CaliforniaTech

Associated Students of the California Institute of Technology

Volume LXIV.

Pasadena, California, Thursday, January 24, 1963

Number 14

Patch Tells Of Crises In Chile BY JAY LIPPMAN

"Things are in the first stages of breaking up in Peru," said Dr. Richard Patch of the AUFS in his lecture to the H5 class last Tuesday. Peru has been typical of conservative Latin American countries who have preserved the status quo for almost 400 years. Now there are pressures against the status quo, but there are many complicated considerations.

Patch, who is an anthropologist by training, pointed out that there is a great cultural discontinuity in Peru. The urban centers established by the Spanish are generally western in character. But the Indians in the rural highlands of the Andes still think in terms of Inca culture. "Their community is their definition of the world," and they have little contact with Spanish speaking persons. Consequently, one might say that Peru is not a nation at all because the majority of the population does not identify with the republic and does not vote on any level of government. Indians dissatisfied with their culture simply move to the coastal commercial estates and form vast slums on the coast that consist of fifteen percent of the urban population. They do not acculturate, but simply change groups. However, their presence is potentially explosive.

Forces of Change

Against this background there are several forces of social change. The instability of the economy, inflation, and distribution of wealth are major issues. After the high profits (among the ruling elite) of the Korean war period there was a period of inflation that caused the fall of the dictatorship of Manuel Odrio. Skilled workers are well paid, but unskilled workers receive very low wages.

Other Factors

Another factor is the increased popularity of Fidel Castro among many intellectuals at the National University of San Marcos (Continued on page 3)

The California Tech proud-

ly announces its first annual



-photo by John Turechek

Fred Haines, station manager of FM station KPFK, explains a point during the Tuesday evening discussion of KPFK's investigation by a Senate subcommittee.

KPFK Manager Explains Investigation By Senate

Mr. Fred Haines, manager of the FM station KPFK, spoke Tuesday evening in a Y-sponsored program to a group in the Winnett lounge 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 subpeonas were issued by the Senate Internal Security Subcommitte 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 stations of the Pacifica Foundation, which owns KPFK and two other stations. The programming of the station was not the subject in the inquiry.

Haines, however, asserted that the programming was brought 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. First, it is operating on a quasi-



legal basis and does not posses a license. The FCC has granted temporary broadcasting rights until the decision on a license has been made. It has been announced within the last week that the FCC intends now to conduct an investigation of the station.

Secondly, since the Pacifica 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. Haines said that if Pacifica should be put on the "Attorney General's list," they might as well "fold up and go home."

Haines started his talk by giving a brief history of the Pacifica Foundation and relating what goals and principles for which they strived. The Foundation was the dream of one man, Louis Hill, a professional broadcaster and a man of letters. He felt that there was a serious lack in American society, and that the way to eliminate this was to get to the core of Amrcian society, which is information and education. His conception of broadcasting was something "radical," in

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

last term on a new physical education program, the faculty academic polices committee is now working on plans for a new physcial education program to be submitted to a faculty vote. 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 adopted.

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 now how closely this plan will resemble the present program.

On the other hand, those faculty members presently favoring a more relaxed program are preparing an optimum program based on two years of compulsory PE. This program will be

Dinner Forum Studies Draft

The Y Dinner Forum for next Wednesday will feature Dr. Caleb McCormick, associate professor of civil engineering and member of a local draft board, who will speak on the topic of "Students and the Draft." The meeting, which includes dinner, will begin at 6:30 p.m. in Chandler Dining Hall. As usual, undergraduate meals can be transferred.

McCormick spoke on this same topic last year to a crowd overflowing into the cafeteria proper. He stated that there have been changes in the draft regulations that may affect Caltech students. Thes new regulations, along with

the still-existing rules, will be the topic of discussion. There

will be a question period after-

Having completed discussion based on the results of the many discussions held on the two year PE program at Tech.

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

It is not known at the present time whether or not any of the proposed charges 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 National Review, 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 Justice Holmes' views regarding "yelling fire in a crowded theatre," as well as any other Supreme Court qualifications of the amendment are nonsense. Kendall, on the other hand, prefers a more reserved interpretation of the amendment.

Kerby has been editor of Frontier since its inception 14 years ago. Previous to that, he was a newspaperman for the Denver Post. Kendall is currently a visiting professor of political science at L.A., State. Previously to this, he was an associate professor of political science at Yale for 14 years. Conservative elements consider him as a leading conservative economist.

worst essay contest. This contest is open to any undergraduate who wishes to submit an essay from his freshman English course. To be considered essays must have received a grade of D- or lower, with the exception that essays receiving a grade of C+ or lower from Dr. Eagleson (or a B- and a blue slip) will also be eligible. All entries should be turned in to J. C. Simpson or Richard Karp in Ruddock, or slipped under the door of the Tech office before midnight on Monday, February 24. The winning esasy will be printed in the following issue and the winner will receive four inches of free advertizing within a reasonable length of time in a single issue of the Calilfornia Tech. The advertizing will be anything normally printable in an issue of the Tech. This is a golden opportunity to strike back at your friends in print for free.

of Diabeties

Dr. Gordon Albert Alles, biology research associate and Caltech alumnus after whom the Alles biology building is named, died last Monday morning at 11:05 a.m. at the Huntington Memorial Hospital of diabetic coma.

Dr. Alles was a major contributor to the Institute Development fund. He received his B.S. degree from Caltech in 1922, his M.S. from Caltech in 1924, and his Ph.D. from Caltech in 1926. He returned to the Institute in 1939 to assume the duties of research associate that he held until his death.

