

Add

CALIFORNIA THE TECH Day

Volume XCIV, Number 4

Pasadena, California

October 16, 1992

Marcus Wins Nobel Prize for Chemistry



Rudolph Marcus, Arthur Amos Noyes Professor of Chemistry, is the 1992 recipient of the Nobel Prize for Chemistry.

Kevin Du

Yesterday evening Braun Court yard was host to a motley band of exuberant members of the Chemistry department as Harry Gray led them in a vigorous cheer for his friend and colleague Rudy Marcus—despite Professor Marcus' absence from the party.

Rudolph A. Marcus can now add, to his already impressive list of 36 awards and honors, the distinguished Nobel Chemistry Prize, thus becoming the 22nd Nobel Laureate to grace Caltech. He is the first faculty member of Caltech to become a Nobel Laureate in nearly a decade—since William A. Fowler received the Nobel prize for Physics in 1983.

The Royal Swedish Academy of Sciences announced Wednesday morning that Professor Marcus had won the prize. Marcus, however, was not home to be notified, and thus the first news of the award was given to his answering machine. Professor Marcus was at the time in Toronto's Royal York Hotel, presenting one of the lead papers at the Electrochemical Society, Inc. conference, and a few inquires and fifteen minutes later, he was inconspicuously pulled out of the room in the middle of his presentation and told the news.

Professor Marcus said he was "a bit dazed at hearing the news."

"[Marcus] found simple mathematical expressions for how the energy of a molecular system is

affected by changes in the structure of reacting molecules and their nearest neighbors," the Academy said. The fundamental points of this electron transfer theory were first presented in a key paper which he wrote in 1956 at the Polytechnic Institute of Brooklyn after puzzling over a graduate student's mathematical problem.

As Fred Anson, head of the Chemistry Department, stated, "Before [Marcus' theory], people couldn't understand why particular reactions went fast or slow even when they had similar driving forces. He pointed out the factors that determined the rate and made accurate predictions." Marcus' theories are internationally recognized and are of fundamental use to scientists trying to predict what happens during almost any chemical reaction.

And while the theory behind how electrons move about in chemical reactions is complex, the mathematical formula itself is "very pretty and elegant, very easy to use" with only two determining factors, according to Aseem Mehta, one of Marcus' graduate students. This falls in line with Alexei Stuchebrukhov's, a research associate, description of Marcus as one whose "ultimate goal is to understand the nature of things...and to discover useful theories that can be applied by a wide audience."

In 1985 Marcus won the coveted Wolfe Prize. Then, a portion of his theory was confirmed in 1988 at

Argonne National Laboratory with experiments testing predictions on the behavior of electrons with an addition of energy. Further experiments have confirmed Marcus' predictions to be 99% accurate in producing the rate of reactions.

And while Marcus won the Nobel Prize for predictions specific in a ferric-ferrous system in water solution, his predictions can be applied to an incredibly broad range of reactions from digestion to artificial photosynthesis to the electrodes on fuel cells. "[It can be used] anywhere electrons move, essentially any chemical reaction," as Professor Nate Lewis stated.

Other research, besides electron transfer, which Marcus is actively involved and responsible for includes Intramolecular Vibrational Redistribution, nuclear tunneling, and the RRKM theory (the M stands for Marcus). "Even among scientists, this man is a pure scientist," said Greg Voth, a former graduate student of Marcus', told the Pasadena Star-News. "It's incredible, his love and burning desire to find things out."

Rudy Marcus, age 69, has been in residence at Caltech as the Arthur Amos Noyes Professor of Chemistry since 1978 and lives in Pasadena with his wife Laura and three sons. Marcus was born in Canada and received his B.Sc. (1943) and Ph.D. (1946) from McGill University in Montreal. Friends and colleagues describe him as "a great guy" and

Continued on page 3

Fanfare Marks the Opening of Braun Athletic Center

Steve Sobelman & Anoop Sinha

Caltech's latest architectural addition, the Braun Athletic Center, was opened to the community last Friday, October 9.

About 2500 people braved the heat to get a first glimpse at the new facilities and enjoy a healthy luncheon from the huge, beautiful

buffet in the new NCAA-regulation gym. The reception followed a brief dedication ceremony which honored the Braun family and, in particular, John Braun, whose death in June of this year prevented him from seeing the fulfillment of his vision of bringing modern recreational facilities to Caltech.

Five speakers shared their thoughts on the importance of the new athletic center during the ceremony. President Everhart, after asking for a moment of silence in memory of Mr. Braun, talked about the gift's meaning to the community. William F. Kieschnick, Vice Chairman of the Board, noted that

this is the first project to be completed during the current campaign. He also praised the leadership of the Braun family in large projects, including this and gifts such as Braun House and the Braun Laboratories for cell biology and chemistry.

Pamela Braun Pesenti, Trustee, emphasized the Braun family's and the Braun Foundation's primary intentions "to fund broad-scope projects" which will benefit many aspects of the community. Later, she and the other members of the Braun family in attendance expressed gratification at the extraordinary turnout from all aspects of

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Bridge Without Sam

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Kinko's Founder to Speak

Hall Daily

Paul Orfalea, founder and chairperson of the board of Kinko's Copy Centers, will speak at The Athenaeum on Monday, October 19, at 4:00 p.m. Students are invited to attend his talk on "Entrepreneurialism" in the Hall of the Associates. A reception will follow the talk at 5:00 p.m., and dress is casual.

Kinko's was founded in 1970 near the UC Santa Barbara campus. The enterprise now encompasses a privately held network of more than 120 partnerships, each operating one or more the 600 copy centers around the United States and in Canada, Japan, and the Netherlands.

A graduate of USC, the curly-haired Orfalea used his own nickname when he selected Kinko's as his company's name.

Orfalea will talk to Caltech students and staff about his corporate philosophy, which stresses teamwork, open communication, and the importance of both personal and professional needs of employees, who at all levels are referred to as "co-workers." He will also talk and answer questions about Kinko's customer relations approach, including the benefits of seven-day-a-week service and, in most cases, 24-hour-a-day store hours.

"Tell The Truth, Mr. President"

Ben McCall

"The American people should demand that their President tell the truth."
— Dan Quayle, October 13, 1992

I couldn't agree more.

It took a while but we finally uncovered something that Dan Quayle said Tuesday night that rings of the truth. His boss, George Bush, should tell the truth. Mr. Quayle added: "You cannot lead this great country of ours by misleading the people." Right again.

So in the interest of uncovering the truth and setting the record straight before the American people vote, here are a few topics and questions that George Bush ought to tell the truth about.

#1. "Stategate": Who Asked for What?

Wednesday's Washington Post reveals that, in a last-ditch attempt to smear Bill Clinton's character, the Bush Administration has been acting like the Nixon Administration. The Post reports that a Bush Administration political appointee directed the U.S. embassies in London and Oslo to search their files on Bill Clinton.

The Post characterized the requests, by Assistant Secretary of State for Consular Affairs Elizabeth Tamposi, as "unusual," and said that they received "extraordinarily high-level attention." Passport files are — as the State Department's own director of its Freedom of Information Office, Frank Machak maintains — "covered by the Privacy Act." (Washington Post, 10/14/92)

The State Department, in a policy statement sent to the National Security Archive in Washington D.C., notes that FOI requests are expedited only in "truly exceptional circumstances." These circumstances include: "(1) whenever it is demonstrated that an individual's life or personal safety would be jeopardized by the failure to process requests immediately, and (2) whenever it is shown that substantial due process rights of the requester would be impaired by the failure to process immediately, and that the information sought is not otherwise available." (Letter to National Security Archive, 11/22/91; attached.)

The Questions:

Who approved these approve "unusual" searches of Bill Clinton's passport files?

Were the searches reported to Tamposi's superiors in the State Department and if so, who? Were the searches reported to anyone in the White House or the Bush/Quayle campaign?

How will Bush determine who is responsible, and what actions will he take against them?

Is this search connected to Bush's secret White House meeting with extreme right wing Republican Congressmen like Bob Dornan to plan political attacks on Bill Clinton's trips to Eastern Bloc countries?

Which of the State Department's two FOI criteria for expedited search did this request meet?

Will the Administration come clean and immediately release all material related to the FOIA requests and State Department searches?

#2. Iran-Contra: The Truth About Arms for Hostages

For six years, George Bush has said he did not know the U.S. was

-- George Stephanopoulos, Clinton/Gore Communications Director

trading arms for hostages with Iran. He claims he was "out of the loop" and unaware of the ill-fated deal and gave testimony to the Tower Commission and Iran-contra investigators to that effect. "I sensed that we were sending arms. And I sensed that we were trying to get hostages out. But not arms for hostages." (UPI, 1/8/88)

And yet when asked on October 13th by Katie Couric whether he knew about the arms for hostages, George Bush replied, "Yes, and I've said so all along, given speeches on it." (NBC "Today," 10/13/92) When asked about his boss' role in the scandal Wednesday morning, the Administration's attack puppy, Dan Quayle replied: "He said it all along. That's no news." (NBC "Today," 10/14/92)

The Questions:

Did he or did he not know about the arms for hostages deal with Iran? If he knew, did George Bush mislead the investigators or has he misled the American people? Or both?

How could he have sat through three dozen briefings on the issue, been in the room when Reagan signed the order for the arms-for-hostage deal, sat in the meeting where Shultz and Weinberger voiced their strong opposition, sat through briefings on the issue with McFarland and yet not catch on?

George Bush has testified twice on his role in the scandal. Once to the Tower Commission and once to the Iran-contra investigators. Will he now make public his testimony to those two bodies?

#3. Iraq-gate: Just how much did we help Saddam?

George Bush likes to pretend we "did not enhance Saddam Hussein's nuclear, biological or chemical weapons capability," despite mounting evidence that dual-use American technology helped him in his bid to acquire weapons of mass destruction.

George Bush maintains he was unaware of any diversion of loans to Iraq and yet we now learn that his Administration had direct evidence of diversions of loans made through the Atlanta based branch of BNL but tried to cover them up. Marvin Shoob, the US District Judge in the BNL case said, "Certainly, either the CIA or the Justice Department or both have misled me." (LAT, 10/13/92) It is time George Bush came clean with the American people on his role in Iraqgate.

The Questions:

What's he hiding? What are we going to find out after November 3?

Why won't George Bush release the key documents that would reveal just who was doing what with Saddam up to the eve of the invasion of Kuwait? These documents include:

*The transcript of the cables between the Administration and US Ambassador April Glaspie revealing U.S. messages to Saddam.

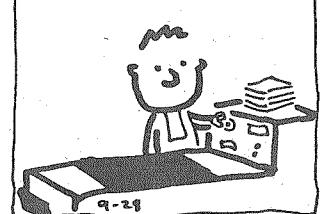
*The text of National Security Directive 26 ordering closer political and economic ties with Iraq.

*The text of George Bush's personal communique to Saddam Hussein on July 28, 1990 five days before the invasion.

