

The California Tech

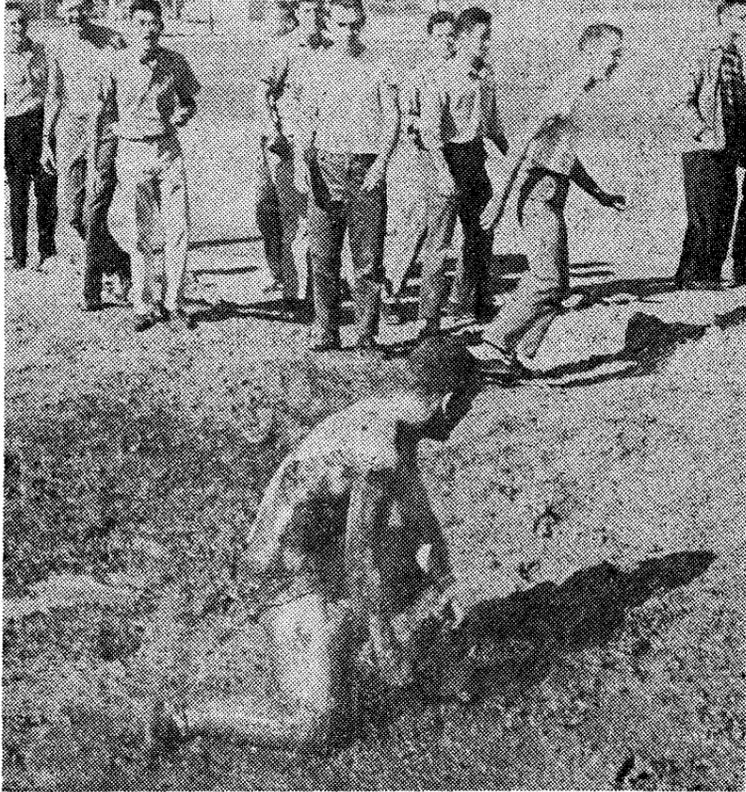
Associated Students of the California Institute of Technology

Volume LXI

Pasadena, California, Thursday, December 3, 1959

Number 10

GRRRARRGH!



Sophs Swipe, Soak Sorenson; Seniors Sorry; '63 Sick

BY WALLACE YERBOVSKY

"I heard a sound like the trampling of a thousand buffalo and my whole life passed before me."

This story properly begins with the chance remark of Bob Bump to Ross Carder and Al Armstrong that "Sorenson really ought to go in the Mudpit." They plotted. Bump got a schedule of Jim's classes. They called in more people. Tim Little persuaded Professor Sharp to let them out of lecture early (Jim charges bribery), and a little before noon of the 23rd most of the sophomore class gathered in front of Jim's classroom.

Cleverly deciding not to attend that particular class due to the late arrival of the teacher, Jim had retired to his room to play the ukulele. About this time the sound of many trampling feet filled the air, giving rise to the quote above.

"I didn't figure I had time to lock the door, so I took off my contacts and dove on the bed, feigning sleep. The first line I heard was 'OK, Sorenson, it's all over.' The room was completely filled with sophs and they tried to bind my legs with tape while I yelled for seniors. I heard pounding on the door and heaved a huge sigh of relief, until I discovered it was 50 more sophs."

They carried Jim to the Athenaeum parking lot, where he masterfully forced a delay by

Bandsmen to Bow Next Thursday

The Caltech Band will present its annual Christmas Concert on Thursday, December 10, at 11:00 a.m. in Dabney Hall Lounge.

Among the numbers included in the morning's program are Lillya's "A Christmas Fantasy," Strauss' "Die Nacht," Anderson's "Sleigh Ride," a "Second Symphony for Band," by Erickson, Warrington's "Yuletide Festival," and the "Ides of March"

claiming to have lost a contact, secretly hoping more seniors would show up.

According to one observer, the scene went something like this: "Stop! Stop! I lost my contacts and they cost \$200 and you guys will have to pay!" "Egad," thought Bump, "that's more than the dance will cost." Gary Turner saved the day, however, by checking in Jim's room and finding the contacts safely hidden away in his medicine cabinet.

A car was supplied by Rick Green and Jim was hustled to T.P., where he was readied for the throwing-in ceremony. The first throw was somewhat of a failure ("They sort of puffed and heaved and then sort of dropped me"), but the second was a little better (see picture).

"But it took over a hundred," says Jim. "I think if there had been only 50 or 60, I might have been able to handle them."

Debaters Cool Tourney

The team of Dave Jefferson and Kip Thorne for Caltech won the first-place trophy in senior men's debate at the Western Speech Association Tournament held last week at Stockton College. Caltech debate teams have previously taken awards in the junior division at this tournament, but the senior division has in the past been commanded by liberal arts colleges. This tournament is attended by students from all western states, and the 58 competing teams this year came from as far away as Colorado and Hawaii.

In addition, Thorne won second place in junior men's impromptu speaking in competition with 72 other students.

Jefferson and Thorne will next compete in an elimination contest to select four teams from the Southwest to attend the Annual National Debate Tournament at West Point, New York. Gary Lorden and Bill Cohen

IHC Recommends Sign-Up, No Rotation For One Year

BY JOHN TODOROFF

A detailed time-table to organize second-term sign-up for membership in the three new Student Houses and a garbled recommendation that rotation be discontinued for one year were approved last week by the Inter-house Committee.

The IHC has submitted the reports, together with a minority opinion, to the faculty Student House Committee. The faculty group is expected to open consideration of the proposals at a meeting early next week and to announce approval or changes in the IHC's procedure before the end of this term.

Accept Committee Report

The IHC report is the verbatim recommendation of its new Student House Committee, a collection of two men from each House which has held forums, conducted a student body poll, and thought for six months about population and rotation questions. The IHC adopted the committee report, without discussion, by a vote of nine to three.

The three-man IHC minority report agrees with the upper-class population plan, but urges that the faculty delay final determination of the form of freshman rotation to be held next fall until after the new House sign-up period. It is further suggested that the student body then (third term) vote on the specific question of discontinuing rotation for next year. Next year's seven House IHC, which be in office third term, could consider the results of the vote and recommend the form of next year's rotation to the faculty.