Dr. Alles' important scientific contributions included his pioneering work with insulin as treatment for diabetes. It is somewhat ironic, therefore, that the cause of his death was diabetic coma, caused by diabetes that was not discovered until the coma Sunday evening.

that it meant to get to the root of things,

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

Waser Tells Frosh Of Foreign Schools

wards.

Chemistry, spoke to the Frosh Diner's Forum, on "Education in Europe" last Monday in Chandler. Drawing on his own experience. Waser explained the European education system and compared this to the United State's system.

In Zurich, Switzerland, an area with which Waser is acquainted, formal schooling begins at age six. After six years of elementary school, the students separate into three groups: a continuance of elementary school, secondary school, and (for the intellectual elite) the Gymnasium, an ad-

Dr. Jurg Waser, Professor of vanced high school. Students who go to the secondary school usually go to a trade school while those who attend the Gymnasium go to the university. Waser commenting on the secondary school in Europe said "This is a type of school which I think is lacking here." The university program is divided into science and engineering, neo-classical, classical, and commercial

> To enter the university the student must pass a federal examination which allows a person to register at any college on (Continued on page 4)

Notices

COUNSELOR APPLICATIONS OPEN

Applications for those who wish to be freshman camp counselors are now open and will remain open for a few weeks. Those interested should indicate this desire by putting a note for Wendell Mendell in Dabney in his mailbox.

RADIO CLUB SENDS MESSAGES

Your twenty-word message will reach its U.S. destination in hours if you send it as a Caltech Amateur Radio Club radiogram. Just drop it into the Club's mailbox in upper Winnett or into the campus mail for transmission the same night. Messages should have full

Editorials

Page Two

RUN!

ASCIT's traditional candidate information meeting next Monday will officially begin the election campaigning for new student body officers. Between that time and the elections three weeks later, perpetually complaining Techmen will have their annual chance to remedy all the evils in Tech.

In the past few years there has been considerable controversy at Tech concerning candidates for ASCIT offices, or more accurately, the lack of candidates. It is true that there have rarely been candidates for each office, but never have there been as few contested offices as in recent years. When an election deteriorates to the point where only two or three offices are contested, the election becomes a mockery of student government.

As seems to be tradition, everyone complains, yet no one, save a small group of devoted Techmen, ever does anything. When an office is uncontested, a candidate feels no special responsibility to work hard or to accomplish much. When one man is overextended by having to hold a major post in several important activities, he is often unable to devote as much time to each as he would like.

There are very few people whose GPA's will suffer from holding an ASCIT office, and by running a person can do quite a bit to remedy those very things about which he is always complaining.

For those who do not want to run just for school spirit, there are other reasons. Running for an office in ASCIT or in any activity, is not a purely altruistic act. There are many selfish reasons for running. Participation gives a student valuable experience in developing responsibility and working with people. This experience is invaluable after graduation and in later life; and prospective employers do value such an indication of willingness to work and ability to get things done.

Last year the only contested offices were president, repat-large (frosh are gung-ho), and business manager, a now nonexistent post. For the first time there were no candidates for California Tech editor, one of the most important campus positions (ahem). This year, as any year, there are certainly several qualified candidates for editor, IHC president, BOC secretary and the six previously uncontested ASCIT offices. Let's not have a repetition of last year's election by acclamation. -J. C. Simpson

Richard Karp

ower 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.

It is clear that the bookstore has almost a virtual monopoly, because of time, distance, and other factors, on a least 75% of the items that it sells.

We feel that these two reasons make it essential that the bookstore be run in a manner which is beneficial to the most students, and faculty as well. This leads us to a few statements regarding the bookstore.

The most important is prices of items. There is a small sign in the back of the bookstore saying "Book prices are set by the publisher." This is, of course, nonsense. Books are not fair traded and there do even exist discount booksellers. And although we were led to believe by the manager of the bookstore that books are actually a money losing proposition, we somehow believe that the bookstore not only makes a profit on books, but a profit on all items.

Lecture Will Illinois Tech Adopts Begin Negro Harder Frosh Year Life Series Illinois Institute of Technoschedule was "tough." But, he

"America's Emerging Tenth," a series considering Negro life in America, is being presented by the Caltech Y. The first of the series will be in the Y Lounge Thursday, January 24, at 7:30 p.m. The discussion will look at life of Negroes in the city slum areas, their hopes for the future or the ambition for a dead-end life, and those who have resigned themselves for a non productive life. "The Cry of Jazz," a movie demonstrating the Negroes' desire to make the present life acceptable. Mr. Lorenzo Traylor of the South Central Area Welfare Planning Council will be at the discussion to answer questions.

This is the first in a series of discussions concerning the Negro problem in America. Later programs will consist of a series of discussions with Negro leaders of Los Angeles. Negro students will be invited to participate in the discussions. The meeting will be held about every two weeks.

The first part of the program involves a series of four or five visits to Avalon Community Center, which serves Negroes in one of Los Angeles' "ghetto" communities. The aim of the project is to aid a group of bright but "culturally deprived" sixth graders to develop their interests in science.

Ten or twenty Caltech students are needed to guide these children in the selection and construction of individual science projects. The visits will be made on alternate Saturdays. and a trip to Caltech and several field trips are being planned for the children.

