**TACIT Introduces a “Fever” to Campus**

by Adam Villani

A far cry from the musical and comedies TACIT is well known for, “The Fever” is a political psycho-thriller. The play (My Dinner With Andre) that takes place inside one man’s mind on an almost bare stage. The central, unnamed character (presumably bourgeois playwright Shawn himself) contemplates his feelings on the essential struggle between the poor and wealthy of the world as he lies in a foreign prison cell, tormented by unseen captors. While the prisoner is represented in the present tense by新鲜 Phillip Rodrigues, senior director Asif Hassan has successfully adapted the original monologue to different aspects of the prisoner’s mind, portrayed by senior June Fujimoto, sophomore Mekhin Mansal, and freshman Mike Devlin. Share time in a frantic debate with one another over whether it is right that the rich have power and the poor do not.

The riveting production is immediately engaging, keeping a sense of urgency and never wallowing in ponderous navel-gazing. Rodrigues accurately described the play as “dramatic,” and the despair and humiliation brought upon the prisoner are readily transferred to the audience in the close confines of Winsitter Center. The players, all undergraduates, do an admirable job with the difficult material and bring the character’s thoughts to life forcefully and with conviction. Hassan’s staging and Dan Dilling’s complex lighting keep the connection between the different actions smooth and the pace quick. Those of you who want to see a stimulating play that will keep you talking for hours afterward will want to go out of your way to see “The Fever.”

“Movie Fever” is showing in Winsitter Student Center Friday, Saturday, and Sunday of this weekend and next weekend, February 17, 18, 19, 24, 25, and 26, with all shows at 8 pm. Note that the time listed in the Caltech Weekly Calendar is wrong. Tickets are $5.00, $2.00 for Caltech students. The show is about an hour and fifteen minutes long.

**Bower’s Watson Lecture Teaches Education**

by Ross Brown

This Wednesday evening at 8pm, Dr. James M. Bower, or “Jim” as he introduced himself, gave an interesting lecture on “Scientists and Science Education Reform” in Beckman Auditorium. The Watson Lecture was attended mostly by educators, some students and a few people from the Caltech community.

The lecture began with a short film depicting what appeared to be elementary school children building structures out of cards and soda straws. As the music and sound alternately faded in and out, the kids’ voices could be heard as they worked. The kids said things like “We’re building a tower” and “Let’s take turns doing everything,” as they energetically went about building their structures.

After the film ended, Jim Bower went to the lectern and explained that the class actually was one of many that have been doing projects such as those shown. Although the film itself was only two and a half weeks old, the Caltech Pre-College Science Initiative (CAPSI) program’s outreach to the Pasadena Unified School district is in its tenth year.

Dr. Bower explained that the audience was going to undergo the same learning process as the children in the Pasadena schools; we would view the film, hear what he had to say, develop our own questions, ask them, and then view the film to get a sense of what we had learned. It worked quite well, since by the second time around the audience was able to pick out a lot more of what was going on.

He discussed the methods with which they have been teaching grade school children high school level science. Every eight to ten weeks a new subject is introduced that begins a chain reaction of inquiry, experimentation and learning. The emphasis is placed on the children asking and answering their own questions. Although CAPSI has not finished developing tests, this type of learning has proven in the past to stay with the child long after the unit has ended. Also, other studies that the grade-schoolers are in seem to have benefited as well, from history to poetry. This energetic, fun learning made the “normal” classroom with all its lectures and textbooks look like a participatory coma.

Dr. Bower was careful to point out that it was not a “feel-good,” powder puff band-aid solution to a growing problem. It is very structured, but dynamic enough to teach creativity and analytical thinking at the same time.

He also explained that National Science Education Standards are being written up at this time, and presented quotes from the draft report. Interestingly enough, the quotes from the “education experts” in Washington D.C. were mirrored by the child in the short film script, such as “cooperation is essential to science education,” (this reporter’s paraphrase of what the child’s take turns doing everything.

Dr. Bower was quite excited and admitted mild apprehension at the phenomenal growth that the program has experienced. CAPSI has received a six million dollar grant from the National Science Foundation in Washington D.C. to expand the program into fifteen California school districts and five more in other parts of the country. In addition, scientists and science educators from around the country and around the world have come to tour the classrooms and talk to the students.

