 E. Colorado Blvd. 2670 E. Colorado Blvd. (818) 796-9704 (818) 793-6149 "Two Thumbs Up!" Raul Julia -Siskel & Ebert sex. lies and **ROMERO** videotape Daily 5:20, 7:30, 9:40 p.m. Daily 5:45, 8:00, 10:10 p.m. Sat-Sun matinees 1:25, 3:35 p.m. Sat-Sun matinees 1:00, 3:10 p.m.

Student Activities Center, Room 1

All members of the Caltech/JPL Community welcome!

For additional information call Monica Hubbard at x6260 or 797-5912



4 September 22, 1989

The California Tech

Registrar Speaks

Dear Caltech Student,

As the 1989-90 academic year approaches, we would like to call your attention to the regulations governing registration spelled out on page 65 of the Catalog. These regulations apply to all students, including those who have not preregistered. For your information, the catalog says:

"Students are not registered until the Registrar's Office. they have both: Ouestions regarding

turned in a signed registration card with their approved study list, and

made satisfactory arrangements with the student accounts office for the payment of all fees due the institute.

Caltech's Campus Computing Organization

will be hosting its Fourth Annual

any student who has not completed both phases of registration within one week after registration day will be removed from the Institute rolls."

In short, the registration period is one week long. The last day to register for fall term is October 2, 1989. After this date, students will be required to file a petition with the Registrar's Office.

Questions regarding the above procedure can be directed to the Registrar's Office.

Good luck with your studies. sincerely Judith R. Goodstein Registrar









If you do, come by for a non-competitive placement audition Sunday, September 24, 1:00-4:00 or Monday, September 25 3:00-6:00, 8:00-10:00 Instrumental Music Office Room 12, Student Activities Center

Questions? Call Bill or Delores Bing at (213)684-8964

EVERYONE IS WELCOME TO JOIN, REGARDLESS OF PREVIOUS EXPERIENCE

1st Rehearsal for the **CALTECH WIND ENSEMBLE** Thursday, Sept. 28, 7:30 p.m.

CALTECH JAZZ BAND Thursday, Sept. 28, 9:30 p.m. Beckman Auditorium Basement

If you can't make this rehearsal but want to play, just call Bill Bing at (213) 684–8964 or leave a message at 12–58 Mozart - Requiem Chamber Singers

Handel - Messiah

Argento - The Revelation of St. John the Divine

Combined Glee Clubs

Men's Glee Club

Sign ups - Men's Glee Club Sunday, 9/24 2-5 pm Monday, 9/25 4-6 pm SAC #3

Auditions - Chamber Singers Tuesday 9/26 4:30-6pm SAC #3

Further Information Call Dr. Donald Caldwell x6197







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Security Pacific representative will be on campus September 20 & 27 and October 4 at the Winnett Student Center.

Security Pacific Lake & Colorado Office, 880 E. Colorado Blvd., Pasadena • (818) 304-3117

O September 22, 1989

Pasadena's Perfect Pizzas

by Matt Fetterman, C. Kwon, Kade Larsen and Mark Land

Tarantino's, on Green Street, between Hudson and Oak Knoll, serves pizza, pasta and many other Italian dishes.

Tarantino's sells a regular large pizza with one topping for \$12, plus \$0.75 for each additional topping, and a specialty large pizza for about \$14. This does not include the 20% Caltech discount. Half of our pizza was pepperoni and sausage; the other half was Florentine, a pizza made with imported cheese and spinach. The chef told us that the Florentine pizza had been designed by the restaurant owner's mother, a woman so Italian that she speaks nary a word of English. "You think you don't like spinach," the chef told us, "but you gotta try this pizza."

Indeed, we all found the spinach topping to be excellent. The crust had a crisp, browned flavor. The entire pizza was lightly flavored with garlic, which added a pleasant aftertaste. However, the sausage was slightly underdone. Overall, this pizza was much more exciting and much tastier than a pizza from Pizza Hut or Pinocchio's.

Tarantino's has class. It was crowded, but not cramped. Neon beer signs and great posters decorated the walls. Our waitress was friendly, but the service seemed slow.

Tarantino's is an excellent place for the college student.

Avanti's Gourmet Pizza, on Lake between Walnut and Colorado, also sells a variety of Italian meals, but specializes is gourmet pizza.

At Avanti, a regular large pizza with one topping costs \$11, plus \$1.50 per additional topping. A gourmet medium pizza costs about \$12.

The regular pizza was undistinguished. The toppings did not melt into the cheese. The cheese was excellent, but the tangy tomato sauce overpowered it.

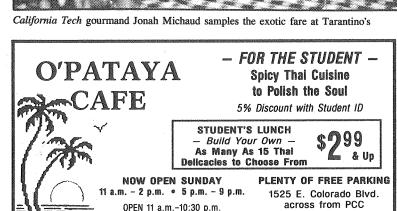
The gourmet pizza was a cu-

linary masterpiece. The pizza was baked in a wood-burning oven, giving it a finely blended flavor. The owner told us that only the best mozarella cheese and the freshest dough is used in the gourmet pizza. To allow the flavor of the cheeses and the crust to come through, Avanti uses olive oil instead of tomato sauce on the gourmet pizza. This seemed to work, though some of us were bothered by an olive oil aftertaste.

The service was fair. Our waitress told us to "please hurry up and order because I have another table waiting." Perhaps this gave us an unfair first impression, for later she was attentive and gracious. Our water glasses were never empty.

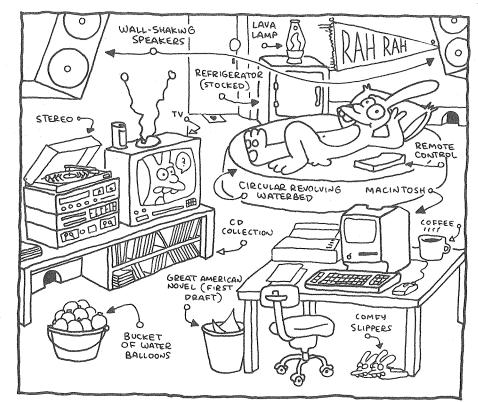
The atmosphere was neutral. There was no music, and not much in the way of decorations. This allowed the lively patrons around us an opportunity to create their own environment.

Avanti Gourmet Pizza is a cut above your average pizza joint.



Monday-Saturday

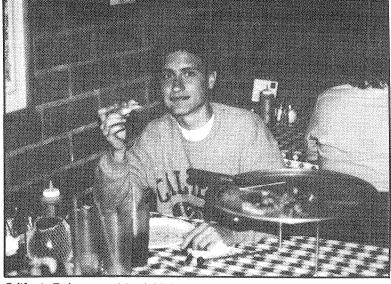
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The California Tech

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But do it really, really fast. Because only one Macintosh is being given away on this campus, and it's going to happen soon.

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The Society of Physics Students

by Chris Oei and Golda Bernstein

With all the physics classes and seminars, there might seem little need for a physics club. What can people get out of the club that isn't already taught?

Your classes will pound knowledge into you, but here you can be exposed to a variety of physics topics without being tested on them. You can meet Caltech professors, graduate students and other undergrads, listen to their ideas and talk to them about yours. We can see films, take feild trips through physics labs, play with computers and physics toys, and get in touch with physics clubs at other universities. But most important, we can share our ideas with each other, get together to work out knotty problems and stimulate each other to new interests.

