Miss RebeccaPennys, a 17-year-old pianist from Sever­
by Hills will give an all-Crap recital in Dabney Lounge on
Monday, November 5, at 8 p.m.
Miss Pennys, returning from a tour which took her to Bloom­
ington, Indiana; Pontiac, Michigan; and Phil­adelphia, Pennsylvania, soon will be a contestant at the National International Chopin Festival. On tour, she was widely acclaimed by music critics.

Miss Pennys made her first public appearance at the age of ten at the Westside Jewish Community Center under the auspices of the "Musicians in the Making." Since her debut, she has given highly acclaimed recitals in southern California. Albert Goldberg of the Los Angeles Times wrote in May, 1963: "Miss Pennys is a slip of a girl who scarcely looks her 16 years...she has an innate flair for her instrument...she has exceptional talent." (Continued on page 3)

**BY MICHAEL MEE**

The latest factor in the grade system is the student's vote on freshman courses. Yesterday dur­
ing assembly hour a meeting of the class was held to hear the official announce and explain the decision. Dean Strong pre­
pared a statement which was read to the students by Professors Owen, Huttenbach, Clark, Apostol, Vogt, and Waser. Owen, chairman of the ad hoc Committee on the Freshman Year, recalled his introduction to the students at frosh camp five weeks ago.

He reiterated the concept of the ideal student as one that once in the harsh reality of life at Cal­
tech students will not be forced to work for grades. Not
only was the grade in any particular subject an important goal, but the overall GPA dominated studies. The hope that led to an over­whelming majority to vote for the proposal in the faculty, he said, is that the year of adjustment will be a change for the better for the student and faculty.

The two-year trial of the pass­
of-fail system was instituted to give the student a freedom of choice in his' studying. The grade system, not done to
constitute almost' all of the
distributions per student will be
the house with the highest con­
dition the students personally.
Contributions may be made in
any amount, in memory of their riverboat theme. The
will become the center of danc­
ing level, but the freshmen were
wrong with a paper.
in Math 1, and those whose
scores are very good will be ex­empted from the final exam. Nu­
merical scoring will be started in
the weekly tests and the final;
(Continued on page E)

**Townsos Brings Another
Nobel Prize to Tech**

BY LES FISCHBONE

Last Thursday, Dr. Charles H. Townes, Caltech's R. A. Millikan Professor of Engineering, attended with Caltech to win a Nobel Prize. Gaining the honors in physics, he was in Pasadena at a NASA manned space flight con­
ference. This year's efforts will be the only time dur­
page spacecraft~
nan continues
pre­

The award, shared with Pro­

fessors Nikolay Basov and Alek­
sander Prokhorov of Russia, is the same as last year's which was awarded for the discovery of the maser laser principle. Townes was first struck by the idea that extremely short microwave could be con­
trolled by atomic or molecular
trol an extremely sensitive atomic
dock. Using the maser lasers and
lasers have found using ranges for high-precision navigation
in appendix carriers to welders for eye sur­
gery.

Townes will receive his award from King Gustaf Adolf in Stock­
holm on December 10, the anni­versary of Alfred Nobel's death.

Townes, born in Chicago, South Carolina, received his BS and PhD from University of Illinois, his M.A. in physics at Columbia D.C., in 1941. After four years he was using the stimulated emission from ammonia molecules to con­
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BY BART GORDON

As the time for Interhouse draws nearer, four more Houses have followed PAGE's example and have decided on themes for the dates. Dabney and Blacker have held meetings but have not, as yet, reached a final decision on their themes.