Economy Runs To Begin Soon

Students who are interested in participating as observers in this year's Mobilgas Economy Run break-ins should register in the Industrial Associates office, 113 Throop, between 8:30 am. and 4:30 p.m. between next Monday, January 28, and Friday, February 1.

The Mobilgas Economy Run is held each year under the supervision and sponsorship of the United States National Automobile Society, and each year Caltech students are entitled to act as observers on the break-in runs, and are the only students

logy, a Tech type institution in Chicago, has just caused quite an uproar in its student body. The cause of the uproar is a plan introduced by the Dean of Engineering and Physical Sciences to increase the amount of science each undergraduate must take. The Dean stated that the changes "are consistent with our educational objectives . . . to provide sound foundations for entrance into professional fields or for additional study at the graduate level." He concluded that: "the adoption of the . . . concepts would place our undergraduate curricula in the engineering and physical sciences division in a most favorable competitive position.

The most contested change requires entering freshmen to take physics, chemistry, and calculus simultaneously during their first semester, as Caltech requires. Freshmen now take only two of these courses.

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, said that the changes "can mean the end of many flourishing activities," He claimed that the freshmen would be "scared out" of activities by the intense work load.

He also stated: "Faculty opinion about this new change is far from unanimous. One prominent professor told me that he thinks the new schedule is far too difficult for these incoming high school seniors. He said . . . the freshmen don't have enough free time as of now. Will it get more applicants?

"One more thought . . . will tougher entrance requirements solve our problem of under-enrollment? After all, we don't have any more to offer prospective students than before. Therefore, from the same number of prospective students, we will have to choose less (sic) because 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 the fact that over 50% of the freshmen had received D and E slips proved that the frosh

KPFK Investigation

(Continued from page 1)

from sponsors or funding groups to broadcast in an orthodox manner. This, Hill felt, was the said: "our freshmen are not stupid. They all have rated high in their graduating class."

He then said most entering frosh do not consider the freshmen curriculum, or care about it. He concluded this editorial with a comment that: "I'm afraid no new curriculum will attract better students. So we will have the same cross section of freshmen next year. What will the D and E percentage look like then, and how big will the sophomore class be the year after?"

The Other Side

Campus sentiment is not wholely against the change, however. Some students hail it as a desirable step forward in IIT's standing as a school. One student who criticized the editorials sharply made the following statements.

"In the first place, curricula with physics, calculus, and chem-(Continued on page 8)

ASCIT Reveals Assembly Plans For Third Term

ASCIT Alumni Assembly Program Committee chairman Henry Abarbanel has announced the planned series of Wednesday morning programs for part of this term.

Yesterday an exhibition of the art of fencing was presented Delmar Cavert. The program included exhibit bouts, demonstrations of various aspects of fencing skill, and an example of a typical lesson. Following the exhibition, Dr. William Shockley and others associated with Caltech announced their intentions of organizing a fencing club here, Meetings will be announced.

Noted author Ray Bradbury will be on campus February 6 to speak on "Creativity and the Space Age." He is well qualified to discuss both subjects, as enthusiasts of science fiction already know.

In addition, projected speakers mentioned for the program later this term are Aldous Huxley and Paul Tillich.

that the Senate investigation was a "clear-cut attempt to limit our right to broadcast programs on their merits."

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 later 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 unless it appears on term bills as ASCIT dues.

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 cooperative gives a 10% across the board discount on all cash purchases plus an additional dividend when there is a surplus at the end of the year. A discount of this sort could amount to over \$50 during undergraduate years and even more for those who buy more.

We feel, therefore, that the bookstore can change. There can and should be lower prices with greater efficiency, and students should not have to be cheated by charging all that the traffic will bear. If, as Mrs. Green, the bookstore manager. stated, they wish only to serve us, then they can do it by lowering prices.

-Richard Karp J. C. Simpson who work as observers.

Pay for each run is \$2 an hour for total time, including waiting time. Each run takes five hours or less. In addition, students are paid for (or given) a box lunch and carfare to and from the compound, which is located in Pasadena.

Larry Rabinowitz will run the program on campus, assisted by Don O'Hara. House "squad leaders" are Tom Latham in Blacker, Wendell Mendell in Dabney, Bill Smith in Fleming, Mike Lambert in Page, Bill Satterthwaite in Ricketts, and Ron Counsel in Ruddock.

Students who act as observers have to follow a strict set of regulations. In general, observers are not to leave the automobile except in case of emergency, and they are to record all details of the trip. Box lunches are eaten in the car, which is under observation at all times by the observer (again, except in emergency).

thing that must be eliminated from the broadcastinhg media, and for this reason all Pacifica stations are privately funded.

The first Pacifica station was a 250-watt station operating in the San Francisco area. It did not maintain operation long, due to financial troubles. However, renewed interest put the station back on the air in 1950. In 1959 KPFK began broadcasting in the Los Angeles area, and New York had a Pacifica station by 1960. Plans for several more are currently being developed.

Although a pacifist group was involved in the original forming of the Foundation, their purpose was not to advocate pacifism but to explore it along with other important subjects, such as race relations. The stations are designed to be the voice of the intellectual community, and operate on the basis that "everyone has the right to speak his piece." Haines said that he believed

In the discussion period that folowed, Haines related that often the station is not able to present as balanced program content as it would like, due to lack of funds to develop such programming. Much of the time, he stated, "we have to rely on what comes in."

