Unemployment
Topic of Talk
For Trustees

IBM Chairman of the Board, Thomas J. Watson, spoke Tuesday at the Athenaeum to a meeting of the Caltech Student Associates on the subject of unemployment. The speech presented the history of the present unemployment problem.

No, Really
The major point of his speech was that unemployment actually is a serious problem. He cited numerous statistics and presented facts which tend to show the extent of the problem. He then emphasized that the problem wasn’t one of statistics, but that something had happened to the cause of unemployment, which he said he was going to advance to tech and lagging education.

He felt that the steps that had been taken to solve the problem had been unsatisfactory. His solution, he felt, would have forced the government to do more of the job.

Sirps for Progress
To solve the problem, and to get the American economy on the move, there are three things. The first was a strong and determined government operation, which would prevent strikes and other labor strife. Secondly, he proposed a study of a reduced work week, and finally, he felt that the U.S. should find other markets for its goods.

He ended on an optimistic note, and said that he felt the U.S. could handle unemployment. Watson has been on the Board of Trustees of Caltech since 1961.

Helstein is Next Y M C A Leader

Ralph Helstein, dynamic Inter­national Student Association counselor of the United Packhust Workers of America, AFL-CIO, will be on campus December 4-6 as the first YMCA Leader of America for 1961-1962.

Mr. Helstein is one of the foremost authorities on the subject of international relations and its impact on the labor force around the world. He has spoken on this subject at leading academic institutions, governmental and trade union conferences and conventions, and on national television documentaries.

Born in 1921, he has been pro­fessional since 1958. As early as 1968, Mr. Helstein became USWA President; his union was acknowledged leader in the international drive for the American Federation of Labor. He is a leader of the International Relations. In 1961, was a pioneering attempt to meet problems caused by automation.

Mr. Helstein is currently a member of the State of Illinois Governor’s Commission on Unemployment, and a member of the United States Board of the University of Chicago.

Draft Regulations Change;
Affect Student Eligibility

President Kennedy’s new draft regulations, compelling marri­ed men without children from the draft, are dropping the induction age requirement so that Caltech student may soon be eligible immediately upon graduation. In an interview with the Californian this last week, Dr. — Helstein, professor of civil engineering and a member of Local Board No. 22 in Alhambra, explained some new draft regulations as they affect Caltech students.

McCormick said that one month the draft age has gone from 23 to 22, and should go still lower. He encourages all undergraduates to complete the draft registration forms. The draft regulations now provide that officers in the armed forces will be considered for deferment for up to two years. The draft age is now 22, and should be considered for deferment for up to two years.

There is still no real danger for any Tech undergrad, however, as deferments are easily obtainable by anyone in reasonable good standing in almost any college. Even if someone does not get a deferment, he can still get a deferment or postponement with little trouble. The main advantage of deferment is to avoid the inconvenience of having to take the pre-induction physical examination.

By HANK SUGAWARA
Attention freshmen and sopho­more Tuesday, November 30, in the date of student's greatest sports event, the Mudeo. Any fresh who still works full-time for a living will be given a ticket for being out during the day.

Superiorly Demonstrated
For the uninformed, the Mudeo is the annual evaluation of the athletic-strength constants of the freshman and sophomore classes. Events will include a tug-of-war, sack race, wheelbarrow race, horse-and-rider event, and a tire race. A special playing field especially designated for the above sports will be prepared in a convenient location within the Caltech campus.

For the benefit of those unfamiliar with the Mudeo, we will point out that the Mudeo is not the same thing as a field day. The Mudeo is a serious attempt to place the athletes of the Caltech campus in a true competition with each other.

In this year's Mudeo, the freshmen have a chance to prove their athletic superiority over the sophomores. The freshmen have been working hard all semester to prepare for the Mudeo, and the sophomores are not going to let them walk all over them.

The Mudeo is a day when the students of Caltech can prove their ability to compete with each other and to show their true colors.

Dubridge Speaker
At Center Opening

"Dr. Von Karman became literally the father of the entire aeroplane industry," thus spoke Caltech President Lee Dubridge at the dedication of the Von Karman Center of the Aeronaut General Corporation, Tuesday, October 9.