**Annual Y Finance Drive To Begin Next Week In Houses**

BY DICK BACKAIRON

The Annual Y student Finance Drive will be conducted next week, Nov. 13. This year's goal is $2,700, which represents an im­portant six percent of the Y's budget. Ed Bauer, Y Treasurer and chairman of the Finance Drive Committee, will have no­tions in the house allies to con­
tact the students personally. Contributions may be made in cash to the solicitor or as pledges to be deferred to next term's In­
stitute bill. As a little incentive, the house with the highest con­tribution per student will be treated to a dinner served by numerous, young, good-looking female waitresses. This will be the only time dur­ing the year that students will be asked for their financial support of the Y. It is therefore crucial that students give serious thought and consideration to the amount which they give in support of the Y's yearly program. Also, students are reminded that outside con­tributions depend greatly upon student donations. Y member­ship is free and open to all who want to participate in its activi­ties and services.

This weekend two small con­ferences have been scheduled at the beach. On Wednesday an All­
Chapin Piano Concert will be given. Many more programs are in the making to take advantage of them and give generously to the Y.

**IH Themes Told**

**Picking Tell's Of Ranger 7's Moon Pictures**

BY BERN SUEZAWA

An unqualified chance to see the latest and most dramatic of America's space achievements drew a large crowd to the fourth of the Caltech Lecture Series in Beck­
man Auditorium Monday night, as Dr. Wil­
Iaam Pickering, director of JPL, presented a lecture on the Ranger 7 spacecraft. Originally from New Zealand and a graduate of Cal­
tech, Pickering has been working with the Ranger series since 1962. Pickering began by explaining some of the most basic of the problems confronting the pro­
gram to develop and test a spacecraft that could survive a journey to the moon's surface from the Ranger spacecraft. These included prob­lems of the trajectory and veloc­ity of the capsule, the time of the launching, the guidance of the system, and landing corrections after the trip had begun. Making extensive use of slides, he broadly explained how these
The faculty has decided to drop freshman grades. The arguments pro and con have been heard around campus and in the Tech Weekly. It has been decided that there are advantages and disadvantages to the new system. However, now that the plan is being tried for at least two years the success or failure of the plan lies with the fresher.

No matter how good an advisor system is established, the ultimate responsibility belongs with the frosh. The frosh already are hearing comments from upperclassmen such as: ‘Hell, why study, you don't have any grades.’ A serious drop in enrollment is a loss to the college and a hit to the individual who is trying to get himself through college.

We are certain that all upperclassmen have experienced these types of lectures.

We are not idealistic enough to believe that these lectures will cease to exist. We do hope that the faculty will make every effort to keep the interest high in all the frosh courses. We also hope that the frosh can keep their self-control and will conscientiously work to make the frosh “grading” system successful.

—Wally Oliver

Stuart Galley

The Critical Ear

BY MAI

Miles Davis: Jazzy Screen the Scope (Fontana—MGP 27023)

Another album of movie music, this album features the leader of the modern jazz trumpeter, the re-released Miles Davis: Jazzy Screen the Scope (Fontana-MGP 27023). The tracks are from the french film, “Ele­vate to the Staircase.” There is never mere mood music or a jazz treatment of pop tunes. The numbers played by Miles, are valid artistic works. They convey real mood and feeling to the listener.

Focus

Played by the extremely lyrical Davis, this music has some truly great moments. In particular:

—Barney Wilen, tenor; René Reuter, piano; Mike Plosh, bass and the American expatriate Kenny Clarke, drums — Miles takes advantage of this opportunity to demonstrate the tremendous solo work of which he is capable. In the horn solo on “L'Aministrat De Cariñes,” Miles plays with a striking beauty and ability matched in any of his previous recorded work.

An interesting sidetone on the way the music was recorded: the great Miles selected and recorded the music. Rather they rearranged the time and then improvised from the written score as the film was projected on a big screen in front of them. It is his ability to react to the mood and feeling of such scene probably helps him, to make this album as good as it is.