One of the points brought up was that of "labeling" people who appear on programs or who write articles. The idea of this, Haines said, is that if we can label those who seem undesirable we can do away with them. The policy of KPFK, however, has been to give people the skimpiest of identifications. Anonymity has always been one of the great American freedoms, 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.

BY JON KING

who are interested in the pro-

spect of direct personal action

for disarmament and similarly

oriented causes, I strongly sug-

gest that you contact CNVA

West, the Committee for Non-

If there are any among you

grad

rattles

Sewers

tural Society) got off to a lively

start last Wednesday with slides

and commentary by Jake Brent-

jes on the Pacific Northwest.

Programs are given on alternate

Wednesday nights at 10:30 p.m.

in the M-J lounge. Scheduled

for the near future are "Hunting

Dodos in the China Sea," "With

Nelson at Trafalgar," and "Col-

lecting Nematodes in Pasadena

For lively theatre at a nominal

(Continued on page 8)

Miscellaneous Ramblings

More AUFS

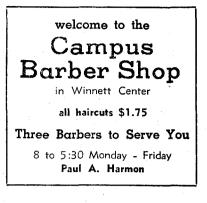
(Continued from page 1)

(where the political future of the country is made). They feel, said Dr. Patch, that Castro has established a socialistic model 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 peculiar choice of candidates: Manuel Odrio former dictator from 1948-56; Victor Raul 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 Accion 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 Odrio 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 June, 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. alliance for progress are misguided (Continued on page 5)



violent Action. This organization has its roots in the Polaris Action group at Groton, Connecticut, and is dedicated to immediate nonviolent action against nuclear war. Though you may be violently opposed to their ends, they present a rapidly vanishing breed, true idealists, willing to commit themselves materially and personally in support of their beliefs. If they accomplish nothing else, they renew one's faith in the possibilities for individual action. Write for info to CNVA-West, P. O. Box 5983, San Francisco.

Plagiarist

I take pleasure in announcing the opening of the First Annual All Caltech Essay Contest (FAACEC) "Why I Hate Engineers." Closing date is February 20; all entries become the property of this column; and winning entries will be published in Life and the California Tech. Entries will be judged by an impartial panel of engineerhaters headed by myself. Submit your incisive critical masterpieces to the Tech. The shorter the better.

CS, MJG?

The MJG & CS (Mosher Jorgenson Geographical and Cul-

Y to Present **Religion Play**

The Caltech YMCA will present the Bishop's Company, of Burbank, California, 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 morals. The company tours the country, playing at such diverse locales as San Quentin State Prison and Princeton University.

After the performance, the

Careers with a future at IBM. World of opportunity at IBM. Room for advancement at IBM. professional growth for careerminded men and women. Opportunities are in :

Research **Development** Engineering Manufacturing Engineering Programming Marketing

- Systems Engineering
- **Customer Engineering**

Qualifications: Bachelor's or advanced degree in Electrical, Mechanical, or Industrial Engineering; Mathematics, Physics, or other Sciences; Economics, Business Administration, Accounting, or Liberal Arts. Our brochures provide the full story.

Advances in data processing at IBM develops, manufactures, IBM are creating new areas for * and markets a wide range of data processing systems and equipment that is performing an increasingly vital role in business, industry, science, and government. Across-the-country operations offer a choice of. laboratory and manufacturing locations in:

IBM

Interviews On Campus

Jan. 31, Feb. 1

Science and Engineering

Systems Engineering

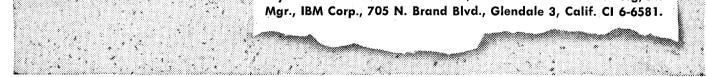
Endicott, Kingston, Owego, Poughkeepsie, Yorktown, N.Y. Burlington, Vermont Lexington, Kentucky San Jose, California Bethesda, Maryland Rochester, Minnesota.

More than 190 IBM sales and service offices are located in major cities throughout the U.S. your choice at IBM.

At IBM you range beyond academic specialties into exciting new fields. IBM programs include company training courses, tuition-refund courses at nearby universities and schools, and company-paid competitive scholarships for full-time study at a university of your choice. IBM is an Equal Opportunity Employer. Our representatives will be on your campus soon to discuss typical careers, various training programs, the advanced education program, financial rewards, and company benefits. Make an appointment through your placement officer. He can also give you additional information on the career of

If you cannot attend the interview, write or call: R. A. Karlberg, Br.

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 on campus.





The Critical Ear

.

rickerman

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 eye-catching sign which reads, "Wahoo, Birthplace of Howard Hanson."

1 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 promulgation 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 50299-SR 90299).

Liadov, a Russian pupil of Rimsky-Korsakov, 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 individual artists. The opening of the "Enchanted Lake" is particularly good. The balance of the string section between the high and low register instruments compares favorably to many orchestras of professional standing. The woodwind section

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 who will be here this students time have interesting backgrounds and were selected with an eye to finding people who are well informed theologically without being dependent upon theological jargon, 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."

is notable for its excellent control. One outstanding fault 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 "Brazilian 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)

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 live 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.'



From Other Campuses by Richard Karp

"What the 'L'?" reads a title of a small boxed article in the Redlands **Buildog.** "Last week," begins the story, "our main editorial was entitled 'Republican Party needs a change.'

"The editorial was read by the Advisor, 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 'halt' in the sixth paragraph had had the 'l' knocked out of it by the printers.

"This changed the paragraph to read:

"'Some Republicans — to the distress of most conservatives have responded to the challenge and stood athwart the course of history yelling 'hat!""

Vote — for What?