The Center, located in the newly constructed building of the Los Angeles area, was dedicated as a permanent home for the Institute of the Everyday, has opened in Dabney Lounge. It is an assembly of work, and the students who create their art from everyday objects.

CHEM E's Hour this afternoon at 3. Free coffee and doughnuts will be served, and their leads their cheers. Submit entries to Len 125 Lloyd or put them in the mailbox in Biology.

COFFEE AND TALK
Don't forget the ASCIT Coffee Hour this afternoon at 3. Free coffee and doughnuts will be served, and there will be an opportunity to talk to some of the students who are involved in the CHEM E's program. This is a great opportunity to meet new people and learn about the different aspects of the CHEM E's program. Bring your coffee and doughnuts to enjoy the conversation.
From Other Campuses
By Jack S. Simpson

I'm glad to see the sport of students has continued in the west. It seems to me that it's important for the nation to keep the sport of students as a healthy part of their lives. As you may know, the sport of students is a very important part of the lives of students, and I believe it's important for the nation to continue to support this sport. The sport of students is a great way for students to learn about teamwork and leadership, and I believe it's important for the nation to continue to support this sport.

(Continued on page 3)

Monday, November 7, 1963

Leighton Gives Physics Department Stand; Answers Complaints About New Course

Editor Pages

RATES RIOU

Technion expect to pay higher tuition and fees to Caltech than would be asked of a student in a state-supported school or a private non-technical school. They might even be convinced that, for some reason, room and board should cost more at a private school. The only way the university can do this is to discriminate at all among private colleges with regard to room and board—physicists take up no more room than historians, economists, or any other group.

The US Department of Health, Education and Welfare's report for 1962-63 shows that Tech's room and board charges are $310.50 per year, which is $120 per year less than the average of $430 per year for the 50th percentile and, in fact, are the highest of any technical school reporting.

These figures are even more interesting when broken down further. Caltech's room rate is $370 compared to the private institution's rate of $250. Room and board at the University of Chicago is $395. Finally, even considering technical schools as a special case, which they shouldn't be, the technical school means are $319 for room and $442 for board (not taking into account the tax that by extension has to be figured into the room and board rates).

In other words, Caltech, considered in any category and with any excuse, is still well above the 90th percentile in both room and board. In fact, $215. The West is, in fact, the cheapest region. The story is neither private than at a public school. But there's certainly no reason for this.

In any case these figures would definitely indicate that room and board rates in these schools, as a matter of fact, are for a long, long, and time, and should probably even be lowered.

J. C. Simpson

Don Green

(Continued on page 4)

B. S. GEORGE

Sabin suggests that the admissions officer of the caliber that usually spends a great deal of his time in deciding which colleges to call, which courses of study to attend, and whether or not to accept the offer of admission. Among the more rational arguments is the fact that the student would be more apt to attend a private school if he were able to do so. Private schools offer a more intensive education and are more likely to provide an environment that is conducive to learning. In addition, private schools tend to have smaller class sizes, which allows for more individual attention. Finally, the cost of attending a private school is often lower than the cost of attending a public school.

There are some disadvantages to attending a private school, however. Private schools often have more rigid admission requirements, and the cost of tuition can be higher. Additionally, private schools may not offer as many extracurricular activities as public schools.

Overall, there are pros and cons to attending either a public or private school. The decision should be based on the individual needs and preferences of the student. Private schools may offer a more rigorous academic experience, but they may also be more expensive and have more stringent admission requirements. Public schools may offer a more relaxed and less rigorous educational environment, but they may also be more affordable and have a wider range of extracurricular activities.
Leighton Writes On

(Continued from page 2) a long gap between lecture, problem, and test — and when the tests were all learning some of the new tricks along with the material covered in the past, and we could proceed down another page of notes in the textbook at hand. We can look for­ward to a more orderly, if some­what less hazardous and ex­citement crossing through the two courses.

Many Survived

But what kind of a course, how many of us of course we do not know for sure to what ex­tent have reached our goals, there are always certain indications. First is the fact that, in spite of the difficulties of re­ading no text, a significant num­ber of students do grasp essen­tially everything that was pres­ented. I expect this number to increase and the number of fail­ures to decrease as the course develops, both because of the availability of a textbook, but also because the instructors and the upperclassmen in the house will be able to offer more help to the new freshmen of sopho­mores. (Perhaps some of the present juniors could improve their backgrounds by helping the freshmen — they might then find that the material wasn’t so hard after all.)