But ED

Finishing up half of the second side of the album are three songs from the French film, “The Woman,” containing the music of Miles Davis: Jazzy Screen the Scope (Fontana—MGP 27023). It is a beautiful album, which is important in part or whole by Art Blakey. These songs show off not only him and his Jazz Messengers. Unfortunately the Messengers — Bobby Tim­mons, piano; Jimmy Merritt, bass; Benny Golson, tenor; Lee Morgan, trumpet; and Bill Evans, on drums — are much better on their usual hard-bop numbers than on those subtle movie themes.

Gifts and Messages Roland Kirk

(Mercury MG 2089)

The word that characterizes Roland Kirk's music is joy. He plays really swinging music in a chaotic and abandoned way. First a little explanation is in order about the instruments he uses. In this particular album he plays a valve trombone, a bass clarinet, a tenor saxophones, the last looks like a fore­runner of the present day saxophone. He plays this imposing array both singly and in various combinations. Although it is unusual to see a few to a people to see

string Trio To Perform In Tech Chamber Music Series

The K-R-B String Trio will perform Sunday, November 8, in the Chamber Music Series at 2:30 p.m. in the Old Dohler Chamber Music Series. The pro­gram will start at 2:30 p.m. in the Dohler Auditorium and will feature three classical arrangements for string trio of Beethoven, Hindemith, and Monet.

Whence K-R-B?

The musicians comprising the trio are Jacob Kraschmalnikov, on the violin; Harry Rumpler, viola; and Edward Sutherland, cello. The K-R-B, is derived from the first letters of the last names of the artists. This will be the first perfor­mance at Caltech for the K-R-B trio.

The first part of the program features Beethoven's String Trio in B-flat, Op. 9, No. 2. The next number is the String Trio, Op. 34, of Hindemith. Mo­nom's Divertimento in E-flat major for Violin, Viola, and Cello, K. 303, concludes the program.

The Chamber Music Series is new in its fifteenth season. The Cage-Whitaker Student House Faculty Committee on Musical Activities, under the direction of members of the faculty, and the Chamber Music Series are available in 406 Dohler.

By Don Green

No More Grades (Continued from page 1)

The weight of the later depending on the quality of the former.

In much 15, on the other hand, the weight of the courses are to be re­corded as P or F, with six “P”s to be considered a course. The instructor of the course will be exempted from the final exam, but it is up to the individual to convince his advisor to no take him. His cap­complishment is must to be performed, because some doing excellent work might be required to be exempted.

Among those desiring a “deeper” examination of life should make a point of checking the current attraction at the Coronet Theatre in Hollywood. Under the title of "The World of Ray Bradbury," the author, one of the most orig­inal of his era, presents three of his short fantastic plays.

In this particular album he plays the extremely lyrical Davis, this music has some truly great moments.

No matter how good an advisor system is established, the ultimate responsibility belongs with the frosh. The frosh already are hearing comments from upperclassmen such as: ‘Hell, why study, you don't have any grades.’ A serious drop in enrollment is a loss to the college and a hit to the individual who is trying to get himself through college.

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No matte...
BY JOHN ROUSE

Will Calaf win Princes Turandot? Can Manczuk defeat the evil Count de Luna in their rivalry for the hand of Leonora? Or will the opera this season to find out. And be prepared for an evening or two of the world's best and most loved music.

The San Francisco Opera's 1964 Los Angeles season opens tomorrow night at the Shrine Auditorium, with a performance of Puccini's Turandot starring Nilsson and Pilar Lorengar. (Continued from page 1)

Morebecca

A large number of Techmen will have an opportunity to see an opera during this season, due to the efforts of Dr. Hutenback to secure four tickets for each performance. These tickets were distributed among the Houses, so each House got tickets to about a dozen performances. Dr. Hutenback was most kind to arrange for these tickets; this attempt to inject a little culture into our lives is well appreciated. This season's opera includes Giuseppe Verdi's Aida, La Traviata, II Trovatore, Otello and the world-renowned Nabucco; Wagner's Parsifal; Bizet's Carmen; Beethoven's Fidelio; Strauss's Die Fledermaus and Der Rosenkavalier; Strauss's Der Rosenkavalier; Mozart's The Barber of Seville; and Leoncavallo's Pagliacci.