It will be election time once again at colleges and universities

throughout the country - and PCC is no exception. The PCC Courier contains the following campaign statements. First, for ASB President, Eric Johnson writes "It has become increasingly evident that a major change is neessary 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 specifics is desired, one need look no farther than the statement of (Continued on page 5)

BEYOND THE PLANE OF THE ECLIPTIC...

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.

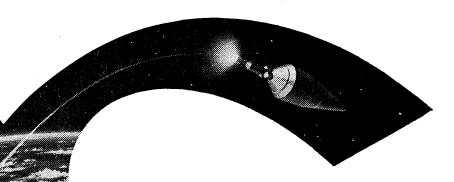


CAMPUS INTERVIEWS

will be held

MONDAY, FEBRUARY 4

See your placement office for details



Drugs Sundries Cosmetics Tobaccos 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 programs, is also 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.

• The Graduate Study Program permits selected engineers and scientists of outstanding scholarship and professional potential to obtain advanced degrees at company expense while on research assignments.

Candidates for degrees in all of the following should investigate opportunities at Lockheed:

Aeronautical	Mathematics	
Chemistry	Mechanical	
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 NASA projects as OGO, OAO, ECHO, and NIMBUS.

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

Other Campuses

(Continued from page 4)

the candidate for women's president: "I would like to initiate a new type of fashion show which might become traditional. I would also like to have a motherdaughter tea for all women students on campus." And that, interestingly enough, is her entire platform.

What — Me Worry?

The Santa Clara reports on final exams: "Good evening, sir. I see that you're about to shoot yourself . . . Just what exactly is the cause of your distress? . . .

"Well, I have eight exams the first day and six the second, plus the fact that I have to recite all the tapes back in language lab. I haven't started to study yet, I'm overcut in nine classes, and I got 600 demerits for kicking my ROTC commander in the shins. I borrowed money on my scholarship from a loan shark, who says he'll cut my tongue out and beat me over the head with it if I can't pay him in three days. I think I have lung cancer and I have gangrene on the toes."

So, what else is new? Lock Before You ...

The following document is taken from the Virginia Tech. It is a verbatim report of an authentic CIA bulletin. Remember that this is a real bulletin and is not a figment of anyone's imagination!

"CIA INTERNAL USE ONLY **RELOCATION BULLETIN 19**

"1 September 1961

"TOILET FACILITIES

"1. During the early stages of the move to the new building, toilet facilities will not be available at the new site. However, all toilet facilities in the downtown area will remain in operation until the move is completed at which time it is anticipated that the toilet facilities in the new building will be activated. Upon activation of the facilities in the new building, the downtown toilet facilities will be rescheduled to provide for operation on Tuesdays and Thursdays, except national holidays.

2. Personnel assigned to the new building prior to the activation of all toilet facilities in the (Continued on page 8)

The Critical Ear

(Continued from page 4) I have ever heard. Kent Kennan's "Night Soliloquy for Flute and Strings" further demonstrates the lyrical ability of the group. My opinion of the flutist was dramatically changed in part here, but that asthma 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 marvelous homogenous sound is exploited to the full in "The Last Spring," by Grieg. The interplay between the sections of the high strings can cause chills. **Onward Marching** It couldn't last. Into Sousa's "The Stars and Stripes Forever!" The change startled me, since I hadn't looked at the jacket. As an experienced flute-piccolo player, I am familiar with the extremely difficult solo in this piece. Hanson delayed the part for one chorus and I was concluding that it had been cut when the piccoloist(s) took off and flew through the part, The brass section really delivers in here too. Improvisions "a full octave higher than the score" are abundant. In conclusion, I would strongly suggest this recording for any-one interested in classical music. In fact, as an all around excellent addition to any music library, this rates an A+ with me.

Book Review

Burroughs Fare Acceptable

BY RODGER WHITLOCK

Edgar Rice Burroughs is undoubtedly one of the most known fantasy writers of all time; virtually every American has at least heard of him (or of his books) and most have read one or another of his works. This week, I am reviewing "The Gods of Mars," (Ballantine, #F702, 50c), the second of the John Carter series. Before actually reading this book, I expected 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: man loves woman; man loses woman; man seeks woman through vast trials and tribulations; man finally regains woman.

The superstructure built around this framework is of excellent quality in this case. John Carter, returning to Mars after a ten year involuntary absence, discovers that the "therns." guardians of the Martian heaven

on earth are virtual fiends. His determination to expose their fraud, as well as his desire to regain his wife, leads him through a varied set of rather wooly 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; Carter's Martian wife has been possibly stabbed by a jealous rival, but since the women are imprisoned in a peculiarly constructed 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, "The Warlord of Mars." I expect this to be published fairly soon by Ballantine.

YMCA Acquires Steak Dinner **Coffee Maker**

The Caltech YMCA has purchased 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. Saga provided the same items, of typical high Saga quality, for about \$14 a week.

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

AUFS 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 make a total change in the society. Consequently any step may be a gigantic one, as the Bolivian revolution shows. Patch will discuss Bolivia in detail next week.