He also stated that the venture is not partisan, bi-partisan or anything-partisan. He said that the primary problem they run up against in this venture is the total lack of funding. “This is not a Democrat thing or a Republican thing—it is an economic thing,” he said. CAPSI is getting industry support because the long-range thinkers are discovering that a lack of skilled and thinking workers will spell doom for the economy and society in general. At present, the priorities, and thus the money, are completely out of whack and 180° from where they should be.

Bower brought home this fact by pointing out that in this year California has poured a depressingly in-visible line: we will spend more on prisons than on education in 1995. “Why not spend the $36,000 to get these kids educated in instead, to keep today’s kids out of prisons tomorrow,” he said “I don’t think we can build enough prisons to house all of our current 2nd graders.”

Bower emphasized that every student in the PUSD was involved in this program, even the special education kids. Apparently, they took it to just as well, if not better than the “normal” students. Also, the emphasis has been on public schools and not private or parochial schools. He stated that the students at those schools are already receiving an excellent education and have the opportunity to receive this type of education. “Zoning in on the cash-strapped public schools give them the chance to educate everybody, including the minorities that make up a large part of our population.” “We are not educating a mono-culture [here],” he said.

Bower answered many questions after the lecture, from the practical “how do you test the kids?” to the philosophical “Why teach science to kids if it may be dying as a field of study?”. His answers were both honest. “We don’t know how to test the kids yet, but we’re working on it.”

Dr. James M. Bower is an assistant professor of neurobiology here at Caltech. He has been working with Dr. John Pine and CAPSI since his appointment as assistant professor in 1984.

**The Usual Stuff**

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- Special Courses for Spring Term

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This is No Joke, Mr. Feynman

Mitra Hartmann

In his last issue, The California Tech printed an anonymous letter from an obviously disturbed individual. The letter's contents do not merit comment aside from certain points that are potentially damaging to all Caltech students.

The Registrar's office never changes an instructor's grade, and never changes credit granted for a course except when explicitly asked to do so by the instructor, or by the relevant faculty committee. Prospective employers, graduate schools and other users can have absolute faith in the integrity of the Caltech transcript.

Sincerely,

(signed)

Dr. Judith R. Goodstein
Registrar

EDITOR and lots of stonewall opinions

This is a letter to the kinds of stories scientists like to tell about themselves. Let's look closely at the first story, "Surely You're Joking, Mr. Feynman." Feynman does indeed admiral­ly convey his enthusiasm for science. But he also chooses to present himself as an insensitive, ego­

matic man, and to choose stories in which he consistently and unrelentingly refutes degrading and humiliating people. These character traits are obviously both obvious and com­

pletely independent of Feynman's scientific ability.

Beginning with the chapter "String Beans," the reader is sup­

posed to empathize with Feynman's situation. Feynman is in a tautological. In a second story, he

mischief. In one story, he confuses his own intellectual exuberance and

inability. The letter's contents do not illustrate his relentless or

pre­bias­ed intellect. They illustrate a

Somebody Else and lots of stonewall opinions.

Here are the

limits.

Please send submissions for let­

ters to the editor to The California Tech; Caltech 4650, Pasadena, CA 91125; or by electronic mail to editors@tech.caltech.edu. Deadline for submissions is Monday at 5 P.M.

The editors reserve the right to edit or refuse to print any letter for any reason.

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In the first story, "Surely You're Joking, Mr. Feynman." Feynman discusses his approach to the field of physics, and how his initial success was based on his ability to "see through" problems and find simple solutions. However, in another story, the author notes that Feynman's approach can be seen as a form of arrogance and a lack of respect for the work of others. In the story about the waitress, Feynman is depicted as being overly confident and condescending, causing the waitress to become frustrated and make a mistake.

Feynman, however, sees the incident as an opportunity to demonstrate his superior intelligence and ability. The author argues that this attitude is not characteristic of Feynman's character, but rather a product of his need for attention and recognition.

In conclusion, the author suggests that Feynman's actions in the stories reflect a deeper issue of arrogance and a lack of empathy. The author encourages readers to consider the implications of this behavior and to reflect on their own reactions to situations similar to those described in the stories.