Favor Rotation

The IHC preference poll showed that at least two-thirds of the students favor eventually establishing some form of freshman rotation among the seven Houses with 60 per cent of these voters favoring a system giving each

frosh one day in each of the seven Houses.

No polls or forums discussed the pros and cons of rotation in next year's transition period. As a result, the minority report questions the IHC's haste in deciding that any form of a rotation during the forming of the three new Houses would be inadvisable.

Sign-Up Organized

The sign-up procedure will, if the faculty approves, be handled as follows:

There will be a sign-up list for each of the three new Houses posted in the office of the Master of Student Houses from 10 a.m. January 18 to 4 p.m. January 22. Each list will have a

specified maximum number of openings for each class. In addition there will be a sign-out list with a maximum set for the number who can leave each class of each old House.

A person desiring to change his name to another list or to withdraw completely would be allowed to do so at any time during the sign-up week.

Three Extra Slots

The sign-up list for each new House will have three extra spaces above the ideal maximum (obtained by taking the total on-campus population of a given class and dividing it among the seven Houses in proportion to the capacity of each). Also the sign-out list for each of the old Houses will have three more spaces

Xmas Dance Slated For Saturday Eve

A toy valued at less than \$3 is the admission price for the annual ASCIT Christmas Dance, to be held this Saturday in Dabney Hall Lounge, according to ASCIT Social Chairman Ken Casey. The gifts should be simply wrapped without any card. They will be distributed to orphans and needy children in the Pasadena area.

Time for the dance will be between 8:30 and midnight. Dress should be like Interhouse — party or cocktail dresses for the girls and dark suits for their escorts.

Decorations will center around a big Christmas tree which will be decorated by the Instituteters, led by Don Fahnlone.

Casey says there will probably be some sort of entertainment for the middle of the dance and that a band will play.

The ideal number leaving each house is: Blacker—7 frosh, 7 sophs, 4 juniors; Dabney — 8 frosh, 4 sophs, 3 juniors; Fleming — 10 frosh, 6 sophs, 3 juniors; Ricketts — 7 frosh, 7 sophs, 2 juniors. The IHC preference poll indicated that the sign-up period will produce no serious deviation from these figures.

After the close of the sign-up period, students whose names fall in the extra spaces will be asked to change in such a way as to reduce the irregularities, but no such person will be required to change.

Non-Residents First

In case large irregularities remain, above the three-space buffer zones, freshman and sophomore non-residents of the overpopulated old Houses who wish to move on-campus will be required to transfer to the new Houses, drawing lots to determine who changes.

If irregularities still remain after transfer of all the non-residents, present freshman and sophomore residents of the overpopulated classes in the old Houses would be required to draw lots. The present juniors (next year's seniors) will not be required to leave an old House against their wishes.

Seek Volunteers

Any drawing of lots that is needed will be held during the week of February 8-12. Before that time, volunteers to even-out irregularities will be accepted.

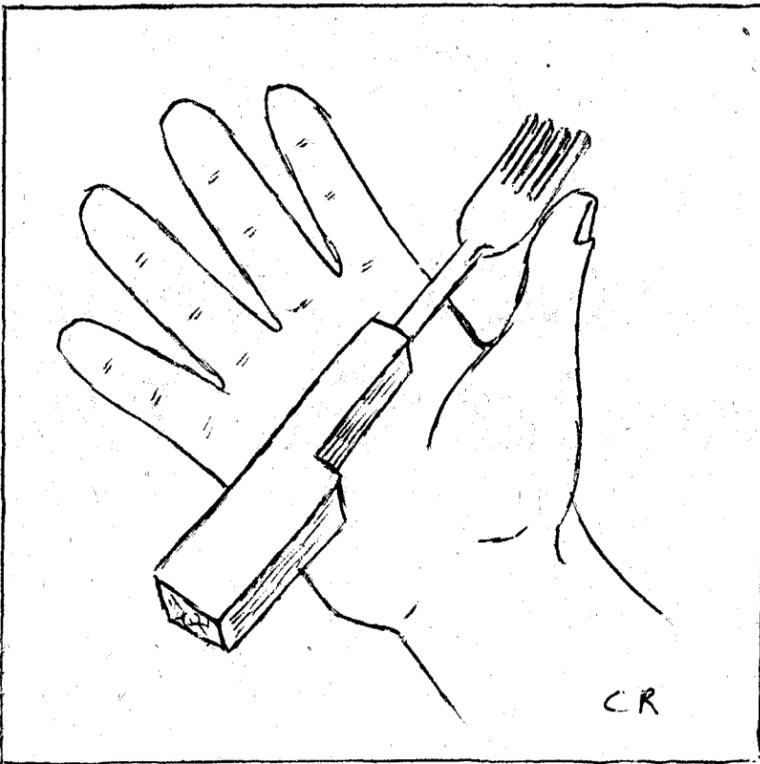
All seven Houses will hold elections between February 25 and March 4. Present House members, who will be moving to a new House next fall, will retain their present rooms through third term, but will split their third term dues \$5.00 to their present House and \$2.00 to the new House.

(Ed. Note: To aid students in deciding where they wish to live next year, the California Tech will print detailed drawings and descriptions of the rooms in the new Houses in the first issue of second term.)



Kip Thorne and Dave Jefferson

also attended the Western competing in the junior division Speech Association Tournament, men's debate.



Hmmm!

Surprise!

Five hundred is a pretty good percentage in some leagues, but it's pretty bad in others.

The New Student House Committee ended its season battling about .500, maybe a little less. The population plan is straight-forward, reasonable and well thought out.

But the no rotation proposal is bad. It leaves questions like Why? and What'll happen next year? unanswered. Worse than that, it doesn't have the student body support. It's difficult enough to get Tech men to cooperate when they're on your side, but when they're against you—well, good luck boys.

Of course, everybody expects us to say this. In fact, we just did. But we have one more comment to add.