There has been also an over­whelmingly favorable reaction to the Phl text from all parts of the country. The physics de­partment has had a steady stream of urgent requests for copies of the Feynman lectures and comments have been univer­sally favorable.

Worthwhile Goal

Those of us who have partici­pated in this experiment have been willing to work hard — and for all concerned, the task has been hard — because we knew that many of our efforts are directed toward a worthwhile goal: a truly first-rate, flexible vehicle for the maturation of the freshman sopho­mores. (Perhaps some of the present juniors could improve their backgrounds by helping the freshmen — they might find that the material wasn’t so hard after all.)

As for the “changes in grad­uates. The quality of the teaching assistants, because they are real people like students, professors, etc., I do not believe that this complaint can be prop­erly directed at the new physics course per se. True, the task has been more than ordinarily de­manding on teacher as well as on lecture, and there may have been some unfortunate teaching assignments made. I think the teachers abilities covered ap­proximately the normal range, which is about the same range that will be covered by the present students, including those who are complaining about com­placency, when they become teachers. People are human.

Morale Important

As I have said before, many of our problems lie in the tan­gible section defined as mo­tivation or morale. This is true not only of the students in Phl and Ph2, but also of other stu­dents, and indeed of the teach­ers and of the entire school. As many of the staff were, I was a Caltech student and attended, and remember clearly quite strongly how full of life one teach­er or another. Some were good, and some were not so good. I learned more from some and less from others. What I did then not appreciate, but think I do now, is that the present teachers are human, and have feelings, ambitions, and usually, a desire to do a good job. Often the problem is one of communi­cation, and understanding is needed on both sides. A teacher has a morale problem too. He needs interest and encourage­ment from his students to do his best. Needless to say, massive cutting of classes or lecture is hardly the way to improve either the lecturing or the teaching of the course. There is a real problem, there are channels available for communication between students and staff, begin­ning with direct talks. These channels will function well only if they are used.

No Intellectual Spirit

One cultural word on culture. One reason why a student comes to Caltech is, supposedly, to be in an intellectually challenging and stimulating atmosphere. He cer­tainly does not come to the In­situte expecting to be intellec­tually pampered and spoiled. Yet, when he arrives, he finds re­markably little intellectual school spirit to urge him on, or com­pared with the challenging offered athletic teams, for example. It seems to me that what Caltech is, and what it is supposed to be, is, first and foremost an intellec­tuall community — a community of scholars. That is what stu­dents think they come here for.

And On

This could be the start of something... BIG!

If you are compiling your BS or MS degree in EE, ME or Physics — you are on the right track! Does the career of a Ph.D. in a leading Ph.D. program fit your vision? Here is the perfect way to launch an exciting career... and keep it rolling! You will work an important internal guidance accelerator. It is not the perfect way to launch an exciting career... and keep it rolling! You will work an important internal guidance and navigational system projects for Titan II and III, the Apollo Navegational-Guidance System, the inertial guidance system other navigation and guidance navigation projects for vehicles, missiles and aircraft.

In AC’s “Career Acceleration Program,” you will spend one day hourly in formal class work, the remaining seven days on a practical project. Course includes: ADVANCED THERMO­DYNAMICS, INERTIAL INSTRUMENTS, DIGITAL COMPUTERS, GUIDANCE EQUATIONS, BASIC ASTRONOMY, TELEMETRY and DATA ANALYSIS, plus mathematics and undergraduate disciplines, as required.

In addition, AC-Milwaukee’s Tuition Refund Plan enables you to improve your skills to a level that can be reimbursed for all tuition costs on satisfactorily completing college-level course of study when undertaken voluntarily. AC also offers an “on-plant” evening educational program for advanced technical training.

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BOSTON—Advanced Concepts Research and Development On-the-Job Training Program—AC’s Boston Laboratory is engaged in research projects in avionics, navigation and inertial navigation systems. The projects include: the development of new theories to prototype, advancing the state of the art in navigation and control.