The image contains a list of deadlines for various submissions to The California Tech, as well as information about the upcoming Coleman Chamber Concert on Saturday, February 18th. It also includes an advertisement for "The Mosh -- Wants you to work for The Tech!" with contact information for the Caltech Ticket Office at 4652.
Science Education at Caltech: An Observation

by Ross Brown

The Watson Lecture on Wednesday inspired me to write about a problem that I have noticed here at Tech and elsewhere. My claim is this: unless something changes soon, I am afraid that Caltech may lose its place as one of the premier science institutions in the world. I was extremely disappointed by the utter lack of Caltech professors at the lecture Wednesday night. "Science Education" sounds like a topic that would interest science educators, doesn't it? So what if it was about teaching elementary school science, that doesn't exempt Ph.Ds from learning something from it, and I think they can learn quite a bit from it.

The future of education lies not in the dusty classrooms and dusty textbooks that constitute the bulk of "education" here and elsewhere, but rather in more natural and sensible methods of teaching. I am not advising more use of white boards or computers, they are not a panacea. The problem lies deeper than the methods used in "education."

There is an established system that has dominated the education scene in America for more than a century. In K-12 the science curricula is usually as follows: "The students are here to have their heads filled with equations and facts." This fosters a dependence on the "experts" for information, not for one's own abilities to get the information. This is often a prime ingredient for a passive population to found a fascist ruling class. But enough of Orwellian predictions, on to the here and now.

A friend of mine approached his advisor to get advice on studying techniques and methods. The advisor told him to go to the dean, that wasn't his purview. The assistant dean, Barbara Green, was nice but told him that there was nobody here that was trained in that sort of thing. "Maybe at another school..." she said. She suggested the Counseling office (sort of like going to the doctor's office for a haircut) or talking to the TA or getting a tutor. There is no established way for teaching, Tech students how to learn, just what to learn.

The professors seem to lay the material out casually like pouring out food for a pet. We go to lectures to have the information presented to us in an ever so detached manner, just waiting for us to pick it up. There are no real problems to solve, just carefully distilled exercises to "reinforce" the lecture material. And in the middle and the end we get a stressful 3 hour take-home interrogation to see if we successfully sponged up the information they have laid out. Sometimes we get demos, which are cool, but are not true exploration.

Of course the blame can't be placed on the professors. I have encountered many in my three years here that are frustrated with this system and care about their students. Also, when they are hired or "appointed" by the institute, they are not trained to educate, they are just assumed to be able to lay out the material to be absorbed. However, real education should be taking place, like teaching critical and analytical thinking. Problem solving skills should be emphasized, not endless pratting on theorems and proofs. Ways should be taught for stretching one's mind to embrace a new concept or even just to pass on simple, practical study habits.

In the real culprit is the entire system of students, "educator," and "education" as institutions that we have grown up with and are comfortable to us. We need to reform not only the ways we teach and learn, but our own thoughts, feelings and ideas toward learning. Science is not something that is "casually observed" as so many of our esteemed textbooks say, it is an active pursuit of knowledge about our world. We should be trained to pursue it, not just re-gurgitate what has been "casually observed."

I have mostly ranted about the problems till now, so on to the solutions (otherwise this would only be an about 2% useful). I suggest that we all, (students, professors, TAs, etc.) step back and look at the real life processes and then model our behavior on reality. The solutions will come from that and not from the stress here, stress caused in part by the threat of bad grades. Most Caltech students have a drinking problem (as in alcoholism). Yes, it is true, if you don't believe me go to any party and watch.

When I asked my math professor last year if I could do extra work to try to improve my grade, he told me that he was going to grade based on strict percentages set forth at the beginning of the class (she final is worth 33%, etc.). He couldn't even allow half of one of his students trying to improve his score. Otherwise, it wouldn't be objective, he said.

This institution should not pride itself on how difficult it can make the coursework, but rather how well it can train us to tackle it and the real world problems we will encounter after graduation. The established, tried and true methods may have worked in the past, but they are quickly becoming dated as we move into the next millennium.