The rest of the student body doesn't have as much right to complain as they'd like to pretend. The committee has been working at this quite a while, most of the time with no support and with changing personnel. The fact that they made up their mind and then tried (unsuccessfully) to prove they're right is partly the fault of the people who didn't listen until it was too late.

PE

The new PE program has been a definite improvement over the old excuse for a program.

Organized classes and instruction are valuable. It's a pleasant change to actually be **learning** something during our afternoons in the gym.

Scheduled classes are also desirable. For a lot of people it has eliminated the No-PE-Before-Midterms philosophy. This is demonstrated by the happy reduction in this term's number of PE blue slips.

The proposed addition of night-time PE sounds like a good idea if the details can be worked out.

But we've heard a lot of talk recently about making PE voluntary for juniors and seniors. The more we think about it, the more we like the sound of it. Most other schools require only two years (Stanford only two terms). Tech men aren't **that** much more spastic.

Of course, when a man is required to do something, its value to him is questionable.

We know people are always clamoring for a change in the PE program, but why doesn't the athletic council, or whoever's in charge of this sort of thing, look into the possibility of eliminating required PE for juniors and seniors.

The California Tech

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

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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, \$2.50 per year. Write: Circulation Manager, The California Tech, 1201 East California Blvd., Pasadena, California.

Letters To The Editor

Editor, The California Tech

One week and a day ago, the IHC endorsed in toto its subcommittee's recommendations on the new Student Houses. Included among these was a much-debated provision abolishing rotation for the coming year. One year of anything can't be too disastrous (especially for a senior) and I shall temporarily refrain from commenting on the more questionable qualities of the report. At this time I'm more interested in recording (for our rotationless prosperity) the coolly logical method by which the decision was made.

The big meeting was held down at training table with the 10 IHC members, the ASCIT president, and the entire subcommittee on Student Houses present. Things began on a fairly convivial level, with many congratulations passing to the committee for the fine job they'd done.

At this point the trouble began. Someone (me) suggested that we'd better prepare an effective method for disseminating all information prior to the coming vote. In retrospect this appears to have been the wrong thing to say. Vote? Appeal to the rabble? Expose the delicate logic of the committee's report to the crude mind of the average voter? Better death (or better yet, dishonor).

One by one the committee members rose to reaffirm their faith in the committee's infallibility (actual quote):

"We've thought about this for six months now, while the average troll in the Houses will just react."

"A vote wouldn't prove anything anyway since the poll comes out about even if you don't count the freshmen's votes." (How about left-handed Jews?)

"The guys in Dabney and Ricketts just vote along House lines, anyway."

Then the ASCIT president spoke, revealing how ASCIT prefers to handle important decisions in committee, avoiding a referendum whenever possible. (Do I vaguely remember something about "Closer coordination between ASCIT and the student body?")

An anonymous committee member provided the coupe de grace: "You only want a vote because you think you'll win!" There I stood, revealed as the charlatan I am — a man willing to stoop to majority vote just to gain his own ends.

There will be no vote on the subject. IHC adopted the report without one word of debate on its content, including the population recommendations. The concept of a vote has been rejected **in principle**, no matter how intelligently or carefully it might be executed.

Ah, but don't forget, no rotation is just a one-year experiment. Another decision will have to be made next year. Perhaps we'd better appoint the new committee immediately. God himself couldn't stand up to a committee that's thought about a problem for **twelve months**.

BRAD EFRON

Secretary's Report

One of the more worth-while ideas put into effect by ASCIT this year concerns the Consolidated Charities Drive. In the past, this program has operated through contributions by members of the graduate and undergraduate student bodies, the money being sent to three organized charities which have been specified on a year-to-year basis.

The new idea concerns a change in philosophy: the drive becomes a student body project. The project would be something which would continue from year to year and in which the Caltech student body, through an organization here on campus, would have an active voice.

Examples of possible projects are the following: support of a localized foreign refugee program, such as in China or some other Far Eastern area; purchase of clothing or other supplies for distribution to the people of some needy part of the world; financing of a college education for students in desti-

tute regions who otherwise would not have any possibility of receiving this education. These by no means exhaust the alternatives, but they will serve to indicate the direction which the program will take.

As adopted by the Board of Directors last Monday, the Fund Drive this year will be held from February 8-12. The money will be used this time to aid refugees in Hong Kong, but this in no way implies a restriction as to future projects. A Steering Committee has been set up, under the chairmanship of Bob Koh, to investigate all possibilities and, hopefully, to come up with an idea which will be supported by the students in general.

Most important, the project will be directed by us; and we will be able to take an active interest in the partial alleviation of a world problem of importance.

William R. Bauer
Secretary, ASCIT

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Positive Bias

Multiplex To Expand FM Stereo

BY PIERRE SUNDBORG

With stereo showing signs of taking over the long-play record field, as it has already conquered the tape industry, the time has come to appraise the future role of stereo in radio broadcasting. A start was made in stereo broadcasting in L.A. three years ago when KCBH and KMLA began FM-FM transmission. Somewhat later, KFAC and KNX instigated AM-FM stereo transmission, and are still using it. More recently, a few AM stations are cooperating on AM-AM stereo programming.

All of these transmission methods yield reasonable results, yet have somewhat severe limitations. For example, on the AM-FM transmissions, the AM channel is considerably the poorer in quality, and is generally plagued by noise. One problem all three methods have in common is that they use two separate tuners, and thus require

rier, and would be received by standard FM receivers along with the main carrier. The stereo FM receiver would then separate the two carriers, remove the subcarrier modulation from the right-hand signal, and feed the two audio outputs into stereo preamps.

The principal advantage of the Halstead system is that it uses fairly simple circuitry, and thus would be inexpensive to install. Its main disadvantage is that a person listening to a Halstead broadcast on a non-stereo tuner would hear only the left channel, and would have no way of hearing the right channel. A second multiplex system, developed by the Bing Crosby labs, overcomes this disadvantage of the Halstead system.

