

# The California Tech

California Institute of Technology

Volume LX.

Pasadena, California, Thursday, December 4, 1958

Number 10

## Students' Day Activities Set For Saturday

The official red carpet will be rolled out Saturday when nearly 1000 guests from nearby high schools will visit the Caltech campus for the annual Students' Day activities.

The program this year, planned by co-chairmen Ted Bate and Don Owings with help from faculty advisor Dr. Thad Vreeland and helper-at-large Ken Casey, will follow pretty closely the programs presented in the past.

First on the agenda will be registration. Each student will check in at the student house to which he has been assigned sometime between 8 and 9 p.m.

Following registration, the students will be taken on a guided tour of the campus, highlighted by brief ten minute lectures by members of the faculty at each point of interest.

At approximately 11:45 a.m. lunch will be served for the guests. Visiting students will eat in the student houses, while the high school teachers will have lunch in the Athenaeum. After lunch, ASCIT President Mike Godfrey will give a short talk on student life to the students on the Athenaeum lawn, while a similar speech will be presented to the faculty representatives at the lunch tables.

The final activity on the agenda will be a program of 45 minutes.

### Announcements

A meeting of the freshman class has been scheduled for next Tuesday, December 9, at 11 a.m. in 155 Arms. Dean Strong urges all frosh to attend.

## Christmas Dance

Saturday night from nine 'till one, Dabney Hall Lounge will be the setting for the annual ASCIT Christmas Dance. Lex Golden's Goldtones will provide the music for the semi-formal affair.

Decorations will be created by Hortie-Van, the firm which did the decorating at Disneyland.

Two toys worth about one dollar each for needy children in the Pasadena area will be the admission charge. Girls should wear cocktail dresses or short formals; their dates, suits.

## Caltech Raiders Ignite Oxy Fire

Suffering only four casualties on the mission, thirty Caltech volunteers set off the Oxy Homecoming bonfire for the first time in five years on November 21.

Staging a five a.m. commando raid with torches and milk cartons filled with gasoline, the Techmen succeeded in setting the heavy telephone poles in the wood stack aflame for a brief interlude before the poles were doused with a fire hose.

Dave Casseres, Ross Carder, Joe Heller and Larry Langdon were taken prisoner by the Oxy freshmen defending the bonfire and were duly removed from their hair.

Although the raid didn't make a lasting flame, it was definitely a tactical success due to the fact that the raiders successfully avoided the vaunted Oxy defense system, rumored to include radio-equipped ears and flashing light signals.

## Special Vote Set Thursday To Fill Vice-President Post

### BOD Names Twelve MUN Delegates

Twelve delegates were chosen last Monday by the BOD to represent Japan at next spring's Model United Nations.

The delegates will be Tom Jovin, delegation chairman, Bill Bauer, Pedro Bolsaitis, Doug Carmichael, Ken Dinwiddie, Kent Frewing, Carl Hamilton, Mike Milder, Cleve Moler, Tom Morton, Roger Noll, Dave Nissen and Ken Scholtz.

The actual planning of the Model UN got under way yesterday when the head delegates from the various southern California colleges met to discuss some of the problems they have thus far encountered.

Further arrangements will be made at subsequent meetings of the delegation which will begin next week.

### Dick Johnson Only Applicant So Far For Office Left Vacant By Wilkinson

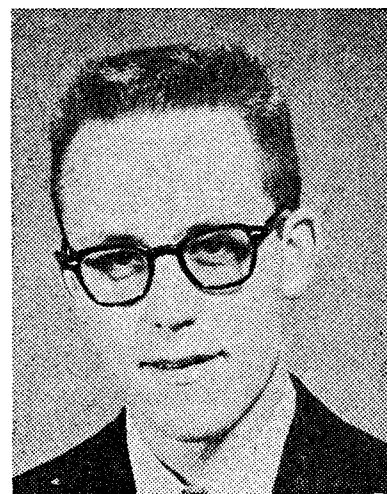
Dick Johnson, senior representative to the Board of Control and Vice-president of Dabney House, has thus far been the only nominee for the recently vacated office of ASCIT Vice-president. Final elections to fill the position will be held next Thursday, Dec. 11.

Nominations for the office were opened last Monday and will continue until 2 p.m. today. Any senior wishing to run for the office should drop a note to Mike Godfrey in the "G" box in Ricketts House as soon as possible.

Election proceedings will follow usual patterns, with balloting immediately after lunch in the student houses and Throop Club, and all day Thursday at Dabney Hall for off-campus students.

The BOD has announced that should no other nominations be received, Johnson will automatically gain the office. Also, should a BOC member be elected to the office, the Board will appoint a successor.

The vacancy was caused when Vice-president Jim Wilkinson announced that he was leaving Caltech after first term this year. Upon being asked why he had made this decision, Wilkinson replied, "I'm going out to search for the discipline and incentive so necessary for worthwhile accomplishments."



Dick Johnson

## CIT Annual Report Shows Fiscal Gains

A vital involvement in America's satellite program and launching of a multi-million-dollar development campaign have made for a historic year at Caltech, President L. A. DuBridge declared to the Board of Trustees in his annual report released Monday.

It was Caltech's Jet Propulsion Laboratory, he said, that with the Army Ballistic Missile Agency put America's first, third and fourth satellites into orbit, and went far to restore some of the prestige which the United States had apparently lost because of

(Continued on page 4)

## YMCA Tops Drive Goal

The YMCA Finance Drive for this year has exceeded its goal by \$226 to date, reports Y Treasurer Howard Weisberg. The drive, held the week of November 17, has brought in \$2026 in cash and pledges so far, with an additional 50 to 100 dollars expected in late returns.

Receipts to date, along with last year's figures for comparison, are:

	1958	1957
Blacker House .....	\$ 427	\$ 340
Dabney House .....	322	270
Fleming House .....	267	340
Ricketts House .....	279	210
Non-house members	356	170
Graduate students ..	374	400
	\$2026	\$1730

### Help Fight TB



Buy Christmas Seals

## Maslow Describes Studies Of Creative Personalities

The study of creative personalities and its relevance to theories of mental health was described to Techmen as today's

frontier of psychological research by Dr. Abraham H. Maslow, visiting psychologist and first guest of the YMCA's Leaders of America program.

Maslow began his three-day visit to Caltech yesterday with a talk before Dr. John Wier's General Psychology class. He described his study of 25 "fully mentally healthy" subjects and how this study has broadened the present-day conception of mental health and influenced the trend of modern research.

His former conventional notion of mental health as "an absence of illness" had to be modified, he said, when he discovered that his "ideal" subjects displayed a number of exceptional capacities as well as freedom from illnesses.

### All Creative

The subjects were all creative people who use their capacities more fully and with greater ease than most people, Maslow found. They had "a much clearer than average perception of reality—good insight into people and good judgment in ideas." They were often capable of "a direct perception of reality akin to the mystical kind often described in religious literature."

Present research is attempting to explain these capacities in terms of the very sound mental health, in the conventional sense, of the individuals, Maslow said.