If anyone reading this would like to discuss this at greater length, please call 568-8028, send on-campus mail to Box 641 or email me: ronald@cco.caltech.edu.
CSS SPACE NEWS

by Ross Brown and Devon McClain

This week begins a new format for this column. Ross Brown will bring you the news of spacecraft and the space program, while Devon McClain will occasionally contribute the latest in the world of astronomy and space science. This column will be shifted overall to an even mix of astronomy, space science and space exploration. Enjoy! Discovery Meets Mir in Orbit

Last Monday, February 6th, the Discovery space shuttle and the Russian Mir space station came within 37 feet of each other while speeding at 18,000 miles an hour 245 miles above the Pacific Ocean. Overcoming a fuel leak that threatened to scrub the mission, the Discovery astronaut team became the first American crew to meet Russians in space in 20 years. The last time astronauts and cosmonauts met each other above Earth was the Apollo-Soyuz rendezvous in 1975.

The commander of the space shuttle, James Wetherbee, maneuvered the 100 ton shuttle to within 37 feet of the Mir space station. This flight also saw two other "firsts." Eileen Collins was the first woman to hold the position of pilot in the entire history of the 14 year old shuttle program. Also, Payload Commander Bernard Harris Jr. had the honor of being the first African American to go on a "spacewalk."

This experiment recalls the days of the Gemini series of projects, in which every mission was carefully thought out to test all the maneuvers and situations that might arise on a mission to the moon. In incremental steps, the Gemini crews trained themselves (and the operations personnel) for the "moon shot" of Kennedy's challenge. In a similar way, the space shuttle crews are gearing up for rendezvous with the Russians to build an international space station.

Many obstacles must be overcome before the cooperative effort can begin. The Mir space station and the space shuttle have many differences, the most troubling of them all is the difference in standards. For example, Mir is metric, while the space shuttle is based on the English system of units. The Russians' technology is considered by some here in the west to be arcane, but has stood the test of time remarkably well. By contrast, the American spacecraft are made with extreme care and high construction standards, but it remains vulnerable to the rigors of space.

But NASA remains optimistic. Last week's gymnastics by the space shuttle, no more than 44 feet from Mir, put the sensing and tracking devices aboard Discovery to the ultimate test. There were worries that the angular design of the Russian space station would throw off the shuttle's radar and navigation sensors, but they were assuaged when the shuttle stayed no more than four degrees off course.

The space shuttle is scheduled to actually dock with the 9-year old Russian space station starting this June, leading to the total merger of the space programs of the two former Cold War rivals by 1997. This unified space program will lead the world in the construction of the 40 billion dollar global space station. Discovery landed at Kennedy Space Center last Friday.

CSS, PAGE 5
to provide astronomers with a wealth of information for several years after­ward. Today, the star can barely be seen without a telescope. Yet it may shine brightly once more.

Before it went supernova, Sanduleak followed the life of an ag­ ing red giant and helium flash. It ex­ pelled several solar masses of mate­ rial on solar winds over a period of about a million years during its time as a red supergiant. When it became a blue supergiant, the solar wind greatly increased as did the material it carried with it. Both periods suc­ ceeded in accumulating a large ring of dust and gas about a light year in diameter around the star. The de­ bris from Supernova 1987A is now on a direct course for this ring of material. When the two collide, the ring will heat up and begin to glow. Even though it is the ring that will be glowing, it will appear about an arc-second in diameter so only large telescopes such as the Hubble will be able to discern any fine detail. Ob­ servations on Earth will be able to see the rebirth of Sanduleak as a 6 to 9th magnitude point of light. It truly will be a fitting end for a Supernova that has given us so much to see already.

Earth's Second Moon
I'll bet you didn't know Earth had two moons! It seems that sev­ eral observations have been made over the years of a mysterious reflec­ tion of the sun's light in a region in the path of the moon's orbit around Earth. This area is called a Lagrange point by astrophysicists, and tralls the moon by about 60° in its orbit.

The most likely possibility is that there is a collection of gas and tiny particles trapped there by grav­ ity. This dust may be the leftover materials from the formation of the solar system, or merely recent par­ ticles from passing comets swept up by the gravity fields of Earth and Luna. If you consider any collection of material to be a satellite, then our Earth has two!

This phenomenon is difficult to observe with ground based telescopes because of atmospheric effects, but someday may be studied by probes or space based telescopes. If this is indeed true, then we would have dif­ ficult parking a space station at this Lagrange point because of the dan­ ger of micro-meteoroid impacts.