Tickets

La Traviata is sold out already, but tickets for the other operas may be purchased at the ticket agency in the Berry and Grass agency. Prices range from $3 to $5 per ticket, with a wait of two hours or two days to better your chances of getting a seat.

To get to the Shrine Auditorium, go south on Harbor Freeway until Exposition Boulevard. The auditorium is at the corner of Figueroa and Jefferson, with plenty of parking space. And plenty of good music.

Interhouse

There WILL be a Frosh-Soph Hop!

There are a variety of ways to advance at IBM. Your progress is tied to your own individual interests, achievement, educational achievement—all are possibilities for you at IBM. As a new graduate considering IBM, you have your choice of Development, Manufacturing, Purchasing, Training, Business Administration, a degree in the sciences, engineering, mathematics, or business administration. See your college placement officer for assistance, literature, and an appointment with IBM interviewers. Or write directly to Manager of College Relations, Dept. 882, IBM Corporate Headquarters, Armonk, New York 10504. IBM is an Equal Opportunity Employer. (Continued on page 5)
Rockclimbers Climb Buildings, Rocks

BY TOM GREENFIELD

The Caltech Alpine Club is a flourishing organisation seeking new blood (climbing at Caltech has a long and bloody past). In the style of the famed night climbers of Trinity College, Cambridge, many unique opportunities present themselves around campus.

Real climbing began here many years ago with the pioneering of the S.U.R.P. Traverse (after the hairline "realized ultimate reality potential", developed by Yvon Chouinard) on the Synchrotron, a climb reopened by Gwen in 1963. For the unsuccessful climber thisjoyous a long pendulum into a plastic awning.

Go Southfire

"They've been climbing this campus for forty years," Bob Levin, the club's president, told me as he pointed out the interesting features of the southeast side of Spaulding Hall. Behind a grad climber famous for his pioneering of the "Vampire" on Tahquitz and the "Diamond" on Yosemite is planned over Thanksgiving, for which hikers, climbers and particularly drivers are encouraged to pool resources. There are two excellent practice areas for the rockclimbers less than an hour from here, and three exceptional sites including Tahquitz and Dry Falls about two hours away. Attempts are being made, in conjunction with the ski club, to organize an overnight all-tour next term, probably at San Gorgonio.

(Continued on page 5)

Gates Sundial Explained

BY TIM HENDRICKSON

In the court between Gates Library and Ban Pacific Street there stands an anachronism in this era of Bounty watches and atomic clocks: a sundial, Caltech's gift from the Class of 1939.

In the August 1927 issue of Publications of the Astronomical Society of the Pacific, a description of the sundial, designed by Dr. Julius Wangenheim, then a personal friend of Dr. Robert Millikan and Dr. William Munro of Caltech, is given. So it was that when William Lawson, president of the Class of 1939, came to Munro seeking ideas for a class gift, Munro talked to Wangenheim; Wangenheim made drawings and offered to pay for the actual construction of the sundial.

As for the location of the sundial, Lawson recalled that the Senior Tree was "traditionally a popular meeting-spot." Evidently it was chosen as the site of the sundial, with the hands of the sundial relative to the Senior Tree, would be relatively free from shadow and disturbances.

An important feature of the sundial is that it reads standard instead of solar time. Thus, the sundial has two interchangeable time plates, which must be switched at each solstice - June 22 and December 22. This tradition will be carried out by Russell Purter, the noted amateur astronomer and aficionado of sundials whose famous drawings of the Palomar Telescope may be seen today in Robinson.

In a letter to Millikan dated October 5, 1940, the baffled Wageman could only make the ironic complaint, "...you can build a 200-inch telescope, and yet get stumped on a sundial..."