The Crosby system also uses a subcarrier, but transmits a different type of information on it. The principal carrier channel transmits a signal which con-

tuner, and most new FM tuners are equipped with multiplex outputs.

Heathkit's adaptor, just introduced, will sell for \$31.95, a price which attests to the complex circuitry necessary for unscrambling a Crosby multiplex signal. For the present, rest assured that your hi-fi system can be complete without a multiplex adaptor. The outlook for L.A. does not include commercial multiplex transmission for many months.



BY JOHN BERRY

I think I am more pleased by the following than by any new drink that I have tasted in the past six months.

THE CARUSO

- 1 part Dry Gin
- 1 part Dry Vermouth
- 1 part Creme de Menthe

A criticism I have heard is that the taste is that of Creme de Menthe only slightly modified by the other ingredients. If the reader decides that this is a fault, he can readily mend it by decreasing the relative

amount of Creme de Menthe.

For myself, I consider it, even if true, no fault. And I highly recommend the following:

CREME DE MENTHE FRAPPE

Fill cocktail glass with shaved ice. Pour in Creme de Menthe, drink with short straws.

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

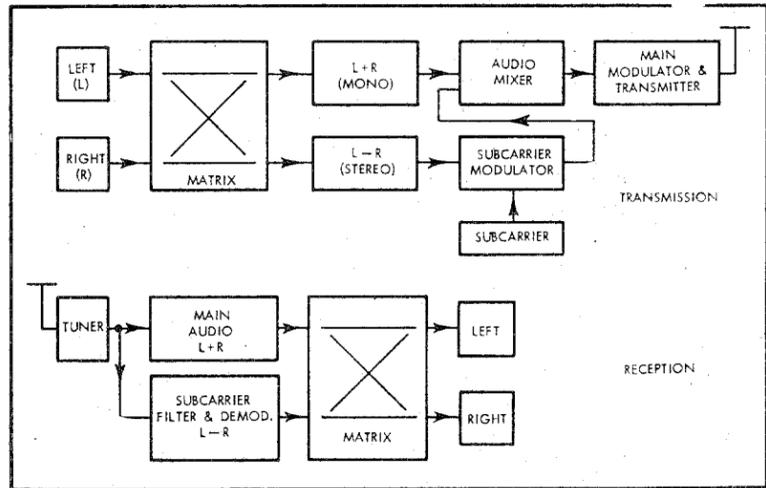


Fig. 268. Basic Arrangement of the Crosby System

a rather large expenditure by the listener.

The two-station transmissions are not desirable from the point of view of the stations, either, for they necessitate close coordination between two locations, rental of telephone lines for inter-station transmission, and problems of dividing the revenues produced by advertising. It is apparent that the only fully acceptable method of operation, from the standpoint of both the radio station and of the listener, would be stereo transmission by one station with one transmitter and listening done on one receiver. Methods of achieving this end are called multiplexing, and that's what I want to talk about this week.

There are several systems proposed for FM stereo multiplexing. Of these, only two are likely to be important. The first of these is called the Halstead system, and is illustrated in Fig. 267. In this system, the left-hand channel is broadcast without change. The right-hand channel, however, is broadcast on a subcarrier. A subcarrier is essentially a second-channel broadcast adjacent to the main carrier. The subcarrier proposed for the Halstead system would be 50,000 cycles below the main FM consists of a sum of the left and

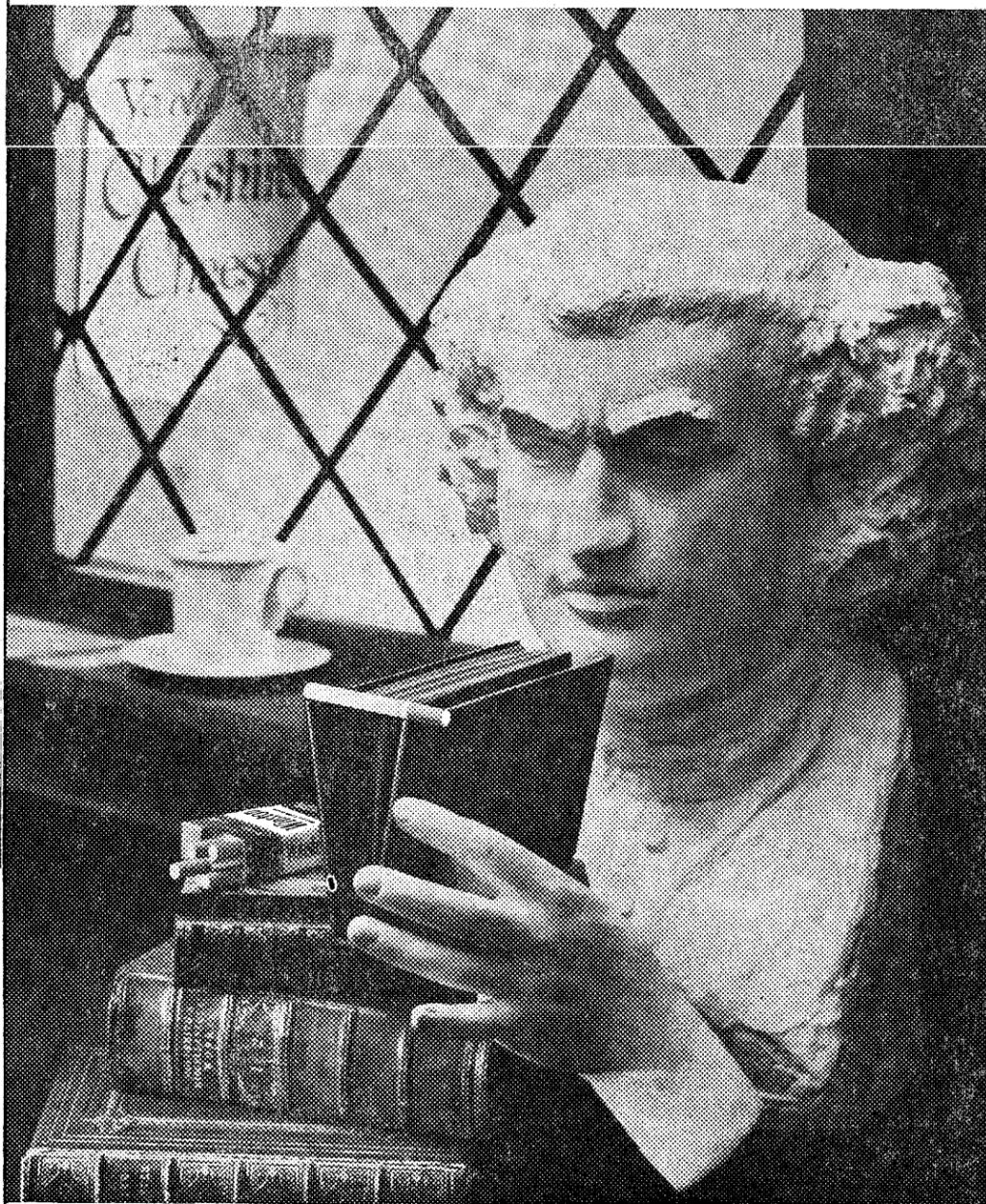
right channels. This is essentially a monophonic channel, and a person listening to it would hear the total sound, although not in stereo.