Science is not just a vast body of knowledge. Learning physics is not just aquiring fancy mathematical tricks, or learning how to predict experiments; it is learning how to see wonder in the simplest

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of things, to see and understand everything that happens from the cosmological scale right down to the most fundamental particles, and to see the world through fresh eyes.

But this is exactly what is missing from classes! The hardest question to answer is not "why is it so." but "why is it so interesting?" In all the world, there is no better place to find out, and in all your life, no better time! There are people here you might not find anywhere else: people who do interesting things and are willing to share their ideas freely. You may run out of ideas sometimes, but when a friend comes pounding on your door, grinning from ear to ear and spouting about his latest brain-wave and scribbling furiously, life is not dull. This is what the physics club is for.

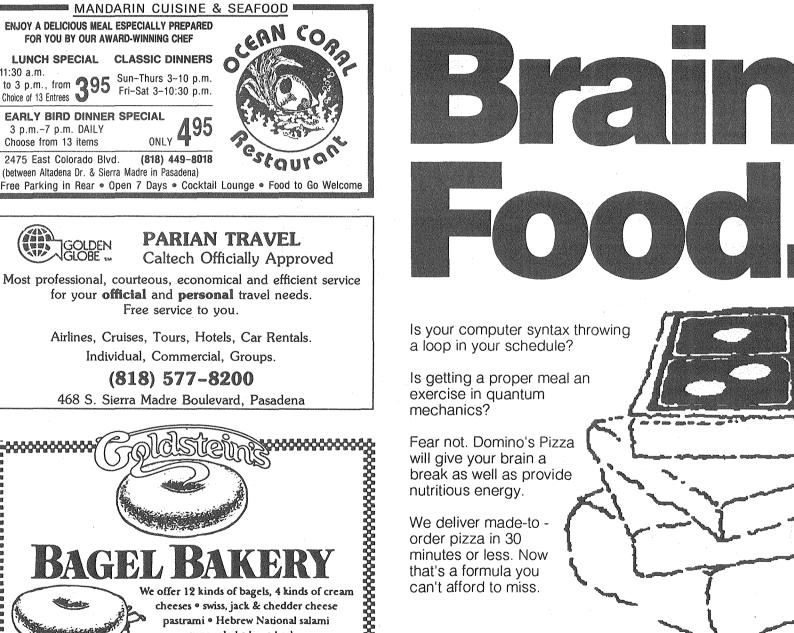
Real physics can't be taught, like some kind of disease, difficult to catch, but happily, it's completely incurable.

Look for announcements during rotation week about our first fall meeting.

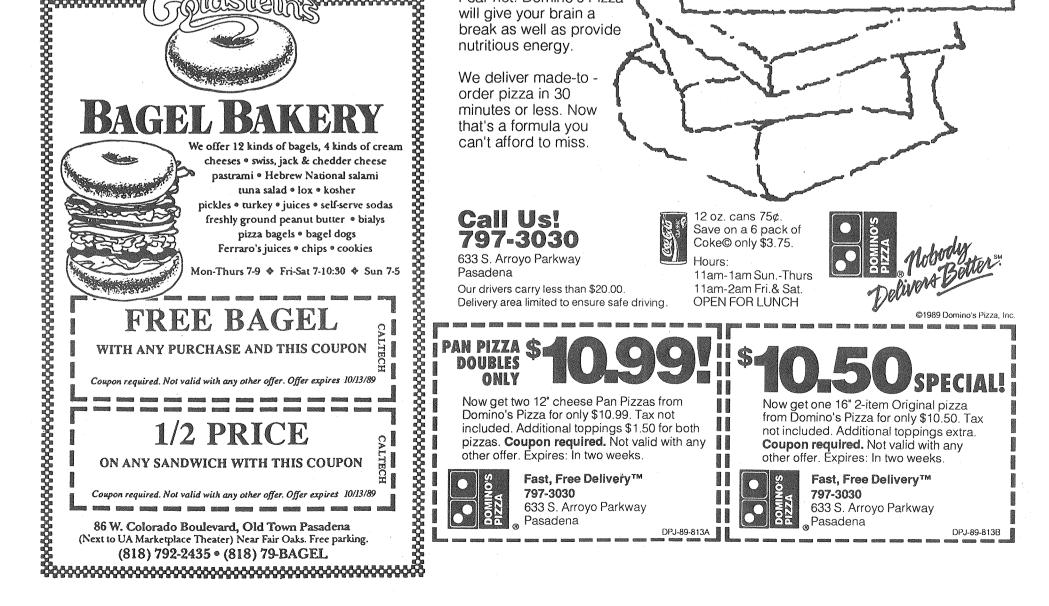


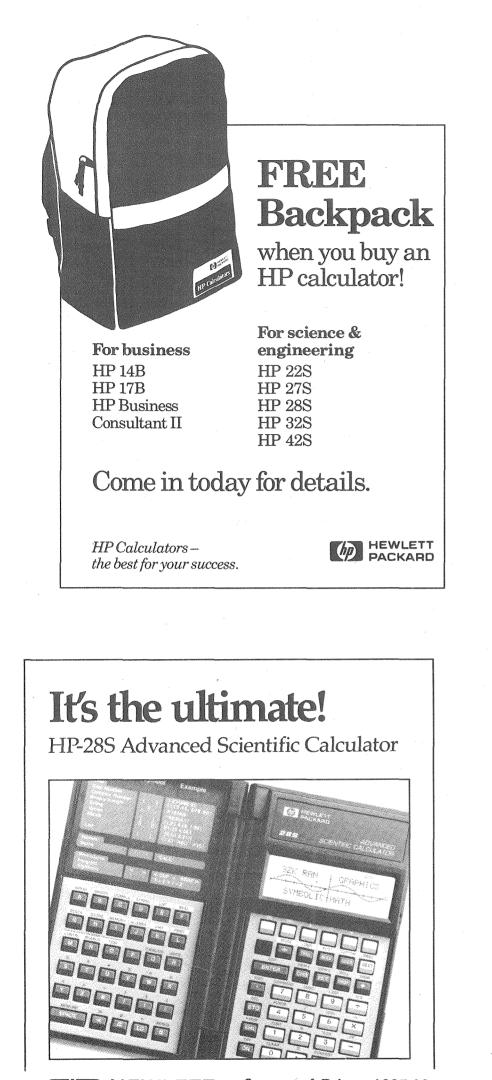
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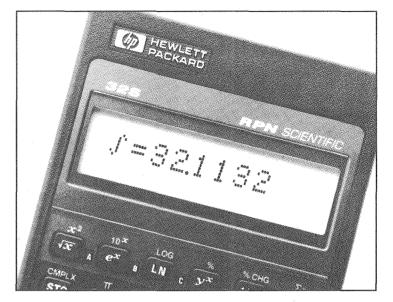


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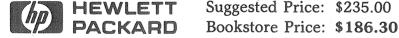
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Byron – Mad, Bad

by Gavin Claypool

Seeing Derek Jacobi on stage is a treat, even in as awkward a vehicle as Byron-Mad, Bad, and Dangerous to Know (recently at the Doolittle Theatre).