LOS ANGELES—Advanced Concepts Research and Development On-the-Job Training Program—AC’S Los Angeles Labora­tory is occupied with advanced guidance research for space vehicles and ballistic missiles, plus research and development in special purpose digital computers.

For further information on AC’s “Career Acceleration Pro­gram,” contact your placement office or write Mr. G. F. Reasch, Director of Scientific & Professional Employment, Dept. 5753, AC Spark Plug Division, General Motors Corporation, Milwaukee, Wisconsin.

In this special issue, we will welcome letters expressing any viewpoint on this subject for publication in that same issue.

Editors note: The TECH will answer Dr. Leighton’s letter in a special editorial next week. In addition, we will welcome letters expressing any viewpoint on this subject for publication in that same issue.

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975-1123
By Steve Schwarz

8.5
One thing you can say about those Italian directors is that they seem to be very unhappy people and they must use a remarkably self-centered lens to precipitate their self-pity, and with themselves is only slightly less than Henry Miller’s. Perhaps there is a connection between their personal problems and their self-centering; if you believe what Fellini said about 8½, it’s time to go to love yourself and no one else.

Of course, this particular movie, which deals with the tribulation of the director, may not be autobiographical at all. But certainly wouldn’t surprise me if Fellini, Antonioni, & Co. were personally aware of the problem of self-love, as it seems to be one of the hallmarks of our time. The hero of 8½, is, in fact, the direct descendant of Peer Gynt, who also wanted to “be himself,” that is, to fulfill the promise that was in him — and strayed into living for himself, which is something else again.

But for the Grace of God …

Other writers gave Peer other names. He is the same person as Kafka’s accused man Joseph K., and the same person in the hero of Bergman’s Wild Strawberries and Winter Light. I think I’ve heard the three of them myself. These men typically achieve material success, proved in ruthless and lonely fashion to achieve a position envied by those who fall to a brief their inner weakness, and end (sometimes) by way of divine intervention, like Ebenzer Scrooge, by committing suicide or by wanting to. As I’ve seen in these tales of Peer Gynt in his various forms, the question that has come to me over and over again is: Why? Is it true? Is it a man who proceeds completely falsely and ruthlessly fated always to a bad end? Or is that a psychological fairy tale?

Certainly, literature does not afford many men of the opposite kind, who blunder their noses at their fellow men and prosper. Don Giovanni perhaps, but he’s not a very direct character, and of course that statue did get him in the end. Shaw declared that Peer Gynt would wring his fellow man to serve his art; yet his supernumeraries always seem to end up marrying super­woman, slipping away to raise broods of little socialists. Another interesting point in this connection is that I can’t think of many examples of the Peer Gynt type in literature earlier than Peer Gynt itself. Can it be that people have really changed so much since God died in the last century? Did people really have some trouble loving until then? There’s something to that.

Bergman on the Cote d’Azur
But (as Max Shulman would say) I digress. There’s no reason to criticize 8½ just because the topic is familiar. I am willing to criticize it because it’s derivative, confused, and uninspiring. First of all I think Signor Fellini has been seeing too many of Bergman’s films. (I do have all, for that matter.) Besides the fact that Bergman used the same plot twice recently, Fellini has some seascapes which are almost copies of those that open The Seventh Seal, and I’ve seen his stolen Ingmar’s camera— lighting the thing is pretty dim for sunny Italy. As for conclusion, it’s fashionable nowadays, but 8½ gives the impression that Fellini is trying to complicate a simple subject. Certainly confusion can contribute to a feeling the director is trying to create, and since 8½ is telling about a lost, confused man one might expect the trick to work out well. But here there is just too much rambling, too much trivia. By the time the film is all wound up we’ve seen the last supper in Viridiana are in that category. But in 8½ Fellini is trying too hard; there is the attempted spectacular scene after another, producing merely confusion and fatigue. He should have contented himself with just one attempt at a great scene.

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**Page Five**

**Sports**

Caltech's varsity water polo team continued its winning ways in Conference competition by routing Redlands 4-1 last Friday in the Redland pool. The victory did not extend to two non-league games played last week; Tech bowed to Los Angeles State 1-2 and to the University of the Pacific 9-1.