The Crosby subcarrier transmits a signal consisting of the difference between the left and right channels. In the receiver, the two carriers are combined in a rather complex matrix circuit which puts out the two separate audio signals. Fig. 268 shows a simplified diagram of the Crosby system.

The Crosby system has the great advantage of being compatible with existing FM receivers. Anyone listening to a Crosby transmission on a non-stereo receiver would think he were listening to a standard monophonic transmission. Because of this compatibility, it is expected that the Crosby system will be accepted by the FCC as the standard system of broadcasting. Experimental Crosby broadcasters are being made in New York at this time.

There is no commercial multiplex transmission in the U.S. as yet, but that hasn't stopped the component manufacturers. There are already several Crosby system multiplex adaptors on the market. These are built to connect to any regular FM

Dr. Johnson turns another elegant phrase:



Sir, if it hasn't got it there, it hasn't got it!

Old Dr. Sam has done it again—brought his dictionary up to date in terms of modern Winston usage.

Winston (win'ston), n. A cigarette with Filter-Blend on one end and a wise man on the other.

Taste (tast), n. What decorators argue about and Winston smokers enjoy.

Filter-Blend (fil'ter-blend), n. A happy marriage of art and science. Light, mild, flavorful tobaccos are artfully selected, then scientifically processed for filter smoking.

Slogan (slō'gān), n. (e.g., Winston tastes good like a cigarette should). A statement of disputed grammar but unquestioned fact.

Front (frūnt), n. (used in conjunction with the preposition "up"). The section of a filter cigarette where if it hasn't got it, it hasn't got it. Also, the section that counts, the section where exclusive Filter-Blend is to be found.

Boswell (bōz'wēl). Nickname for a guy who is always hanging around to cage Winstons from you.

"There is nothing which has yet been contrived by man by which so much happiness is produced . . ."

Boswell's Life of Dr. Johnson, Vol. 1, Page 620

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by griffen



And naow, before we introduce our first guest, would you please steep right ouver here to our isolation booth, where we are fortoonate enough to haive isolated . . . please, steep back there, we can't have any accidents . . . yes, folks, they said it couldn't be done; they said we would all get caught in the huge drifts, spewing forth as never — but there in front of youre veery eyes . . . in the isoation booth . . . to protect you and your loved ones (remember for only two cents a day) . . . is the one, the only . . . Studentus Caltechus . . . let's watch those flashbulbs, these booths are strong but . . . I'd hate to be responsible . . . if he ever got out, those drifts would kill them. Now, folks, if you would be soooo kiand as to focus youre attention right on the end of thiz Krypton pointer, you will notice the bloodshot eyes, sagging abdomen . . . just keep youre eyes on the end of the pointer, please . . . the shaking hands, long hair . . . limp lower lip . . . obvious malnutrition. You say so what's so unusual . . . this damn booth better hold . . . if you weel care to look very closely, you will notice growing out of the dandruff, out of the mass of kinky, bunched, unwashed, fetid fur on his head . . . the drifts will destroy them allll . . . there is a pair of horns—Horns—HORNES—horsnes . . . Keep back . . .

KEEPE BAIKE, I say . . . don't you understand . . . the booth . . . the drifts . . . the world . . . the subways . . . spinning toward evolutibn faster than Superman . . . Keeeepppp baaaak.

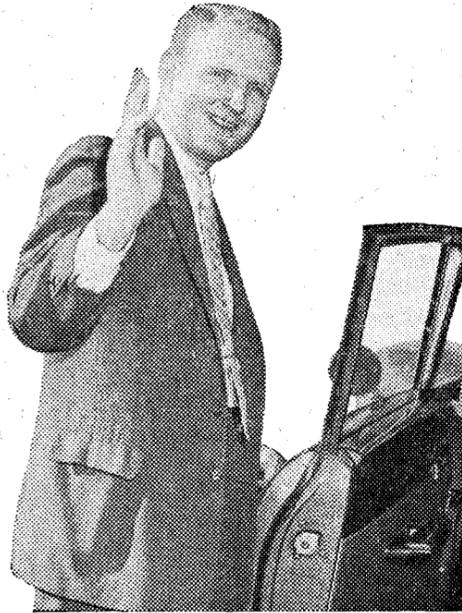
eaerth moves . . . and the two jaguars that he holds on the golden leash strain in the hope and fear that the world knows . . . Nicholai now stands royally at the head of the table. "Grigori Margovitch, ve can eider destroy or create; if ve destroy, nothing vill be left; if ve create, however, de world vill know us as ve really are — charitable, good, understanding, interesting

in improving Studentkin, and not taking his very life from him." "And if ve create, Nicholai Robertovitch, vat must ve create?" "Grigori Margovitch, it is not my business to create; it is your business — or perhaps you are forgetting that you are not yet the Tsar . . . even dogh Ilonova Florentzovna has married, you must still create, and pozhaloosta, etp nie

zabood!" Nicholai proudly left the room, followed by his secretary. As he reached the door, he turned. "May I suggest some form of entertainment to keep Studentkin happy and compatible . . . a leetle quail never hurt anyone, huh, Grigori Margovitch; oh, but pardon me, I forgot you are never indulging."