Not quite a biography, not quite an impersonation, Byron relies heavily on Lord Byron's own letters and poems-some set to music-to tell its story. The story is jointly narrated by Jacobi (as Byron) and Isla Blair (as many of the women in Byron's life). The script manages to work in a date and/or Byron's age without much difficulty, and in pretty strict chronological order, so the audience can follow along. But as drama, it's a little too pedantic.

As an educational device, it has much going for it. Byron, who with Shelley and Keats (both mentioned in the course of events) form the great English romantic trio, was a womanizer, a rogue, and a literary genius. The complexities of the man-and the absurdities of his lifestyle-coupled with the beauty of his verse make him an intrigu- Ahmanson in the Music Center.

ing subject. Books on Byron and by Byron should be popular check-out items at local libraries as a result.

Jacobi does not make any attempt to look like Byron, other than to move about the small set with a limp. His dulcet voice is well suited to Byron's words, and when raised to stentorian levels, the Doolittle is perhaps too intimate a theater. Blair is a marvelous complement; assisted by clothing props, temperament, and accents, she is able to keep the audience focused on which woman she now was. One Sunday, affected by a heavy cold, she went gamely on, assisted by electronic amplification. The only noticeable problem was when Jacobi's voice came into range of the microphone.

The Ahmanson's first season at the Doolittle continues with Edward Albee's Who's Afraid of Virginia Woolf?, directed by the author and starring Glenda Jackson and John Lithgow. It opens September 24 for 12 weeks. The Phantom of the Opera haunts the

September 22, 1989

The Inside World

Lloyd

"They were all buck naked" Pasadena – Seventy-nine year old resident of Pasadena, Leetta Esther Doogal, reported seeing six youths running through her garden doing the "Hokie Pokie" in the buff. As they turned themselves around, Leetta ran to the nearest phone and dialed 911, after, of course, having noted any anatomical abnormalities possessed by the suspects. From her report, the Pasadena Police were able to identify the six youths as recent escapees from the Lloyd Home for the Mentally Insufficient. Believed to be on their way to Catalina Island, their descriptions are included below to aid in their identification.

Jack Prater, a.k.a. "The Shadow": A black man, 6'1", 155 lbs. wearing a hat that says "Nobody Move." Jack is believed to be the mastermind behind the escape. Technically diagnosed as a Tactilofeeliac, Jack has an inherent need to touch others. High school girls should exercise extreme caution if approached by a tall, skinny, naked black man.

Curt Hagenlocher, a.k.a. "The Penguin": A white male, 5'10", 210 lbs. wearing a monocle and a tophat, and carry-ing an umbrella. He suffers from BIGBUTT (Batman Inter-Grandiose Behavioral Under-Tremendous Trauma). Curt assumed the identity of his favorite TV persona when his arch-rival, the Joker, became the prime villian in the 1989 summer smash, super wonderful, totally bodacious, isn't-this-great-everybody movie, *Batman*. At the Home for the Mentally Insufficient, doctors recovered a note from Curt saying "Wanhk, wanhk, wanhk, wanhk." They have not yet unravelled the mystery surrounding this cryptic message.

Fiona Lo, a.k.a. "Fiona of the Outback": An Asian woman, 5'4", 110 lbs. wearing nothing but a smile. Classified as a Dingophile, Fiona had suffered a nervous breakdown when she found out the platypus was an egg-laying mam-mal. During her recovery, she became obsessed with all things Australian. She speaks with a false Australian accent and periodically barks like a Dingo. Australians and pitbulls alike should be extremely careful when in contact with Fiona

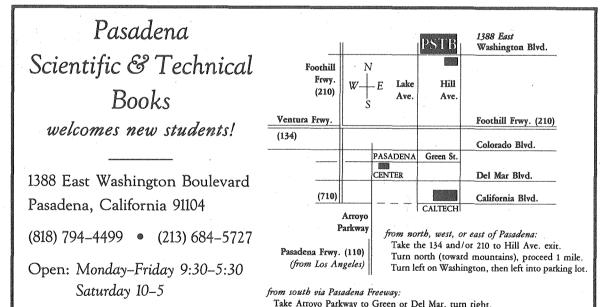
Steve Carson, a.k.a. "Fred Flintstone": A white male, 6'4", 195 lbs. with a loud obnoxious and boisterous voice. He suffers from Megadecibel Syndrome, the need to be extremely loud at all times. Doctors at the Home gave him his alias because his manner and gait resembled that of the Emmy award-winning Bedrock film star. Steve liked the nickname and began bellowing the phrase "Yabba Dabba Doo, dude." Soon after, Steve went completely insane and has proclaimed himself on a holy mission to find Wilma, his beloved wife, or become the Grand Poobah of the Sacred Buffalo Lodge, whichever comes first.

Steve McLaughlin, a.k.a. "Face": A middle class, white Anglo-Saxon Protestant male, 5'8", 150 lbs. who loves to do the Hokie Pokie, especially the part with the left hip. Steve has an extremely potent fetish for women with "knobby knees and lots of em." Doctors are still puzzled as to whether Steve is attracted to knobs, knees, or women, therefore all three should be on the lookout.

Bruce Patton, a.k.a. "The RA": A white male, 6'0', 170 lbs. with a robust mustachio. Psychologists have confirmed that Bruce has lost his marbles, is nutty as a fruitcake, not playing with a full deck, one brick shy of a full load, loony as a goony bird, out in the outhouse without the shitpaper, gone to bat without his helmet a few too many times, and is "just plain weird."

If any of the above suspects are sighted, DO NOT ATTEMPT TO APPREHEND THEM. They are armed and extremely dangerous. Well, they're pretty dangerous. Actually, they aren't really THAT dangerous. In fact, in some instances they can be pretty mellow. Come to think of it, most of the time they seem rather calm. All right, they're not even armed, and they're downright whimpy.

--Heavy Senior Number 1



Puccini's Tosca

by Gavin Claypool The Los Angeles Music Center Opera launched its fourth season this month with a remarkable production of Puccini's Tosca.

With its relentless, straightforward storyline, and easily recognized characters, Tosca is one of the most accessible operas to the newcomer. A romantic artist, a jealous lover, a political prisoner, and a lecherous police chief are drawn together with tragic results for all.

Maria Ewing, who stunned audiences with her erotic Salome last May, performed the title role for the first time with aplomb. The distress brought about by her killing of police chief Scarpia seemed to reprise Salome's own descent into madness a little too closely, but her jealous love of artist Cavaradossi and utter loathing for Scarpia were strongly felt.

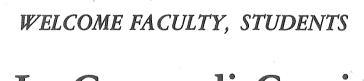
The concupiscent Scarpia was terrifyingly portrayed by Justino Diaz, whose villianous Iago was the highlight of last season's Otello. Scarpia is dead by the end of Act

Two, but his duplicity reaches beyond the grave to seal the young lovers' doom.

Neil Shicoff as Cavaradossi. Louis Lebherz as the prisoner Angelotti, and Michael Gallup as the Sacristan rounded out the fine cast. Placido Domingo, one of the greatest tenors to perform the role of Cavaradossi, conducted the opera for the first time.

The second opera of the season, The Rise and Fall of the City of Mahagonny, has already completed its five-night run. A four-month gap now remains before the Music Center Opera resumes its season with Mozart's The Marriage of Figaro in January. Verdi's Falstaff returns to Los Angeles in February-remember Guilini's triumphant version of just a few years ago?-and April will bring Tchaikovsky's Queen of Spades.