If you wish to know more about CSS and its activities, please call us at 568-8082, write us at cscs@cco.caltech.edu.

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### NEWS

by Topher Hunter

**Crunch! Smack! Slam!**

What do those sounds mean? Those are the sounds of Boffo Bouncehouse Boomball in action! That’s right, sign ups open today for this term’s Boomball tournament. We’ll be playing on Sunday, Feb. 26, from 10:30 pm to 4:30 am. (Note the unusual day and times.) Since we have more ice time this term, we have space for ten teams to sign up. Prices are $30 per undergraduate team and $45 per graduate team.

**Black History Month** continues at the Y, with a dramatic presentation by the Israel Players today at noon in Winnett. The Black History Film Fest will be showing *Daughters of the Dust* in the Y lounge on Tuesday at 7:30 pm. For storytelling entertain­ ment, drop by Winnett Center on Friday the 24th to hear the Ixthus Players today at noon in Winnett. The Nduagu Chancier.

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### FoxTrot

by Bill Amend

**NOTICE**

I’VE HAD A LOT OF WALK ON MY DESK I NEED TO CATCH UP ON.

I’D LIKE TO STAY HERE AT THE OFFICE A WHILE LOWERED IF THAT’S OK.

WILL YOU BE HOME?

ROGER, THIS IS THE THIRD STRAIGHT WEEK YOU’VE DONE THIS.

WELL, MAYBE NEXT WEEK.

IT’S UNBELIEVABLE HOW MUCH WORK I HAVE TO DO TODAY!

I CAN’T REMEMBER THE LAST TIME I HAD THIS MANY THINGS DUE.

I DON’T KNOW WHERE ALL MY TEACHERS WERE TEACHING.

IN THE CLOSET.

WASN’T THE DISHES.

WHEN ARE YOUR HOLIDAYS SO AWKWARD?

IT’S ALL IN HOW YOU SAY IT.

I THOUGHT YOU HAD NO HOMWORK.

YOU’RE RIGHT.

JASON WAS SO DUMB THIS MORNING, OH?

HE WANTED TO KNOW IF I COULD BEND THAT OLD PICTURE OF FRANK TO SCHOOL FOR HIS CLASSMATES TO SEE.

I WOnder WHAT ERA.

I ASSUME BECAUSE HE WANTS TO SHOW OFF HIS SISTER, WHAT OTHER REASON COULD THERE BE?

AND TO CONCLUDE: THINK ABOUT IT, I OFFER YOU PHOROGRAPHIC PROOF OF THE BISTRO.

YOU CAN SIT DOWN NOW.

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  - Electrical Engineering
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PairGain Technologies will be on campus for interviewing on March 1, 1995. Sign up for interviews at the Career Development Center.
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   A. Hot new taco dip
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   A. Quickly access on-line service using predefined scripts for CompuServe, MCI Mail, GEnie and others
   B. Send and receive Internet e-mail using Delrina Internet Messenger™
   C. All of the above

3. When the prof gives you an assignment you:
   A. Panic
   B. Think to yourself ‘It’ll be easier the second time around.’
   C. Smile smugly because you have WinComm PRO 1.1, the perfect research tool that lets you access on-line information with the click of a button

4. Dylan is currently dating:
   A. Kelly
   B. Valerie
   C. Who cares, tell me more about WinComm PRO.

If you chose anything but “C” you’re missing the boat. When it comes to easy communications, nothing beats new Delrina WinComm™ PRO 1.1, the easiest way to go on-line.

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Matters Left Undecided

As Cross Country Team Heads For Bahamas

by Tom Meyer

Last weekend took the Caltech men's cross-country team back to La Mirada's "Frisbie Golf" Park for the important SCIAC Multi-Dual Meet, the first of two meets that determine conference standings for this season. Despite strong individual performances by several team members, Caltech came away with several unexpected defeats and a 1-6 record for the meet. Hopes are set on the conference championship meet that is still another weekend away, when the team hopes to have its final farewells to States and anything (workouts in particular) related to it, as well as benefiting from a full complement of healthy, uninjured runners.