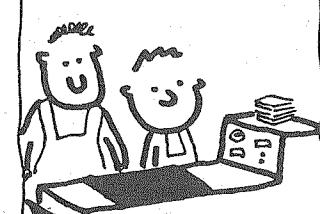
If George Bush thought he was doing the right thing by trying to bring Saddam Hussein into "the family of nations," why won't he come clean?

Jim's Journal

I worked at the copy store today.



Hal came up behind me and watched me make copies.



I wondered if maybe I was doing something wrong.



by Jim

THE CALIFORNIA TECH

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Sat-Sun Bargain Matinee 2:30 p.m.

FRIDAY NIGHT ASCIT MOVIE

Shakespeare's Henry V

war pillage murder intrigue

Baxter Lecture Hall at 7:30 and 10:00
\$1.50 Ascit and \$2.00 non Ascit

Next Week: Bugs Bunny Road Runner

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Marcus Wins Nobel Prize

"really down to earth and nice".

Indeed, faced with the prestigious Nobel Prize, Marcus has hardly changed his modest attitude. The Los Angeles Times reported Marcus said, "getting the answer to that problem was by far the most exciting moment in my scientific life. I'm still as excited about my work now as I was then. It is great to win the prize, but the ultimate is just being able to solve problems and seeing your work used... I'll keep doing research as long as I feel what we're

doing is sort of novel. We're having a lot of fun doing things we haven't done before." As for the 1.2 million dollars that go with the prize, Marcus told the Pasadena Star-News, "we don't need anything, I don't have any immediate plans. I don't think it'll affect our life."

"He has a high standard and integrity, and is a very high quality scientist," said Stuchebukhov at Wednesday's party, "he is a rare person."

Caltech's Nobel Laureates

Robert Millikan	Physics	1923
Thomas Hunt Morgan	Physiology and Medicine	1933
Carl D. Anderson (B.S. '27, Ph.D. '30)	Physics	1936
Edwin M. McMillan (B.S. '28, M.S. '29)	Chemistry	1951
Linus Pauling (Ph.D. '25)	Chemistry	1954
William Shockley (Ph.D. '32)	Physics	1956
George W. Beadle	Physiology and Medicine	1958
Donald A. Glaser (Ph.D. '50)	Physics	1960
Rudolph Mössbauer	Physics	1961
Linus Pauling (Ph.D. '25)	Peace Prize	1962
Charles H Townes (Ph.D. '39)	Physics	1964
Richard Feynman	Physics	1965
*Murray Gell-Mann	Physics	1969
Max Delbrück	Physiology and Medicine	1969
Leo James Rainwater (B.S. '39)	Physics	1975
Howard H Temin (Ph.D. '60)	Physiology and Medicine	1975
William Lipscomb (Ph.D. '46)	Chemistry	1976
Robert W. Wilson (Ph.D. '62)	Physics	1978
*Roger W. Sperry	Physiology and Medicine	1981
Kenneth G. Wilson (Ph.D. '61)	Physics	1982
*William H. Fowler (Ph.D. '36)	Physics	1983
Rudolph Marcus	Chemistry	1992
* in residence		

Crime & Incident Beat

Stephen Heise

Crime Tip: Please, don't walk off campus alone at night.

10-8 A Tech was followed by two men from Chester and Del Mar to Holliston. There he was told at knifepoint by one of the men, "Give me your money." Meanwhile the other suspect struck the victim with a karate chop to the neck. The victim fell to the ground and his wallet was taken. The wallet

contained cash and credit cards. (\$14)

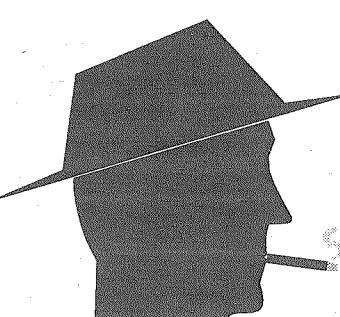
10-9 A suspicious person was found showering on the second floor of Keck House. He was escorted off campus.

10-9 A car parked at BBB had the rear driver's window smashed. The radio/tape player, backpack, running shoes and shorts were taken. (\$310)

10-10 A set of surround sound speakers were stolen from the Catalina I Recreation Room. (\$1300)

10-12 Three windows at Business Services were found with BB pellet nicks in them. No pellets were recovered. The damage was superficial.

Week Total: \$1624



World



News

Huy Le

Nobel Prizes

Caltech professor Rudolph A. Marcus won the 1992 Nobel Prize in chemistry (see page 1)

American researchers Edmond H. Fischer, 72, and Dr. Edwin G. Krebs, 74, both from the University of Washington, share the 1992 Nobel Prize for physiology or medicine, for their studies of how chemical reactions within cells are activated and deactivated.

Derek Walcott, a 62-year-old West Indian poet compared to a modern-day Homer by critics, won the 1992 Nobel Prize for Literature last week for an extensive body of work that offers a rich, evocative blend of African, West Indian, and European cultural traditions.

Congress

Congress approved last week an energy policy designed to increase the use of nuclear energy and spur the development of alternative and renewable fuels. President Bush is expected to sign the bill despite the fact that it contains several tax increases.

U.S.-China Relations

After over a year of trade talks, China has agreed to eliminating most of its import quotas, trade restrictions, controls, and licens-

ing requirements on U.S.-imported goods for the next five years, as a result guaranteeing American companies greater access to China's huge market and avoiding an ugly trade war involving retaliatory duties on imports.

U.S.-Iraq Relations

The Bush Administration contacted Iraqi officials last Friday, demanding the release of an American bomb expert seized Thursday while working to clear land mines on the Kuwaiti side of the Kuwait-Iraq border. Iraq agreed to the demands on Saturday, ending fears of a confrontation. Meanwhile, Iraqi President Saddam Hussein asked that the United Nations suspend weapons inspections until after the U.S. election to prevent the Bush Administration from creating incidents that might help Bush's chances.

Former Soviet Union

On Wednesday, Russian President Boris Yeltsin disclosed two documents on the 1983 downing of a South Korean jumbo jet and the World War II execution of thousands of Polish officers. He blamed former Soviet President Mikhail Gorbachev for keeping such material secret for so long.

Russian President Boris Yeltsin warned last week that a "large-scale war" could erupt unless the leaders of the former Soviet republic of Georgia do not reach a political agreement with their counterparts in Abkhazia, a region of the republic fighting for independence.

Leaders of the Commonwealth of Independent States are meeting to improve their economic state and international relations and to ease the warfare raging in several areas of the former Soviet Union. They agreed Friday to create an inter-republican committee to help inte-

grate their feeble economies but did not give it executive powers. In addition, they agreed on a reduction of nuclear arms.

Bosnia-Herzegovina

The commander of U.N. peace-keeping forces in Bosnia-Herzegovina warned last week that 400,000 residents of the battered region are at a risk of dying from freezing or starvation, if foreign countries did not speed their deployment of troops in the area.

The U.N. Security Council on Friday blocked all military flights over Bosnia but rejected U.S. demands to authorize the shooting down of planes to enforce the "no-fly" zone. The U.S. is accusing Serbian forces of violating the ban and is appealing to the Council on ways to ground the aircrafts.

Egypt

An earthquake of a 5.9 magnitude and three aftershocks rocked Egypt Monday, killing over 400 and injuring more than 3,000. The epicenter was only 20 miles from Cairo. Scientists fear the possibility of a newly active fault line near the capital. (Pyramids and Sphynx seem OK.)

South Africa

President Frederik de Klerk apologized for the ruling party's 42 years of enforcement of apartheid. The African National Congress recently agreed to recontinue talks for a new constitution.

Japan

The Japanese public uncharacteristically protested after Liberal Democratic Party powerbroker Shin Kanemaru avoided an indictment for taking \$4.1 million in illegal campaign contributions.

S. C. R. PRESENTS . . .

THE "Dive-In" Movie

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continued from page 1

Braun Athletic Center

the Caltech community.

Amitabh Mehra of Ricketts House, senior in Electrical Engineering and President of the Associated Students of the California Institute of Technology, gave the student's perspective on the project. Finally, Dan Bridges, Director of Physical Education and Athletics, gave thanks to a number of the people who helped in completing the project, including Warren Emery, Gary Lorden and Jeanne Noda, David Morrisroe and President Everhart.

"The opportunities for students have tremendously increased," according to Mr. Bridges. All along, one of the primary purposes of Braun Center was to increase the number and quality of athletic opportunities for both graduates and undergraduates. Restrictions have been imposed on use of the facilities by people outside of Caltech and JPL. Only two guests will be allowed per visit, giving more access to students instead of friends of friends of JPL employees. Mr. Bridges also pointed

out that the new gym is "conducive to casual use," like wandering over for a game of "pick-up basketball" on an open court in the new gym.

Mr. Mehra touched on some others ways that the new center will enhance student life. "It's the closest thing we have to a new community center or student union." In fact, he said that the ASCIT Halloween party will be held at Braun Center this year, instead of its usual Dabney Gardens location. "The gym has a kitchen," to be utilized for parties and other activities. Mr. Mehra got to see both the men's and women's locker room, which were restricted from the public tours for logistic reasons. He was particularly impressed by the immensity of the women's locker room. In general, Mr. Mehra was "awed at the new gym."

Robert Miles, graduate student in Applied Physics, also found the gym "impressive." He works out regularly at a local gym and is thinking about giving up his membership to use the weight training and health



photo by Bob Paz

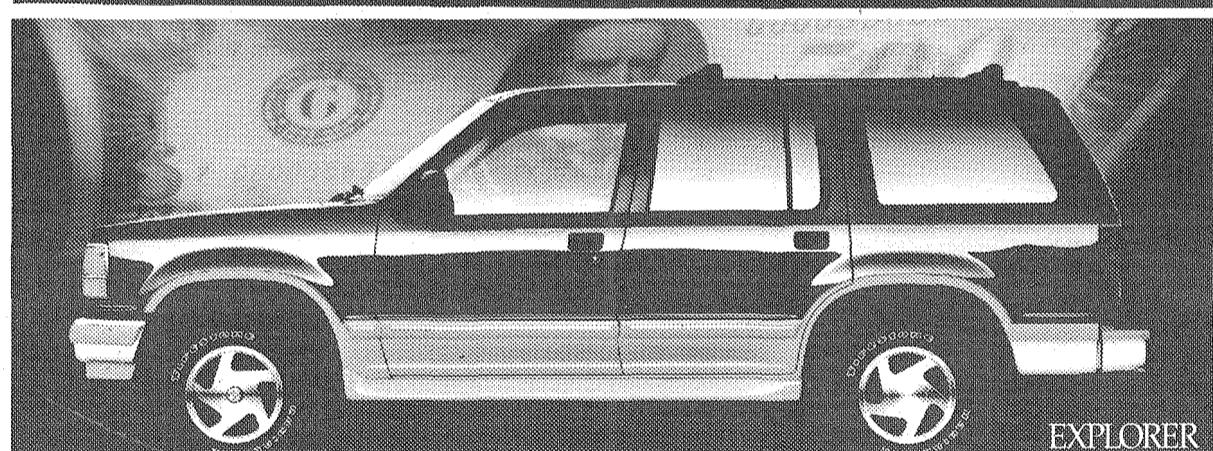
Pamela Braun Pesenti speaks to the audience gathered to witness the opening of the Braun Athletic Center.

facilities at Braun Center instead. He is also thinking about adding racquetball and squash to his regimen. His only criticism is that he "would like to see it open later than

6:00 on weekends," and that his padlock sticks in the lockers in the men's locker room.