The season concludes on a lighter note in June with a paired production of Oliver Knussen and Maurice Sendak's Where the Wild Things Are and Higglety Pigglety Pop!, as well as Oklahoma! by Rodgers and Hammerstein.



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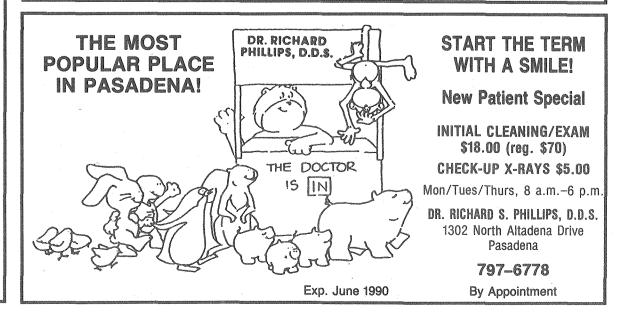
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DERRINGTON, TALETHA -/DA RU/LL BL/PA PA/RI LL/BL RI/RU FL DILLING, DANIEL -/PA BL/RI LL/DA DA/FL RI/LL FL/BL RU DONNING, BRIAN -/FL PA/RI RU/BL BL/DA RI/RU DA/PA LL DOOLEY, JENNIFER -/RI DA/PA LL/RU RU/BL PA/LL BL/DA FL DOTY, ROANNA –/LL RU/BL DA/PA PA/FL BL/DA FL/RU RI DUDEY, GREGORY –/FL LL/BL PA/DA DA/RU BL/PA RU/LL RI DURASOFF, MATTHEW –/RU RI/LL BL/FL FL/DA LL/BL DA/RI PA DUSSIN, PETE –/RU RI/BL PA/LL LL/DA BL/PA DA/RI FL

EBRAHIM, FATIMA –/LL FL/RU DA/RI RI/BL RU/DA BL/FL PA ENRIQUEZ, LYLE –/RI DA/BL PA/FL FL/LL BL/PA LL/DA RU EPPLEY, GEAPY –/PA BL/RI FL/DA DA/RU RI/FL RU/BL LL ETZKORN, EDWARD –/DA RU/BL FL/LL LL/RI BL/FL RI/RU PA

FAGERLAND, SCOT -/BL FL/RI RU/DA DA/LL RI/RU LL/FL PA FERNANDEZ, YANGA -/FL RI/DA BL/PA PA/RU DA/BL RU/RI LL FIRMAN, TIMOTHY -/LL RI/FL DA/PA PA/BL FL/DA BL/RI RU FORMAN, JENNIFER -/BL RI/PA DA/RU RU/FL PA/DA FL/RI LL FOUST, JEFFREY -/RU BL/PA LL/RI RI/DA PA/LL DA/BL FL FOX, GEORGE -/RU PA/LL FL/BL BL/RI LL/FL RI/PA DA

FOA, GEORGE -/RC FALL FUEL BLIEL BLIEL EL/FL RUTA DA
 FREEMAN, JOHN -/DA BL/LL RU/RI RI/PA LL/RU PA/BL FL
 FREI, NATHAN -/FL RU/BL RI/DA DA/PA BL/RI PA/RU LL
 FREUND, MATTHEW -/RU LL/FL DA/RI RI/PA FL/DA PA/LL BL
 FRUMIN, DAN -/BL RU/FL PA/RI RI/DA FL/PA DA/RU LL
 FULTON, TRUXTON -/LL RI/FL PA/RU RU/DA FL/PA DA/RI BL

GANARAJ, SWATHI -/LL RI/DA RU/BL BL/FL DA/RU FL/RI PA CEORGE, ANNA -/DA PA/LL RU/FL FL/BL LL/RU BL/PA RI GERK, TIM -/RI DA/LL FL/PA PA/RU LL/FL RU/DA BL GIN, KIMBERLY –/LL-PA/DA FL/RU RU/BL DA/FL BL/PA RI GIRISH, BALASU BRAMANIS –/RI RU/LL DA/FL FL/PA LL/DA PA/RU BL GOH, KEOWLIN –/BL FL/PA DA/LL LL/RI PA/DA RI/FL RU GOMEZ, FRANCISCO –/PA RI/DA FL/LL LL/RU DA/FL RU/RI BL GRADE, JOHN –/RU LL/BL FL/PA PA/DA BL/FL DA/LL RI GREENE, WILLIAM –/BL DA/LL RU/PA PA/FL LL/RU FL/DA RI GUADARRAMA, MICHAEL –/RI LL/RU FL/DA DA/PA RU/FL PA/LL BL GURKAN, KORHAN –/RI BL/PA FL/LL LL/DA PA/FL DA/BL RU GUSTAVSON, TODD –/RI DA/FL BL/RU RU/LL FL/BL LL/DA PA

₩ HALDEMAN, JESSIE -/BL RU/FL RI/PA PA/LL FL/RI LL/RU DA

HALDEMAN, JESSIE -/BL RUFFL RIFA FAILE FLIT LLING DA HALL, DAVID -/PA FL/RU BL/LL LL/DA RU/BL DA/FL RI ≫ HANSEN, AMY -/BL PA/RU FL/DA DA/LL RU/FL LL/PA RI HEISE, STEPHEN -/LL FL/DA PA/BL BL/RI DA/PA RI/FL RU HERRERO, FANCISCO -/FL PA/BL LL/DA DA/RI BL/LL RI/PA RU HILLIS, SHAWN -/RU PA/RI DA/FL FL/LL RI/DA LL/PA BL HOEKSTRA, STEVEN -/LL RI/DA BL/RU RU/PA DA/BL PA/RI FL HONG, KAREN –/FL RU/PA DA/BL BL/RI PA/DA RI/RU LL HORNG, MARK –/FL DA/RI BL/RU RU/PA RI/BL PA/DA LL

LIN, DONG -/RU FL/BL DA/RI RI/LL BL/DA LL/FL PA LIN, DONG -/RU FL/BL DA/RI RI/LL BL/DA LL/FL PA LING, HSIU-HSIEN -/DA FL/BL RU/PA PA/LL BL/RU LL/FL RI LIN, MARTIN -/LL BL/RI FL/RU RU/DA RI/FL DA/BL PA ≫ LIPOFSKY, DANIEL -/LL RI/FL BL/DA DA/RU FL/BL RU/RI PA LIU, YVONNE -/RI FL/LL RU/PA PA/BL LL/RU BL/FL DA LOW, JAMES -/DA FL/BL LL/RI RI/PA BL/LL PA/FL RU LUNDSTEN, ANDREW -/PA LL/FL BL/RI RI/RU FL/BL RU/LL DA LURIE, ELLA -/PA LL/FL DA/BL BL/RI FL/DA RI/LL RU LUU, QUOC THAI -/RU DA/RI LL/BL BL/FL RI/LL FL/DA PA LIUL THUAN -/DA PA/RI FL/LL JL/BL RI/FL BL/PA PI LUU, THUAN -/DA PA/RI FL/LL LL/BL RI/FL BL/PA RU LYE, WHYE -/DA PA/RU BL/FL FL/RI RU/BL RI/PA LL