A light precipitation the night before the race prepped the turf at La Mirada to sodden perfection for the day's struggle, but Caltech was well to Adams States and anything expected defeats and a 1-6 record for any match.

The intercollegiate road cycling season started slowly for Caltech. In San Diego, on February 6th and 5th, the team finished 12th and 11th. A week later, in Long Beach, the team placed 11th and 10th. While not really pacing well as a team, there were some solid individual performances.

The season started on February 4th with a road race 25 miles east of San Diego. The course was 4 miles of steep hills. Michael Kantner raced in the Men's C category (2 laps). He finished out of contention, and saw the first crash of the season. No one was hurt, and Cyrus was not involved. Jody White provided the high note of the day, finishing 11th in the Women's B 11 lap race.

Caltech fared slightly better in Sunday's criterium. The 0.9 mile loop had a hill before the finish line, which led to some exciting sprint finishes. Unfortunately, Caltech was not involved with them. Cyrus placed 7th in the Men's D race. Jody earned prime points for the team, though she didn't place in the Women's B race. Michael was trapped behind a crash during the last lap of the Men's C race. He did not fall, but was forced to nearly stop to avoid other fallen riders.

The team had more success at the Long Beach criteriums on February 11th and 12th. Saturday's loop was 0.8 miles long with 6 turns. As usual, Jody was Caltech's only entrant for the Women's B race. Midway through the race, 3 riders broke off the front of the pack. Jody missed the break, and was left in the main group. Initially, she tried to catch the breakaway, but no one else was helped. It quickly became apparent that the break was gone for good. With one lap to go, Jody was following Kate Ethlyn (from UCSD) who increased the tempo. The main group disintegrated, and Jody and Kate were alone in front. In the final straight-away, Kate led the sprint for 4th place. Jody tried to come around on Kate's right, but she didn't have enough time. Jody was 5th overall, about 1 foot away from 4th place.

Cyrus's luck was not as good. The Men's D race ended in a field sprint. Cyrus was in great position going into the final turn, about 10 people behind the front on the inside. However, the two riders directly in front of him touched handlebars and crashed. Cyrus slammed on his brakes, but was unable to avoid hitting them. He fell, sprained his wrist, and did not place.

The Men's C race was uneventful, until the last lap. As the start of the final lap, a UCSC rider jumped off the front. Michael attempted to go with him. He misjudged the UCSC rider's speed and was caught in second place, 10 yards behind the leader and 20 yards ahead of the pack. After a fatal moment of indecision, he decided to try and solo to the finish line. UCSC had teammates in the front of the pack blocking for their rider, so Michael had a chance for second. With 30 yards to go, the pack caught Michael, and he finished 5th overall. The UCSC rider was not caught, and he won the race.

Sunday's criteriums were less exciting. Jody placed 7th in the Women's B criterium and also earned prime points for the team. Michael's race (Men's C) ended in a field sprint, and he placed 5th. Midway and a sprintwise kept Cyrus from racing.

There is intercollegiate road racing Monday every weekend until May. On April 2, Caltech is hosting a race on campus. For more information on collegiate cycling, contact Michael Kantner at 833-1 or cycling交通安全. One day racing licenses are available, and there are races for all skill levels.

by Michael Kantner

Men's Tennis vs. Biola

by Jason Jenkins and Ronak Bhat

After a close match with Whitmer and a tough loss to Occidental, the Caltech men's tennis team found its form this past Saturday, February eleven, freshman Jason Jenkins's birthday, against Biola. Caltech swept all six singles matches, giving up no more than five games in any match.

The Biola team saw many shoppers knock the rust off their games. Team captain and senior Chandra Das led the way with victory against a 6-3, 6-2 win over Dr韭l Game of Biola.

In second and third singles juniors Atul Salvekar and Amir Alagheband handled their opponents with ease, winning 6-1, 6-4 and 6-2, 6-3 respectively. At fourth, fifth, and sixth singles freshmen Jenkins, Ronak Bhat, and Dhari Chau followed suit with easy wins.

In doubles action on Saturday the first doubles team of Das and Alagheband lost a tight two set match. At second doubles, the undefeated team of Bhat and Jenkins added another win to their list of victories.