Braun Athletic Center is open 6:00 a.m. to midnight, Monday

through Thursday, 6:00 a.m. to 10:00 p.m. on Friday, and 8:00 a.m. to 6:00 p.m. on Saturday and Sunday. Facilities include a new weight room, with brand-new weight training equipment plus exercise bikes and rowing machines, new gym, two squash and four racquetball courts, and a multi-purpose room. Aerobics will be offered each weekday from 12:10 p.m. to 12:55 p.m. and from 5:30 p.m. to 6:30 p.m., and Monday, Wednesday and Friday from 6:30 a.m. to 7:30 a.m. Single use day lockers are available in both Braun Center and Brown Gym.



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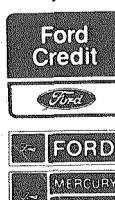
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The Official Minutes of the ASCIT BOD Meeting of October 13, 1992

Korhan Gürkan

Present are the BOD (minus Ben), Bryce, Steven Fought, Ewald Hueffmeier, Scott Van Essen, Xavier Bengoechea.

ASCIT BOD meetings will be held at 10 p.m. each Tuesday.

WHERE IS BEN?

Elections: Nominations for Junior Class Secretary/Treasurer were closed tonight. Election will be this Monday. The nominations for Director for Academic Affairs will be open for one more week. Elections for this office and the BOC bylaw changes will be held next Monday, October 26. DON'T FORGET TO READ ABOUT THE BYLAW CHANGES.

Bryce is back, and he is pissed at Amoeba because he was not recognized at the opening of the new gym. Hey, he is Ath Man after all. Right Amit?

Sabre Team Banner: As you all know, last year, Caltech Sabre Team won the conference and the sectional championship. Since Resolution VIII only covers conference championships, the sabre team requests that the team members get another patch for their Western Region title. They also request that funds be made available for the purchase of a banner to be displayed in the new gym. The BOD likes the banner idea, and approves both requests (6-0)

Speaking of BOD members with an amazing sense of responsibility, WHERE IS BEN SMITH, MR. IHC? By the way, Todd fix the copier and the old van! Oh, if you want to borrow one of the ASCIT vans, call 564-1260 or come to 1170 Del Mar #6. For the next ten minutes, we are bitching about the Tech editors and all the other ASCIT officers who are being lame. Amit starts making up a list of people we need to purge. But hey, who does he think he is? I think the problem with ASCIT starts at the top. Let's get rid of Amit. Better yet, let's get rid of Mike, too. That means more power to me. Yes, the day has finally

come....OK, let's move on to some serious business.

DAPAC Policy needs to be reviewed this year. Barbara Green is in charge of this. If you are interested, see Mike Nassir. Also, the sexual harassment policy will be reviewed soon, so see Barbara Green or Mike by Friday.

Society of Hispanic Professional Engineers: Xavier is here to ask for funding for SHPE. Their purpose is to contribute to the advancement of the Hispanic society. The BOD requests that they submit a budget proposal next week. Sorry, see you later.

Rehab Party: The North Houses plus Fleming are having a party on Saturday at Ruddock. Of course, Amit isn't even aware of the posters that have been around for the longest time. By the way, Lloyd gets their \$200 for the party. Meanwhile, Derek still hasn't contacted Dan Bridges about the Halloween Party.

Derek notes that the ASCIT hockey sticks are being used. Ball hockey tournaments will be organized soon. If you want to use the equipment, go to Lloyd Shed. Talk to Derek first, though.

Any IHC news, BEN? The BOD agrees that the IHC is nonfunctional and that ASCIT should take over. One of the three pillars of student government at Caltech has fallen.

Faculty Board Meeting: Mike talks about the meeting. Apparently, the statement in the catalog was put there by Gary Lorden's office. According to Dr. Lorden, this has always been Caltech's policy. It is unlikely that the statement will be removed because the lawyers are fully behind it. However, the grandfather clause-you know, the one about being able to graduate under any catalog while you're at Caltech-will probably be put in the catalog. However, this still has to be approved by the Curriculum Committee and the Faculty Board. Steve will still be running around, looking for an explanation.

Another issue discussed at the Faculty Board meeting was the re-

view of the core curriculum. Academic Policies Committee is in charge of the review. While some faculty members are proposing some minor changes, some think that broader changes need to be brought. They are not happy with the students' concern about grades. They think maybe the school needs to get rid of grades. This whole argument stems from what the Institute's education philosophy should be.

Committees: I have put signups for the Academic Policies, Grievance and Athletics committees outside the ASCIT Meeting Room(next to the DRL's Office). Also, the Women's Center needs one undergrad on its Advisory Board and one on its Director Search Committee. There are also signups for these. You can signup for both. And finally, WHERE IS THE BIG T? (No bonus)

If you want a copy of the ASCIT Minutes, drop me a note at Box 565 or call 564-1260.

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CLUE: Debi explains all the problems they encountered in the publication of the CLUE. So, now we know why the page numbers were messed up. However, this year's CLUE was \$2000 cheaper than last year's, with the same number of pages. Student Affairs is supposed to pay for the cost. As for the salaries, Rob offered \$100 of his salary to Debi, since she did all the publishing stuff. The BOD approves to pay Rob \$300 and Debi \$100 (5-0-0).

Wellness Week: The Health Center is organizing it this year. It is going to be the week of October 19-23. They will have all this biofeedback-relaxation stuff and free massages. They are asking for \$500 from ASCIT. Hey, you might as well participate 'cause we approved their request (5-1-0).

Parties: Derek is planning to have the Halloween party at the new gym. Sounds like a good idea but, Dan Bridges needs to approve it. Also,

the North Houses are having a party in two weeks. Since Stu left, Tim Crowder is the new Jam Room Manager. Go bug him!

Elections: Ewald is ready for elections. Nominations for the Director for Academic Affairs and Junior Class Secretary/Treasurer opened last week. Sign up, so that you get a chance to join that glorious bunch. The Director for Academic Affairs will be responsible for the 1992-93 CLUE, however, will be in office only until March. The BOD decided to change the responsibilities of this office. From now on, the elected D for AA will be responsible for the new academic year's CLUE. Amit will prepare a resolution for that. Also, coming up at the elections will be the BOC bylaw changes. The elections will be held within the next two weeks.

Bylaw changes: The BOC has three bylaw changes. The proposed changes will appear in the Tech soon.

Catalog: What's the deal with the first page of the new Caltech catalog?... Are we supposed to tear it? Maybe it is just a joke... Steven Fought is trying to find out who did the deed, but so far, the responses he got are very amusing and hardly helpful. The BOD will wait for Tuesday's Faculty Board Meeting before it takes any action. Meanwhile, Steve will be running around, looking for an explanation.....

There are plans for a summit between the GSC and ASCIT. Caltech Y is trying to organize something... Academic Policies Committee and Grievance Committee each need one more member... WHERE IS THE BIG T? (I guess they won't be getting a bonus.)

YNEWS YNEWS YNEWS

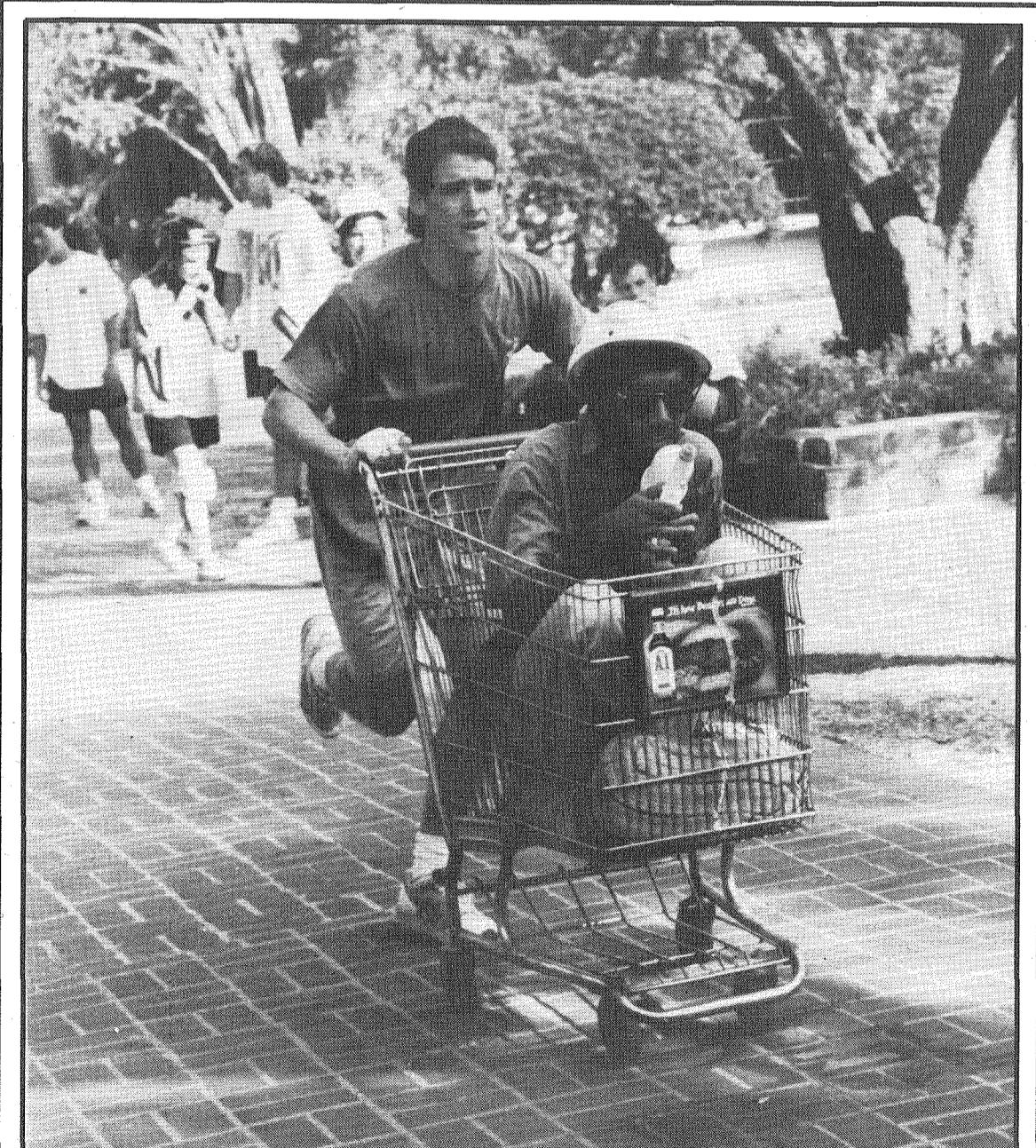
Katy Quinn

It's the start of a new school year with lots of new people to meet and lots of new viruses to catch. So what better time than right now to have Wellness Week! What is this Wellness Week you ask? A week long extravaganza dedicated to bringing you health and happiness, sponsored by all your favorite organizations: ASCIT, the Caltech Y, GSC, Health and Counseling Centers, Office of Student Activities, Staff and Faculty Consultation Center and the Undergraduate and Graduate Deans' Offices.