Tech was never in trouble at Redlands, having complete control over the game from the onset. Forward "Dirty Tom" Crocker, Dave Selb, and John Walter each scored 4 goals. Rich Nielsen contributed the other 2 to complete the diversified scoring. "Filthy Harry" Maynard and "Moore" McCammon again led an inspired defensive effort, limiting Redlands to only two goals until the fourth quarter, when Coach Eversy turned to his bench to complete the game.

Against L.A. State and UOP, Tech could not cope with strong swimming attacks and good shooting. Nielsen in the L.A. State game and McCammon in the UOP game scored last quarter goals to make the final score 9-1. Against L.A. State, Leb set an all-time record for obvious dirty play by fouling out with four fouls in less than four minutes of the first quarter. But a bright spot occurred when "Dirty Tom" Crocker managed to get the UOP goalie thrown out of the game for committing a major foul.

The Caltech frosh recorded an even more spectacular loss in previous weeks. Not content with losing by scores of 20-3, 21-0, etc., the frosh bowed to Redlands 49-0.

In the Big game with Occident Friday, the Tech water poloists bowed by a 74 score. All of Tech's goals came in the first quarter. Rich Nielsen got 2 and Tom Crocker 1. After that Tech's offensive efforts were largely ineffectual and Oxy's swimming wore down the defense in the later goals. The Tech frosh again succumbed easily, 3-2.

The two teams journey to Claremont-Harvey Mold tomorrow for the second encounter with the Tigers. They return next Tuesday to battle Pomona in Alumni Pool at 6:00 p.m.

**Webmen Defeat UR; Bow To Oxy**

The Caltech cross-country team showed significant improvement over the previous week, although nipped by Whi tler 20-16. The improvement becomes more significant when it is realized that the Whittier course is one vast hill, yet the Tech runner rarely sees more than a five foot elevation change in training. The improvement was mostly due to the running of the freshmen, mainly C. Carl, and Dick Eisenberg who finished fourth, fifth, and eighth respectively. Dependable Earl Lee finished third behind two hill-hardened Whittier runners.

The frosh team succeeded in regaining the winning form of their first race by winning 28-25. Showing greatest improvement in this race were Bob Miller who finished second and Fred Lamb who finished seventh. They were backed with good running from Pete Cross (third), Jim Smith (fifth), and Larry Dillahay (ninth). With this victory the frosh record now stands even with two wins and two losses.

**Page Upsets Blacker, 7-6; Big Red Takes Softball Title**

As the Interhouse softball season drew to a close, Blacker lost its chance to gain a tie for first place by losing to Page 7-3.

Page capitalized early on Blacker infield bobbles to set up a commanding lead. Then it was a nip-and-tuck battle to hold the lead, as Del Levy contributed some clutch pitching to stem the Blacker challenge. Steve Teigland took the loss for Blacker.

At Delaware combined power with consistent pitching to defeat the Blackets 9-1. D. Dalyney started fast on Yudie's home run and coasted to the victory although there were tight moments in the last inning. Swatek took the win and Eaton the loss.

**Cross-Country Men Lose; Fresh Win**

The Caltech cross-country team showed significant improvement over the previous week, although nipped by Whittier 20-16. The improvement becomes more significant when it is realized that the Whittier course is one vast hill, yet the Tech runner rarely sees more than a five foot elevation change in training. The improvement was mostly due to the running of the freshmen, mainly C. Carl, and Dick Eisenberg who finished fourth, fifth, and eighth respectively. Dependable Earl Lee finished third behind two hill-hardened Whittier runners.

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**On Campus**

"I was a Teen-Age Slide Rule" is a recent learned journal (Playboy) the distinguished board chairman (Ralph "Hot Lips" Sigafoos) of one of our most important academic subdivisions (the Art Meth­ odological Co.) wrote a trenchant article in which he pinpointed our single most urgent national problem: the lack of culture among science graduates.

Let me hasten to state that Mr. Sigafoos's article was in no sense derogatory. He said emphatically that the science graduate, what with his grinding curriculum in physics, math, and chemistry, was bound to be interested in finding time to study the arts too. What distresses Mr. Sigafoos—and, indeed, all of us—is the inferior grade of today's science courses: graduates who can build a skyscraper but not Beethoven's Fourth Sympo syphony; who are familiar with Prokofiev's lines but not with Shelley's.

