**KPFK Manager Explains Investigation By Senate**

Mr. Fred Halines, manager of the FM station KPFK, spoke Tuesday evening in a televised program to a group in the Winitznout concerning the present subcommittee investigation of the station. The talk, which defended the principles of operation of the station, was followed by a question and answer period.

Early in December subcommittee members were issued by the Senate Internal Security Subcommittee to several people who had been involved with the station. Senator Dodd at the time indicated that the purpose was to determine if there was any Communist infiltration of the station. President Franklin D. Roosevelt announced that KPFK and other stations were involved with the investigation.

The programming of the station was not the subject in the inquiry.

Mr. Halines, however, asserted that the programming was broadened under fire by implications of the political backgrounds of some of those who had appeared on the station.

The station is in a very precarious position for two reasons:
1. It is operating on a quasi-legal basis and does not possess a license.
2. The FCC has granted temporary broadcasting rights until the decision on a license is made. It has been announced that in the last week that the FCC intends to conduct an investigation of the station.

Secondly, since the Pacific stations are sponsored by subscription and carry no commercials, they operate on very marginal budgets. Any extensive investigation could cause them to suspend operation because of the cost it involves. Halines said that if Pacifica should be put on the “Attorney General list” it might as well “fold up and go home.”

Halines started his talk by giving a brief history of the Pacifica Foundation and explaining what the goals and principles for which they strived. The Foundation was the dream of one man, LeRoy Litt, a professional broadcaster and man of letters. He felt there was a need for an American society, and that the conceptions of broadcasting was something “radiational” in that it could get to the root of things.

Nearly all radio stations, however, are under pressure either (Continued on page 2)

**P.E. Discussions Progress; Changes Likely Next Year**

Having completed discussion last term on a new physical education program, the faculty academic policy committee is now working on plans for a new physical education program to be submitted to the Faculty next term.

Although no plan has come before the faculty board yet, present actions and proceedings seem to indicate that this year a new program will be drafted.

At present the athletic department is investigating an "ideal" physical education program, taking into account everything that they feel should be accomplished in a student's tenure at Tech and considering improvements in the athletic facilities which are expected or desired. This program will be larger than the proposed two year program, but it is not necessarily a full four year program. It is not known how closely this plan will resemble the proposed program.

On the other hand, those faculty members presently favoring a more integrated approach to preparing an optimum program based on two years of compulsory PE. This program will be based on the results of the many discussions held on the two year PE program at Tech.

If these negotiations are completed, they will be submitted to a joint committee composed of the Educational Policies Committee and the Physical Education Advisory Committee. This joint committee will form a compromise from these two positions, and prepare a final presentation for the faculty board. The faculty board will then discuss this presentation and submit it as the general faculty.

It is not known at the present time whether or not any of the proposed changes will seek to correct the scheduling problems in the existing physical education program.

**Editors Argue Amendment In Debate Tonight**

This evening at 8:00 p.m., Dr. Willmore Kendall, senior editor of the Student Newspaper, and Mr. Phil Kerby, editor of Frontier Magazine, will participate in a debate on the first amendment in Dabney Lounge. The debate is sponsored by the Caltech chapter of the ACLU.

Kerby feels that there are absolutely no exceptions to the first amendment. He believes that since the Second Amendment is regarded “culling fire in a crowded theater,” as well as all other Supreme Court qualifications of the amendment are nonexistent. Kerby prefers a more complete protection of freedom of speech than a government censorship of political science at Yale for 14 years. Conservatory elements are leading conservative elements.

**Waser Tells Frosh Of Foreign Schools**

Dr. Jurg Waser, Professor of Chemistry, spoke to the Freshman Frosh’s Forum on “Education in Europe” last Monday in Chandler. Drawing on his own experience, Waser explained the European education system and showed how it might be able to help those who hope to go to the university.

In Zurich, Switzerland, an area with which Waser is acquainted, formal schooling begins at age six. After six years of elemen­

tary school, the student enters into the Gymnasium, a continuation of elementary school, secondary school, and (for the intellectual elite) the Gymnasium, an advanced high school. Students who go to the secondary school usually go into the University, while those who attain the Gymnasium go to the university. Waser commenting on the secondary school in Europe said “This is a topic for another meeting, which includes dinner. It will begin at 6 o’clock in the Dabney Dining Hall. As usual, under­graduate meals can be trans­ferred.

McCormick spoke on this same topic last year in a tour flowing into the cafeteria proper. He stated that there have been changes in the draft regulations that may affect Caltech students. These new regulations, along with the still-existing rules, will be the topic of discussion. There will be a question period after the presentation (Continued on page 4)

**Election Notes**

Applicants for those who wish to be freshman camp counselors are now encouraged to apply for a few weeks. Those interested should indicate this desire by writing to Wendell Mendell in Dabney Post in his mailbox.