- ∞ MACLEOD, JASON –/RI FL/BL RU/LL LL/DA BL/RU DA/FL PA MAEPA, LINDA –/RU FL/RI LL/PA PA/DA RI/LL DA/FL BL MALLEN-ORNELAS, GABRIELA –/LL DA/RI BL/PA PA/RU RI/BL RU/DA FL MAMMINI, BETH –/FL DA/RU RI/BL BL/LL RU/RI LL/DA PA MANCILLA, JESUS -/RU BL/PA RI/LL LL/FL PA/RI FL/BL DA MARSCHKE, STEVE –/DA RI/RU LL/FL FL/PA RU/LL PA/RI BL MARTIN, JEFFREY –/DA PA/RI BL/RU RU/LL RI/BL LL/PA FL MARVIT, BETSY –/BL FL/RI DA/PA PA/RU RI/DA RU/FL LL MASEK, JAMES –/PA DA/RI RU/BL BL/LL RI/RU LL/DA FL MATSUBAYASHI, DON –/FL DA/BL BL/LE M/RU LL/DA FL MATSUBAYASHI, DON –/FL DA/BL RU/PA PA/RI BL/RU RI/DA LL MAZUREK, MARK –/DA PA/FL RU/RI RI/LL FL/RU LL/PA BL MCCANN, PETER –/RU DA/RI FL/PA PA/BL RI/FL BL/DA LL MCLAUGHLIN, TODD –/RU RI/DA LL/PA PA/BL DA/LL BL/RI FL MCMAHON, DIANA –/RI FL/PA LL/DA DA/RU PA/LL RU/FL BL MEHRA, AMITABH –/DA LL/FL RU/BL BL/PA FL/RU PA/LL RI MELBOURNE, TIM –/DA RI/LL FL/BL BL/RU LL/FL RU/RI PA MELBOURNE, HM -/DA RI/PL FL/BL BL/RU LL/PL RU/RI PA MENG, AUDRA -/DA RU/PA FL/LL LL/BL PA/FL BL/RU RI MESSENGER, JENNIFER -/BL FL/DA RI/LL LL/PA DA/RI PA/FL RU METAXIDES, EVANGELOS -/DA RU/RI FL/PA PA/LL RI/FL LL/RU BL MICHAUD, JONAH -/BL LL/FL RI/DA DA/PA FL/RI PA/LL RU MIKULA, ALFRED -/RU RI/BL DA/FL FL/PA BL/DA PA/RI LL MONY ABEEZ //DA LL/EL DA/BL DU/DL EL DA PA LU DU
- MINULA, ALFRED /RU RI/BL DA/FL FL/PA BL/DA PA/RI LL MODY, AREEZ /DA LL/FL PA/RI RI/BL FL/PA BL/LL RU MOILANEN, ERIKA /LL FL/BL RI/RU RU/PA BL/RI PA/FL DA MONTZ, ALLEN /DA LL/BL RI/FL FL/RU BL/RI RU/LL PA MORTAZAVI, SEYED-ALI /LL RU/DA BL/FL FL/RI DA/BL RI/RU PA MULLIN, JENNIFER /PA RI/BL RU/DA DA/FL BL/RU FL/RI LL MURAKAMI, EDWIN –/FL RU/PA BL/DA DA/LL PA/BL LL/RU RI

NAKASOME, CASS -/LL RI/PA DA/FL FL/RU PA/DA RU/RI BL NGO, HOA – /RU RI/FL LL/BL BL/PA FL/LL PA/RI DA NGUYEN, SON C.T. – /LL BL/DA PA/RI RI/RU DA/PA RU/BL FL NGUYEN, TUAN DINH –/BL DA/RI PA/LL LL/FL RI/PA FL/DA RU NICHOLS, JESSICA –/RU BL/RI DA/LL LL/PA RI/DA PA/BL FL NOBLE, SETH –/BL RU/LL DA/RI RI/FL LL/DA FL/RU PA NYGARD M/CHAEL //PL FL/LL PL/PA DA/DA LU/PL DA/FL PU NYGARD, MICHAEL -/BL FL/LL RI/PA PA/DA LL/RI DA/FL RU

ODER, MICHAEL -/PA LL/RU BL/DA DA/RI RU/BL RI/LL FL OEI, MONICA – /PA RI/RI EL/DA RU/FL DA/RI LL PL ORTH, CHRISTOPHER –/LL FL/RI BL/DA DA/PA RI/BL PA/FL RU OSLAKOVIC, KEITH -/BL RI/RU DA/FL FL/LL RU/DA LL/RI PA

PALMATIER, THEODORE -/RI BL/FL PA/LL LL/RU FL/PA RU/BL DA PELLETIER, JON –/DA PA/LL BL/RI RI/FL LL/BL FL/PA RU PEREZ, JOSE –/BL LL/RU FL/RI RI/DA RU/FL DA/LL PA PETERSON, SVEN –/LL RU/FL RI/BL BL/DA FL/RI DA/RU PA PETRUSCU, JULIANA – /DA RI/BL LL/RU RU/FL BL/LL FL/RI PA PFARNER, PRESTON –/PA BL/FL LL/RU RU/DA FL/LL DA/BL RI PORNSINSIRIRAK, TEERACHAI -/RU BL/FL RI/DA DA/LL FL/RI LL/BL PA

QUINN, KATHERINE -/BL RU/PA RI/LL LL/DA PA/RI DA/RU FL

REIFSTECK, SHAILA -/BL RU/RI LL/FL FL/DA RI/LL DA/RU PA 2022 REMINE, JENNIFER -/RI BL/FL RU/DA DA/PA FL/RU PA/BL LL

RENNER, TOM -/RI PA/FL LL/BL BL/DA FL/LL DA/PA RU RHEE, MIRAN -/PA DA/FL RU/RI RI/BL FL/RU BL/DA LL RICKENBRODE, ROBERT -/RI PA/DA FL/BL BL/RU DA/FL RU/PA LL RISAL, ATULYA –/RI BL/RU PA/FL FL/DA RU/PA DA/FL KL RISAL, ATULYA –/RI BL/RU PA/FL FL/DA RU/PA DA/BL LL ROBERTS, CHAD –/RI BL/DA LL/FL FL/PA DA/LL PA/BL RU ROSSER, ALEX –/RI RU/DA PA/LL LL/BL DA/PA BL/RU FL ROSS, KAREN –/FL RI/BL LL/PA PA/DA BL/LL DA/FL RU RUZEK, DANIEL –/RU RI/DA FL/BL BL/LL DA/FL LL/RI PA