At third doubles, Mike Zerina teamed with Atul Salvekar to add strength and experience to the winning team. When all was said and done and the scoreboard was closed the final score was Caltech 8, Biola 1. Come out and see the men's tennis team take on Pomona at home on Wednesday, February 22 at 3:00 PM.

Intense V-Ball Opener

by Daniel Chang

Happy to make it out of Game 2 with a win, Caltech was ready to take the lead. Staying with the outside attack, Chad Edwards kept setting outside hitters Andrea and Jack, who earned nine and eight kills, respectively. Although middle blocker Stuart Demcak had two kills in the game, the middle attack was never established as a viable threat, and Caltech lost a close game, 15-13.

With eight kills in Game 6, Andreas continued his superb outside hitting. However, Jack was troubled by inconsistency, as evidenced by his five kills and nine attack errors. Caltech's only service ace came in Game 4 at the hands of Brendan McNelis. Although close, Caltech lost the game—and the match—slip away, 15-12.

The match was a riveting 2-hour, 10-minute battle, and everyone present knew that it could have gone either way. We'll get together next time, when we visit PCC. By the way, the game against Claremont McKenna tonight at 7:30 pm has been canceled.

Come out, join the action, and show your support for the Caltech Men's Volleyball Club team!
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Saturday, February 25th

Locations: UCLA, USC, CSUN, PCC, UCR, Cal Poly, Pomona
Second Term

The development of psychoanalysis, especially the case histories, and the emerging concepts of the unconscious, were among the topics covered.

The study of short stories and novels by well-known authors, such as Horacio Quiroga, Maria Luisa Bombardieri, Jorge Luis Borges, Gabriel Garcia Marquez, Julio Cortezar, and others, such as Horacio Quiroga, Maria Luisa Bombardieri, Jorge Luis Borges, Gabriel Garcia Marquez, Julio Cortezar, and others, was included.

The course will be offered on the campus of Duke University, will explore the lives of African Americans during the age of Jim Crow. In addition to books, articles, and primary documents, the course will use film, music, and art to interpret the inner life of the black community as it affected and was affected by the external constraints imposed by disenfranchisement and segregation. First-person testimony of African Americans who lived during the period between the late 1890s to the beginning of the direct action civil rights movement after WW II will be stressed.

The California Tech Council Travel

SPECIAL TOPICS

Courses Offered

Spring Term

Freed. The development of psychoanalysis, especially Freud’s theories of hysteria and dreams, from its origins until the early years of the twentieth century will be covered in Hum 119. Topics will include the interplay between Freud’s developing theories and clinical evidence and his relations with the scientific and medical community of the day. Course offered by Prof. Tigges Th 1-3. Advanced Humanities credit.

The Caltech Space Society, a chapter of SEDS and the National Space Society, is hosting a high school educational conference called Space 101. If you would like to assist with this event, which will take place on Saturday, February 25, please come to our meeting this Saturday in SAC 15, Clubroom B (next to the music wing of the SAC). If you would like to assist and cannot attend this meeting, email css@cco or call 568-8028. Ad Astra!

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CASE STUDY:

Dr. Mabel Morana. Th 9:30-11.

Cultural Encounter (H 161) spring term. The course will be taught by Prof. Pigman. Th 1-3. Advanced Humanities credit.

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I'm asking everybody to quantify their contributions to revenue. Your pay will depend on it.

You should all follow Wally's example of how he quantifies his contribution to revenue.

Basically, I assumed my project would fail without me. Therefore, all the revenue it generates can be attributed to me.

A billion dollars? It's as if you cynically believe we can't track these numbers.

That crossed my mind.

Wally, you just sent me the same e-mail you sent last week.

I'm running the "best of Wally" on cube sabbatical.

How long is your sabbatical? Six months so far, and you're the first to notice.

I was so late I had to put on to shave in my makeup in the car.

That's nothing. I was so late that I had to give myself a sponge bath in the car.

Aren't you the driver of your carpool? You've never heard such whining.

We're so understaffed that the project is six weeks behind schedule.

The analysis...

I can't add people while I'm changing the due date. I can't ignore it.

Bad news... we're not giving any raises.

Making it worse... but we think work is its own reward.

Making it much worse... expect to get rewarded about twice as much next year.

Contest Results: Elementary States?