Rockclimbers Climb Buildings, Rocks

Tech Speakers Rise to Heights in Competition

Caltech debaters Nick Zahlbuck and Kermit Kubitz received superior ratings in lower-division debate at the Pacific Southwestern Collegiate Forensics Association Tournament held at San Diego State College, October 30 and 31. Zahlbuck and Kubitz compiled a record of four wins and no defeats at the tournament. Zahlbuck also received an Excellent Rating in Impromptu at the tournament.

Also representing Caltech at the tournament among the 180 teams participating were the debate teams of Fred Lamb and Dave Cline, and Roger Davison and Gary Scott. Both teams participated in upper-division. In individual events, Fred Schmutz and Cline participated in Extemp while Davison represented Caltech on Impromptu.

Caltech will attend its next debate tournament at Loyola University on November 6 and 7.

PHYSICS

The more competent your co-workers are, the greater your satisfaction when they advise something you've done. And the better your chances are to learn something new yourself. B. W. is a project leader at Boeing.

In the course of his work, B. W. is exposed to all aspects of the design and construction of the advanced jet transports fabricated at Boeing's factories in Seattle and Everett. In a recent assignment, B. W. was the organizer and supervisor of a team of engineers who, under his direction, performed a number of physical experiments on the stress analysis and flutter of the new Boeing 747 aircraft.

The project required the team to perform a series of experiments on the stress analysis of the Boeing 747 aircraft, including both static and dynamic analyses. The team was responsible for the design and construction of the experimental apparatus and for the analysis of the results.

The team consisted of five engineers, including two specialists in stress analysis and one in structural dynamics. B. W. was the leader of the team, responsible for the overall coordination of the project.

The experiments were conducted in a large test facility, which included a large wind tunnel and a high-speed test section. The wind tunnel was used to simulate the flight conditions of the Boeing 747 aircraft, while the high-speed test section was used to simulate the flutter conditions.

During the course of the project, B. W. and his team worked closely with the designers and engineers at Boeing to ensure that the experimental results were consistent with the design and manufacturing guidelines. This involved performing detailed analyses of the experimental data, comparing the results with the design specifications, and making necessary adjustments to the design.

The project was completed within the scheduled time and budget, and the results were presented to the Boeing management team. The management team was pleased with the results and praised B. W. and his team for their excellent work.

In addition to the large-scale experimental work, B. W. also participated in a number of smaller projects, including the analysis of the stress distribution in the wings and fuselage of the Boeing 747 aircraft. These projects involved the use of advanced computer techniques to perform the necessary calculations and simulations.

Overall, B. W. was highly satisfied with the results of the project, which he felt provided important insights into the stress and flutter behavior of the Boeing 747 aircraft. He was confident that the results would be valuable to the Boeing management team and would contribute to the successful development of the aircraft.

Work with a group worth standing out in.
More Pickering
(Continued from page 1)
problems were met and overcome.
Once the basic problem of getting the Ranger to the moon was overcome, more detailed systems, such as the cameras, had to be perfected. The Ranger carried six television cameras, two of which sent back pictures every five seconds while the other four sent pictures of smaller areas back every 1% seconds. As the Ranger got close to the moon's surface, the resolution of the cameras exceeded the best obtainable on earth by a factor of 1000, and many very small craters, never before seen by man, were easily distinguished.

More Laipsis
(Continued from page 3)
After lunch and some technical explanation of the morning's rides, the practical experience got hairier still as everyone got a ride in the school Cobra. By now, though, everyone felt more comfortable, and there were fewer hands reaching for the grab bar as the rear of the car slid out around a turn, or as the right front wheel went off the track into the dirt as the Cobra passed a slower car on the inside of a turn. Each of the drivers followed the same "line" around the course, and each of them drove with a smoothness and precision that it is unfortunately rarely seen on the street.