**Radio Club Sends Messages Across Ocean**

KPFK’s 6:30 a.m. program reached its U.S. destination in hours. It has been submitted to a joint committee investigating the possible use of KPFK’s special calling. This evening at 5:00 p.m., a message to be dropped into the Club’s mailbox in the Dabney Post in his mailbox.

**Waser Tells Frosh Of Foreign Schools**

Dr. Jurg Waser, Professor of Chemistry, spoke to the Freshman Frosh’s Forum on “Education in Europe” last Monday in Chandler. Drawing on his own experience, Waser explained the European education system and showed how it might be able to help those who hope to go to the university.

In Zurich, Switzerland, an area with which Waser is acquainted, formal schooling begins at age six. After six years of elemen­
tary school, the student enters into the Gymnasium, a continuation of elementary school, secondary school, and (for the intellectual elite) the Gymnasium, an advanced high school. Students who go to the secondary school usually go into the University, while those who attain the Gymnasium go to the university. Waser commenting on the secondary school in Europe said “This is a topic for another meeting, which includes dinner. It will begin at 6 o’clock in the Dabney Dining Hall. As usual, under­graduate meals can be trans­ferred.

McCormick spoke on this same topic last year in a tour flowing into the cafeteria proper. He stated that there have been changes in the draft regulations that may affect Caltech students. These new regulations, along with the still-existing rules, will be the topic of discussion. There will be a question period after the presentation (Continued on page 4)
**Lower Bookstore Rates**

In four years, the Caltech undergraduate will probably spend over $400 at the bookstore. This $400 will include not only books, but very often such items as blue books, pens, maps, slide rules, and many other diverse items.

We are referring to profit above and beyond all costs, wages, rents, and depreciation charges. What is being done with these profits? They are going to provide “scholarships and a subsidy to ASCIT,” this latter was not done last year! We object to paying for other people’s education in this manner. We are paying plenty for our own. A similar argument applies to ASCIT subsidies. There is no reason to pay any money to ASCIT on this basis, except as ASCIT does.

Therefore, we feel that the profits collected by the bookstore should not exist. The way to eliminate them is to lower prices each year. The lowering would not be minor: MIT cut 10% of its prices, and Caltech would cut 5%. We object to paying for other people’s education in this manner. We are paying plenty for our own. A similar argument applies to ASCIT subsidies. There is no reason to pay any money to ASCIT on this basis, except as ASCIT does.

The changes were attacked bitterly in the same issue of the paper in which they were announced. The editor of the paper, in his opinion column, that the changes were a mean way to obtain many flourishing activities. He claimed that the bookstore would leave the situation as it was.

We also stated: “Faculty opinion about this new change is far from universal. One of the division professors told me that he thinks the new change is far too difficult for these incoming high school seniors. He said that, in the future, they will have enough free time at once. As it is,

It will get no application.”

“More important, though, tougher entrance requirements will solve our problem of under-enrollment.” After all, why should we have any more to offer prospective students than a greater number of prospects will not be able to meet our requirements.”

The editor carried this sentiment even further in his column the following week. He stated that the fact that over 50% of the freshmen in 1967 at Caltech D slipped proved that the freshmen were not productive or capable of maintaining a socially competitive position.

The most contested change required students to take physics, chemistry, and calculus simultaneously during their first semester. As Caltech required, freshmen now take only two of these courses.

KPFK Investigation

(Continued from page 1)

from sponsors or foundation groups to broadcast in an orthodox manner. This is likely to be a good thing that must be eliminated from the broadcasting media, and for the reason that the stations are privately funded. The first Pacifica station was a 250 watt station located in the San Francisco area. It did not maintain operation long, due to financial troubles. However, a renewed interest put the station back on the air last year. Even the KPFK began broadcasting in the Los Angeles area, and New York had a revival of the station. Plans for several more are currently being developed.

Although this group was involved in the original forming of the Foundation, their purpose was not to find a new radio station to explore it along with other interests that it had with various community relations. The stations are designed to be the voice of the independent community, and operate on the basis that “everyone has the right to speak his piece.”

Haines stated that that the Senate investigation was a “disconcerting attempt to limit our right to broadcast programs on the merits.” In the discussion period that followed, Haines related that often the station is not able to broadcast any particular content as it would like, due to problems with sponsors and licensing. Many of the time, he stated, “we have to rely on what we feel is right.”