Monday, October 19th, is a massage class and demonstration (sorry, we already have an assistant) and a biofeedback demonstration, 7:30 pm in the Caltech Y lounge. Tuesday is a discussion, "Relaxation and Guided Imagery Techniques for Managing Stress" at 7:30 pm in the Caltech Y lounge. On Wednesday the Student Activities Center presents, "Comedy Unplugged - Laugh Your Stress Away" Then comes the grade finale, Friday from 12 noon until 3 pm will be a Health Fair outside Winnett Lounge. There will be lots of educational displays ranging from blood cholesterol checks to AIDS awareness. After the fair, from 4 pm to 6 pm, the band "Moonwash Symphony" will perform for your listening pleasure.

But wait, that's not all! We still have our usual plethora of Caltech Y events. Sunday October 18th, leaving 8:30 am, is the Throop Peak Hike, a 4.5 mile easy day hike to Throop Peak, named after Caltech's late and great founder Amos Throop. Paul Orfalea, founder of Kinko's, will be speaking at an entrepreneurial reception, 4 pm at the Atheneum. There will be free food and all are welcome to show up. Next weekend, Saturday 24th, is the event you've all been waiting for. The Bofo-Bonecrusher X Broomball Tournament!! Sign up a.s.a.p. if you want to be in on the action.

If you have any questions about these activities please call the Y at x6163. We are open Monday to Friday, 9 am to 5 pm, our offices are on the second floor of the Winnett Student Center. Come on up and say howdy!



Rob Whitley pushes Mitesh Patel to victory during Page House's Alley Olympics last weekend.

photo by Anoop Sinha

Proposed BöC ASCIT Bylaw Changes

Note: Regular type denotes existing bylaws. Strikeout type denotes proposed deletions. Italics indicate proposed additions.

1. No bylaw currently requires that BOC representatives be undergraduates. We would like to rectify this oversight.

Append the following to Article VII, §2:

Only registered undergraduates may serve as Board of Control representatives.

2. We would like to make it possible for the Associate Dean to participate in the Dean's review of each case if the defendant choose to have her present.

Change article VII, §1 as follows:

The Board of Control shall review all cases of alleged violations of the Honor System and shall make recommendations to the Dean of Students for action in those cases in which the accusation is held to be true a violation is found to have been committed. All defendants will be asked if they wish the Associate/Assistant Dean of Students to participate in the Dean's review of the Board's recommendations. It shall be the duty of the chairman...

3. We would like to allow any defendant to request a "sidebar," a chance to discuss questions about the Board procedure or aspects about his or her case with a single member of the Board. This is to be used in situations where a defendant feels particularly uncomfortable in front of the entire Board, but it is in no way intended to replace the full Board hearing. The individual Board member will not be able to receive privileged information, i.e., he or she will share any information relevant to the case with the full Board. These meetings will take place at the discretion of the chair.

Create new Article VII, §3(m) and relabel the following subsections accordingly:

A defendant attending a hearing of the full Board may ask the Chair at any time for permission to hold a short, private recess with a Board member of the defendant's choice. Any new information pertaining to the case revealed in this conference will be shared with the full Board. The member shall remain able to vote on the case.

ASCIT Election '92

Moeen Abedin

As many of you may know, I dropped out of this election in July. However, after intense consultations with my volunteer coordinators, I have been persuaded to continue my bid for this office. The current candidates have now shown the improvement I wanted to see, so, with the request of millions behind me, I shall run.

All joking aside, I am running for Junior Class Secretary/Treasurer because I want to complete the duties of the office: to organize a frosh-sophomore event (Mudeo) and search for a commencement

speaker. I look forward to working with Stanley Grant III, our class president, on these tasks. I know Stan pretty well; I think we will make a really good team and get the job done. Stan and I have already had many animated conversations about the Mudeo pit. After intense debate we concluded the first thing we should do is dig a hole. It is conceivable that we could talk about Mudeo and commencement every day for the whole year! In addition, I promise to report in *The California Tech* the state of the treasury once it is established. Now that you have the facts, juniors, remember to vote for Moeen on Monday.

Jeff Pasquino

Since you are obviously reading this statement, you must have some interest or concern about this election for Junior Class Secretary/Treasurer (or you're avoiding having to read the fascinating Bridge column). Anyway, I am running for this office because I feel that the job needs to be done, and I can do the job. Graduation would be pretty poor without a graduation speaker, and that is my number one priority if elected. I have held positions of responsibility and leadership in my own house, being a member of the Fleming athletic team for the last three years. So if you want someone who is willing to do the tedious behind-the-scenes job of Secretary/Treasurer, please vote for me on Monday. Thanks.

Junior Class Secretary/ Treasurer Statements

ASCIT Election News

Ewald Hueffmeier

The first election of 1992-1993 is now underway. the Junior Class Secretary/Treasurer election will be held on Monday, October 19. All juniors are eligible to vote in this election. The candidates are Moeen Abedin and Jeff Pasquino. Please read their statements in this issue of the *Tech*.

ASCIT members: Nominations are still open for the Director of Academic Affairs. The Director of Academic Affairs position is currently vacant. Whoever is elected to fill this vacancy will serve on the ASCIT Board of Directors only until March, but will be responsible for the publication of next year's *C.L.U.E.* A nominee for the office must be a member of ASCIT. Other responsibilities of the Director of Academic Affairs include serving as Chairman of the Educational Policies Committee.

Anyone wishing to run for this office may sign up on a sheet posted on the east wall of Winnett next to the ASCIT meeting room. Sign-ups come down at 5pm on Tuesday, October 20.

The initial election for the Director of Academic Affairs will be held on Monday, October 26, with a run-off election, if necessary, on that Friday. The October 26 election will also include three proposed by-law changes dealing with the Board Of Control. Don't miss this important election! Absentee ballots may be cast for any election if they are filed with the Election Chairman no later than midnight before the election. If you have any questions, read the by-laws in your *Little-T*, or contact the Election Chairman, Ewald Hueffmeier: Page 105.

Jim's Journal

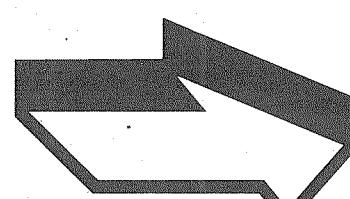
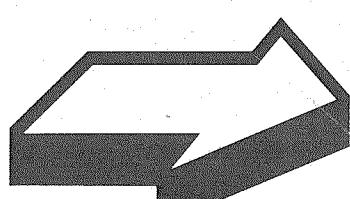
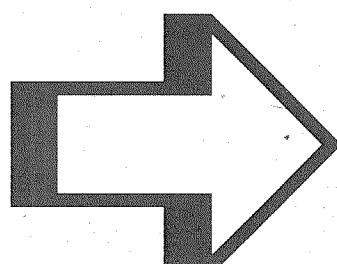
Today I saw somebody who said he lost the little latch from his watch.



I helped him look for it.