SANDOVAL, DANIEL –/RI PA/BL FL/RU RU/LL BL/FL LL/PA DA SAVELLANO, MARK –/RI LL/RU PA/BL BL/FL RU/PA FL/LL DA SEITZ, KEITH –/RI RU/FL BL/LL LL/DA FL/BL DA/RU PA SENGUPTA, MIMI –/M RU/FL BL/LL LL/DA FL/LL DA/RU FA SENGUPTA, MIMI –/DA RI/FL RU/BL BL/LL FL/RU LL/RI PA SERAG, AHMED –/RU PA/FL LL/DA DA/BL FL/LL BL/PA RI SHANMUGAM, SURESH –/FL RI/PA RU/LL LL/BL PA/RU BL/RI DA SHEU, SHUYAN –/FL LL/PA RU/DA DA/RI PA/RU RI/LL BL SHIELS, DOUGLAS – /PA BL/RU DA/RI RI/FL RU/DA FL/BL LL SKEIE, DAVID –/RI FL/DA LL/PA PA/BL DA/LL BL/FL RU SKEIE, DAVID –/RI FL/DA LL/PA PA/BL DA/LL BL/FL RU SMITH, AIMEE –/RU FL/LL PA/DA DA/RI LL/PA RI/FL BL SMITH, BENJAMIN –/LL RI/DA FL/BL BL/PA DA/FL PA/RI RU SMITH, DANIEL –/LL FL/PA RI/BL BL/DA PA/RI DA/FL RU SMITH, MCHAEL –/LL FL/PA RI/BL BL/DA PA/RI DA/FL RU SMITH, MICHAEL –/FL LL/RI BL/RU RU/DA RI/BL DA/LL PA SOHA, JILL –/BL RU/LL PA/FL FL/RI LL/PA RI/RU DA SON, MARK –/RI RU/FL LL/DA DA/BL FL/LL BL/RU PA STAMM, JOHN –/RU DA/BL RI/PA PA/LL BL/RU FA STAMM, JOHN –/RU DA/BL RI/PA PA/LL BL/RI LL/DA FL STERN, AMY –/LL RI/PA FL/DA DA/BL PA/FL BL/RI RU STURDZA, PETER –/RI RU/BL DA/FL FL/LL BL/DA LL/RU PA SYED, HASSAN –/RU PA/RI BL/DA DA/FL RI/BL FL/PA LL

TAYLOR, ERIK -/LL RI/PA BL/FL FL/DA PA/BL DA/RI RU TAYLOR, MAGGIE -/LL FL/PA RU/DA DA/BL PA/RU BL/FL RI TENG, JUN -/LL BL/RU RI/PA PA/DA RU/RI DA/BL FL

THOMPSON, DAVID -/FL BL/BL RI/FL PA/DA RU/RI DA/BL FL THOMPSON, DAVID -/FL DA/BL RI/LL LL/PA BL/RI PA/DA RU THOMPSON, STEPHEN -/FL BL/LL RU/RI RI/DA LL/RU DA/BL PA THREATT, BRADFORD -/LL DA/RU FL/BL BL/PA RU/FL PA/DA RI TORRES, CHON -/PA RU/DA FL/BL BL/LL DA/FL LL/RU RI TORRES, CHON -/PA RU/DA FL/BL BL/LL DA/FL LL/RU RI

HOWELL, ANTHEA – 'RU BL/DA PA/FI FL/LL DA/PA LL/BL RI HUANG, ZHI-RONG –/RU BL/FL DA/PA PA/RI FL/DA RI/BL LL HWANG, SEUNGWON -/RU LL/DA RI/BL BL/PA DA/RI PA/LL FL

ZZJACOX, VALERIE -/BL DA/FL LL/PA PA/RI FL/LL RI/DA RU JAIN, SANDEEP –/BL RU/FL DA/LL LL/PA FL/DA PA/RU RI JATIA, ANUP –/BL PA/DA RU/RI RI/FL DA/RU FL/PA LL JUNGKUNTZ, JENNIFER –/FL LL/BL RU/RI RI/PA BL/RU PA/LL DA

KAN, KEVIN –/PA DA/RI LL/FL FL/BL RI/LL BL/DA RU KAPUR, TARUN –/RI RU/PA FL/DA DA/BL PA/FL BL/RU LL KIBBEY, TRISTANIA –/FL RI/LL PA/BL BL/DA LL/PA DA/RI RU KITCHLOO, NITYA -/FL PA/LL RI/RU RU/DA LL/RI DA/PA BL KIICHLOO, NII IA –/FL PA/LL RI/RO RO/DA LL/RI BL/LL RU KOSHI, JEFFREY –/FL LL/DA RI/PA PA/BL DA/RI BL/LL RU KOVALIK, JEAN PAUL –/RU RI/LL DA/PA PA/FL LL/DA FL/RI BL KROWAS, JOHN –/LL RU/BL PA/DA DA/RI BL/PA RI/RU FL KULAWIK, ALAN –/PA DA/RU FL/RI RI/LL RU/FL LL/DA BL KUO, YU-CHIEN -/BL PA/FL RU/LL LL/RI FL/RU RI/PA DA KURKOSKI, BRIAN –/RU BL/DA FL/RI RI/PA DA/FL PA/BL LL KWON, CHOONG –/PA BL/DA RU/FL FL/RI DA/RU RI/BL LL KYUNG, JAE -/DA FL/RU LL/BL BL/RI RU/LL RI/FL PA

LANDE, DAVID –/DA RU/RI PA/FL FL/BL RI/PA BL/RU LL LANDRY, WALTER –/PA DA/RU RI/LL LL/BL RU/RI BL/DA FL LANGE, JON –/RI DA/PA RU/LL LL/FL PA/RU FL/DA BL LARSEN, KADE –/DA FL/BL PA/RU RU/RI BL/PA RI/FL LL
 LARSEN, KADE –/DA FL/BL PA/RU RU/RI BL/PA RI/FL LL
 LAUER, JOSEPH –/RI PA/BL DA/LL LL/RU BL/DA RU/PA FL
 LEE, JONGWON –/RI FL/PA BL/RU RU/DA PA/BL DA/FL LL LEE, JONGWON -/RI FL/PA BL/RU RU/DA PA/BL DA/FL LEE, ROY -/FL BL/PA LL/RU RU/RI PA/LL RI/BL DA LEE, VICTOR -/FL LL/BL DA/RU RU/RI BL/DA RI/LL PA LEW, HYON -/BL DA/PA RI/FL FL/RU PA/RI RU/DA LL LEW, REX -/LL DA/BL FL/RI RI/RU BL/FL RU/DA PA LI, MARCIA -/PA LL/RI DA/RU RU/FL RI/DA FL/LL BL LI, MELISSA -/BL LL/DA RI/RU RU/FL DA/RI FL/LL PA

TOWNSEND, SCOTT -/RI BL/RU DA/LL LL/FL RU/DA FL/BL PA TSAI, BIHGUANG -/DA FL/PA RI/RU RU/LL PA/RI LL/FL BL TSAI, HELEN –/PA LL/BL RI/RU RU/DA BL/RI DA/LL FL TUCKER, MATTHEW –/LL BL/FL DA/RU RU/RI FL/DA RI/BL PA TUNG, YUAN –/PA RU/BL LL/DA DA/FL BL/LL FL/RU RI TUTTLE, DEBRA –/PA FL/RU LL/RI RI/BL RU/LL BL/FL DA