He mentioned the relevance of such modern psychological research to the Caltech community: "Questions dealing with creativ-

(Continued on page 4)

## TBPi Initiates Ten Members

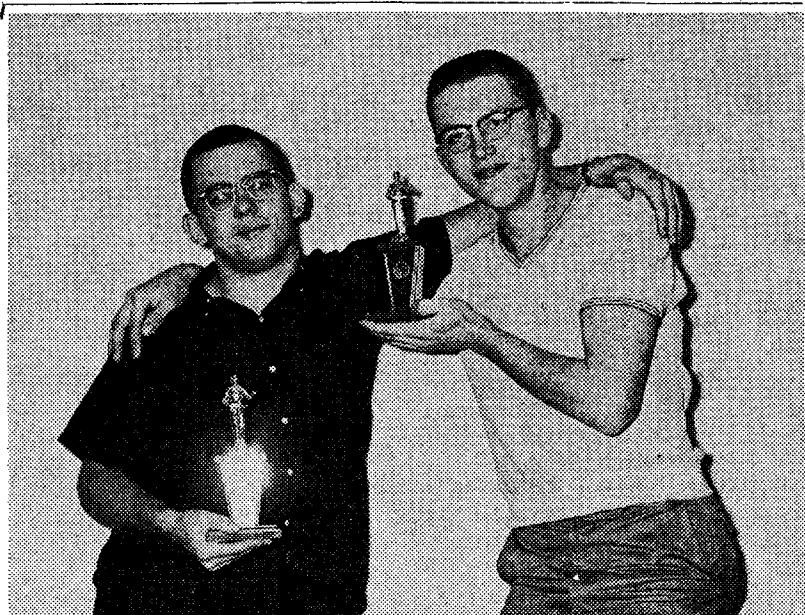
Seven seniors and three juniors will be initiated into Tau Beta Pi, national engineering and science honorary, this Sunday.

Seniors John C. Peterson, Ron Forbess, Jerry Arenson, Steve Schwartz, Keith Brown, John David Teal and Gordon Hughes and Juniors Brad Efron, John H. Munson and Lewis E. Toth have been named by present members as candidates for membership.

Seniors in the top one fifth of their class and juniors in the top one eighth academically are eligible for membership in Tau Beta Pi. Members are elected from the eligible candidates on the basis of outside interests, personality, and academic standing.

## Nine Named To StuFacRelCom

The Student-Faculty Relations Committee named nine new members at a meeting last Monday. Students named to the faculty-student coordinating group include Bob Koh, Bob Nason, Gordon Hughes, Tom Tebben, Stan Sadjera, Dale Green, Dave Spencer, Clyde Zaidins and Tom Tisch.



"OLD BUDDIES" Cleve Moler and Roger Noll simper for the photographer. They are clutching the trophies they won at last week's Western Debate Tournament.

## Moler, Noll Score At Western

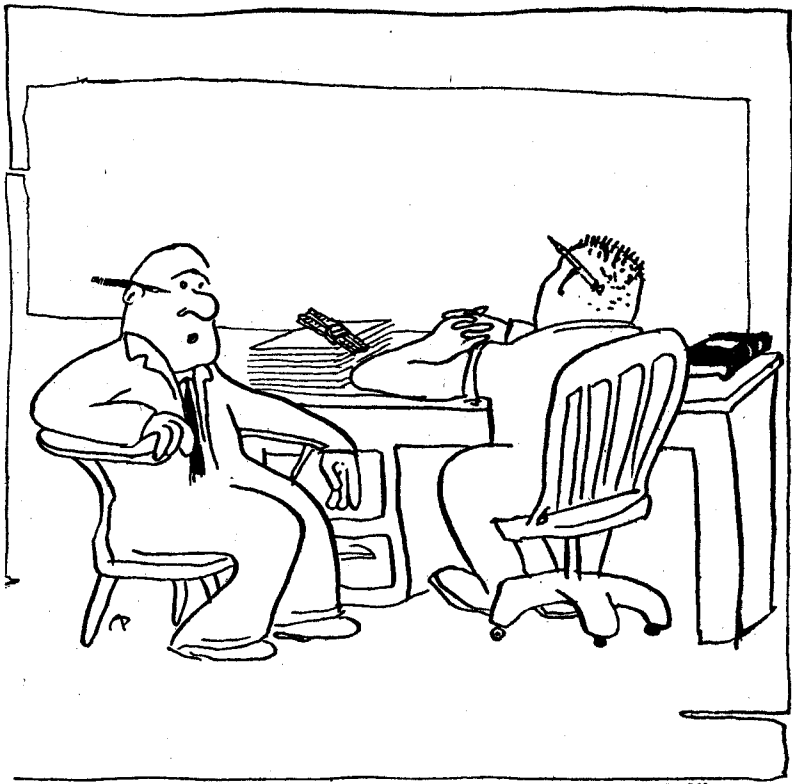
Cleve Moler and Roger Noll led the Caltech debate team to a successful completion of its first term's activities by placing third in lower men's debate at the Western Speech Tournament last week. Moler was also awarded second place in impromptu speaking on foreign relations.

The Noll-Moler team lost by a split decision in the semi-final round of the tournament which was held at the University of Utah. Fifty-four teams from

over 30 western colleges participated in the lower men's division.

Carl Hamilton-Carl Rovainen and Kip Thorne-Dave Jefferson both went through the four preliminary rounds, but were defeated in the first of the final debates.

Thorne made the final round in extemp, but did not place in the top three. Hamilton participated in the semifinals in impromptu.



"Well, now that we're organized—what do we do?"

## Editorial

# Maslow's Message To Tech

"America as a culture does not produce the creative individual."

These few words alone, mentioned quite calmly by Dr. Abraham H. Maslow during the first hour of his visit to our campus, should stimulate more than passing concern and interest among all the members of the Caltech community. The one fact of the very small number of original advances in science or engineering that have been produced in this country as opposed to Europe lends great weight to this commentary.

As we as a group bound by this rule of our national culture, or do we transcend it? Take a serious look at the Caltech undergraduate community.

The context that produced the lead statement was a discussion of psychological well-being as a concept separate from the simple lack of ailments. Dr. Maslow believes that in the truly healthy individual is found a unity of mind and spirit which defies older concepts of psychic makeup.

A product of this lack of conflict is a clear insight into "reality," and a creative and effective individual. Dr. Maslow would relate the attribute of the psychologically healthy person to those demonstrated by the religious mystics, by the greatest creative artists, and the greatest scientists.

A major goal of Caltech has long been to produce the creative leader in science and engineering. Dr. Maslow's work in defining the effective and creative individual and in the study of conditions and characteristics which led to creativeness should be of real concern to every member of our community.

Dr. Maslow's manner of speaking is forceful and clear, and the concepts which he presents appear to be meaningfully derived from a clear understanding of many of the influences which bear upon the psychology of the individual.

No one should miss the opportunity to hear Dr. Maslow, and more important no one should neglect to consider reflectively the ramifications of his statements, particularly as they relate to our status as members of this community.

MIKE GODFREY

## The California Tech

EDITOR: Mike Milder

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# Fineman's Shilling Scandal Sheet Bares Secrets Of British Student Life

Joe Fineman '58 is The California Tech's foreign correspondent in the British Isles. He is studying physics at St. Andrews University in Scotland on a Fulbright Fellowship. Here continues the third and latest of his letters.

Scotland  
31 Oct., 1958

My other physics course is quantum mechanics, taught by "super duper" Kuper (incidentally the only Jew I have come on here) out of Schiff's book. It is roughly a successor to Caltech's Physics 112, but there are overlaps (for example the perturbation theory) and gaps (Dirac's oh-so-pure treatment of the harmonic oscillator is assumed); however, most of the class (which includes about half women) seem even more snowed than I am. (Rather startling, by the way, to hear a feminine voice talk about "degenerate eigenfunctions"—rather more so than obscenities!)

SECOND YEAR moral philosophy is fairly interesting—we have gone through Hobbes' Levi-

athan fairly thoroughly (with many comparisons to Spinoza) and are now starting on Locke (an old Caltech friend)—but the style of lecturing is quite a shock—the instructor speaks very slowly, repeating important sentences, and the students copy down every word he says.