Mr. Sigafoos can find no solution to this lamentable imbala nce, I, however, believe there is one—and a very simple one. It is this: if students of science don't have the time to travel to the arts, then the arts must come to students of science.

For example, it would be very easy to provide a class to teach poetry and music right along with physics. Students, instead of being called upon merely to recite, would instead be required to rhyme their answers and imbibe—like famous athletes, for instance, the starting Colonel Bogey March. These recitations would not only be checked with important themes of the course, but would, at the same time, expose the students to the aesthetic delights of great poetry and music. Here, try it, yourself. You all know The Colonel Bogey March, a song along with physics:

Physic  
Is what we learn to do.  
Einstein  
Said energy is mass.  
Newton  
Is highly dubious.  
And Pascal's a meek,  
Einstein  
Said energy is mass.  
Newton  
Is highly dubious.  
And Pascal's a meek,  
Einstein  
Said energy is mass.  
Newton  
Is highly dubious.  
And Pascal's a meek,

Do you see how much more involving it is to learn physics this way? Of course you do. What? You want another chorus? By all means:

Leibnitz  
Wrote the Logica,  
Trollel  
He wrote the Trollel, cur,  
Curie  
Bust is a mealy,

And Don'ts a wotch,  
Sage Sagle.  
Once the student has mastered The Colonel Bogey March, he can go on to more complicated melodies like Death and Trans­ formation, Station Yank, and Rast-How.

And when the student, loaded not only with science but with culture, leaves his classroom and lights his Marlboro Cigarette, how much more will he enjoy that filter, that flavor, that pack or box? Because then he will no longer be a little wise within him repeating that he is culturally a dull. He will know—know joyously—that he has mastered an important theme in his life, and he will look and ravel in the pleasure of his Marlboro as a cold soak in new goo—crushed and triumphal—a truly educated human being—a credit to his college, himself, and to his totemism!

© 1963 Max Shulman
By J. K. Evans

Gridders Put Up Good Fight But Fall To Santa Clara—40-6

BY J. K. EVANS

You can argue with the statistics, no matter what anybody says—too bad nobody told whoever scheduled Santa Clara. Caltech's Beavers put up a good fight, but weight of numbers and weight of tackles (26 to 26) proved to be too much for the outclassed Techmen as they bowed to the Broncos 60-0 at Buck Shaw Stadium in Santa Clara Saturday night. SC's vaunted offense proved to be everything it was vaunted to be, as the Broncos' tough halfbacks swarmed-hipped their way behind line-everting blocking on long touchdown runs.

In complete contrast to former games, the long yardage came in the game as the Broncos passing attack was ineffective. CIT's line was unable to contain the powerful SC line all the time, though it made valiant attempts and in fact did stop several drives. However, once a hole was made in the line, SC's downfield blocking cleared away the secondary; several long runs were stopped only by the busting pursuit of linemen—Palmer, Myers, Visonhaler, Kemp, and Christie were all over the field hauling down runners.

Offense Stalls

CIT's offense on the other hand, never really got off the ground until the last quarter that carried for 77 yards and a touchdown as Liebermann rolled in from the three. As a rule, however, the outmanned Tech line could not penetrate the SC defense, because for three quarters Coach LaRiviere used his horses on defense and the second unit played offense; finally he decided that it was time to score and played his first string on offense. Also, SC used their first unit only sparingly after the middle of the second quarter.

Out of Our League

The simplest thing to say about the game is that CIT was simply out-classed. The loss of Visonhaler and Scott with knee injuries during the game did not help the situation anyway. There is no disgrace to be found in losing to a team that is just plain out of your league. The Techmen did not play a bad game; man for man they played as well as ever they have. But a good big man is always better than a good little man, and that was certainly true at Santa Clara; they had plenty of good big men. While the trip was certainly a novelty and a break in routine, still it seems a shame to travel four hundred miles to lose not only a game but two good ballplayers through injury simply because the opponents are too good for an even contest.