ULMER; CHRIS -/RI FL/LL BL/DA DA/RU LL/BL RU/FL PA UNDERWOOD, ROBERT -/LL RI/RU PA/FL FL/BL RU/PA BL/RI DA

VAUGHN, DAVID -/FL LL/DA BL/RU RU/PA DA/BL PA/LL RI VOLENEC, ANDREJA -/BL LL/RU DA/PA PA/FL RU/DA FL/LL RI

WADA, ROY -/PA BL/DA RI/LL LL/FL DA/RI FL/BL RU WAGNER, STUART -/FL DA/RI BL/LL LL/RU RI/BL RU/DA PA WAGNER, TODD -/BL LL/RI FL/DA DA/RU RI/FL RU/LL PA WANG, XIAOHUI -/RI DA/RU BL/PA PA/FL RU/BL FL/DA LL WARDLE, GREGORY –/BL RI/PA LL/DA DA/RU PA/LL RU/RI FL WARNER, LEAH –/BL LL/DA FL/RI RI/PA DA/FL PA/LL RU WATSON, WILLIAM –/DA RI/RU BL/LL LL/FL RU/BL FL/RI PA WETTERER, SEAN -/BL DA/FL PA/RU RU/LL FL/PA LL/DA RI WHITELEY, ROBERT -/PA BL/RU FL/LL LL/RI RU/FL RI/BL DA WHITE, NATHAN –/PA BL/FL DA/LL LL/RU FL/DA RU/BL RI WIBERG, KENNETH –/DA FL/LL RI/BL BL/PA LL/RI PA/FL RU WIERSEMA, GEOFFREY –/DA RU/PA BL/RI RI/LL PA/BL LL/RU FL WILLS, JOANNA -/DA RU/RI FL/BL BL/PA RI/FL PA/RU LL WONG, DIANE -/FL RU/LL BL/DA DA/RI LL/BL RI/RU PA WRIGHT, JENNIFER -/RI LL/DA PA/FL FL/RU DA/PA RU/LL BL

YEW, ANDRE -/BL RI/RU LL/PA PA/FL RU/LL FL/RI DA YONÉBAYASHI, YUKA –/RI PA/LL BL/FL FL/RU LL/BL RU/PA DA YU, JENNIFER –/DA BL/RI LL/PA PA/RU RI/LL RU/BL FL

ZITOLA, RICHARD -/BL RI/DA RU/LL LL/PA DA/RU PA/RI FL

Submit announcements for What Goes On The Back Page on forms available outside the Tech office (SAC room 40A) and in the copy/mail room (SAC room 37), or use a plain piece of paper. Send an-nouncements to 40–58, or put them in the IN box outside the *Tech* office. Indicate the date(s) the announcement must run. Announcements for the current issue must be received by 5 pm Tuesday and should be shorter than 75 words. Announcements will be published as space becomes available and will be chosen according to size and interest to the Caltech community. Announcements for commerical events unrelated to Caltech will not be published.

Guitar Classes at Caltech

Guitar classes for the fall quarter will meet on Tuesdays starting October 3 in the Student Activities Center (SAC), Room 1. The schedule is as follows:

Beginning class –4:30-5:30 pm Intermediate class – 3:30-4:30 pm

Advanced class-5:30-6:30 pm Classes are free to Caltech students (and other members of the Caltech community, space permitting). Undergraduates can receive 2 units of credit if they choose. Classical and Flamenco repertoires will be explored but the techniques transfer to other styles of guitar. The beginning class includes a jazz and folk chord system. Private instructions on any level can be arrnaged. The instructor, classical guitarist Darryl Denning, has an international recording, perfor-mance and teaching background, and can be reached at (213) 465-0881.

Ec 120 To Be Offered NOW

Ec 120, International Economic Theory, will be taught by Dr. Ray Riezman, Tues-day and Thursday, 10:30-12:00 noon this term. The course was not listed at preregistration, so don't miss the opportunity to sign up for the course on Monday.

Student Space Group Meeting

Caltech SEDS (Students for the Explo-ration and Development of Space) will be holding its first meeting of the year, on Tuesday, October 3rd at 7:30 pm in room 15 (Clubroom B) of the SAC. We will discuss our plans for the year, which include or-ganizing trips to shuttle landings, attending the launch of COBE, and going on star parties. We will also watch videos taken at our recent conference. For more info, contact Irwin Horowitz (x4121 or 577-1930). Refreshments will be served.

H&SS Course Schedule

To assist in planning their 1989-90 course schedules, lists of humanities and social science courses to be offered fall, winter, and spring terms are available in 228 Baxter.

Tutors Needed

We will be needing tutors for our high school Saturday Science Program that begins September 30, 1989 and ends May 12, 1990. We will be needing several teachers in the Math and Chemistry classes. Applicants may call x6207 or x6208 or come by Lee Browne's new office at 107 Winnett Center.

CLASSIFIED ADS

COMPUTER SERVICES-

NASA AEROSPACE INFORMATION BBS catering to the aerospace professional. Open 24 hours, 300-2400. Latest QBBS software with FD Mailer. No fee. Open to all callers. 30 regional & national echoes, with over 3000 messages on-line. Orlando, Florida, (407) 774-7371. System operator: Mike Pompura.

Research Semester

The U.S. Department of Energy has announced a research program open to juniors and seniors interested in biomedicine, chemistry, materials science, engineering, reactor physics, atomic physics, nuclear physics, high-energy physics, environmental science, geoscience, mathematics, computer science, energy systems, waste technology, nuclear medicine, and automated inspection/measurement systems. The program provides a stipend, housing and travel reimbursement for a variety of activities including hands-on research, seminars, academic courses and advanced instrumentation training. Applicants must be a U.S. citizen or a permanent resident and must have a GPA of at least 3.0.

Applications are available in the Deans' Office. The deadline for submitting an application for the Spring 1990 semester is October 20th.

Women's Glee Club Tryouts

The Caltech Women's Glee Club welcomes all members of the Caltech community. We meet Mondays from 7:30-9:30 pm and Wednesdays from 5-6 pm in Room 1 of the Student Activities Center. Tryouts are Sunday, Sept. 24 from 1-4 pm and Monday, Sept. 25 from 3-5 pm. Additional times may be scheduled by appointment for Monday afternoon, October 2. The women will be performing portions of Handel's "Mes-siah" with the Men's Glee Club in December and touring California's central coast (Santa Barbara to Santa Cruz) during spring break. For further information call the Glee Club office at x6260 or Ami Choksi at 795-3253

Jewish High Holidays

8 Domestic

International

LORENZO'S BARBER SHOP

Call (818) 794-0210

FREE WORLD TRAVEL 1550 E. Elizabeth St., Pasadena

Unisex Hairstvling

Regular Cut (men) \$ 900

This year the Jewish High Holidays commence Friday evening, Sept. 29, 1989. Yom Kippur begins at sundown on October 8, 1989

Temple Beth Torah, a Conservative congregation, located at 225 S. Atlantic Blvd. in Alhambra, has a number of complimentary High Holiday tickets for unaffiliated Jewish students wishing to attend services. These tickets can be obtained by contacting Rabbi William Gordon at the Temple offices Monday through Thursday at (818) 284-0296.

History Film Series

Sept. 25 The Apartment (US, 1960-Billy Wilder) Executives of Consolidated Life of New York pass around secretaries as fre-quently as the key to C.C. Baxter's bachelor pad. Billy Wilders' film The Apartment won the Oscar for Best Picture in 1960. Will Jack Lemmon, as the Man in the Grey Flannel Suit, trade love for a corner office. Shirley Maclaine plays the dizzy elevator girl. Fred McMurray plays the sinister cheif of personnel.