Junior German is a slowly plodding course whose main notoriety is in that it meets at six pm, this being the only time students in different departments are all free. Inter (and for that matter intra-) departmental coordination are nonexistent; I got into one where I had to dig up the prof himself to find out where to go—nobody else knew, not even the departmental secretary!

One familiar result of this is that science students could take no arts courses even if they could find the time; a physicist, for example, takes physics and two other related science courses, and gets nil in anything else past the grammar-school level (a little more advanced, it is true, than that of United States

well adjusted moron high schools).

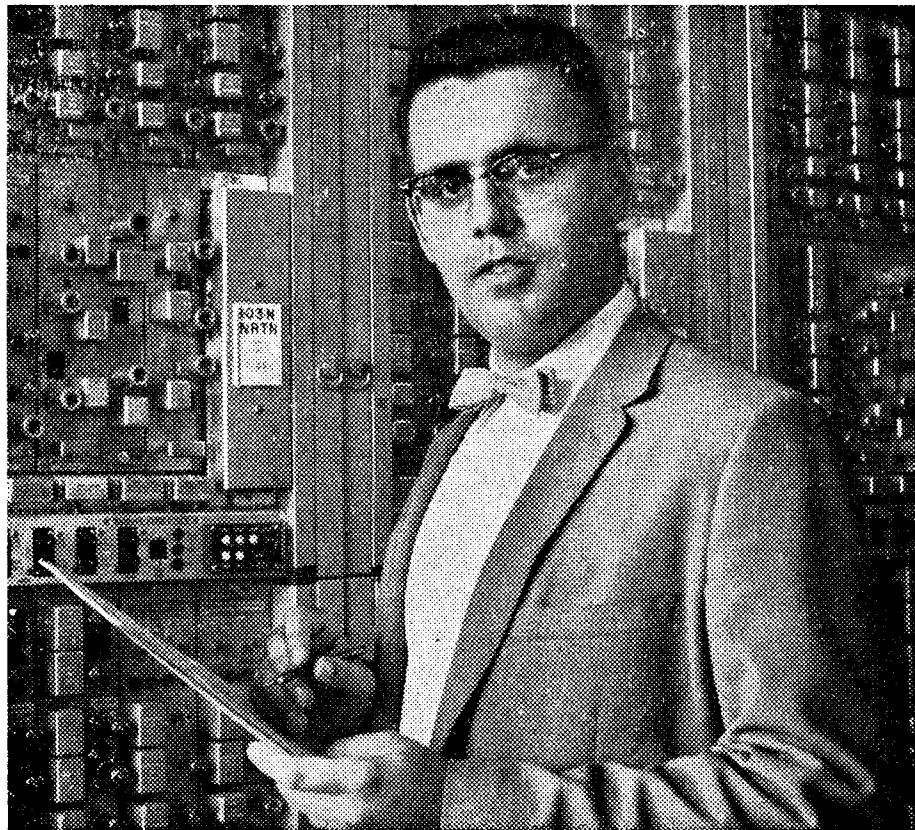
A girl in thermodynamics the other day, seeing I had a book on Hobbes, asked me what a hobbe was. Of course, their four year ("honours") degree is somewhat more advanced than the American B. S. in the specific field concerned, though the three year degree is nowhere near up to it.

TO KEEP MY BLOOD circulating I am doing 'circuit training'—a ring of twelve exercises is supposed to go around three times, each exercise being beefed up when you get too fast at that. I doubt if I shall try running again, though there is a good deal of interest in cross-country here, more so than in the States. Saint Andrews has the six mile championship.

The other major fall sports here seem to be rugger, tennis and, of course, golf; I have also had to battle against the usual impression that every American is a better basketball player than any Briton.

(To be continued)

## A Campus-to-Career Case History



"I wanted a job I could grow with  
—and I've got it"

H. James Cornelius graduated from Swarthmore College in 1954 with a B.S. in Electrical Engineering. He's been "growing" ever since with the Bell Telephone Company of Pennsylvania.

After an initial 44-week inter-departmental training course, Jim was made Facility Engineer in charge of the fast-growing Norristown-Pottstown area. In that capacity, he engineered over half a million dollars' worth of carrier systems and cable facilities between major switching centers.

Today, he is one of 50 young engineers from the Bell Telephone Companies chosen to attend a special Operating Engineers Training Program at Bell Lab-

oratories. This 19-month course of study—with full pay—deals with advanced techniques and new concepts in electronics which signal a new era in telephony. It involves both classroom theory and practical laboratory applications.

When Jim and his colleagues return to their companies, they'll review major engineering projects. This will assure the best use of equipment for current engineering, as well as for expected new developments in communications.

"I wanted a job I could grow with," says Jim, "and I've got it. I can't think of a better place than the telephone company for an engineering graduate to find a promising future."

Many young men like Jim Cornelius are finding rewarding careers with the Bell Telephone Companies. Look into opportunities for you. Talk with the Bell interviewer when he visits your campus. And read the Bell Telephone booklet on file in your Placement Office.



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# Jazz Beat

by Lloyd Kamins



**Prestige 7142 featuring: John Coltrane, tenor sax; Red Garland, piano; Paul Chambers, bass; Arthur Taylor, drums.**

John Coltrane is a promising, popular, and highly touted young tenor man. Although Trane has been in jazz for some time, he first came into prominence in 1955 when he became a member of the Miles Davis Quintet. At that time, he was still in the process of developing a personal, individual mode of expression. While working with the Davis group, Trane was far overshadowed by the fabulous Miles, but he still managed to attract attention due to his individuality.

**Developed Into Major Voice**  
Since 1955, Coltrane has done quite a bit. He has developed into one of the major voices of the current jazz scene. At this point, Trane is certainly a major soloist in his own right, commanding admiration and appreciation.

Coltrane has an unusual sound. Although he plays a deep horn, he customarily works in the upper register and also uses a distinctive edge on his tone. There is a distinctive reedy quality to his tone, a sharpness without harshness. The tone as a whole is perhaps most reminiscent of Sonny Stitt, with decided influences by Dexter Gordon, Wardell Grey, and Stan Getz. Stitt is usually used as a conceptual influence. It is quite uncommon, in fact, to find a tenor man coming on the scene decades after Stitt and borrowing his sound.

Conceptually, Coltrane leans heavily on Charlie Parker, of course, but also listens to Sonny Rollins. This too is strange, as just a few years ago Rollins came on as a radically different young tenor. It is interesting to find influences and disciples so soon.

It must be restated here that Coltrane is markedly an individual. What with all this talk of influences, he seems to be coming out of this as a piece of blotting paper. Everything about Trane's style is personal. Even his influences are uncommon.

**Constant Striving**

Trane plays fast, very fast. He consistently plays just a shade faster than he is able to execute. Consequently, there are some bloopers, there are some passages of filler, there are some exceptionally good passages, never attempted by others, and there is an aura of tension, of constant striving, about all his work. Coltrane is never fulfilled. He is always trying to do more, trying to say something else, and in a

better way. It is commendable in principle, and it is good jazz.

Trane can excel in almost any tempo. In way-up numbers, he seems to be forcing the song along, not sounding as if he's being dragged by the heels. On ballads, Trane uses the extreme high register of the horn, producing a beautiful tone. His mood is completely that of melancholy. On the groovy tracks Trane is at his best. He stays with the beat and swings hard, and then doubles it and astonishes the listener. He uses passages almost too fast to follow as a type of harmonic device. These passages are fondly described as sheets of sound.