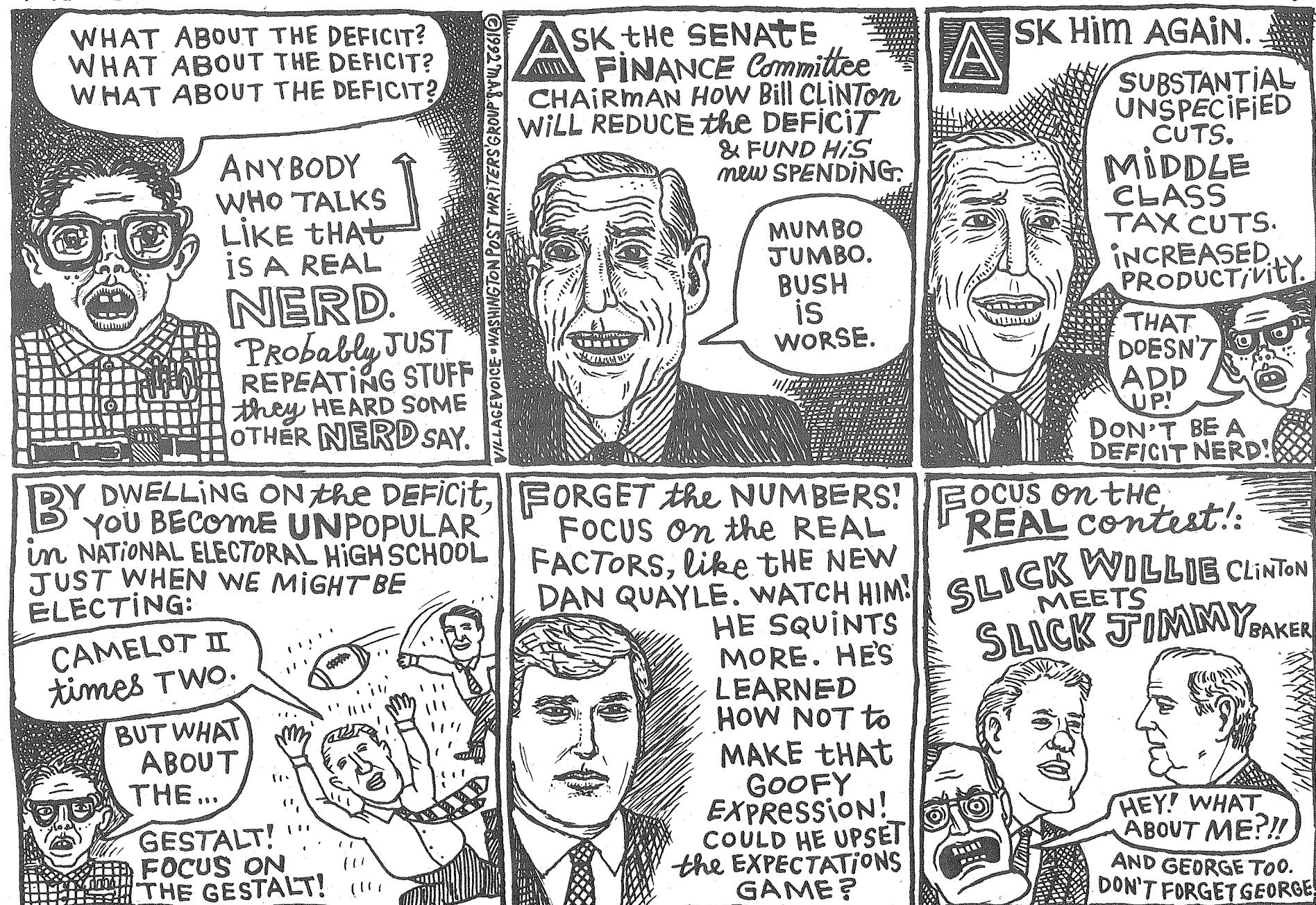
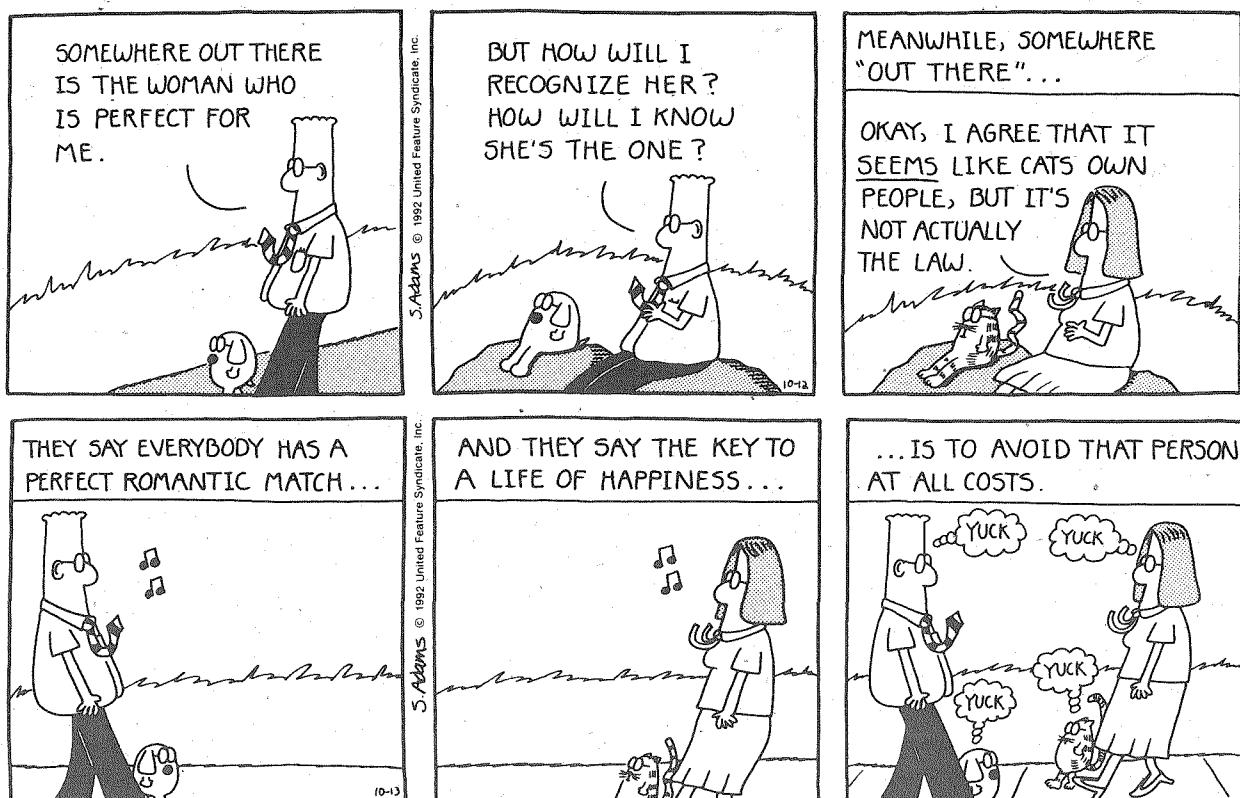
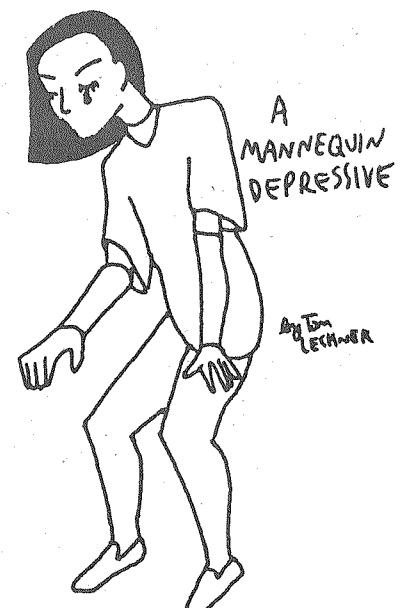


COMICS



WASHINGTON TOON.

Mark Alan Stamaty

**DILBERT® by Scott Adams****lechner****Jim's Journal****by Jim**

ENTERTAINMENT

Shakespeare's "The Two Gentlemen of Verona" comes to Caltech

Cara Stemen

The California Shakespeare Festival will present "The Two Gentlemen of Verona", Shakespeare's comedy of infatuation, rivalry and unbridled jealousy, on Saturday, Oct. 17 at 8 p.m. in Beckman Auditorium.

One of Shakespeare's earliest romantic comedies, "The Two Gentlemen of Verona" tells the story of Valentine and Proteus, best friends whose relationship is strained when they vie for the hand of the lady Silvia. Love and loyalty are further tested with the arrival of Julia, Proteus' first love. Director Penny Metropulos adds a touch of 19th-century romanticism to this comic adventure by setting it in the days of Byron, Shelley and Keats.

This production features Jay Karnes as Valentine and Morgan Strickland as his fickle rival, Proteus. Susan Patterson will play the object of their desire, Silvia, with Stacy Ross as the love-sick Julia. Scenery is by Jeff Hunt, with lights by David K Elliott and costumes by Barbara Bush.

Tickets are available at the Caltech Ticket Office. Call x4652 for more information.



Courtesy of Caltech Public Events
"The Two Gentlemen of Verona" will be presented by the California Shakespeare Festival on Saturday, Oct. 16 at 8 p.m. in Beckman Auditorium.

Negativland Escapes the Burbs

Guns

Negativland

SST

Anne Dudzik

This is by far the most polished production ever put out by Negativland, one of this decade's most controversial and experimental underground bands. Although not a punk band, Negativland has been as heavy an influence on the hardcore scene as Nomeansno and NoFx, two bands with much faster and concert-oriented sounds.

Negativland debuted in 1980 with a self-titled LP pressed under a small independent label in the Bay area, the home of the Negativland crew. This first album was a very limited edition packaged in wallpaper, and was musically shaky enough to compare with the early Cabaret Voltaire sound experiments made ten years earlier in England. Inspired by John Cage's work and by an intense dislike of mass media, Negativland soon gained a reputation for repeatedly being sued and kicked off record labels for illegal sampling. Yet it was their least con-

troversial song, The Answer Is, off their second record *Points*, which was the first tune to hit college radio playlists.

Points was Negativland's easiest to find record, until Island records was sued and forced to recall and destroy all of the copies it could recover. It turns out that *Points* contained an anti-U2 song that infuriated Bono so much that the band members filed a lawsuit resulting in Island Record's permanent rejection of Negativland. This has actually been a good thing for Negativland fans. SST picked up Negativland, and managed to get a guest appearance by Jello Biafra for their 1987 album, Escape From Noise. Not bad for something that isn't a D.C. compilation.

Some of the tracks on the new album, *Guns*, are actually danceable. Carl Car Bomb could actually be played in clubs, and the title track has already been played more on major radio stations than all of Negativland's earlier material. But Negativland have lost none of their edge. If you are getting sick of the East Bay scene and want to return to some of the eighties underground's true roots, throw away that fanzine and step into Negativland.

Bridge Without Sam

Jeff Goldsmith

Femmes Fatale

Playing in a regional pairs event with a new and strong partner, we qualify for the barometer final with a tiny carryover. Going into the last round, we are one-half of a matchpoint out of first place and a pack is breathing down our neck. Jill Meyers and Kay Shulle arrive at our table. The first board is a pretty flat 3NT, but we can make a minor suit slam and will even get there if they did not preempt. The last board is this:

♦ K1065	♦ 86		
♥ Q83			
♦ K643			
♦ 752			
♦ K109			
♦ J2	♦ 873		
♥ K10542	♥ 76		
♦ 752	♦ ?8		
♦ K109	♦ QJ7542		
♦ AQ94			
♥ AJ9			
♦ Q1097			
♦ A3			
West	North	East	South
Pass	Pass	Pass	1NT (15-17)
Pass	2 ♠	Pass	2 ♠
Pass	3 ♠	Pass	4 ♠
(All Pass)			

Kay, West, leads the ♦ J and I draw trumps in three rounds, ending in dummy, West beginning with a doubleton. On the third round of spades, West contributes the ♥ 5, which, in their methods, is encouraging in

hearts. Being agreeable, I play a heart to the Jack, which loses to the King. She returns

a heart and I play a third round, East showing out this time and playing the ♣ 5, requesting a club shift. Being agreeable, I cash the ♣ A and play another club. East wins this with the Jack. West followed with the Nine and Ten on the first two rounds. After a little thought (half a second is an eternity for this pair.)

Jill exits with the ♣ Q. I ruff in dummy, pitching a diamond from hand while West plays the King. This looks to be a true card, especially considering the previous spots. I continue with a diamond to the Queen, which holds, and the ♦ 10, which gets the last small diamond from West.

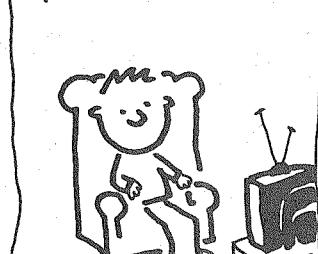
The whole hand is now known except for two cards. Who has the ♦ A, and who has the ♦ J? What clues are there? How about the bidding? I check their convention card. Voila! They are playing 10—12 1NT openings. I doublecheck about this and find that they only play those not vulnerable, otherwise, they play 15—17 and 2 Over 1 Game Force. So much for that. How about the opening lead? The ♦ J is a very dangerous lead. (I always ask for unsupported trump honor leads, but this time I wish they hadn't.) This suggests that she had a dangerous holding in the side suits from which to lead. Jxx and Axx are both terrible leads into a strong notrump, so that is inconclusive. Additionally, after we have possibly struggled into game on a 4—4 fit, a trump lead is often best, so I don't know how much inference I can draw from this. What about the defense so far? They have defended well, I am afraid, and it would have been a masterstroke to duck the ♦ Q from Axx, but trivial from Jxx. Grumble. I wish that I did not have this problem with the event on the line.

Finally, I decide that perhaps West would have bid with an 11-count and a five-card major, and run the Ten. Wrong. Down one. We end up fifth. If I play the King, we win the event. Nice defense.