Let The Music Begin

Friendly, non-competitive auditions for Caltech's Jazz Band, Wind Ensemble, and Chamber Music Ensembles will be held on Sunday, September 24 from 1-4 pm and Monday, September 25 from 3-6 pm and 8-10 pm in Rm. 12 of the SAC. (If you have a chance, please sign up for a time on the schedules on the door of Rm. 12, SAC.) All students are welcome to participate in instrumental music, regardless of experience. If you have questions, don't hesitate to call Bill or Delores Bing at (213) 684-8964. Returning students need not audition.

- **1st Term Mini-Lottery For Rooms** Deadline to enter: Wednesday, Septem-
- ber 27. Mini-Lottery Room Draw: Friday, September 29.
 - NOON at the MOSH OFFICE!

Symphony Auditions

The Caltech-Occidental Symphony is a full 70-piece orchestra, meeting once weekly and performing one program each term. We will be holding auditions in the Student Activities Center (Dabney basement) on Monday, Sept. 25 from 6-10 pm. Signup sheets are posted on the performing ensembles bulletin board opposite Rm. 10, SAC. For further information, call the conductor, Al-len Gross, at (818) 796-8966 or (213) 259-2574.

Folk Music Concert in Dabney

The first concert in the new season of Caltech Folk Music Society presentations will be in Dabney Hall at 8:00 pm on Saturday, Sept. 23. In concert will be Priscilla Herdman, who is a great singer (as opposed to some folk singers, who are great song-writers who happen to sing - these latter are all Bob Dylan's fault, so be sure to blame him!). In any case, tickets for the general public are \$8.00, but for Caltech students are only \$4.00. Tickets available at the Caltech Ticket Office (356-4652) or at the door

Freedom To Read

There are people out there who don't want you to read-or at least don't want you to read anything they don't find suitable. Some try to ban books from schools and libraries. Others burn books, or even try to kill off authors. Funny? Salmon Rushdie doesn't seem to be laughing. Who are the dreadful, horrible authors whose books are being banned? Ray Bradbury, Alice Walker, Lewis Carroll, Will Shakespeare . . . basically anyone whose writings inspire people to think or dream is in danger from the modern book burners.

As a result the American Library Association, along with bookstores, authors, pub-lishers and libraries around the country have set aside the week of Sept. 23-30 as Banned Books Week, in an attempt to make people aware of what is being done to their right to read.

On the evening of Sept. 23, there will be a read-a-thon at Planet 10 books in Pasadena, (79 N. Raymond Ave.) featuring various science fiction and fantasy authors. At press time they included Mick Farren, William F. Wu, Octavia Butler, Sharan Newman, Mick Garris and S.P. Somtow, with other authors possibly dropping in. The read-a-thon starts at 6 pm. There is no admission charge.

The California Tech

Poetry Contest

The American Poetry Association is conducting a poetry contest and specifically urging students to enter. The contest includes cash prizes, and has no entry fee. Entries are considered both for the contest and inclusion in a poetry anthology. Entries may consist of no more than six poems, each no more than 20 lines. The writer's name and address must be on each page. Send entries or inquiries to: American Poetry Associa-tion, Dept. CT-70, 250-A Potrero St., PO Box 1803, Santa Cruz, CA 95061. Entries must be postmarked by December 31, 1989.

Watson Fellowships

The Watson Foundation provides postraduation fellowships of \$13,000 (\$18,000 or married students) for a year of independent study and travel. Fellowships are not intended to support formal study at a for-eign university. They encourage, instead, an informal break in the normal sequence of undergraduate/post-graduate education. Caltech seniors are usually chosen for this award. In fact, a 1989 graduate, Cameron Campbell, is a Watson Fellow this year.

One-to-three page project proposal drafts are due in the Deans' Office on Friday, October 13th. Keep in mind that successful proposals generally have a single topic of study or investigation that reflects a students' long-standing interest in that area. Seniors should stop by the Deans' Office if they have any questions about this program.

Hillel Welcomes Grad Students

Wednesday, September 27th, the Caltech Hillel presents kosher wine tasting at it's best—"Life After Mogen David", at the Red Door Cafe (above the bookstore) from 5 - 7 PM. Join us for the beginning of a truely vintage year.

WEEKLY SPORTS CALENDAR

102/04/22	Contraction of the second s		
	Date	Time	Sport
	9-23	5:00 pm	Cross Country
	9-24	12 noon	Water Polo
	9-24	1:00 pm	Soccer
	9-26	4:00 pm	Water Polo
•	9-27	3:00 pm	Soccer
	9-27	4:00 pm	Water Polo
	9-30	9:30 am	Cross Country
	9-30	10:00 am	Soccer
	9-30	1:30 pm	Football
	9-30	2:00 pm	Volleyball (W)
	9-30	2:00 pm	Water Polo



I ocation Whittier Caltech Claremont-Mudd Caltech Caltech Caltech Caltech Redlands Caltech Caltech Chapman

THE CALTECH Y* WELCOMES

ALL NEW AND RETURNING TECHERS

...stop by for discount movie tickets, camping equipment, used book exchange, free food, and much, much more!! *located on the 2nd floor of the WINNETT STUDENT CENTER



Rag Time Wed. Wed. Sat. on Green Sat. RESALE CLOTHING Sat. Sat. Sat. WOMEN 1136 E. Green St. • Pasadena (818) 796-9924 Mon 10-6 • Tues-Thurs 10-5 • Fri-Sat 10-3 LOWEST AIR FARES

Day

Sat.

Sun.

Sun.

Tue

Sam Custom Tailor 3519 E. COLORADO BLVD PASADENA (818) 793–2582 Hours: 9:00 a.m. – 7:00 p.m. TAILORING for LADIES & GENTLEMEN ALTERATIONS RESTYLING INVISIBLE REWEAVING Special rates for Caltech/JPL community

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Caltech Student Discount!

\$1 off

FOR RENT-	Regular Cut (women) \$ 900 \$1 off
ANTASTIC ROOM FOR RENT, Monterey fills, 10 minutes from campus. 1 bedroom, private bath, fireplace, washer/dryer, sauna, weight room, pool, Jacuzzi, parking. \$550 single, \$575 double. 213) 342-9678.	Style Cut \$1200\$2 offPermanent Wave \$4000\$5 off9 a.m 6 p.m., Monday - Saturday 14 N. Mentor Avenue, Pasadena(818) 795-5443 No Appointment Needed
IELP WANTED-	
HILD CARE desired by JPL employee for ix-year-old, 5 days a week from 2–6 p.m. ialary negotiable. Call (818) 449–8839 fter 5 p.m.	CCO 1a
LEGAL SERVICES—	COMPUTING FUNDAMENTALS
XPERIENCED IMMIGRATION ATTORNEY . ocated in Culver City. Small consultation pe. Call Max Skanes. (213) 559–1369.	C will be taught this term
ROOMMATE WANTED-	
QUIET ROOMMATE WANTED. Alhambra apartment. (818) 458–5437.	ORGANIZATIONAL MEETING
ATES\$4.00 for first 30 words; 10¢ for each additional word. end written ad with payment to 40–58. leadline is 6 p.m., Monday before issue. to charge for on-campus lost & found.	Monday, Sept. 25, 4 р.м. • 201 Booth CAMPUS COMPUTING ORGANIZATION

	LIFORNIA TECH	
40-58 S/	C CALTECH	
` Pasadena	CALTECH California 91125*	