Silence . . . Raspuptin kicked one of the jaguars . . . a yelp

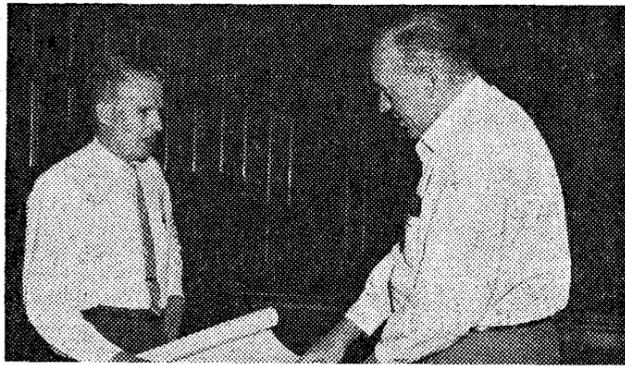
. . . for Nicholai Robertovich had spoken . . . Rasputin would now be known as Madame Grigori Margovitch, for Studenten Caltekin must be kept happy and there is only one way . . . yes, Madame, to create is the only way . . . and the Imperial Palace will create a place where Caltekin can be happy . . . the Tsar Nicholai Robertovitch II has spoken . . .



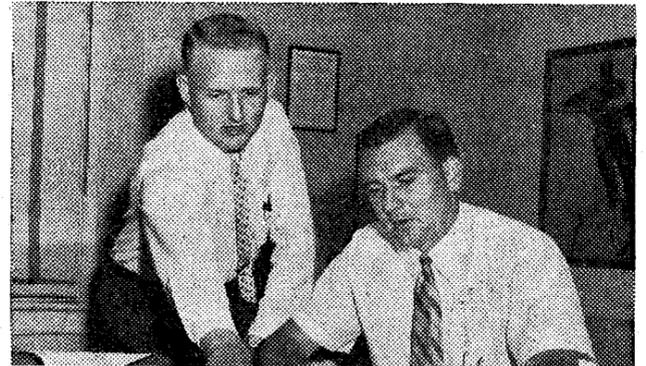
Just four years out of college... He heads a team of 63 people

L. Dean Darbe graduated from Kansas State U. in 1955 with a B. S. degree in electrical engineering. Today he is Supervising Service Foreman for Southwestern Bell Telephone Company at Hutchinson, Kansas. Dean has five Foremen and 58 craftsmen reporting to him. He's got full responsibility—covering installation, maintenance, testing and repair—for 21,000 telephones and all the equipment that serves them.

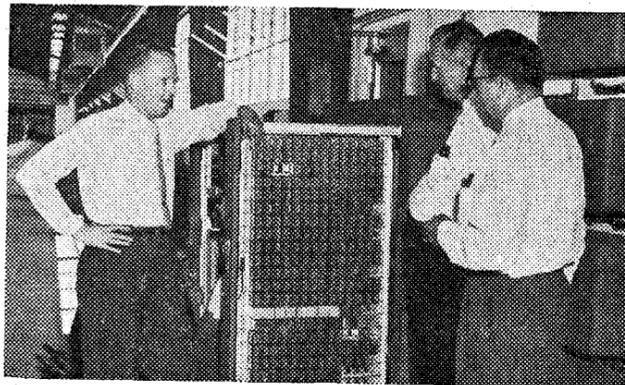
"It's interesting work," says Dean, "and it keeps me on the go. Here are a few of my activities during a recent day on the job."



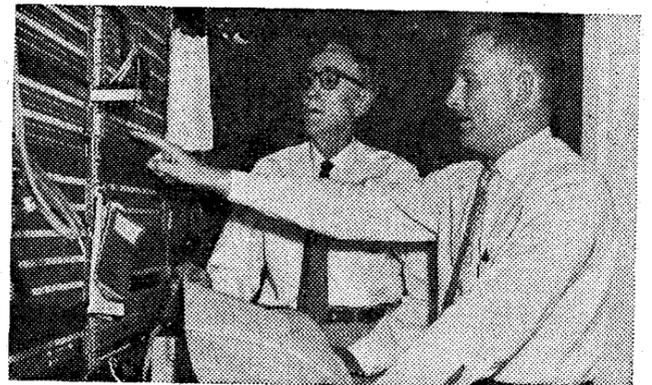
"8:30 a.m. I meet with one of our Foremen at the plant garage to discuss a cable-pressurizing job. We're putting all aerial cable in Hutchinson under air pressure to keep out moisture which causes cable failure and costly service interruptions."



"10:15 a.m. My boss, District Plant Superintendent Randy Barron, and I go over plans for an addition to our dial central office. Several pieces of large and complex switching equipment will have to be rearranged to tie in with the new facilities."

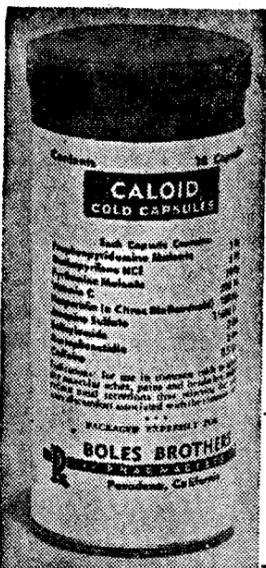


"1:30 p.m. After lunch, I drive out to the new plant of a mobile home manufacturer. My men are completing installation of a new-type cordless switchboard. I discuss features of the new equipment with the firm's Vice President and Plant Manager."



"3:00 p.m. At our toll center we'll soon be adding another test desk to increase our facilities for 'trouble shooting' Long Distance circuits. Here, with our Chief Testboardman, I go over some of the board changes which will have to be made."