Statistics Lie

The statistics don't really show just how great the discrepancy really was. Though SC rolled up 339 yards to CIT's 136, this does not include two touchdowns on kickoff, and punt returns of 85 and 87 yards, or two TD's from scrimmage of 71 and 97 yards called back because of clipping penalties. (SC played a

Page Six
CALIFORNIA TECH

Thursday, November 7, 1963

Frosh Sparkle While Falling To CHM, 33-8

By Marshall Hall

Though a loss, the Caltech–Claremont-Harvey frosh football game last Saturday came out well considering CHM was favored by anywhere from 60 to 150 points. The final score was 33-8 with the Beavers racking up their second T.D. of the season. This second touchdown represents the first time in six years that the Caltech frosh have scored twice in one season.

Caltech looked shaky the first half, losing the ball twice within the CHM 10 yard line. At the start of the second half, however, Caltech took the kick-off and marched for a touchdown in seven plays. Passes by quarterback Greg Guffery to ends Marshall Hall, Steve Card, and John Foster took the Beavers to the Caltech's six yard line. Bill Sikricken carried the ball on a full back plunge over the line for six points. A quick pass from Greg Guffery to Marshall Hall added two more points for the rest of the game.

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(Continued on page 8)

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Varsity Soccer Team Defeats Biola; JV Loses

Last Saturday afternoon, the varsity Caltech soccer team beat Biola by a score of 4-3. The game began with a quick goal which Biola pushed by a surprised Caltech defense. Before the defense settled down, Biola led 2-0 in favor of Caltech.

The second half found both teams fairly disorganized. Both defenses and both offenses generally exhibited a lack of any concerted, effective tactics. The game was rough and Christian charity was not in evidence. During this period of time, Biola managed to tie the score 3-3. Towards the end of the game, the two teams' playing improved. Caltech gradually managed to build up an advantage which they used to take the lead 4-3.

The next game will be this evening against Redlands. The game will be played here with Caltech attempting to continue their win streak.

The J.V. soccer team lost 2-1 to the Biola J.V. Saturday at T.P. Tech led 1-0 at the end of the first half, but several minutes after the beginning of the second half, the center half-back Ted Young was kicked in the ankle, and forced to leave the game. Biola scored on this play, and again a few minutes later, before the Tech defense could adjust to the loss of the center half. After the second goal, the team managed to hold the Biola attack, but was unable to score.

We're looking forward to meeting you.

In addition, Boeing's Vertol Division is one of America's leading designers and builders of helicopters. Research projects at Boeing are under way in such advanced fields as celestial mechanics, solid state physics, nuclear and plasma physics, flight sciences, space flight and propulsion.

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Drop in to your Placement Office and arrange for an interview. We're looking forward to meeting you!
Santa Clara Rolls On

(Continued from page 6) rough and slightly dirty game, demonstrated by the fact that they were penalized over a hundred yards for illegalities such as clipping and unnecessary roughness.) The Beavers tried hard but lost through no fault of their own.

The Play-by-Play:
SC took the opening kickoff and ran it back 65 yards for a touchdown. The kick was good. (7:0) Peterson took the kickoff and returned it to the 32. Green picked up 16 for the 24 and rumble it back 3 yards for a TD. The kick was good; SC led 10-0. After a 71-yard gallop on a reverse was nullified by a clipping penalty. SC's Miranda broke around right end for 68 and the TD. The kick was good, SC led 16-0 and removed their first unit permanently. CIT received and punt. SC then mounted a drive that carried over into the fourth quarter, going 37 yards in 12 plays for the score. The kick was good (40-0). After an exchange of punts, Tech mounted a drive from their 23 which covered 77 yards in 14 plays and culminated in Liebermann's score from the 2 after Dinius set it up with a 12-yard drive. Liebermann's kick was no good (40-6).

Third Quarter:
A 38-yard field goal by Peterson gave SC a 26-0 lead at the sideline by Myers in pursuit. Another fullback draw went for 87 yards for a TD. Tech fumbled and then Christie intercepted and returned it to the 22. Green went for 35 and the TD. Andy Kampe blocked the point (20-0). The Play-by-Play:

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(Continued from page 1)

With Campus Interviews:

On Campus Interviews: November 22. Contact University Placement Office For Appointment.

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