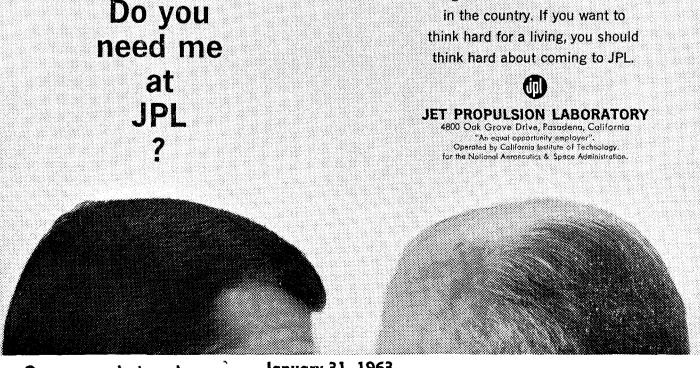
For Charities Drive Winner

The annual ASCIT Charities Drive will be held this year from February 4 to 11. This year, the charities benefitting from the drive will be the Pasadena Community Chest, The YMCA World University Service, and the Los Angeles County Heart Association. The first two charities were included in last year's solicitation.

This year, a new competition, designed to increase donations, will be instituted. The method of the competition will be a House contest. The House getting the greatest percentage of donations (each House will be assigned about 100 grad students to collect from) will win. The prize will be a faculty-served steak dinner. This competition is designed to increase the participation and funds usually collected from the charities drive.

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



On Campus Interviews:

January 31, 1963 **Contact University Placement Office for Appointment**

Page Six

CALIFORNIA TECH

SPORTS

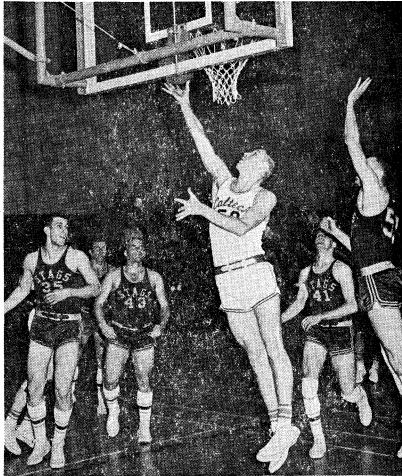


Photo by Kendall Brown

Dick Burgess jumps for a shot as all five Stag players look on in awe. The shot was good.

Ricketts, Ruddock, Fleming

Beavers Vanquish CHM

BY DENNIS MCCREARY

Caltech hosted and defeated a favored CHM team last Saturday in a thriller which lasted over two hours. This marks Caltech's first league victory in two years, the last one occuring in the '60—'61 season when Tech defeated Oxy 78-76.

Beavers Lead Stags

Claremont controlled the opening 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 for Claremont, CIT never relinquished the lead, although the game was tied up several times. As the first half drew to a close, Claremont stole the ball and scored to tie up the game at 30 all. 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 intermission, the teams came back on the floor and began to warm up, but it was soon discovered that there was a discrepancy on the scoreboards as to the score. This defect was quickly remedied, but a second glance at the boards showed that the clocks were now out of phase. This second discrepancy was never solved, and after a futile 15 minutes of trying to make them agree, the game was finally resumed with only one scoreboard in operation.

This time the tip off was controlled by Caltech and the Tech men proceeded to widen their lead. At one point in the game with less than five minutes remaining to be played, the Beavers were ahead by seven points for their biggest lead of the

night. Claremont however, relentlessly began to narrow the lead. Soon, with about three minutes still left to play, the hardwood men found themselves hanging on to a two or three point lead by the skin 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 Claremont men double-teamed Chuck Vinsonhaler, one of them sneaking up from behind, and stole the ball, Claremont immediately called time out and the clock showed only 18 seconds left in the game. Claremont brought the ball down court against a loose Beaver press, as the Tech men wanted to put some pressure on the Stags without risking a foul. Claremont finally got off a shot which missed the basket completely and went out of bounds to CIT. 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. Bopp finally came up with the ball but went outside with it. Claremont again called time out and with two seconds left set up an out-of-bounds play. Unfortunately for them, however, the pass in was high and the man who finally got it juggled it momentarily; before he could get off a shot the buzzer sounded.

The entire game was played very well by the Tech team. They hit over 50% of their shots both halves, and their alert defensive play kept Claremont's 20-pointers in the low teens. Chuck Vinsonhaler had the best percentage as he hit 5 for 7 from the floor and made two freethrows for a total of 12 points. Dick Burgess was high-point man with 18, Gary Dahlman had 11, Joe Weiss scored 9, and Tom Bopp put in 8 to round out the scoring, which was pretty well balanced.

Caltech's record now stands at 5 and 6 overall and 1 and 1 in conference. This Saturday the Beaver varsity meets La Verne at La Verne, with the tip off at 8:00 p.m. The following Tuesday Caltech hosts Oxy with game time again at 8:00.

Upland Bows

In a Tuesday afternoon game last week Caltech hosted Upland College for their second meeting of the year, Caltech having won the first encounter. The Techmen jumped off to an early lead and were able to maintain it through the first half, leading (Continued on Page 7)

Dabney, Ricketts Tie Discobolus Golf

Dabney and Ricketts tied 2-2-1 in a Discobulus golf match played last Friday and Monday. The points will be split between the two houses, but Dabney retains possession of the trophy. Page challenges next.

Winners were Earl Reiland and John Beamer for Dabney and Dave Hyde and Mel Hirschi for Ricketts. The tie match was between Dave Barker and Maynard Olson.

Dabney won the trophy earlier in the term by defeating Ruddock in basketball, and has since defended successfully against Blacker in football. An error was made last term in the published points; corrected and up to date standings appear below.