One of the points brought up was that of “labeling” people as like programs or who write articles. This is something that, Haines said, is far from reality. People who are part of KPFK, however, has been to avoid the simplest identifications. Anonymity, he said, is the great American freedom, stated Haines. “We should listen to what the people have to say, not to who the person is or what his qualifications are. People on the station are now given the identification which they themselves prefer.
More AUSF (Continued from page 1) (where the political future of the country is made). They fool, said Dr. Patch, that Castro has established a socialist model so that could be placed in Peru with no major difficulties.

The present situation is in great flux. The feeling at the presidential elections in June 10, 1962, was that the particular status quo was no longer tenable. But the people had a particular choice of candidates: Manuel Odriz, former dictator from 1956-80; Victor Raúl Haya de la Torre, an old man, twice compromised revolutionary of the APRA party and friend of the U.S.; and Fernando Belaunde, founder of the new AUSF Popular party who has been characterized as a clown with not enough political sense to solve Peru's problems. When no candidate had the constitutional plurality of one-third of the votes, the army gave its support to Belaunde. The opposition candidates countered by pooling their support to Odriz which provoked the army to seize power (with their U.S. supplied tanks) in the interest of public order.

A military junta now rules Peru and promises elections in 1963. Even the junta feels the pressure of change and have proposed the redistribution of land in the highlands (but not on the coastal estates). Dr. Patch concluded by saying that both the junta and the U.S. alike for progress are misguided.

(Continued on page 5)

Y to Present Religion Play

The Caltech YMCA will present the Bishop's Company, of Burbank, on Saturday, February 2, at 8 p.m., in Dabney Lounge. The Bishop's Company, which tours the country, presenting dramas dealing with religious and moral concerns, will present the play "Cry, The Beloved Country" by Alan Paton. Admission will be 75c.

The play deals with tensions between whites and Negroes in apartheid South Africa. The Bishop's Company was founded ten years ago to bring together drama, politics, and music. The company tours the country, playing at such diverse locales as San Quentin State Prison and Princeton University.

After the performance, the cast will be at Page House to participate in a discussion about the play and a reception. Refreshments will be served. During dinner, the cast will be eating dinner at various Houses with no major difficulties.

The present situation is in great flux. The feeling at the presidential elections in June 10, 1962, was that the particular status quo was no longer tenable. But the people had a particular choice of candidates: Manuel Odriz, former dictator from 1956-80; Victor Raúl Haya de la Torre, an old man, twice compromised revolutionary of the APRA party and friend of the U.S.; and Fernando Belaunde, founder of the new AUSF Popular party who has been characterized as a clown with not enough political sense to solve Peru's problems. When no candidate had the constitutional plurality of one-third of the votes, the army gave its support to Belaunde. The opposition candidates countered by pooling their support to Odriz which provoked the army to seize power (with their U.S. supplied tanks) in the interest of public order.

A military junta now rules Peru and promises elections in 1963. Even the junta feels the pressure of change and have proposed the redistribution of land in the highlands (but not on the coastal estates). Dr. Patch concluded by saying that both the junta and the U.S. alike for progress are misguided.

(Continued on page 5)
The Critical Ear
by nickerman

When traveling cross-country through Nebraska on U. S. route 30, Alternate one will pass through a moderate sized town by the unlikely name of Wahoo. On the outskirts one will see a large eyecatching sign which reads, "Wahoo, Birthplace of Howard Hanson."

I am confident that when one lists the great musicians of the twentieth century, Dr. Hanson will be ranked very high in the list. As director of the world famous Eastman School of Music, a composer of some of the landmarks of modern music, a writer of texts on musical composition theory and conductor of the Eastman-Rochester Orchestra he has been a champion in the propagation of American music. In the fall of 1961 the U. S. Department of State asked him to take the Eastman Philharmonia, the student orchestra, on a "cultural exchange" tour. The reception was unprecedented — particularly for a group so young.

Wahoo! Mercury has just released a recording of this orchestra playing a selected group of short works (Mercury MG 50289 — BH 9029).

Lindor, a Russian pupil of Hinsley-Korayov, is the subject of side one. The influence of R-K is strongly felt in the three selections: "Baba Yaga," The Enchanted Lake," and "Kikimora." One of my first impressions of the orchestra was the fine quality in the playing of the instrumental artists. The opening of the "Enchanted Lake" is particularly good. The balance of the string section between the high and low register instruments is favorably compared to many orchestras of professional standing. The woodwind section is notable for its excellent control. One outstanding fact is that the first flute seems to have a slight touch of asthma in the solo near the end of the "Enchanted Lake," breath sounds come through very well.