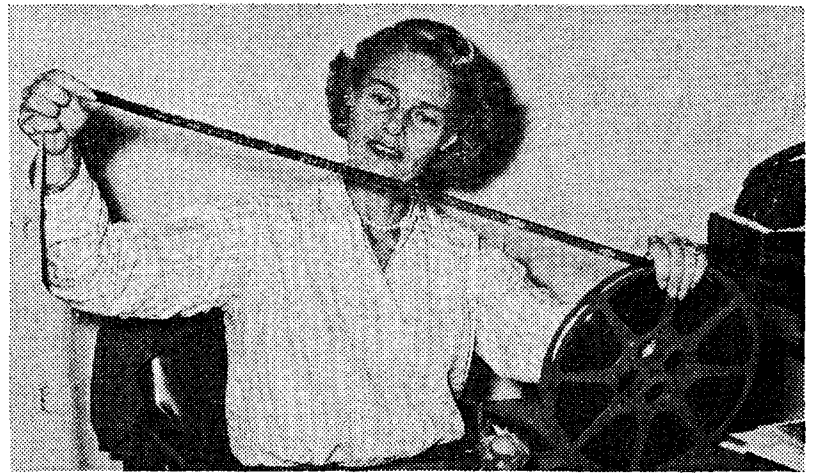
# Tech Sec Masterminds TV Series

by Peter Bickel

Yes, unbeknownst to most of the student body, there is an Associate T.V. Producer on campus. The Caltech series "The Next Hundred Years" is the idea of Mrs. Rose Blyth, assistant to the director of the News Bureau, who realized that the great American public, despite all the indications to the contrary, might have some good taste left.

It was she who persuaded NBC to donate some of the time the FCC obliges all broadcasting companies to give to educational programs. The choice six o'clock spot is a great tribute to her persuasiveness.

The first show of the Caltech TV series, Dr. Harrison Brown's address on the Next Hundred Years, was less successful than it might have been due to technical difficulties, but Mrs. Blyth feels that the later shows have profited from the mistakes of the first and have been pro-



Mrs. Rose Blyth examines film of Caltech TV series.

claimed unqualified successes.

Mrs. Blyth's title carries with it a list of unimpressive but important duties. Not hers is the the erudite performers have succeeded without the pink and gray shirts that are so necessary

for the harsh glare?

To her work she brings technical experience gained at the University of Southern California School of Journalism, as well as on several San Fernando Valley newspapers.

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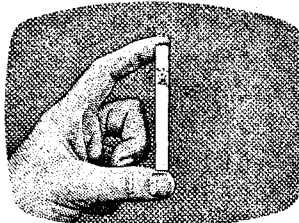
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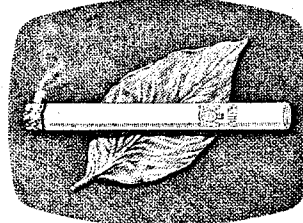
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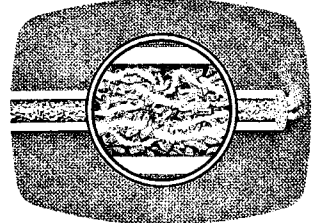
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## Students' Day

(Continued from page 1)

ute lectures by each of the science and engineering departments on campus, presented in three periods, thus allowing each student to attend three of the lectures.

Planners of the affair point out that the success of Students' Day depends on competent help from Caltech students and encourage anyone interested in either guiding tours or helping to register students should contact the guide and head host in his house or Throop club.

## Report Shows Economic Gains

(Continued from page 1)  
earlier Russian successes.

Caltech's development program, DuBridge said, is aimed at increasing faculty salaries and providing 16 new buildings including student houses, a central library, an auditorium and facilities for rapidly growing research and teaching programs in biology, mathematics, physics and engineering.

Reviewing the financial affairs of the Institute, DuBridge stated that during the 1957-58 fiscal year, Caltech's total net worth increased by \$6,806,000 to a figure of \$75,594,000 and that the

book value of its endowment capital increased by \$4,910,600 to \$41,769,000.

He said expenses for campus operations during the year were slightly in excess of \$9,000,000. Off-campus expenses were \$3,155,000 for the Southern California Cooperative Wind Tunnel, which Caltech operates for five aircraft companies; and \$34,363,000 for the Jet Propulsion Laboratory, which Caltech operates for the Department of the Army.

The annual report also called attention to direct expenditures made for research on the campus under contracts with the United States government. These to-

taled \$2,036,665.

Gifts and grants to the Institute during the year amounted to \$2,929,000 for current operations, and the endowment fund was increased by \$2,501,000. In acknowledging the gifts, DuBridge said there were more than 450 donors, including corporations, foundations, individuals and government agencies.

In September, 1958, Caltech's undergraduates numbered 703, its graduate students, 555, the report indicated. Applications for admission to the Freshman class totaled 1508 (double the number that applied five years ago), of whom 202 were enrolled.

## Maslow Visit

(Continued from page 1)

ity, imagination, and motivation in science are receiving a great deal of attention."

Visit Ends Friday

Maslow's visit will continue through Friday. He will hold office hours for graduate students between 3 and 4:30 p.m. today in the Ricketts guest suite. Tonight he will eat dinner in Ricketts House, and meet with the students afterward in the lounge.

Maslow has scheduled office hours for undergraduates between 2:30 and 4:30 p.m. Friday. He will conclude his visit with an open house at the residence of Ed Hutchings, 2396 Highland Ave., Altadena.

# An announcement of special interest to fall graduates in Engineering and Science

B.S. • M.S. • Ph.D.

Lockheed Missile Systems Division has created a number of special, new openings with unusual opportunities for fall graduates in electrical engineering, mechanical engineering, aeronautical engineering, mathematics or physics.

The Division is engaged in a broad program of basic research in all areas of scientific activity in missile and space technology, including advanced systems research; nucleonics; physics; chemistry; mathematics; design; test; electronics; flight sciences; and manufacturing. Some of the important studies under investigation are: man in space; space communications; ionic and plasma propulsion; space physics; nuclear propulsion; magnetothermodynamics; oceanography; computing machine memories; human engineering; noise suppression; materials and processes; boundary layer control; electro magnetic wave propagation and radiation; and operations research and analysis.

Lockheed is systems manager for such major long-term projects as the Navy Polaris IRBM; Air Force Q-5 and X-7; Army Kingfisher and other important research and development programs.

The Division was honored at the first National Missile Industry Conference as "the organization that contributed most in the past year to the development of the art of missiles and astronautics."

### LOCATION

Headquarters for the Division are at Sunnyvale on the San Francisco Peninsula and new modern Research and Development facilities are located in the Stanford Industrial Park in nearby Palo Alto. A four thousand acre company-owned static test base is located in the Ben Lomond mountains thirty miles from Sunnyvale. Other Division locations are at Van Nuys and Santa Maria, California; Cape Canaveral, Florida and Alamogordo, New Mexico. Together, they occupy more than two million square feet of laboratory, engineering, manufacturing and office space and provide the latest in scientific and technical equipment.

### ASSIGNMENTS

Upon joining the Division, you are assigned to your special areas of interest and work directly under distinguished leaders in your field. The company encourages and sponsors individual communication with other scientists, the publication of papers and articles, and participation in symposiums and conventions. Every opportunity is given members of the technical staff to participate in the initiation of advanced technological developments.

### GRADUATE STUDY PROGRAM

Of special interest to those who wish to continue their advanced education, is the Division's Graduate Study Program. Under it, selected students with qualified academic records may obtain advanced degrees at the University of California at Berkeley or Stanford University, while employed in their chosen fields at Lockheed. All costs of tuition, admission, thesis and textbooks are borne by the company.