House	Trophy Points
Lloyd	11
Ruddock	10
Blacker	9
Dabney	9
Ricketts	6
Fleming	2
Page	1

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

Strong In Interhouse Football Ricketts House maintained ing on defense as Page, Blacker, top position in interhouse football competition by beating a less. strong Fleming team 32-6 last

Lloyd's team leader Al Gilles-Friday. Fleming remains a probable contender with Ruddock for Quarterback Marty Hoffman has scored close to 80 percent pass completions for Ricketts, primarily to Les Tomley and

Carlos Johnson. The Ricketts defense has proved equally powerful as the Red Raiders scored 72 points in two games against a total of 6 for their opponents.

second place.

Transfer Bob Christie this week led the Fleming offense to victories over Lloyd, 26-19, and Blacker, 33-0, passing at random to Steve Hillyard, Don Green, and John Nady. Fleming now boasts three wins against the Friday loss to Ricketts.

For Ruddock House, Bill Ricks has sparked three straight victories with impressive running and passing since Steve Gorman was injured in the first game. Murray Sherman shared quarterback duties with Ricks and Grant Blackinton was outstandand Dabney were all held score-

pie has run a passing offense, with Jim Crabtree as prime receiver, in compiling a 1-1-1 record against Blacker, Fleming, and Page respectively. Lloyd has suffered from the loss of Bob Howenstine and John Slonski to injuries, but scrappy little Al Young remains a defensive standout.

Dabney House lost to Ruddock 7-0 Monday and defeated Page 21-6 a week ago for a 1-2 receord as of Tuesday. Gerry Gowen leads the Darbs, with Bob Scott as an outstanding pass receiver and safety man and John Beamer rushing strongly.

Page has shown steady improvement, coming from a 27-0 loss to Ruddock and 21-6 defeat by Dabney to hold Lloyd to a 0-0 tie on Monday. Quarterback Chuck Holland has relied mainly on center Jerry Thomas and fullback John Mowery for his offensive threat while Thomas has caused opponents lots of trouble

(Continued on page 7)

CaliforniaTech

Published weekly during the school year by the Associated Students of the California Institute of Technology, Incorporated.

Editors-in-Chief Richard Karp, J. C. Simpson

> Managing Editor Alan Hindmarsh

News Stoff

Buzz Bernstein, Clem Chase, Walt Deal, Don Green, Ken Kimball, Wally Oliver, Dave Price

Feature Staff Wally Oliver, editor Jon King, Craig Murphy, Gerry Steiner, Rodger Whitlock

Sports Staff Gary Chamness, Editor Steve Blumsack, Tom Latham, Dennis McCreary, Dave Ollis, Paul Rushin, Jim Sagawa

Business Staff Lee Molho, Manager Circulation: Howard Monell

California Tech, 1201 East California Blvd., Pasadena, California. Member of The Associated Collegiate Press Second Class postage paid at Pasadena, California Printed by Bickley Printing Co. Represented nationally by National Advertising Service Inc. Subscriptions: \$1.00 per term, \$3.00 per year. Write Circulation Manager.

all types of guidance, detection, control and communications

Propulsion – relating to fluidmechanics, 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 consoles, instrument panels and pilot equipment

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

Aerodynamics – relating to wind tunnel, research, stability and control

Solid State Physics – relating to metal surfaces and fatigue

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

Get full information at INDIVIDUAL ON CAMPUS INTERVIEWS

Thursday and Friday, Jan. 31 and Feb. 1

We urge you to make an appointment through Dr. D. S. Clark, Director of Placement. If you cannot, please write to

S. A. Amestoy, Engineering Employment Manager

DOUGLAS AIRCRAFT COMPANY, INC. 3000 Ocean Park Blvd., Santa Monica, California

An equal opportunity employer

Beaver Wrestlers Scrimmage Frosh Basketballers In Rough Season Chaffey College Team Caltech's freshmen have played second half comeback narrowed suffered its worst defeat of the

The newly formed Caltech wrestling team traveled to Chaffey College Tuesday night for their first scrimmage of the season. Inexperience weighed heavily on the Beaver grapplers, who suffered an unofficial 24-13 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 9-8 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 Kosai met Chaffey opponents in

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 againt Biola, which bowed to the Tech soccermen 3-1. 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 De-Barbarac and Joel Kwok 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 defense.

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

Standings (as of Wednesday afternoon):

House	Won	\mathbf{Lost}	Tie
Ricketts	3	0	0
Ruddock	3	0	0
Fleming	3	1	0
Lloyd	2	1	1
Dabney	1	3	0
Page	0	2	1
Blacker	0	4	0

Basketball

(Continued from page 6) at half time by a score of 31-22. Early in the 2nd 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 lead- 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 as they put on a full court press. Gary Dahlman then iced the game by making both free throws to bring the final score to 55-52. Upland brought the ball inbounds quickly, but was unable to score before the clock ran out.

exhibition contests.

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

Feb. 4, 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 beat Rio Hondo before vacation in a wild and wooley 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 56-45. 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 61-58.

Then last Saturday, the team

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 Tedder. Other regulars include captain Jerry Yudelson, Frank Potter, Ed McCullough, Mike Ashbacher, 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.

٠

IS THIS THE WAY YOU'LL CHOOSE YOUR JOB?

DOSE ADOK JOR .

From CHM news release: "Caltech is 0 and 1 in league play, having dropped one to Pomona 56-48. They are 3 and 5 for the season and should prove little trouble for Claremont . . ."

Better luck next time!