"Kikimora" is also lyrical in its opening, rapidly changing to an active scherzo. The transition is smooth from the lyrical style — the orchestra is facile in both forms of music. Side two opens with a short "Brazillian Dance," by Guarnieri — a composer and work heretofore unknown to me. Wayne Barlow's very beautiful "The Winter's Past" follows. The total sound is exceptionally good here and the performance is absolutely the finest.

(Continued on page 5)

BEYOND THE PLANE OF THE ECLIPSE... Whether in the forefront of space exploration or in bionics research, Lockheed Missiles & Space Company's almost limitless fields of endeavor offer a challenging choice to graduate engineers and scientists. Lockheed's location on the beautiful San Francisco Peninsula, its outstanding facilities, its sophisticated programs, its excellent employee benefits, among many other advantages, have all contributed to the Company's position as a leader in the aerospace industry.

SPECIAL CAMPUS INTERVIEWS will be held MONDAY, FEBRUARY 4 See your placement office for details

Drugs Ophthalmic Cosmetics Tobacco
CALIFORNIA REXALL
PHARMACY
555 S. Lake
SY 2-3156
Breakfast Lunch Dinner

European Schools (Continued from page 1)
the continent. All universities are state owned and charge only nominal fees. Waser explained that the student is left to choose his own program without any advice. There are no exams and attendance at lectures is not required. Waser stated that "time is wasted" in this system. The only degree confirmed is the Ph.D. degree. There is little campus spirit and no dormitories. Some social life exists in various clubs and a few fraternities which do not fight together but drink together. Waser stated that "students in the United States work a lot harder than students in Europe." Graduation from the Gymnasium means the students know more than high school graduates in the U. S., but the college students in each are comparable. Waser concluded that "a summer in Europe is very worthwhile."

What the LIT reads a title of a small boxed article in the Redlands Bulldog. "Last week," begins the story, "our main editorial was an explanation that the Republican Party needs a change."

The editorial was read by the Adviser, the Editor-in-Chief, the Managing Editor, the Associate Editor, the Editorial Manager, two proofreaders and my roommate. We all failed to notice that the word "malt" in the sixth paragraph had had the T knocked out of it by the printer. This changed the paragraph to read:

"Some Republicans — to the distress of most conservatives — have responded to the challenges and stood astounded at the course of history yelling "hat!" Vote — for What?"

It will be election time once again at colleges and universities throughout the country and the PCC is no exception. The PCC Courier contains the following campaign statements. First, for President, Eric Johnson writes "It has become increasingly evident that a major change is necessary in our student government. I fully support the ideas embodied in the new constitution." As if this stand of unprecedented firmness was not enough, the other candidate writes "It is my intention to offer PCC a new type of leader ship. I can offer not only myself but a vast number of new and previously uninterested participants to an expanding student government." Clearly, he's got some way of working on the faculty. In case a firm stand on speci fies is desired, one need look no farther than the statement of

(Continued on page 5)

Theologians To Visit Tech

The seven theological students who will be staying in the Student Houses from Tuesday, February 5, to Friday, February 8, have now been selected, and from all reports the program should be as successful this year as it has been in the past.

Students have remarked about previous visits that "many of us were surprised to find a theologian as open minded, if not more so, than scientists." All the students who will be here this time have interesting backgrounds and were selected with an eye to finding people who are well informed theologically without being dependent upon theological journals, according to the YMCA Religious Emphasis Committee.

A "Techman" said of the 1957 visit that its value "did not lie in the number of conversions that were made from one side to the other. It lay in the fact that several scientists and religionists were able to see each other as honest and sincere people with the same goal in mind — an understanding of the essential nature of the world in which we live."

Drug Sundries Cosmetics Tobacco
CALIFORNIA REXALL
PHARMACY
555 S. Lake
SY 2-3156
Breakfast Lunch Dinner

Lockheed, Systems Manager for such projects as the Navy Polaris FBM and the Agena vehicle in various Air Force Satellite projects, is looking for an important contributor to various NASA programs involving some of the nation's most interesting and advanced concepts.

As one of the largest organizations of its kind, the Company provides the finest technical equipment available; for example, the Sunnyvale facility houses one of the most modern satellite tracking and control centers in the world. Every opportunity is given members of the technical staff to participate in the initiation of advanced technological developments.

Further, Lockheed strongly encourages continuing education and advanced degree work, maintaining two programs in their support.

Lockheed's Tuition Reimbursement Program remits seventy-five percent of the tuition for approved courses taken by professional and technical people who are working full time.

Candidates for degrees in all of the following should investigate opportunities at Lockheed: Aeronautical Mathematics Chemistry Electrical/electronic Physics

Lockheed is an equal opportunity employer.