We now take you to a small conference room in the Imperial Palace, Tsar Nicholai Huttenoff II presiding. "Nicholai Robertovitch, vat can be done about dis menace to ze life ve all love so well? How can ve stop Studenten Caltekin from entering our homes and (shudder) taking de vons ve lov so well?" . . . Rasputin has spoken . . . the



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"That's about it for one day. Tomorrow's schedule will be different. I'm doing interesting, challenging work all the time—and I'm given plenty of responsibility. That's what I like about my job."

There are countless young men like Dean Darbe who are moving ahead in supervisory careers with the Bell Telephone Companies. You could be one of them. Talk it over with the Bell interviewer when he visits your campus—and read the Bell Telephone booklet on file in your Placement Office.

BELL
TELEPHONE
COMPANIES



Y's Asilomar Conference Set Dec. 27-Jan. 1

Sign-up will continue this week for the Y-sponsored Asilomar conference.

Asilomar is a joint YMCA-YWCA conference which is held every Christmas vacation at Asilomar on the Monterey Peninsula. The conference this year will last from December 27 until January 1.

Its purpose is to examine the problems facing the contemporary young man and woman; seminars under the direction of competent leadership, forums by men important in their fields, and informal conversation with young men and women not only attending different colleges in the West but also with exchange students from other countries highlighted the conference.

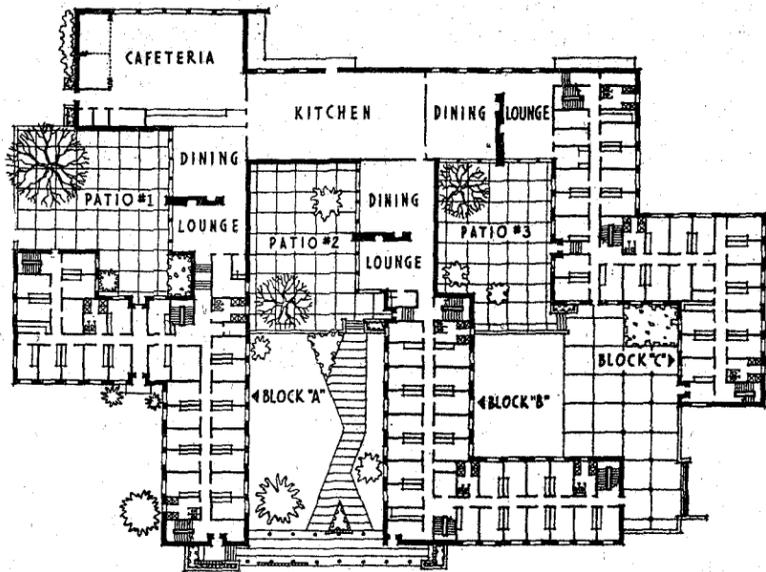
Room and board for the conference period costs \$36.00. The registration fee is \$13.50 up to December 10, when it is boosted one dollar. The Caltech YMCA will give some "scholarships" to students who otherwise would find difficulty in attending.

Those interested should contact Wes Hershey or Al Green over at the Y office or any member of the YMCA executive committee.

Announcements

PRIVATE PHONES

The Student House office's policy on private telephones may be revised in the near future. Anyone interested in having and paying for a telephone in his room should contact Dr. Huttenback.



FLOORPLAN of the new Student Houses. The California Tech will carry a complete description of the new Houses in its first issue next term.

Plink, Plunk! Piano Movers On Campus, Remove Pianos

Within the past two weeks, daring and adventurous thieves highjacked the lounge pianos from Blacker, Fleming and Dabney (presumably for black market distribution). Intensive investigation by Student House personnel has revealed no clues and the FBI has been notified (honest).

The presidents of the three affected Houses laid down the following lines:

Ken Scholtz, Blacker — "Considering the condition of our piano, we would rather let it go and get a new one. If the thieves have unsuccessfully been trying to sell our piano, we'll take it off their hands for \$5."

Lou Toth, Dabney—"We are disturbed about this because our piano is not insured and is probably worth \$350-\$500. This appears to be the work of students from some nearby col-

lege. Incidentally, our piano can be identified by a distinctive liquor stain on the right side of the top and a cigar stain on one of the keys, etc., etc."

Doug McLane, Fleming—"This appears to be a prank, and we suspect our prodigal piano will eventually return, just like the silverware. We want it back, anyway."

And finally, the latest development is an extortion note received by Ricketts, which said, in abridgement, "Leave \$10 in such and such a book in the Physics Library and we won't take your piano." The following note was placed in the specified place, "We guarantee that if you don't take our piano we will not shave you and leave you nude on the corner of Raymond and Arroyo."

Vice Squad and FBI?

Applications For Model UN Close Today

Applications for positions on Caltech's delegation to next spring's Model United Nations will close tonight.

Caltech, representing Israel, will send 12 men to the session, which will be held April 6-9 at the University of California in Berkeley.

Each delegate chosen will have to pay about \$18 toward transportation and conference fees. The BOD has appropriated \$375 to cover the rest of the expenses.

Anyone interested in attending should contact Cleve Moler, delegation chairman, in Ricketts before 8 tonight.

Jones Elected To College Board

Caltech Dean of Admissions L. Winchester Jones was elected to the Board of Directors of the College Entrance Examination Board recently. He previously served as president of the Western Division of the Board.

Jones will hold his office until 1962. He meets every three months with other Board of Directors members to decide the policies of the Board.

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Stanley of NBC To Visit Soon

Ed Stanley, head of public relations for the National Broadcasting Company, has tentatively been scheduled for a brief visit to the Tech campus during the first week of second term, announces Al Green of the Caltech YMCA staff.

Stanley was originally scheduled to be on campus next week, but he must be in Washington, D.C., instead. Stanley may answer questions about the current national debate about the morals of mass media of communication.

Y Drive Almost Makes \$2050 Goal

The annual YMCA fund drive was about \$250 short of this year's goal of \$2050 as of last Monday.

Y FILM

"The Ox Bow Incident," the first of the adult westerns, will be shown Sunday evening at 7:30 in Culbertson.