Great Race
The other, and to SCG major, purpose of the day's events was to acquaint everyone with the details of the American Road Race of Champions, to be held at Riverside later this month. Those Technmen interested in sports cars should make an effort to get to this race. There will be 14 races, representing each of the different displacement classes. In each race, there will be 16 of the country's top racing drivers; three from each of the country's six geographical divisions.

There will also be displays by all of the sports car manufacturers, exhibiting cars, speed equipment, and accessories. The racing will be very fast, and very close, with excellent drivers and sports cars you can identify with. See the Sports Car Graphic ad in this issue for details as to when and how much. It's going to be a good race; y'all come.

Criticaler
(Continued from page 2)
a grown man blowing three instruments at the same time, just listen to the music and don't worry about how it is produced. This would be a musical example of the end justifying the means. It is in this oddness that half of the charms of Roland Kirk lie. The laughter and slight tinge of mocking he puts in the music make this a pleasantly satisfying album.

Kirk is accompanied on the album by Horace Parlan on piano and an anonymous bassist and drummer. Parlan manages to play reasonably good solos on two of the tracks: "Tears Sent by You," and "My Heart at Thy Sweet Voice."

If you ever get the chance to see Roland Kirk in person, I urge you to do so. Watching him play one, two, and three instruments simultaneously is a fascinating experience; you may also be pleasantly surprised at the music produced.
Webmen Lead Conference

The variety water polo team finished the first round of conference play with an unblemished record by defeating Oxy’s Tigers Tuesday afternoon at the Alumni Pool. Last week found the Webmen defeating both Redlands and the University of the Pacific. The Webmen won their most important game to date against Occidental by using the strategy that had given them their previous conference victories. Cautious, half-court play enabled the Beavers to score 4 goals while holding Oxy to 2 tallies. Although Tech made very few mistakes during the game, the Tigers took many shots at goalie Mike Bank, who made several excellent saves. The fine defensive play in the first half provided the margin of victory.

The Scoring

The first period ended with Tech leading 1-0 after Walter drove a right-handed hook past Oxy’s goalie. Nielsan scored a goal in the second period to boost the lead to 2-0. The teams exchanged goals in each the third and fourth quarters as Nielsen and Walter counter-acted Mikkelson’s 2 goals. Walter’s second hook and Nielsan’s outside shot clinched the victory.

The game against Redlands but Friday afternoon proved to be the most frustrating of the three games; Tech finally won 6 to 5. The team was hampered by poor officiating resulting in Jenkins fouling out after six minutes of play. Walter and Maynard left the game early in the fourth quarter after each had received their fourth foul.

The first period ended with Tech leading 2-0. The teams exchanged goals in each of the three halves, and the Beavers to score 4 goals while holding Redlands the lead to 2-0. The teams exchanged goals in each of the three halves, and the Beavers to score 4 goals while holding Redlands.

Harriers Split

The Caltech frosh cross-country team protected its perfect record last Friday afternoon, as they downed the Whittier freshmen in a meet on the home course. Once again the varsity attempted to post the first win of the season, but fell to the varsity team from Whittier.
**Fleming Leads In Discobolus**

Fleming roared on to two more Discobolus victories during the last couple of weekends to take a commanding lead in the trophy standings. Both contests were held "off-campus" as Lloyd succumbed in football and Ricketts in softball.

The Lloyd contest was held two weekends ago on a very muddy Polytechnic field. Last year's Lloyd football machine seemed to suffer due to the graduation of most of their first team. A seemingly endless supply of Flemming ends proved to be very important in the downfall of the 1963-64 Interouse Football champs. The final score was a very lopsided 31 to 6.

Ricketts caused the Flems a few anxious moments last weekend. The game was held at Grant Park due to the softball (Continued on page 8)

**Fleming**

Leads In

Discobolus

**Tech Outkicks BIOLA**

The seemingly unbeatable varsity soccer team added another victory to its list Tuesday afternoon at the expense of BIOLA. After the varsity players had shut out their opposition, the jaegers made it a perfect after noon for Tech by outscoring the BIOLA junior varsity team by the close score of 2-1.