### IMPORTANT

The number of these special openings is limited. If you are interested, please **wire collect** directly to Mr. R. C. Beverstock, College Relations Administrator, 962 W. El Camino Real, Sunnyvale, California, giving your major, and degree level.

# Lockheed

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# Amiin And The Arts

By Joel Amiin

The Ash Grove, quasi-cabaret in Hollywood, boasts the fine talents of Barbara Dane, who appeared at the Armstrong concert. She is a folk singer out of the ordinary, possessing a wonderful voice and enough guitar ability to accompany herself with ease and facility.

### BERNSTEIN ON T.V.

Sunday at five in the evening CBS television presented Leonard Bernstein and the New York Philharmonic in a performance of parts of Beethoven's Choral Symphony. The Westminster Choir and four soloists furnished the vocal part of the finale.

Mr. Bernstein is, to say the least, an anomaly. The first American conductor of the New York in years, and I think perhaps its youngest, he has a boundless enthusiasm and a penetrating knowledge of the works he performs. But, somehow, I don't think he ever produces up to his capabilities.

The finale of the Ninth was harsh in the tutti passages; most of it was almost monotonal. Mr. Bernstein produced a welter of sound, none of it polished, all of it individually competent, but essentially non-continuous, moving with a hop, a step, and a jump.

If, as Mr. Bernstein says, "The nature of man is essentially tragic . . ." and if Beethoven is trying through his music to ex-

cite the emotion of love in order to consummate the relationship between men, then the point of the music has been lost, and he needs to take a long look at the practicalities of directing the orchestra long acclaimed as one of the five finest in the world.

### BLANDFORD PUBLISHES

The National Poetry Association this week announced that the poem "Pause" by Robert Blandford has been accepted for publication in the Annual Anthology of College Poetry. The Anthology is a compilation of the finest poetry written by the America, representing every section of the country. Selections were made from thousands of poems submitted.

### PAUSE

'Be cool love  
As my spirit hovers overhead  
And clear-eyed gazes down on us.'

'Love, whither now,  
Come to me soon.'

Emerald elves on moss, under  
Stars and sagebrush, kiss; and  
Sparks pour from their lips,  
Melting emerald to alabaster,  
Spirit into flesh.

'Cool to hot, love  
Sing into my ear, love.  
Prick me to fire and  
Bury my spirit  
Between your breasts.'

## No Worries, No Cares

# Groib Cools Crazy Campus

by Boris and Griffen

"Grundy goobs an' dumdy groats an' diddly squunch edidy; doo-didi-da-da-doo-da-doo-da. ." Meet Groib Spoop, senior, singing on his way to class. Groib is not too well known on campus, but his massive physique and flashing coordination are easily recognized by the envious phrosh.



And he is, above all things, very unselfish. (e.g. just last week he thumbed his nose at his Ph 129 instructor without any thought of credit.) "Say, fellows, how do you like my new briefcase? Notice the 3-inch gold initials on the side just above the triple-plated chrome clip for hanging my slide rule. The boys down at the gym gave it to me for my birthday."

"Why, it's a splendid briefcase, Groib, wear it in good health."

There is a happy man. He literally radiates contentment as he skips along singing his little song. Why is he so happy? Why are you, the superior student, unhappy, frustrated, contemplating suicide or ROTC? Have you ever wondered what it would feel like to be caught up—to be ready for those pop-quizzes? Groib never wonders what it would be like to be caught up or, for that matter,



what he is going to be doing after PE or at night or on weekends. He never thinks about the future; after all, Dean Strong told him what he should be doing at every free moment.

Why don't you take a tip from Groib? Become an out of it and have no troubles, no worries, no life, no nothing.

Here's the tried and tested technique: Forget about girls—they're bad for you. Dress immaculately, preferably with suit and tie. Never step out of the room with less than the required equipment: a slide rule on the belt and a 12-inch circular around your neck on a massive gold chain. Give the impression that you own a bookstore. Sit in the front row in class and nod your head vigorously at every occasion. Never hesitate to point out that you know more than Dr. Gell-Mann.

If, by some mad quirk of fate, you happen to meet a . . . female, instantly take one of two possible courses of action: either begin mumbling figures or slap your hand to your forehead and yell in a loud, clear voice, "What a skag!" then fall writhing on the ground until she leaves. However, it is semiconceivable that you might have to talk to one sometime and so it is best to prepare by memorizing questions such as, "Could you please tell me where I can find the Raymond fault scarp?"

Next week, How To Become A Student Leader.

## Campus Brewins

Phelegms Gordo H., J. Somburp, and D. Wilburp made the North Beach scene over weekend; inspired to new heights of coordination by beer one evening, Gordo and Somburp decide to demonstrate artistic talents by skipping down stree' can-can style, linked arm in arm. At bottom of hill momentum carries them into outspread arms of members of San Francisco Grime Prevention Society, who, being true lovers of the dance, decide that trolls such as these are not worthy of their intimidatory talents. Off into darkest night go our heroes, on to new and greater glories on the beat scene.


### Terrible Parable

Scurv athletic manager Crawl Morass decides to experiment with inkohol at alley party, totters off to womb somewhat under weather, but manages to arise brighteyed and bushy tailed next morning to toddle off and teach ninth grade Sunday Skool Klass all about social skills and like that.

### BROTH BUBBLES

Forced to delve back into the murky mists of time, Beak remembers a certain barn dranz. Scene opens with Beak and date flaked out on porch after exhausting bout of "doce-a-do." "Stop that making out and go in and dance", burbles Broth; "Yes, you're not even hot yet," chimes in Brothdate. Exeunt, amid shower of sour grapes.

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# Sports

## AS WE SEE IT

### Opponents Reach Peak In Time For Beavers

By the Sports Staff

Two relatively unsuccessful seasons have come to a close, football and water polo, and by way of bringing down the curtain on the gridiron and pool for another year, the next two articles will be devoted to review and evaluation from our point of view.

Looking back over the football season, it seems pretty evident that the places where Tech missed its chances to emulate last years' winning record were in the Pomona game, which we lost 16-8 and the tie with Cal Western at 42-42. In both these games, a little extra drive and a couple more breaks (or fewer mistakes) would have made a big difference.

A curious thing about this season is that three opponents, Redlands, Cal Western, and Occidental, each played the best game of their season against the Beavers. Redlands came nowhere near its showing against us before or afterwards. It was a Cal Western team which had improved remarkably in passing and ball-handling that played Caltech compared with the team that played Oxy, Riverside, and Claremont-Mudd. Oxy, in their game with us and with Pomona a week later, suddenly jelled into a strong team after winning only one previous game, being plagued by injuries and so-so performances.

The Claremont-Mudd game was certainly a satisfying one for the team to end the season on and for the seniors to have for their last college game. We improved our defensive playing and they made a couple of mistakes, but the important factor was that our team had the most steam left when the fourth quarter came.

Next year's squad, although losing five starters, will be a much more experienced team.

This year's freshman team had a relatively large number of players who showed a lot of potential and should come out for the varsity. It was a disappointment to see the small number of sophomores who came out this year; there were quite a few who could have done a lot for the team but chose not to.

Total statistics show the season team leaders in rushing as:

	Carries	Yds.	Ave.
Gustafson	130	585	4.5
Holland	74	283	3.9
Hood	62	241	3.9
Siegel	32	115	3.6
Walsh	23	13	0.6

Always good for at least a few

feet, Gustafson lost only six yards over the entire season. The Beavers outrushed the opposition, averaging 152 yards per game as a team compared with an 137-yard average to which the defensive unit held the enemy.