If you flip a coin between just a couple of jobs, you're not giving yourself the best odds on real opportunity. Give yourself better than 50-50 by looking at both sides of the coin, with every company. Pacific Telephone, for example. We offer excellent opportunities for you technical, engineering, business and liberal arts majors to put what you know to work. Plus some unique advantages: immediate responsibility, rapid advancement, and an atmosphere you can grow in. We'll have to be honest about the odds, though. They're just 1 in 7 you'll qualify for a top career with Pacific Telephone. We're looking for the heads-up man. Sign up with your placement office today.

An equal opportunity employer (A) Pacific Telephone part of the nation-wide Bell System, world leader in communications

TALK TO OUR REPRESENTATIVE ED FOSTER ON CAMPUS FEB. 11-12

CALIFORNIA TECH



week's Brewins, Birdie Leech, her virtue besmirched, shot Beak dead in head. Hence, this week Brewins is being taken over by a new writer, Tailfeathers. As a rosy glow before the dawn of the New Brewins, Tailfeathers would like to describe his new policy. Hereafter only genuine, carefully documented falsehoods will be published. Any suggestion of truthfulness will be carefully routed out, and readers are encouraged to bring to the attention of the editors any points of truth that Tailfeathers may overlook.

Beak's funeral was held last Saturnsday at the Weedpatch Memorial Weedpatch.

OhSoHairy Frozen

This last Monday ASPIC Sec Done OhSoHairy received an interesnaya present from two coed

Grad Rattles

(Continued from page 3)

price try the little theatres upstairs at the Pasadena Playhouse. There are usually three productions running on any given weekend, with more than competent student casts, and quite a wide variety of style and mood.

Barbara Jones is interested in raising money to help finance her new Triumph. Need I say more?

Drummers! Lousy drummers, good drummers, dumb drummers, one desperately needed to complete a trio. See Angy Lamola in M-J.

If anybody is contemplating driving to San Francisco the weekend of the first, and wouldn't mind taking a rider, I'd appreciate if they would get in touch with me. Otherwise I'll have to thumb.

Other Campuses (Continued from Page 5)

building will be expected to make personal provisions consistent with personal comfort. It is anticipated that prior to Christmas 1961 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 adjacent to the public telephones and in the second sub-basement adjacent to the boiler room.

A Heady Matter

"3. For security reasons personnel will not frequent gasoline

In a grande finale to last seek's Brewins, Birdie Leech, er virtue besmirched, shot Beak ead in head. Hence, this week rewins is being taken over by new writer, Tailfeathers. As a

> "COMPLIMENTS OF ICE EATERS ANONYMOUS".

After carrying all that ice, I wonder if the poor girls are frozen, from all that frigidity?

Things for Amusement

Beak thought of a few things, some of them O. R.'s, some not, that might be good girl snowers:

"Caltech is not built on a wold."

"If all the girls in Vassar were laid end to end, I wouldn't be surprised."

"If all a man's blood vessels were lined up end to end, the guy would probably die."

"Whitlock is a fink."

"D. E. I."

"Able was I ere I saw Brewin's."

Illinois Tech

(Continued from page 2) istry all 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 intelligent bid to regain reasonable stature among schools of science and engineering. "We will have much more to offer the prospective student.

IIT will begin (again) to attract MIT and Cal Tech caliber students, considerably enlarging and improving the freshman class. Prospective students who quail at the revised program are welcome to enroll in colleges of lesser standing."



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 AiResearch divisions of the Garrett Corporation 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 compete in industrial and commercial fields on an international basis.

At Garrett-AiResearch the products are highly engineered. You work on advanced systems and equipment doing much original design and state of the art work. The majority of your engineering

> AiResearch Division Los Angeles, California

background and training will not be wasted; you will need it to solve the problems encountered in the development of sophisticated equipment.

The demand and respect for an intense engineering effort at Garrett-AiResearch creates a professional atmosphere that is second to none in the aerospace industry.

To help you in job placement, an orientation program covering several months is available to acquaint you with various laboratory, design and development assignments.

stations, restaurants, and other public facilities in the vicinity of the new building with the intent of utilizing such toilet facilities, inasmuch as this will attract undue attention to agency personnel.

"4. Personnel are reminded that vegetation at the new building is U.S. Government property. Damage to or destruction of U.S. government property is a Federal offense. Personnel are also reminded that some leaves of plants in adjacent wooded areas are harmful such as poison ivy (3 leaves), poison oak, and poison sumac. Photographs of these plants will be posted at the main entrance to the new building at an early date.

"DISTRIBUTION: ALL EM-PLOYEES"

This, it must 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 . . ." placards.

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

Central air data computing systems, submarine controls. Miniature cryogenic refrigeration systems using high speed (150,000 rpm) turboexpanders.

Life sciences studies for space.

High speed (48,000 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 utilizing Freon and air cycle refrigeration.

Aircraft engine control systems.

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

Environmental space radiators, evaporators, condensors. —420°F to 2200°F heat transfer systems.

Aircraft gas turbines for onboard auxiliary power, helicopter prime power, ground support applications for aircraft and tactical missile units.

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.

Jet aircraft starters, constant speed drive-starter units.

Special purpose pneumatic analog computers for process industries.

Air moving and control systems for Ground Effects Machine vehicles.

Gear box drives.

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.

AIRESEARCH MANUFACTURING DIVISIONS • Los Angeles 9, California • Phoenix, Arizona Systems and Components for: Aircraft, Missile, Spacecraft, Electronic, Nuclear and Industrial Applications