I goofed on the last announcement of the results. People noticed that while I said Florida was the Everglade State, I listed Washington as having that sobriquet. What I meant to say was that although both Washington and Florida both have the moniker "The Everglade State," Washington is more commonly known as "The Evergreen State," so perhaps you thought I made a mistake. And if that didn't confuse you enough, instead of giving the winner's result I had given the runner-up's! Anyway, Advoquita got 12 right, not the winner's result which was she got 11. Anyway, Advoquita got 12 right, not the winner's result which was she got 11. Another goof was in yesterday's crossword ... we had two extra black squares.

Listed Washington as having that sobriquet. What I meant to say was that although both Washington and Florida both have the moniker "The Everglade State," Washington is more commonly known as "The Evergreen State," so perhaps you thought I made a mistake. And if that didn't confuse you enough, instead of giving the winner's result I had given the runner-up's! Anyway, Advoquita got 12 right, not the winner's result which was she got 11. Another goof was in yesterday's crossword ... we had two extra black squares.

As many chemists know, many elements were discovered independently by different people, and although each of them may suggest a name, only one of them goes into the accepted nomenclature. Most of the names I listed are "rejected" names of this sort. Anyway, the answers are: 

- BREVJUM = element 91
- PROPTACTINIUM, AUSONIUM = element 90
- REVENUE = element 93
- MUTA- = element 94
- PLUTONIUM = element 92
- TRITANIUM = element 92
- 

- NEUTRONIUM, ISAURIUM = element 93

- RUTHERFORDIUM = element 1287.

Send your answers to go@tech before Wednesday 8:00pm. Win $10!
searches is April 14th. Send all submissions either by e-mail (estem@tech.caltech.edu), mail (MSC 990), or by foot (Page, room 132).

Sharyn Slavin, Assistant Vice President for Student Affairs, and Stan Bondovskky, Student Affairs Administrator, invite you to stop by the Coffeehouse on Friday afternoons from 2 to 4 p.m. to talk with them. All students are welcome, and free drinks will be available. Please drop by and get to know Sharyn and Stan. They will be happy to answer questions or provide assistance.

The AIDS Service Center presents "Just Say Know," a free educational support group that will explore different topics related to HIV and AIDS. "Just Say Know" will meet every Tuesday from 6:30 to 8:30 p.m. through March 21st at the AIDS Service Center, 126 West Del Mar Boulevard, Pasadena. To participate, call from Drake (818) 398-4553.

The Caltech Muslim Student Association will hold Muslim Friday prayer sessions weekly in the Y-lounge at 12:15 p.m.

"Take a Break and Spend Some Time with Friends." The office of the International Student Programs would like to invite you to our Open House for coffee, tea and conversation. Every Wednesday from 4:00 p.m. - 5:30 p.m. at the office of International Student Programs, Olive Walk. Open to the entire Caltech community.

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NEW Please note: the Caltech Weekly Calendar lists the wrong time for the Sunday performances of The Feve'r. The show will start at 8:00 p.m., not at 2:00 p.m. as listed. The Friday and Saturday performances are correctly listed as starting at 8:00 p.m.

The Totem is now accepting submissions! All undergraduates, graduates, and faculty are welcome to submit poems, short stories, essays, photos, art, music, or any original compositions. The Totem is also looking for a creative cover design for this year's volume. Designs should be drawn in ink and be 8 1/2" x 11". Please limit designs to two colors. The winner will receive $25 and a autographed copy of The Totem! The deadline for both talent searches is April 14th. Send all submissions either by e-mail (estem@tech.caltech.edu), mail (MSC 990), or by foot (Page, room 132).

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**From the Counseling Center**

California bachelor's Graduating system, sojrir 0) La few as of at of technology, innovation, or entrepreneurship: hour before the program.

**Club Announcements**

The theme for a California Institute of Technology students presents a new program. The program will be announcing its first national internship opportunity with the Society for Calligraphy, Dr. Gene Caltech. By CHS presents a free concert focusing on the science, ethics, and public policy of "Scientific Creationism: From Heresy to Mainstream." The California Institute of Technology announces auditions for the production of "Apparitions." The performance will be at 7:30 p.m. on Saturday, February 18 in the Robert O. Anderson Building.

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