Lockheed Missiles & Space Company
A GROUP DIVISION OF LOCKHEED AIRCRAFT CORPORATION

Systems Manager for the Navy Polaris FBM and the Air Force Agena Satellite in the Discoverer and MIdas programs. Other current programs include SAINT, ADVENT and such NASAlay projects as OGO, DAO, ECHO, and NIMBUS.

SUNNYVALE, PALO ALTO, VAN NUYS, SANTA CRUZ, SANTA MARIA, CALIFORNIA • CAPE CANAVERAL, FLORIDA • HAWAII

Thursday, January 24, 1963
Other Campuses

(Continued from page 4)

the candidate for women's
dent: I would also like to have a
dughter tea for all women
dents on
What - Me Worry?

(Continued from page 3)

in conclusion,

(Continued from page 4)

the years, but I would like to initiate a
new type of fashion show which
might become traditional. I
would also like to have a
daughter tea for all women
dents on

The Critical Ear

(Continued from page 4)

I have ever heard. Kent Ken-
nan's "Night Holiness for Flute
and Strings" further demon-
strates the lyrical ability of the
group. My opinion of the fist
was dramatically changed in par-
t to the beauty of the price. It is
back. It is interesting to note
that he can control this as the
complete solo portion is without
the annoying gasps. The strings
are magnificent — and this truly
magnificent homogenous sound is
expected to culminate in "The
Last Spring." by Grigg. The
interplay between the sections of
the high strings can cause chills.

Onward Marching

A couldn't last. Into Strauss's
"The Stars and Stripes Forever"
The change startled me, since I
hadn't looked at the jacket. As
an experienced flute-piccolo play-
er, I am familiar with the ex-
tremely difficult solo in this
piece. Hanson delayed the part
for one chorus and I was con-
cluding that it had been cut when
the piccoloist() took off and
freely through the part. The
brass section really delivers in
here too. Improvisers "a full octave
higher than the score" are
an asset.

In conclusion, I would strongly
suggest this recording for any-
one interested in classical
music. In fact, as an all around
excellent additio to any
music library, this rates an A+
with me.

Book Review

Burroughs Fare Acceptable

BY ROGER WHITLOCK

Edgar Rice Burroughs is un-
doubtedly one of the most known
fantasy writers of all time; virt-
ually every American has at
least heard of him (or of his
books) and must have read one
or another of his works. This
week, I am reviewing "The
Gods of Mars," (Ballantine,
\$7.95, 50c), the second of the
John Carter series. Before ac-
tually reading this book, I ex-
pected something on the order
of the more degenerate Tarzan
volumes. It turned out instead
to be a very pleasant experience,
even though its basic plot is in
the fine old Burroughs tradition:
mars, loves woman; man loses
man; man seeks woman
through trial and tribula-
tions; man finally reunites
woman.

The superstructure built
around this framework is of ex-
cellent quality in this case. John
Carter, returning to Mars after
unable to voluntary absence, discov-
ers that the "thursday,"
guardians of the Martian heaven
on earth are virtual friends. His
determination to expose their
fraud, as well as his desire to
regain his wife, leads him
through a varied set of rather
woolly adventures. After all is
said and done, nonetheless, the
tale turns out to be eminently
readable, full of life and color.

Who Got It?

Most Burroughs books end on
a note of sweetness and light, with
everybody just fine; "Gods of
Mars," on the other hand, ends
with things in almost as bad a
muddle as at the beginning; Car-
ter's Martian wife has been pos-
sibly stabbed by a jealous rival,
but since the women are im-
prisoned in a peculiarly con-
structed cell so that they will
not be heard of or seen for a
full year, neither the reader or
John Carter really knows who
got stabbed. The effect of this
situation is to make one quite
hot for the next book of the
series, "Warlord of Mars." I expect this to be published
fairly soon by Ballantine.

YMCA Acquires
Coffee Maker

The Caltech YMCA has pur-
chased a coffee urn, after the
requests of students and ASCIT.
The urn has a 75 cup capacity,
and is intended to be put to use
during the weekly coffee hours.

Estimates show that the cost
of coffee and donuts using the
pot will be about $8 a week for
the coffee hours. Sags provided
the same items, of typical high
quality, for about $11 a week.

The pot will be used for other
purposes. Most noticeable of
these will be to supply coffee to
the many hard working Califor-
tia Tech workers on Monday
nights.

AUSF Again

(Continued from page 3)

in their reform programs. For
there are so many rigidities that
a process which appears to be a
very minor reform may be a
total change in the society. Con-
sequently any step may be a
sizable one, as the Bolivian
revolution shows. Patch will dis-
cuss Bolivia in detail next week.