The passing figures show the difference, however. Holland completed 58 of 121 throws and Walsh 10 of 32 for a game average of 101 yards and a percentage of .444. On the other hand, against the leaky Beaver secondary, the opposing teams completed 95 of 175 for an average of 197 yards.

Tech fumbled 21 times and lost possession of the ball 11 of these times. Newman was the leading scorer with 36 points, and his punting average read 32.9.

The five conference coaches named the following all-conference team last week:

- End Lou Vedova (W)
- FRED NEWMAN (C)
- Tackle Gary Kemp (O)
- Bob Kurilich (W)
- Guard Ray Pierce (O)
- Bob Peavy (R)
- Tackle Gary Kemp (O)
- Center Claud Sharp (R)
- Backs Gary Campbell (W)
- Clarence Treat (O)
- Jim Frye (R)
- Tim Burroughs (R)

Newman will now have a third plaque to add to his all-conference basketball and baseball selections of last year. Sharp was the only player from last year to repeat on the first team. He, along with Campbell, Treat, and Burroughs are non-seniors. The only Beaver on the second team was senior RUSS PITZER at guard.

## Soccer Men Aim For Revenge

### Host Sagehens Saturday at 10

This Saturday at 10 a.m. the soccer team hosts the Pomona Sagehens who hold a previous upset sudden-death victory over the Beavers. The game should be a good one, for last time the Beavers dominated every facet of the game but the score, and they are anxious to prove their total superiority.

The Caltech varsity soccer team played to a tie game against Redlands two Saturdays ago. The score was deadlocked, 1-1, after the regulation time, and one twenty-minute overtime was played without either team scoring. Tech's one goal was scored by Ellis Cumberbatch.

The following Wednesday the Beavers easily overcame U.C. Riverside, 4-1. Control of the ball for the majority of the game was again evident, but in this game the kickers managed to put in four goals. Luis Baez-Duarte garnered 2, with Ellis Cumberbatch and Bob Norton each adding another.

Last Saturday, a powerful University of San Francisco squad took command of the game with Tech and handed the locals a



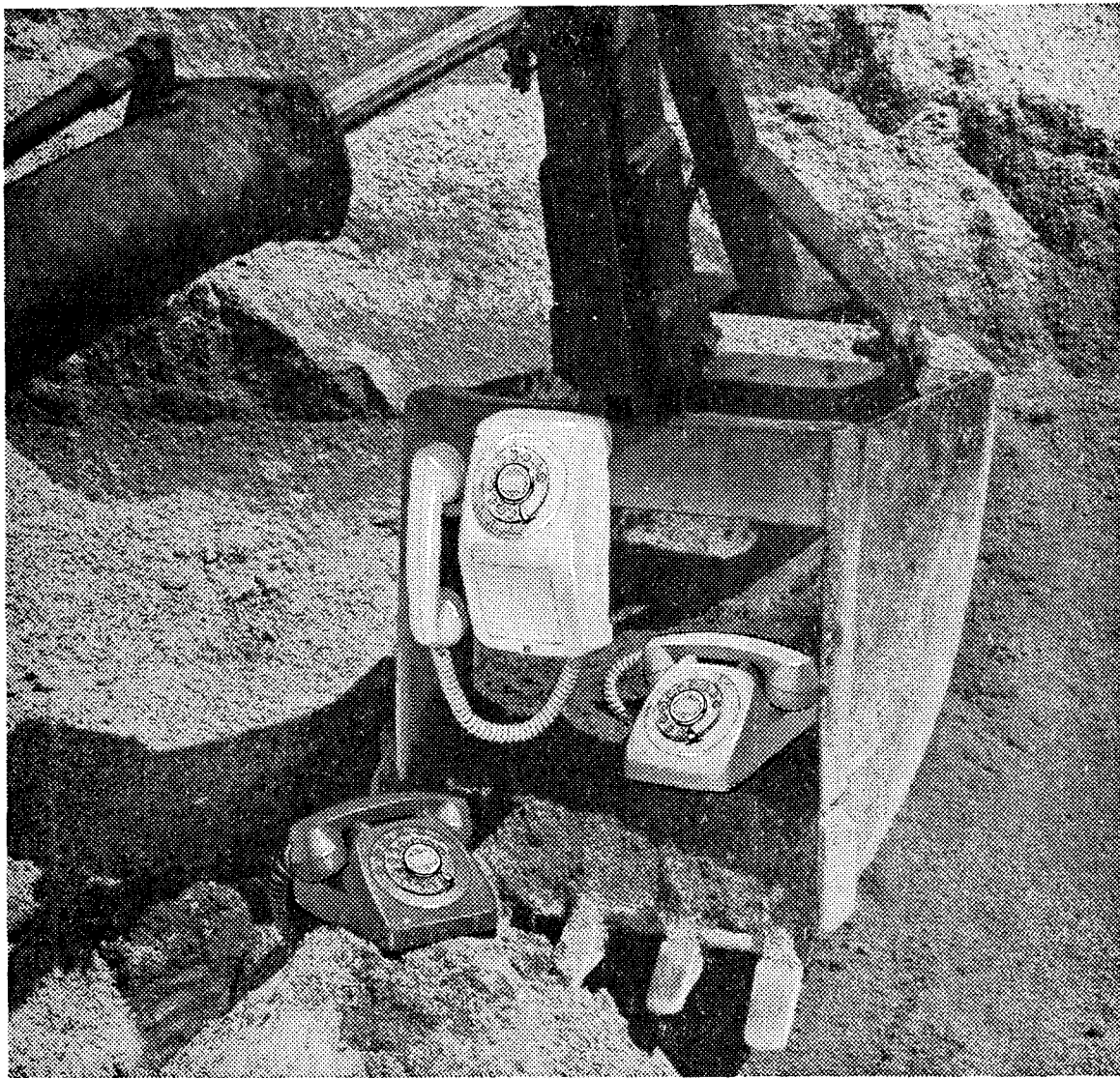
ASCIT Photo

Tech moves briefly to the attack in the San Francisco game last Saturday. Visitors from the north won handily 9-0, the 38th consecutive varsity win for USF.

convincing 9-0 defeat. The first half was all U.S.F., and those who saw the game realize why U.S.F. is making a bid for national recognition in soccer. Their varsity has lost one game in their last 94 and has won 38 games consecutively. This season

their opponents have only scored two goals against them, while U.S.F. has collected 67.

Headed by Glenn Converse, who blocked many goalbound shots, Caltech made somewhat of a contest in the second half, allowing only three goals.



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# GENERAL TELEPHONE

# USC Coach To Address Fall Banquet

Marv Goux, member of the University of Southern California coaching staff, will be featured speaker at the Fall Athletic Banquet at the Brookside Country Club in Pasadena next Monday at 6:15 p.m. Goux is head frosh and assistant varsity football coach at USC. He was a high school and junior college All-American and a star lineman at Southern Cal.

Mr. Robert Huttenback will emcee the program, and Dr. L. A. DuBridge is scheduled to give a short speech. Members of the football teams of the classes of 1928, 1938 and 1948 have been invited and some plan to attend.

Fred Newman, all-conference end, will receive his award plaque at the banquet, and the Wheaton Football Trophy will be presented to the member of the varsity team who, in the opinion of his team mates, was outstanding in the fields of sportsmanship, scholarship and morals. Letters, numerals, blankets and sweaters will be awarded to frosh and varsity members of the football, water polo and cross country teams.

Tickets for the banquet are \$1.50 for team and band members and cheerleaders, and \$3.00 for less fortunate mortals. They are available at the Deans' and Athletic Offices, and from Russ Pitzer in Dabney, Wes Shanks, Fleming, Lee Hood, Blacker, Tony Leonard, Ricketts, and Chuck Ray, Throop Club.