Rough Game

Although the varsity team won the contest 4-0, the men from BIOLA made a very respectable showing, as the play during the game was extremely rough. Nonetheless, the Beavers were in complete control of the game from start to finish. Tech combined a good passing game with the ability to outrun BIOLA to enable Flemming and Trishuk to score; Yilmas scored 2 important goals in the first half, putting Tech ahead to stay, and added another in the second half of play. Trishuk's single goal in the second half completed Tech's scoring.

The junior varsity team made another fine showing while defeating BIOLA's JV's. This game was quite similar in appearance to the varsity game despite the fact that the score was much closer. As was the case in the varsity contest, Tech dominated the game well enough to win by a single goal over a determined opponent in another rough, hard fought game.

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**Next Week's Sporting Events**

**CROSS COUNTRY**

Fri. Nov. 6 4:15 p.m. Pomona at Pomona

**FOOTBALL**

Sat. Nov. 7 2:00 p.m. UC Riverside at Riverside

Sat. Nov. 7 9:00 a.m. UCLA at UCLA

**FROSH AND VARSITY WATER POLO**

Fri. Nov. 6 4:00 p.m. Claremont-Mudd at Caltech

Tues. Nov. 10 4:00 p.m. Pomona at Pomona

**Splash**

(Continued from page 6)

scoreless. The game tightened a bit in the third quarter as Redlands scored four goals, Caltech three. The Beavers then held the Bulldogs to only one goal in the final period to achieve the victory. John Walter scored four goals, Nielsen scored one, and Hugh Maynard added the sixth. Even if Redlands had been able to win the contest, it would have been a Caltech victory as Redlands was penalized for infractions of conference rules; the penalty was the loss of all conference games.

On Saturday afternoon the Beavers played host to the University of the Pacific team from Stockton. It turned out to be a bad trip for UOP as they lost to Oxy 7 to 3 in the morning and were nipped by Caltech 4 to 3 in the afternoon. Tech played its usual ball-control game and led the entire game. Nielsen scored two goals, while Jenkins and Walter added one each to the cause. Fouling was heavy on both sides - UOP lost four men and the Beavers fouled out Jarvis, Walter and Maynard. Actually the game was no rougher than usual, but the referees were of a much higher quality. They called the play close, but they were consistent and kept the game well under control.

**Coming: November 17, 1964**

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Hairiers Split
(Continued from page 6)
Dave Kolb, Dave Hammans, and Steve Pollock. The final score was 12 to 4.
The Caltech varsity fared slightly better than the Whittier frosh. Pete Cross, in fourth place, was the first Tech finisher. The race had already ended in a three-way dead heat as a trio of Whittier runners strode across the finish line together after running the three-mile course in 23:16. Other Tech placers were Bob Miller, Larry Dillehay, Maynard Olsen, and Dick Eisenberg in fifth, ninth, eleventh, and twelfth places, respectively. Tech accumulated 41 points in the meet, to Whittier's 16; however, cross-country, like golf, is won with the fewest points.

Good reading

You're looking at the intelligent product of one week's work. (Some might be in your campus library.) They're technical bulletins written by very talented scientists and engineers at the Jet Propulsion Laboratory. JPL people write over 500 such documents each year. Documents with titles like "Evaporation Effects on Materials in Space," and "Pretty heady stuff.

Telstar's bold flight characteristics of neighborhood roadway "watch out for the, uh — crash, bang — yeah, that's it" warning signs. And the way punkin's back upon the noble brow of Tech progenitor's name-punkin's back as a proud, healthy, strong realization of the dream dreamt.

Hitchens quote.

"Bitchin quote.

It is the fall of the year; the corn is in the shock, and the front is on the punkin, and the punkin's back upon the noble brow of Tech progenitor's name-punkin's back as a proud, healthy, strong realization of the dream dreamt.

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Brewins

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