If you have an advanced degree,
let’s talk some more.

You’ll be part of a 3500-person facility
responsible for R & D on America’s
lunar, planetary, and interplanetary
explorations. If you come to Caltech’s
Jet Propulsion Laboratory in Pasadena,
California, you’ll find the finest technical
facilities in the world — like the library
with 125,000 technical documents,
the most sophisticated computers,
space simulators, acres of laboratory
space, and about three support people
for every one of you. And you’ll be
working with the finest scientific minds
in the country. If you want to
think hard for a living, you should
think hard about coming to JPL.

On Campus Interviews:

January 31, 1963

Contact University Placement Office for Appointment
Beavers Vanquish CHM

BY DENNIS MCREARY
Caltech hosted and defeated a favored 15-0 team last Saturday in a thriller which lasted over two hours. This marks Caltech's first win in two years, the last one occurring in the '60-'61 season when Tech defeated Oxy 76-76.

Beavers Lead Stags
Clament controlled the open-
ing tip off Saturday night and scored two points but the Beavers quickly came back with a basket of their own, and when the stag team missed its next shot Tech went ahead 4 to 2. From that point on, except for a short lived two point lead, the Beavers never relinquished the lead, although the game was tied up several times. As the first half drew to a close, Clament stole the ball and scored to tie up the game at 30. The Tech team brought the ball down court again and went into a stall to use up the clock. Then, with only two seconds left, Gary Dahlman hit a 25 foot set shot that put Caltech back in the lead 32-30.

After the usual half time in-
terruption, the teams came back on the floor and began to warm up, but it was soon discovered that there was a discrepancy on the foul position. This defect was quickly re-
duced to zero, and with a futile 15 min-
tutes of trying to make them agree, the game was finally re-
sumed with only one score leading.

This time the tip off was con-
trolled by Caltech and the Tech men proceeded to widen their lead. At one point in the game with less than five minutes re-
mained, the Beavers were behind four points for their biggest lead of the night. Clament however, re-
lience as they slowly began to narrow the lead. By 000, about three min-
utes left still to play, the hard-
wood men found themselves hanging on to a tight league victory with great point lead by the skins of their teeth.

Show Down
Finally, with about 25 seconds left to play, Caltech went into a stall in an effort to hold onto its two point lead, but two Clare-
mont men double-teamed Rand Vinsenhaler, one of them sneek-
ing up from behind, and stole the ball. Clament immediately called time out and the clock showed only 18 seconds left to play. The game. Clament brought the ball down court against a loose Beaver press, as the Tech men wanted to put some pres-
sure on the Stage without risk-
ing a foul. Clament finally got off a shot which missed the bas-
ket completely and went out of bounds to CITT. Six seconds were left and Tom Bopp grabbed the ball and tried to get it in bounds to one of our men who was open, but the ball was deflected and in the scramble which resulted, Dopp could not control his shot and the ball went outside with it. Clament again called time out and with two seconds left to play, the Dabbies were behind four points for their biggest lead of the game of the night. The game was ended by Bob Ruddock, and the Tech men were defeated 72-70.

CAMPUS WEEKS
Andrew Diedrich, Steve Blumsack, Tom Latham, Dennis McCracken, Dave Oliss, Paul Jon King, Craig Murphy, Gerry Steiner, Rodger Whitlock

Sports Staff
Gary Clum, Editor
Steve Blumsack, Tom Latham, Dennis McCracken, Dave Oliss, Paul Jon King, Craig Murphy, Gerry Steiner, Rodger Whitlock

ADVANCED AEROSPACE PROGRAMS AT DOUGLAS have created outstanding career opportunities for SCIENTISTS and ENGINEERS with advanced degrees

Assignments include the following areas:

- **Servo-Mechanisms** – relating to all types of control problems
- **Electronic Systems** – relating to all types of guidance, detection, control and communications
- **Propulsion** – relating to fluid-mechanics, thermodynamics, dynamics, internal aerodynamics
- **Environmental** – relating to air conditioning, pressurization and oxygen systems
- **Human Factors** – analysis of environment affecting pilot and space crews, design of cockpit con-

Heat Transfer – relating to aircraft, missile and space vehicle structures

**Structures** – relating to cyclic loads, temperature effects, and the investigation of new materials, methods, products, etc.