## Interhouse Darbs Defend Against Throop

Dabney will attempt to make a third successful defense of the Discobolus trophy next week, accepting the challenge of Throop club in softball.

In the last game, the Darbs, led by all-conference Fred Newman, overwhelmed Blacker in basketball 35-12, catching fire after Blacker held a 9-3 advantage at the end of the first quarter.

### Swimming

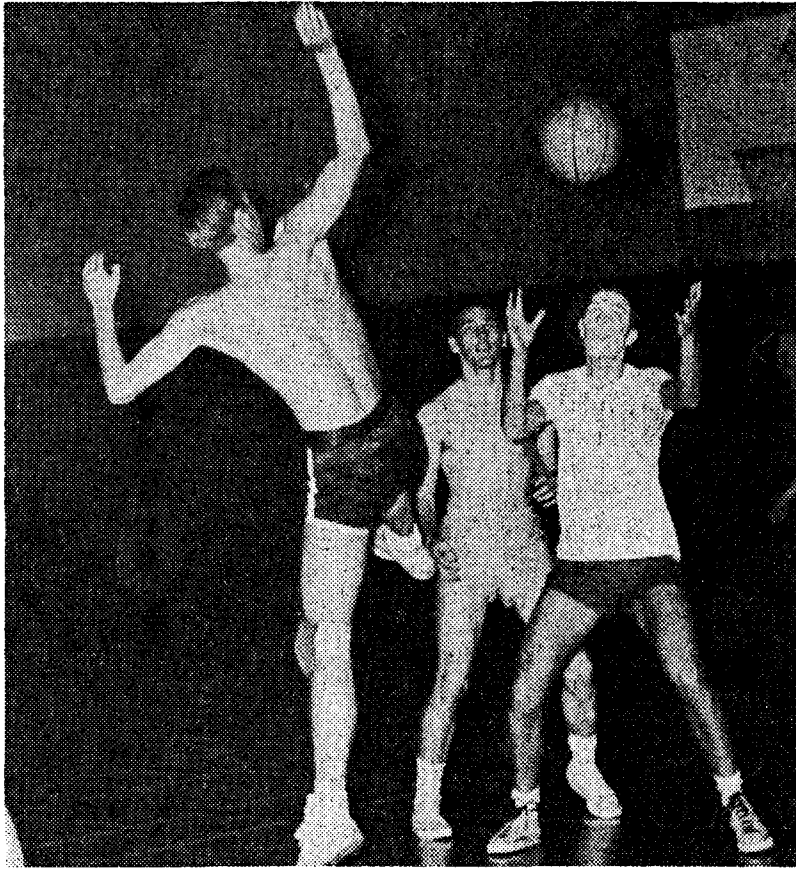
Fleming has assumed the favored role to repeat last year's sweeping interhouse swimming victory in the meet a week from today. Although claiming to be plagued with colds and lack of intensive practice to date, the Flems nevertheless will have the winner of each of the seven events last year again carry their colors.

Dabney, with the lead in the trophy race, hopes for a far stronger showing than last year's distant second. Ollie Seely and Dave Mitchell should be their strongest entries in the free style, with Bob Lange and Paul Widess excelling in the breast stroke.

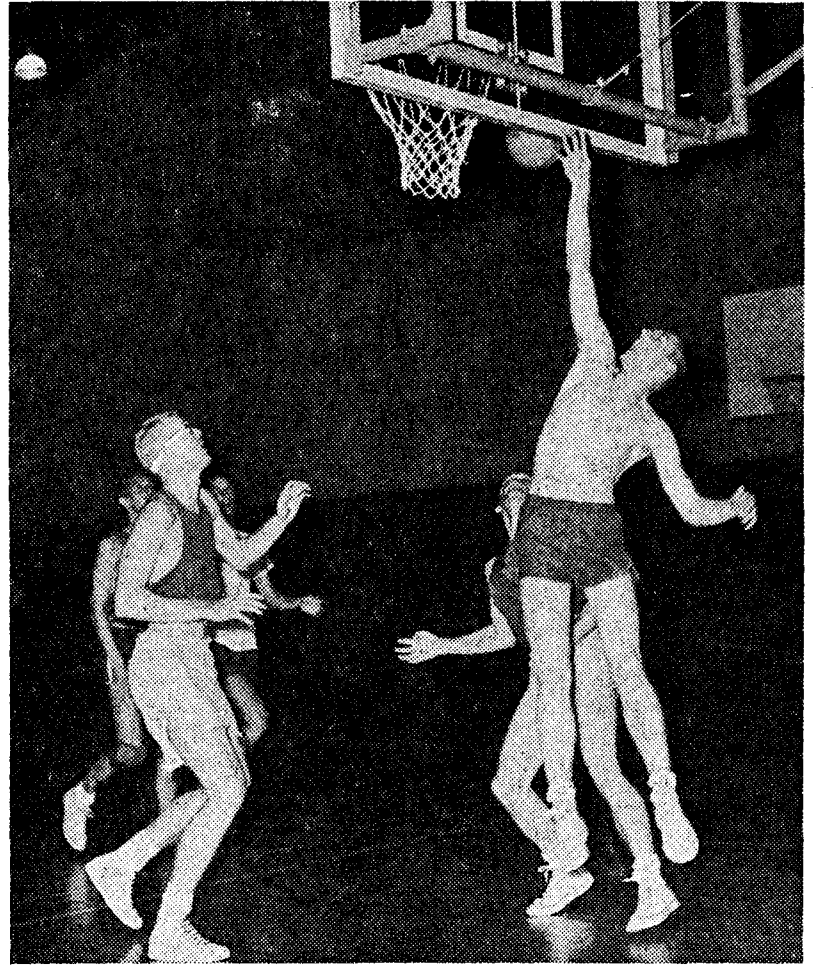
Blacker will have Dick Krueger and Steve Imrich as newcomers, joining Ken Dinwiddie and Walt Johnson of last year's team and diver Bob Thompson.

Ricketts is far from optimistic on the chances of improving on a weak fourth place finish of a year ago. The Rowdies' main hope for points hinges at the moment on the tentative participation of Mike Ruecker.

Throop athletic managers report a ten-man squad working out with a good chance of beating some of the house teams predicted.



Fast action under the backboards marked basketball drills early this week as the Beaver cagers ready for the season opener tomorrow night with powerful LA State.



## Cage Prospects Vying For Slots On New Platoons

Beaver basketball hopefuls are fighting for starting berths in heated inter-squad scrimmages this week. Varsity competition opens tomorrow night at Los Angeles State, with the first home game Saturday evening, 8:15 p.m., hosting UC Riverside, in what promises to be an exciting, evenly matched contest.

Coach Gene Rock is considering relying upon a two-platoon system, to fully utilize what he describes as a club of at least ten about equally good men.

Centers will be Doug McClure and Ron Arps, with Len Maley seeing action there and at forward; captain John Stene will see much action at forward, with Mel Holland and Bill Ripka at guard or forward, and Larry Shampine, Dave Blakemore, Larry Brown, Ben Burke, Jack Bass, and Ray Magdaleno alternating at guard or forward vying for the other slots on the platoons.

All-conference guard Fred Newman will miss this week's games due to an operation and injuries, but the team hopes he will be ready to join as the schedule swings into full scale after the holidays.

*Dedin*

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# Tuft Paces Harrier Victories

The frosh harriers added two more victories to their unbeaten record in the last two weeks and, along with their less successful varsity running mates, are pointing toward the all-conference meet at Whittier Saturday. Coach Tony Leonard has been sending the teams through stiff workouts this week in preparation for the four-mile varsity and three-mile frosh grinds over the steeply hilled championship course.