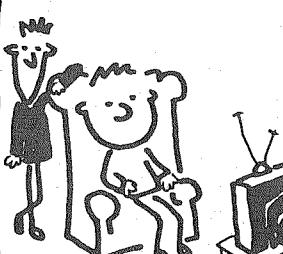
The Caltech Bridge Club meets every Monday night at 7:15 in Winnett Lounge. Everybody is welcome; call Jeff Goldsmith at x2818 for details.

Jim's Journal

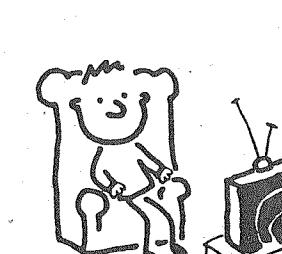
Today I just sat and watched TV.



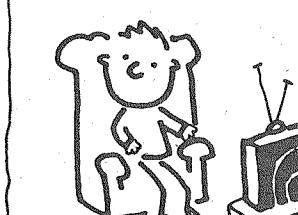
Steve came over for a while.



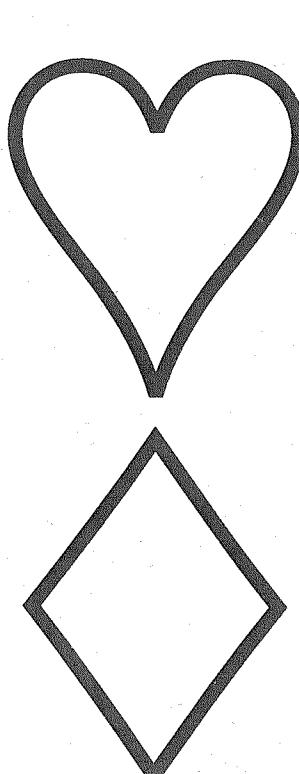
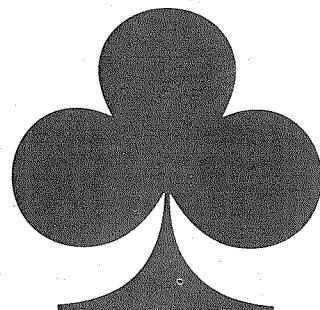
But then he left.



I don't think I realized he was there until after he left.



by Jim



cerebral laundry

Khurram Dastgir-Khan

ISLAMIC SCIENCE

For someone studying science in the twentieth century, it invariably means *western* science. Indeed, in the luminous continuum of western science since 1500 A.D., there is only one prominent Islamic name: Abdus-Salaam. Winner of the Nobel Prize in Physics in 1979, now of Imperial College London and the Trieste Institute. He is all that Islamic civilization has to show in the 500-year ledger of science. Such a drought of talent! It is a small leap of logic to conclude that perhaps Islam *intrinsically* discourages science and, by implication; rational thought, open inquiry and logic.

This widespread western impression is false. Islamic science took up where the Hellenists left off, and flourished in medieval times (700-1100 A.D.) when Europe was in the throes of the dark ages. There were great centers of learning in Baghdad, Cairo, Cordova and Damascus while Paris, London and Berlin were darkened by the tyranny of the Church. Charles Burnett, in a recent essay in *The New York Times Book Review*, writes that "The Europeans...neglected scientific learning in the early medieval period, [and] turned to writings they found in use among the Muslims; first of all for medical (and astrological) information, and only later for more theoretical aspects of philosophy and *the exact sciences*." (Emphasis added)

Islamic scientists and philosophers represented the state-of-the-art in the world in their respective areas. Al-Kindi, in the ninth century, drew up a classification of the sciences and wrote two treatises on mineralogy and one on metallurgy. Hunayn ibn Ishaq translated three dialogues of Plato, four works of Aristotle, fifteen books of Hippocrates, and no less than ninety works of the second-century Greek physician Galen. Ibn al-Haytham (Alhazen) wrote the comprehensive *Book on Optics*, which was translated into Latin in 1572 and inspired the studies of Roger Bacon and Witelo.

The foundations of Islamic, and Western, algebra were laid down by Al-Khuwarizmi, whose very name has produced the word *algorithm*. Islamic scientists introduced the concept of zero in arithmetic by combining the Indian system of reckoning with the nine Arabic numerals. Al-Uqlidisi, in a pioneering text, explained and applied decimal fractions. Omar Khayyam, whose name in the West is associated only with his *Ruba'iyyat*, was a great mathematician. He classified equations of the third degree into 25 categories and numerically solved equations of the first and second degree and geometrically solved, with conic sections, equation of the third degree. Between them, alchemists Al-Razi and Jabir discovered Nitric acid, Hydrochloric acid and soap. Ibn-Sina's (Avicenna) medical treatises were the standard medical texts in the West for many centuries.

Western historians have long viewed the development of European civilization as a continuous thread from Greek and Roman civilization down to the present Western culture with an ill-understood hiatus in the dark ages. This view assumes that after the downfall of the Roman Empire, the works of Greek authors were suppressed but preserved by the Church, only to be rediscovered to usher in the Middle Ages and the Renaissance.

History speaks otherwise. In twelfth-century Europe, the dominant scientific influences derived from works of Al-Ghazzali, Ibn-Sina and Ibn-Rushd. The works of Aristotle and Plato did not directly transfer to the Europeans; they were translated into Latin from Arabic, having been translated from Greek to Arabic three centuries ago. The standard commentaries on Plato and Aristotle were by Ibn Sina and Ibn Rushd. Later, works of Ibn al-Haytham, Jabir and Al Khuwarizmi filtered into Europe and fueled the rise of Western science.

Islamic science was the precursor to the scientific revolution in the West. How many of us know this? Extremely few. Current western view of the history of science excludes the achievements of Islamic scientists. The absence—at best scarce mention—of this fact from history and from our perception of science is a massive historical injustice.



Child Educational Center Art Fair, Oct 16-18 at JPL

Kathy Harris

The 22nd Annual Art Fair will take place October 16, 17 and 18, on the mall of the Jet Propulsion Laboratory, 4800 Oak Grove Drive, in Pasadena. A percentage of all sales will benefit the Child Educational Center, a nonprofit preschool and child-care center established for employees of Caltech and the Jet Propulsion Laboratory, as well as for the surrounding communities.

The Fair features more than 80 artists and craftspeople selling handmade items including paintings, ceramics, jewelry, children's toys and furniture, handwoven clothing, Halloween costumes, and holiday decorations. A special area

for children features a variety of activities for children of all ages, including pumpkin painting, crafts, games and face painting. Entertainers include Chanson, and a cappella singing group that sings barbershop and standards.

On Sunday, at 11am, the Bob Baker Marionette Theater will perform for children of all ages. Food at the Fair includes hot dogs, pizza, a bake sale, and a special kabob plate from Shamshiri Persian Restaurant in Glendale.

As usual the Space Museum will be open to the public, and a multi-media presentation, "Welcome to Outer Space," will be shown. Guests will be able to get a close up view of the life-size spacecraft models of

Voyager (flew by Saturn, Jupiter, Uranus and Neptune), Galileo (the spacecraft will swing by Earth on Dec. 8 and continues its journey to Jupiter), and Magellan (currently orbiting Venus, it has recently finished mapping the planet). Memorabilia from the U.S. Space Program will be available for purchase.

Admission to the Fair is free and there is no additional charge for parking.

The Child Educational Center has a current enrollment of 245 children between the ages of two months and five years. There is an after school program for children in kindergarten through grade three. The program is supported in part by Caltech and JPL.

Wellness Week, Oct. 19 - 24

Amitabh Mehra

It's back. Next Monday is the official start of the festivities for Wellness Week, sponsored by several organizations on campus. Months and months of preparation have gone into orchestrating this pinnacle of health awareness. There are a bevy of programs and exhibits throughout the week which all center on the theme of good health and plain common sense in regards to our treatment of ourselves and others.

The week starts out with an evening program on Monday, October 19. There will be two demonstrations conducted by eminent masters of the physical arts. First is the massage class and demo, followed by a demonstration of biofeedback. Curious as to what

these are and what will really go on in the presentations? Check it out in the Y Lounge at 7:30 p.m.

The follow up to these two discussions is on Tuesday night, same time, same place. A member of the Caltech Counseling Center will give a presentation on relaxation and guided imagery techniques for managing stress. This may not relate to many people on campus, but if you feel that maybe you might feel stressed at some point later in life, attend and maybe pick up a pointer or two.

On a lighter note, Wednesday night at 10 p.m. in Winnett Lounge is the kick-off of Comedy Unplugged, a series of nights designed to let students laugh their stress away. There will be comedy, juggling and other amusements, as well as refreshing mocktails.

Friday is the pinnacle of the week. The famous Health Fair, consisting of 25 booths and other attractions, takes place outside Winnett Lounge from noon to 3 p.m. There is fun as well as information for everyone. From four to six, the Moonwash Symphony will perform a concert in front of Winnett for all to attend.

On Saturday is the final event, a special showing of the film *The Accused* starring Oscar winning Jodie Foster. Information pertaining to the subject of the film will be distributed on the fliers and at the showing. This is a free showing open to the Caltech community in Baxter Lecture Hall. The organizers of Wellness Week, which is a long and lengthy list, all hope that you can attend some or all of the events planned for next week.

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FREE Wells Fargo T-Shirt when you apply for both a checking account and a Student Visa card. (This offer expires October 15th, 1992.)

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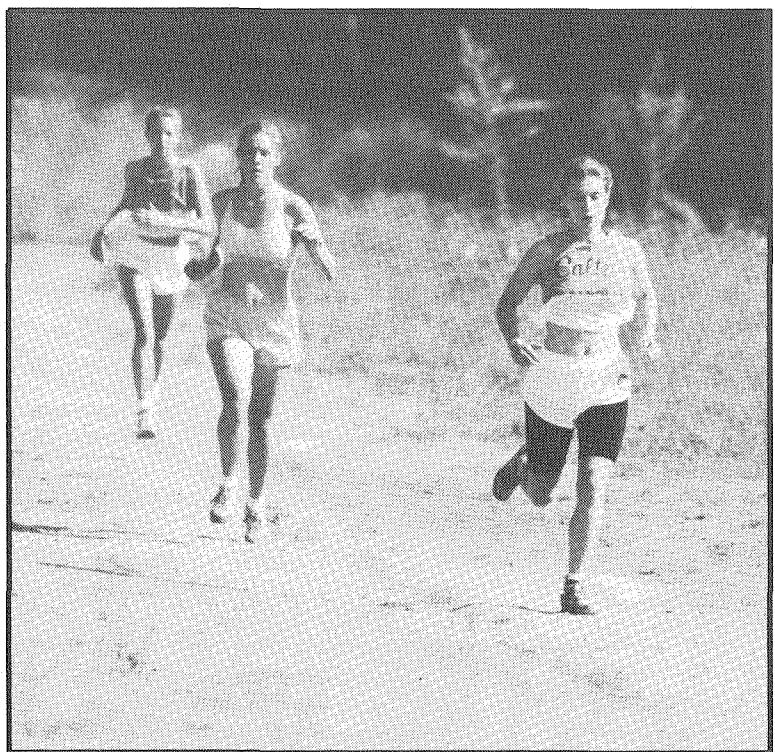
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SPORTS

Cross Country Takes Biola by Storm

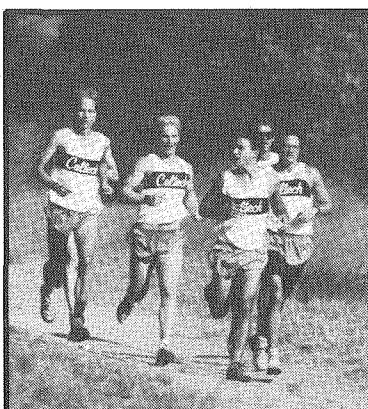


Tobe Corazzini, Aimee Smith, and Amy Hansen (right to left) lead the Beaver women in the Caltech Invitational.