**Aerodynamics** – relating to wind tunnel testing, stability and control

**Solid State Physics** – relating to solid state electronics

**Space vehicle and weapon system studies** – all of types, involving a vast range of scientific and engineering skills

Get full information at ADVANCED AEROSPACE PROGRAMS AT DOUGLAS

Thursday, January 24, 1963

**DOUGLAS AIRCRAFT COMPANY, INC.**

3000 Ocean Park Blvd., Santa Monica, California

An equal opportunity employer
Beaver Wrestlers Scrimmage Chaffey College Tuesday night for first scrimage of the season. Inexperience weighed heavily on the Beaver grapplers, who suffered an unofficial 26-13 loss. Dick McGehee gained the quickest win of the evening for Caltech by pinning his opponent in 2:30. Captain Doc Speir and Tom Latham also won their matches, Speir by a pin in 8:15 and Latham by a 9-6 decision. Other team members fighting regular matches were Akira Yoshida, Larry Wolfson, Dave Faulconer, Frank Rhame, Andy Kampe, and John Letcher. Dan Paxton, Walt Paciorek, and Ken Koai met Chaffey opponents in exhibition contests.

Since the beginning of the season, the team has been working out under Pete Merringen, a former Olympic wrestler. Four matches are scheduled for the season.

Feb. 6, 6:00 p.m., Long Beach State JV at Caltech.

Feb. 9, 4:30 p.m., Caltech at Claremont-Mudd.

Feb. 13, 7:30 p.m., Claremont-Mudd at Caltech.

Feb. 20, 6:00 p.m., Caltech at Long Beach State JV.

Caltech’s freshmen have played some exciting basketball recently, but have been unable to put four good quarters together for a win since the season opener.

The team best Rio Hondo before vacation in a wild and won-tery affair which saw the Frosh outscore their opponents 76-68. The scoring was led by forwards John Tucker and Jerry Yudelson with 27 and 17 points respectively. In the first game after Christmas, the hoopsters found themselves trailing Redlands by over 20 points at the half. A strong second half comeback narrowed the margin to a final 36-45. The hapless Techmen reversed the pattern against Pomona playing three of their best quarters of the season before running out of gas.

The Frosh played their most exciting game so far against Biola, spotting them 20 points with 9 minutes to play and then putting on a tremendous comeback. Jim Pearson led the way with a twenty-point effort, but Biola barely hung on to win 61-68.

Then last Saturday, the team suffered its worst defeat of the season at the hands of CHM with two CIT starters sick and one out completely. The present starting five for Coach Jenson’s team consists of guards Doug Holford and Wayne Pitcher, forwards Jim Pearson and John Tucker, and center Cliff Teddy. Other regulars include captain Jerry Yudelson, Frank Potter, Ed McCullough, Mike Aschbacher, John Eastment, and John Vitz. The Frosh hoopmen should all be in action for games with La Verne Saturday and Oxy here on Tuesday evening.

Caltech Captures Soccer Trophy

Caltech became the winner of the Stuart Soccer Trophy last Saturday in the first year of competition for the trophy. The final game of the series pitted CIT against Biola, which bowed to the Tech season 31. UC Riverside was another team competing. A second game was played later the same day between the conference all-stars, including three Techmen, and Pomona College. The Caltech all-stars were graduate students Jacques Delbarbaran and Joel Kwek and undergraduate Herb Chen. The all-star team defeated Pomona 3-2, in spite of having only one previous practice together and using the three tired Techmen.

Interhouse

(Continued from page 6) on other pages.

Blacker House head coach Art Johnson has put together a spirited but inexperienced team, and Blacker has so far suffered losses to Lloyd Ricketts, Rudderock, and Fleming.

Standings (as of Wednesday afternoon):

<table>
<thead>
<tr>
<th>House</th>
<th>Won</th>
<th>Lost</th>
<th>Tie</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blacker</td>
<td>3</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Rudderock</td>
<td>3</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Fleming</td>
<td>3</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Lock</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Dabney</td>
<td>1</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Panic</td>
<td>0</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Blacker</td>
<td>0</td>
<td>4</td>
<td>0</td>
</tr>
</tbody>
</table>

Basketball

(Continued from page 6)

at half time by a score of 31-25. Early in the second half however, Upland tied up the score at 40 all as the Beavers had their troubles trying to score. From this point on the game was tight all the way to the end as Caltech was never able to gain more than a four point lead. Several times Upland was able to pull to within a point of the Beavers, in fact, with less than a minute to go the score stood at 53-52 with Tech in possession of the ball. But enough time left for Upland to score if they could get control. At this point Upland fouled them as they put on a full court press. Gary Dabney then took the game by making both free throws to bring the final score to 53-52. Upland brought the ball inbounds quickly, but was unable to score before the clock ran out.

From CHM news release:

"Caltech is 6-0 and 1 in league play, having dropped one to Pomona 36-48. They are 3 and 2 for the season and should prove little trouble for Caltech...