Dick Tuft, star Beaver frosh, lost his first frosh race of the year over the Whittier route Nov. 25, finishing second 30 seconds behind O'Brien of the Poets.

### Practice on Hills

Tuft's time of 11:48.5 for two miles against a 10:41.6 over the level CIT two-mile course reflects his inexperience with rugged terrain, according to Leonard, and Tuft has been working out on the Whittier course in hopes of reversing the standings on Saturday.

Close behind Tuft's second place, however, came teammates Bob Juola and Al Whittlesey in third and fourth, and these points, coupled with Art McGarr in sixth and Bob Ross in eighth,

gave Tech a 23 to 32 victory.

Tuft ran two miles in 11:09 over the Mt. San Antonio course to beat both the Claremont-Mudd and Pomona frosh as well as the winning times of the Tech and Pomona varsities on Nov. 21. His teammates again furnished strong support with the score reading Tech 28, Claremont-Mudd frosh 34, Pomona frosh 57.

Dennis Paull paced the varsity harriers in a losing (20-38) three-

mile run against Whittier, finishing third a minute and thirty-eight seconds behind a first-place tie by Perez and O'Brien of Whittier. The Poet varsity runners also copped the number four and five slots, with Wes Shanks and Pete Lippman less than ten seconds behind for sixth and seventh. Loebbaka was tenth and Hansen twelfth.

The Pomona varsity defeated the Beavers 24-31.

## Polo Teams Divide Finale

Caltech's varsity water polo team dropped their last game of the season to Occidental, 8-2. Mike Kane scored both goals for the Beavers and Dave Tucker proved the mainstay on defense. The loss left the Beavers in last place in the conference with an 0-6 conference record.

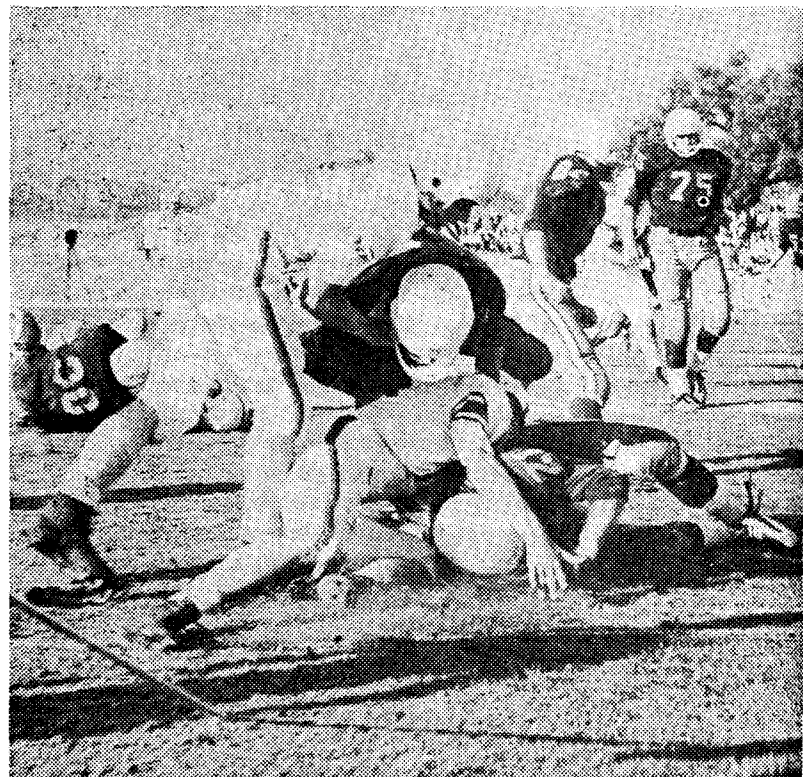
The frosh, determined to prove their last win over Oxy was no accident, readily tamed the Tigers, 7-1. Caltech took an early lead and it was their game from then on, with Oxy never giving much threat.

Caltech's 1958 varsity team

placed two men on the All-Conference teams.

Senior goalie Don Wiberg was named to the conference first team for his superb work in the Beaver net all year. Don played every minute of every game for Tech and maintained his phenomenal goals saved percentage despite the fact that he was playing on a losing team.

Dependable star Dave Tucker was named to the second All-Conference team as guard. Dave's play paced the team throughout the season, on offense as well as defense. Last year he received similar recognition.



ASCIT Photo

A Claremont back is brought down out of bounds in final football action of the '58 season. The Beavers finished with a flourish, defeating Claremont-Mudd 12-0, thus completing a 2-5-1 season record.

## Grid Season Ends With Decisive Win

Caltech successfully initiated a home-and-home series with Claremont-Harvey Mudd in closing out a 2-5-1 campaign with a decisive 12-0 victory on away grounds.

The win spoiled the first Homecoming celebration for the hosts who will enter SCIAC competition next year and probably provide the annual Homecoming foe for the Beavers.

After a scoreless three quarters, the Beavers cracked the contest wide open with two touchdowns in the final period capped by Mel Holland's scoring runs. The junior quarterback tallied on a six-yard end sweep

and a four-yard off-tackle play. Both extra-point tries were stopped.

Claremont mustered a serious threat in the second quarter by driving down to the Tech three-yard stripe where a fumble stalled the march. Tech's only scoring threats were halted by intercepted aerials.

Tough line play finally spelled the difference as the young Claremont line collapsed in the fourth quarter to allow Tech to put together a pair of long drives on the ground.

Dick Gustafson, team rushing leader, again had a field day. Holland, even without his favorite target, injured Fred Newman, sparked the overhead attack.

Seniors playing their final collegiate game were: John Conover, Russ Pitzer, Gustafson, Newman, Steve Ahrens, Tim Harrington, and Mike Rusin.

## Tech Sailing Crew Places Fourth in 'Series' Opener

Tech sailors finished fourth in a six-team field last Sunday at Newport Harbor Yacht Club to open Southern Series competition for the season.

The race, first of eight for the Southern California Conference title, was won by Occidental with Pomona-Claremont placing in the runner-up slot. Tech finished only a single point behind the third-place Santa Barbara squad. Long Beach and Harbor JC rounded out the field.

Skippers were Lowell Clark and Doug MacLane with Keith Matthews as crew. The remainder of the competition will be held after Christmas at Newport YC in Layman 10 dinghies.

Top event for the Techmen this term will be the Pacific Coast championship held at Newport Harbor Dec. 20 and 21. Schools along the coast are eligible with Occidental back to defend its crown. Last year, Tech finished a creditable seventh and shows promise for improvement this year.

### Football Summary SCIAC Conference Standings

	W.	L.	Pts.	Agst.
Whittier	4	0	142	35
Redlands	3	1	108	58
Occidental	2	2	120	68
Pomona	1	3	44	104
Caltech	0	4	14	163

### Individual Statistics

#### Rushing

#### Carries Yds. Ave.

Frye (W)	123	640	5.2
Gustafson (C)	130	591	4.5
Sweeney (P)	124	498	4.1

#### Passing

#### Att. Comp. Yds.

Campbell (W)	139	87	1237
Burroughs (R)	131	675	86
Holland (C)	121	58	693

#### Total Offense

#### Rush Total Ave.

Campbell (W)	422	1659	184.3
Burroughs (R)	406	1271	127.1
Holland (C)	283	975	121.9

#### Pass Receiving

#### No. Yds. Ave. TD

Lovenburg (R)	36	568	56.8	8
Newman (C)	33	443	55.4	4
Farrell (W)	27	338	37.6	3



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