Andrew Zug

After the cross-country team "suffered" through the beach-front accommodations for their first meet in Santa Barbara, the Stormin' Caltech Beavers hosted their annual invitational meet in the Lower Arroyo Park. The competition for the men proved to be slim as the team coasted to victory by taking the first six places as a single pack known only in long-forgotten lore as the Beaver Stampede. Legend has it as being even rarer than the supposed frozen-pumpkin blue flash thing.

The Beaver women faced a different story as both La Verne and Mount Saint Mary's colleges came with lean and mean teams that gave no respect whatsoever to the home team and (quite rudely) beat them. Despite this, several of the Caltech women ran excellent races, led by the fearless Tobe "Tobar Tetrazzini" Corazzini. In an ugly incident, one obnoxious spectator was pulled



The Beaver herd stampedes across the finish line at the Caltech Invitational.

from his car and called rude names after he interfered with the progress of the women's race. The meet was won by a one-point margin by La Verne.

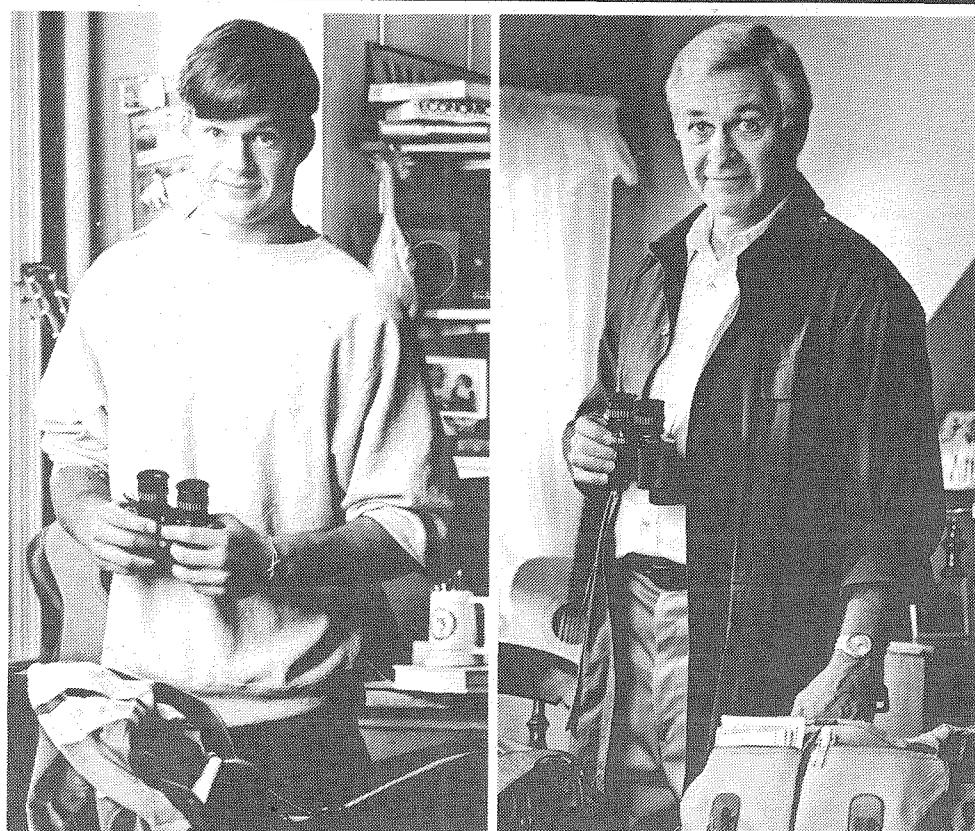
After two hilly and dusty courses, the team begged Coach "Jimbo Ryan" to run on the well-watered turf of La Mirada Park. The Biola Invite offered just such an oppor-

tunity (and there was much rejoicing). The men faced conference rivals Redlands, Claremont and Cal Lutheran as well as other less important teams. While the Beaver butts are still aching from the spanking they received from the hot and talented squads from Redlands and Claremont, the men did stomp on Cal Lutheran as well as the Beavers favorite whipping-team from LIFE Bible College. Andy Zug led the wayover the five-mile course in 28:11, while sophomore Schuyler Cullen showed that he is up-and-coming by running a smart 29:41. AJ Lavin, Mike Pejic and freshman Mike Vogel rounded out the Beaver top five.

The Women came to the meet ready to race. Alice Chan sported brand-new racing flats, Amy Hansen ate a nutritious breakfast, and Betsy Barton blood-doped. Tobe Corazzini was once again the number one runner for the women, finishing the 5k course in 22:23. Close behind was Amy "Capt'n" Hansen in 22:46, with Ginger Garcia, Tristy Kibbey and Betsy Barton filling out the top five. After the race, it appeared that Amy would be disqualified for using a performance-enhancing drug but it was later learned that it was only a Power-Bar. The women smoked Redlands and lost by a close margin to La Verne. It should be noted that with dual meet scoring and without the absence of the top five runner, Aimee Smith, the women would have almost put La Verne in their place.

The next test for the Beaver Harriers is tomorrow in the eight-way dual meet at La Mirada. Both men and women look to place well (i.e. kick some but.)

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SPORTS**For the Pride
of Pasadena**

Chris Buchner

Last week, two water polo teams, both hailing from the lovely town of Pasadena, met in competition. The match was held next to the Braun Athletic Center on the campus of Caltech. During a tournament, two weeks ago, Pasadena City College had put up a tough struggle before falling to the water polo juggernaut, Caltech. But this match found P.C.C. missing some key personnel.

What ensued was too ugly to print but suffice it to say, Caltech dominated. Everyone played and most players scored a goal or two. Final score: Caltech 19, PCC 5. Jim Radford scored 6 goals, Ellis Eckland had 3, and Chris Buchner and Mike Greene had two each. Alan Kulawick, Mark Salvellino, Ryan Naone, Mike Ng, John White, and even goalie Nick Porsinsirirak all scored a goal apiece.

This Saturday, the Techers have another home match against the biggest and dirtiest players found anywhere on the face of the Earth, the Alumni. The varsity team will be hard pressed against the more experienced and talented older players. The Alumni will feature coach Warren Emery and two All-Americans, Matt Wette (field) and Reed Burkhardt (goal). The varsity team counters with standout goalie Nick Porsinsirirak and All Conference field player Jim Radford. The match will start at 11:00 a.m. in the Braun Pool. Come see who is better, wisdom or youth.

Over the 35 years of competition, the score stands at varsity 18, alumni 17.

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YOU'RE WANTED -

WRITERS, PHOTOGRAPHERS, OTHERS - if you had come by the Tech office THIS week, you could have helped put together a Nobel Prize Winner issue. Next week, perhaps a Pulitzer Prize-winning issue?

RATES . . . \$4.00 for first 30 words; . . . 10¢ for each additional word. Send written ad with payment to 40-58. Deadline is 6 p.m., Monday before issue. No charge for on-campus lost & found.

This Week In Caltech Sports**Womens' Volleyball**

10/16 7:00 PM
10/17 9:00 AM

vs. Bethany
Caltech Invitational

Mens' Soccer

10/17 10:00 AM
10/17 3:00 PM
10/19 4:00 PM
10/21 4:00 PM

vs. Redlands
vs. Cal Maritime
vs. Pomona-Pitzer
@ Cal Lutheran

Mens' Football

10/18 1:00 PM
(JV)

vs. Cal Lutheran

Mens' Water Polo

10/17 11:00 AM vs. Alumni

Cross Country

10/17 9:30 AM
Mirada

SCIAC @ La

SCOREBOX**Men's Water Polo**

vs. Chapman
Caltech Tournament
vs. PCC

L 5-13
1W - 3L
W 19-5

Men's Cross Country

Westmont Invitational
Caltech Invitational
Biola Invitational

4th place
1st place
5th place

Women's Cross Country

Westmont Invitational
Caltech Invitational
Biola Invitational

4th place
3rd place
6th place

Women's Volleyball

vs. Pacific Christian
vs. Mount Saint Mary's
vs. Christian Heritage
vs. La Sierra
vs. Pacific Christian

L 1-3
L 0-3
L 0-3
W 3-2
L 1-3

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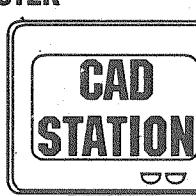
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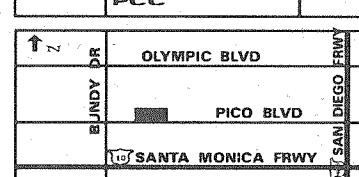
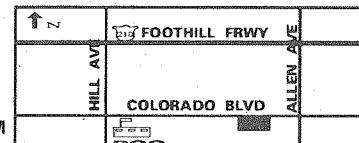
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WHAT GOES ON**NOTICES**

Caltech Film Club - The Caltech Film Club holds meetings every other Wednesday in SAC room 25 at 8 pm. For further information contact Alex Protopapas.

Gaming club meeting! - Friday, October 16 at 7:30 in SAC room# 33 (gaming room). Play games and eat the free food!

Caltech-JPL Flying Club (AACIT) - The Caltech-JPL Flying Club will hold its 1992 fall membership meeting at 7:30 pm on Wednesday, October 21, in room 269 Lauritsen Hall at Caltech. A brief membership meeting will be followed by a presentation given by a representative of the Angel Flight Organization. Refreshments will be served, and there may be door prizes! Anyone interested in the flying club, or Angel Flight is invited to attend. The Flying Club also plans to have a fly-in at the Agua Dulce airport for their fall social on Saturday, November 14. Also planned is a trip to Brackett airport on December 1 to see the Budweiser Blimp. For more information contact Bob Ferber (4-3463) at JPL or Paul Carpenter (6126) at Caltech.

Holiday Crafts Faire - Student Activities is sponsoring a craft fair on Dec. 8th and 9th. Anyone interested in selling or participating, contact Elizabeth Sheiman at x2935 for an application or information. Participation is free to all members of the Caltech community.

Caltech Y Excomm meeting - The Y invites anyone who wishes to cosponsor an event to attend on the first or third Monday of each month at 2 pm in the Wes Hershey lounge on the second floor of Winnett.