Better luck next time!"
Illinois Tech
(Continued from page 2)

Every last in the first semester have been used for some time at most technical schools (Case, Cal Tech and MIT to name a few). IIT has been behind the pack and is now making an in-

spiring bid to regain reason-

able stature among schools of

science and engineering.

“We will have much more to

offer the prospective student.

IIT will begin (again) to at-

tract MIT and Cal Tech

caliber students, considerably

enlarging and improving the

freshman class. Prospective stu-

dents who qualify at the revised

program are welcome to enroll

in colleges of lesser standing.”

FRENCH SPANISH RUSSIAN GERMAN JAPANESE

THE BERLITZ SCHOOL OF LANGUAGES

PASADENA, 170 SOUTH LAKE AVE., SYCAMORE 5-5888

PRIVATE INSTRUCTION

SMALL CLASSES STARTING NOW

Native Teachers

Day or Evening

Free Trial Lessons

GARRETT-AIRESEARCH

will interview on this campus B.S., M.S., Ph.D.

Aeronautical, Electronics, Electrical, Mechanical and Chemical Engineers:

Physicists • Mathematicians; Engineering Mechanics

Thursday, Jan. 31

The AllResearch divisions of the Garrett Corpora-

tion are among the most successful organizations in

the fascinating field of producing specially

designed aerospace systems and components for

prime manufacturers or government agencies. They also

make available in the new building with the

buildings was expected to

make personal provisions con-

sistent with personal comfort.

It is anticipated that prior to Christmas 1962 at least two

temporary toilet facilities will be made available in the new

building if funds permit. If installed these temporary units will be

located on the seventh floor

dedication to the boiler room.

A Heady Matter

3. For security reasons per-

sonnel will not frequent gasoline sta-

tions, restaurants, and other

public facilities in the vicinity of

the new building with the intent of utilizing such toilet facil-

ities, inasmuch as this will

attract undue attention to

agency personnel.

4. Personnel are reminded that vegetation at the new build-

ing is U.S. Government property.

Damage to or destruction of U.S. government property is a Fed-

eral offense. Personnel are also

reminded that some leaves of

plants in adjacent wooded areas are natural such as poison ivy

(3 leaves), poison oak, and poison

sumac. Photographs of these

plants will be posted at the main

door to the new building at an

early date.

“DISTRIBUTION: ALL EM-

PLOYEES”

This, if remembered is a

real memorandum. Maybe this

is what the CIA does? The last

paragraph seems to remind one

of “We don’t swim in your toilet . . .” plancard.

GARRETT-AIRESEARCH MANUFACTURING DIVISIONS • Los Angeles, California • Phoenix, Arizona

Aircraft, Missile, Spacecraft, Electronic, Nuclear and Industrial Applications

Airplane and control systems for Ground Effects Machine vehicles.

Air conditioning and control systems for buildings.

Nuclear engine control systems.

Jet aircraft starters, constant speed drive-starter units.

Special purpose pneumatic analog computers for process

Industries.

Air transport and control systems.

Nuclear and solar power conversion system for space.

Air turbine motors.

• Make an appointment to meet with Garrett-Airesearch interviewers on your campus.

Literature is available at your engineering, placement office.

AIRCRAFT DIVISION

Los Angeles, California

• Space environmental control systems (for Mercury, Gemini, Apollo space vehicles).

• Central air data computing systems, subsonic controls.

• Miniature cryogenic refrigeration systems using high speed (150,000 rpm) turboexpanders.

• Life sciences studies for space.

• High speed (40,000 rpm), high frequency power generation systems. Static power converters and controllers.

• Supersonic transport aircraft studies.

• Waste heat recuperators for gas turbine engines.

• Aircraft environmental systems using Freon and air cycle refrigeration.

• Aircraft engine control systems.

• Missiles and spacecraft accessory power systems, thrust vector steering, reaction attitude control systems.

• Environmental space radiators, evaporators, condensers.

• —45°F to 2200°F heat transfer systems.

AIRESEARCH DIVISION

Phoenix, Arizona

• Aircraft gas turbines for onboard auxiliary power, helicopter prime power, ground support applications for aircraft and aerospace vehicles.

• Pneumatic, hydraulic and electromechanical systems and controls for aircraft and missiles.

• Cryogenic fluid control systems.

• Industrial gas turbine systems providing electrical power and air conditioning for buildings.

• Nuclear engine control systems.

• Air transport and control systems for Ground Effects Machine vehicles.

• Gear box drives.

• Nuclear and solar power conversion system for space.

• Air turbine motors.