Attention Graduate Students - The NSF Graduate Fellowships applications are here. You make pick them up in the Career Development Center, located in room 08 of Parson-Gates.

Hold The Date! - Auditions for the upcoming Winter musical will be held on Saturday and Sunday, November 21 and 22. We want students actors, singers, technicians, musicians and more. Start preparing. For more information call Elizabeth x2935.

Legalize Marijuana - The Caltech Association for the Legalization of Marijuana (CALM) is having a meeting at 5pm on Monday, October 19 in SAC Room 25. Come and learn about the wide-ranging uses of the cannabis plant and discover what you can do to help get it legalized.

Canadian Club - The Canadian Club will hold its first meeting of the year next Thursday, Oct. 22 at 7:30 pm in SAC 25. If your only going to join one club this year, this is it! We do everything - ball hockey, ice skating, broomball, parties, going to see LA Kings games. The club is open to everyone in the Caltech community and you don't need to be Canadian to join. Come on out or contact Derek Surka x3691.

Part Time Job for a Work Study Student

- Professor Bjorkman's lab in Biology needs a laboratory helper. The duties would be as follows: Autoclave glassware, pick up clean glassware and reshelf, make bacterial medium, go to the stockroom to purchase necessary supplies. A Biology major is preferred. Estimated hours per week: 10. If you are interested, please call extension x8351 and ask for David Penny or Peggy Fahnestock.

EVENTS/SERVICES

Friday Prayer - Prayers organized by Caltech Muslim Students are held in the Caltech Y lounge at 12:30 pm every Friday.

Caltech Hillel/Jewish Community Weekly Meeting - An informal gathering, every Thursday at noon in the Y lounge. For information call Caty Konigsberg at 213-259-2959

Mass - Thursday at 8:15 in the Y lounge and Sunday at 10 am in Winnett lounge. Sacrament of Reconciliation(confession) is given 20 minutes before masses. Refreshments are served after mass.

Bible Study and Discussion - Every Wednesday at noon in the Y lounge. Bring your own lunch. For more information call Mike Gerfen at 356-4886.

Caltech Lesbian and Gay Society - Meets the first and third Tuesdays at 7:30 pm in the Health Center Lounge. This confidential meeting is open to all Caltech community members looking for a supportive context in which to address questions and concerns about sexual orientation - including coming out, being out, self-discovery, coping with families.... We begin with a focus topic but move to whatever is feeling most relevant to the group that night. On October 20, we will focus on Discovering One's Sexual Orientation". Refreshments are served. For information, please call 356-8331.

Adult Children of Alcoholics - A 12-step group meets on campus every Tuesday, from 12 noon to 1 pm, in "Club Room Two". The group is open to any student, staff or member of the faculty who grew up with family alcoholism and other problems. For more information call Dinah Lee Schaller at 356-8331.

Open Line, Caltech's multicultural group, is having its second Multicultural Picnic open to the whole Caltech community, Sunday October 25, from noon to 6 pm at Tournament Park (south-east corner of the athletic track). Families of staff, students, faculty, and post-docs of all cultures and backgrounds are invited to bring their national food and take part in multicultural games, shirt and paper painting, volleyball, kid's games, etc. Feel free to come late or leave early. For more information call Pamela Croomes at 356-4723, or Branislav Kecman at 356-4264.

Poetry Workshop - In the Y lounge from 7:30 to 10 pm on the second and fourth Tuesdays of every month. For information call Silvana Pereira at 356-8343.

The CIT-KNIT Group meets at noon on Tuesdays in the Benioff Conference Room (Rm. 256 S. Mudd). For all levels of knitters. Come and join us.

Preschool Playgroup - The Caltech Women's club sponsors structured activities for mother's, father's and their children, on Tuesday, October 20 in the Caltech Villa Apartments, from 10 am to noon. For further information contact Valerie Murray at 287-8960.

Baby Furniture Pool - The Caltech Service League loans out baby furniture to students and postdocs on Wednesday at 324 S. Chester from 10 to 11 am. For more information call 952-1631.

ENTERTAINMENT

JPL/CEC Art Fair - Friday, Oct. 16 from 3 to 7, Saturday from 9 to 5 and Sunday from 9 to 5. For more information read the article in the entertainment section or call (818)354-3418.

"The Two Gentlemen of Verona" - The California Shakespeare Festival will perform Shakespeare's comedy of infatuation, rivalry and unbridled jealousy. In Beckman Auditorium Saturday, October 17 at 8 pm. For information call x4652. Tickets can be purchased at the Caltech Ticket Office.

The Pasadena Folkdance Co-op offers beginning and intermediate instruction every Friday at 7:45 pm in Throop Unitarian Church on the corner of Los Robles and Del Mar. A program of varied international dances follows the instruction at 9:00 and continues until 11:00. Wear soft-soled shoes. A contribution of \$1.50 is requested.

Wellness Week (October 19-24):
Monday - **Massage Class and Demonstration** by Julie Malaker, Area Coordinator, Cal Poly Pomona & Biofeedback Demonstration by Wayne Henkelman M.S. Self-Regulation Services, Pasadena at 7:30 pm in the Caltech Y Lounge

Tuesday - **Relaxation and Guided Imagery Techniques for Managing Stress** by Jon Pederson, Ph.D. Staff Psychologist and Dir. of Training, Caltech Counseling Center at 7:30 pm in the Y lounge.

Wednesday - **Comedy Unplugged - Laugh your Stress Away** with Edward Jackman Comedian and Juggler presented by the Student Activities Center.

Friday - **Health Fair**, a variety of displays to educate our community about health and wellness including: blood cholesterol checks, earthquake preparedness, AIDS awareness, moonwalk fun, etc. & "Moonwash Symphony" - will perform in front of Winnett from 4-6 pm.

Saturday - "The Accused" staring Jodie Foster and Kelly McGillis will be shown in Baxter Lecture Hall at 8 pm. Admission is free.

Pece Atanasovski will teach Macedonian Folk Dances and Play Macedonian Music in Dabney Lounge on Tuesday, October 20th at 7:30 p.m. The event is sponsored by the Caltech International Folkdancers.

International Folk Dancing - Tuesday night in the Dabney Lounge. Beginning instruction starts at 7:30 pm; intermediate at 8:00 pm and open dancing takes place from 9:00 till midnight. Donations are accepted for more information call Mike McKenna (310) 692-0366.

Israeli Folk Dancing - Sunday in Winnett lounge, Beginning instruction starts at 7:30 pm, intermediate at 8:00 and open dancing goes on from 8:30 to 10:30. For information call Nancy Macmillan at 795-3655. Admission is \$2.00.

Scottish Country Dancing - On Wednesdays in Dabney Lounge from 8 until 10 pm Beginners are welcome and no partners are needed. For more information call David Hills at 354-8741.

Music with James Boyk - Pianist James Boyk gives a performance each Wednesday from 4:30 to 6 pm in Dabney Lounge. The performance is open to the public and free of charge. Feel free to come late or leave early. For more information call x6353.

LECTURES/SEMINARS

"Procreation and the Law: Regulating the New Reproductive Technologies" will be presented by Lori Andrews, a research fellow at the American Bar Foundation in Baxter's Judy Library on Thursday, October 20 at 4:00 pm. Refreshments will be served. This lecture is a part of the series on Science, Ethics, and Public Policy.

Recovering from Co-dependency..Taking Charge of Your Life - A presentation by Kip Flock, LCSW, Clinical Director, John Bradshaw Center, Ingleside Hospital. Co-sponsored by the Organization for Women at Caltech. Topic covered will include recognizing controlling behaviors, learning to set limits and say "no", and learning to get your needs met. A FYI Lunchtime Learning Presentation in Winnett Lounge, October 20 from 12 to 1 pm.

Euthanasia talk - Want to know more about Prop 161? The Newman Center will be sponsoring a speaker on Euthanasia and Physician-Assisted Suicide: California's Prop 161 on Tuesday night October 20 at 7:30pm in 24 Beckman Labs. The speaker will be Warner Johnson M.D. associate professor of psychiatry and the behavioral sciences, USC School of Medicine.

"Space Technology and the Discovery of the Lost City of Ubar" - Dr. Ronald Blom, geologist in the Earth and Space Science of JPL will give the Ernest C. Watson Caltech Lecture at 8pm on Wednesday, October 21, in Beckman Auditorium. Admission is free.

The American Physical Society (APS) is offering \$2,500 scholarships to African-American, Hispanic-American or Native-American undergraduate freshman or sophomore students majoring in Physics. The deadline to submit completed applications to APS is February 26, 1993.

SCHOLARSHIPS, & COMPETITIONS

The Future of Computing - The Institute of Electrical and Electronic Engineers Computer Society, NCR Corporation and Computerworld magazine are sponsoring a \$60,000 international essay contest on the future of computing. The contest is open to undergraduate and graduate students. First prize is \$10,000 and a NCR notebook computer. For more information, send requests to editors@tech.caltech.edu.

Hughes Predoctoral Fellowships - The Howard Hughes Medical Institute will award 66 fellowships toward a M.S., Ph.D. or Sc.D. degree in biological sciences. The fellowships provide an annual stipend of \$14,000 and a \$12,700 annual cost-of-education allowance, effective June 1993. The fellowship is for both U.S. and foreign students and is aimed at students who have completed at least one year of graduate study. The application deadline is Nov. 6. Call (202)334-2872 for an application.

Fritz B. Burns Prize in Geology - Undergraduates in the division of Geological and Planetary Sciences are encouraged to apply. The award(s) will be made up to \$1,500 for the best proposals for undergraduate research in the fields represented by the Division. If interested, submit a short statement (less than one page) describing the research you would like to do. The submission deadline is December 1, and they should be sent to Professor Kerry Sieh, Division Academic Officer, Division of Geological and Planetary Sciences, Mail Stop 252-21.

The Financial Aid Office has applications and/or information for the following scholarships. All qualified students are encouraged to apply. Our office is located at 515 S. Wilson, second floor.

The Northrop Corporation is offering a \$3,000 scholarship at Caltech for the 1992-93 academic year. The scholarship is open to freshmen through seniors in Electrical Engineering, Mechanical Engineering, Aerospace Engineering, Computer Science/Engineering or Manufacturing Engineering. Students must show evidence of a strong academic record and a career interest in the aerospace/defense industry. The applicant must be a U.S. citizen and may be a concurrent recipient of another company's scholarship. Resume's and academic transcripts must be received by the FAO by 5:00 pm, Friday, October 30, 1992.

The Data Processing Management Association is offering three scholarships for \$1,000 each provided by the Bert A. Monaghan Systems Management. The scholarship committee must receive the application by November 20, 1992.

The American Physical Society (APS) is offering \$2,500 scholarships to African-American, Hispanic-American or Native-American undergraduate freshman or sophomore students majoring in Physics. The deadline to submit completed applications to APS is February 26, 1993.

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