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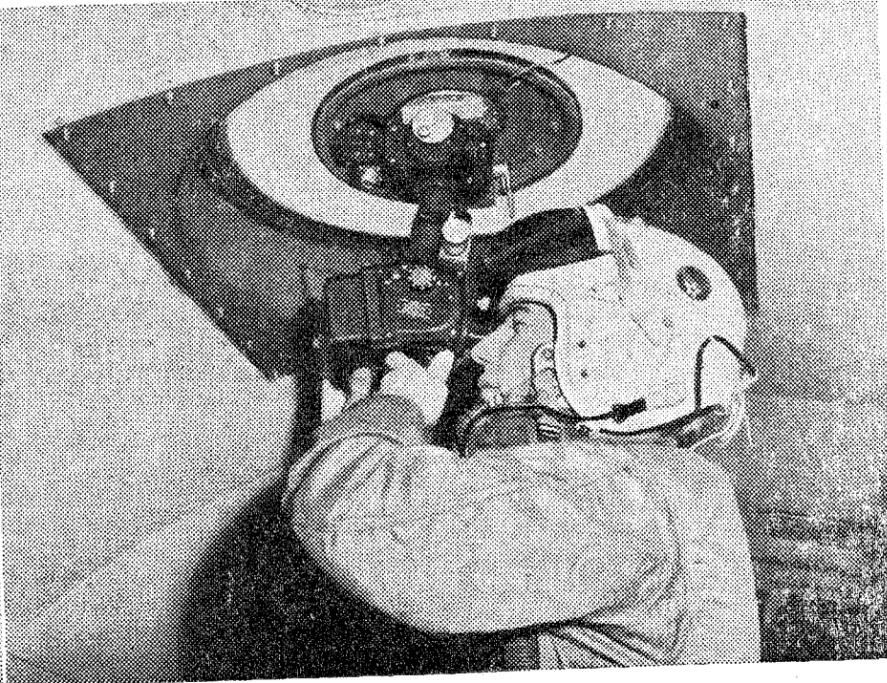
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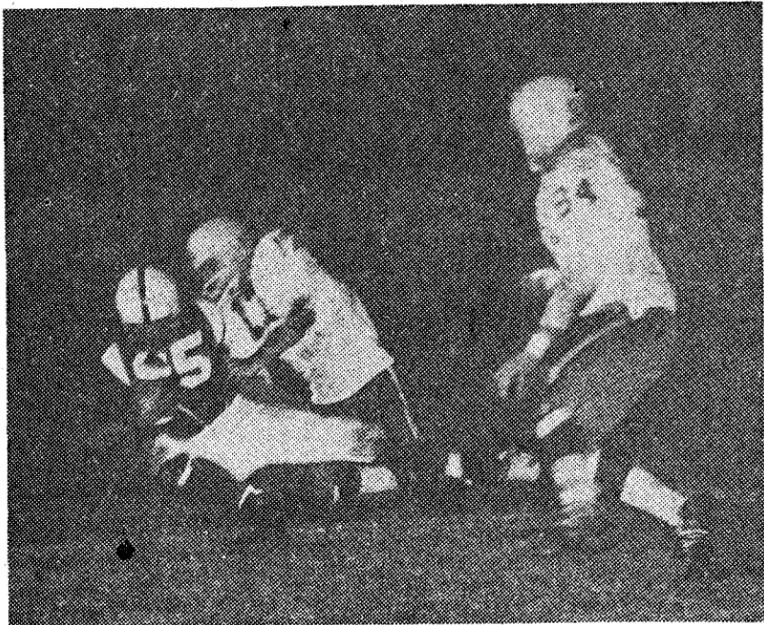
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The California Tech

SPORTS



Caltech halfback Vince Hascall splits his way for extra yardage to help teammates to 14-12 Homecoming win over Claremont.

Football Team Grabs Homecoming Victory

Caltech successfully closed its football campaign by whipping favored Claremont-Harvey Mudd, 14-12, in the annual Homecoming game played in the Rose Bowl.

A spectacular 96-yard scoring sprint by flashy halfback Vince Hascall highlighted the determined Beaver offense which staved off two late CHM threats to take the narrow victory.

The sharp-passing visitors assumed a 6-0 lead at intermission but Coach Bert La Brocherie's Beavers grabbed two touchdowns on Hascall's dash and a Mel Holland-John Arndt aerial, then iced the game with a successful pass for a two-point play.

This victory extended the Beavers undefeated record against CHM with the Caltech squad copping a 12-0 verdict in their only previous meeting last year.

Riding the arm of quarterback Don Doty, Claremont jumped off to a 80-yard scoring drive midway in the first quarter. Doty flipped a pair of 30-yard passes with the last going for the touchdown. The conversion attempt failed, making the score 6-0.

Caltech answered in the second period by moving the ball to the Stag 15, where they were stopped by downs. On the next play, Stag back Wayne Booth burst through the Beaver line and galloped 82 yards before being brought down on a desperation tackle by Holland.

Ken Stevens dove into the end zone for an apparent score but Carl Gottschall's jarring tackle resulted in a Beaver recovery of Steven's fumble.

Basketball Year Begins; Good Season Predicted

The Caltech basketball team launches the new season this afternoon by playing host to Upland College. The game is scheduled to begin at 4:15 in

the gym.

Upland is the third team that has been scheduled to be the Beavers' initial foe, as both San Fernando State College and Southern California College recently canceled games scheduled for this week.

Hopes for a Beaver victory are quite strong, especially if hotshot Fred Newman can find the range, and if the Beaver fast break works as expected. Upland is not considered to be too strong this year as they recently lost quite convincingly to La Verne.

Saturday night the Beavers journey to Riverside, where they will engage the Riverside branch of the University of California. The game is scheduled to begin at 8 p.m. The Beavers should emerge victorious, as UCR lost most of its squad from last year through graduation.

This year's version of Caltech basketball should be the best since the SCIAC conference champs of six seasons ago. Although two first stringers from last year's squad were lost by graduation, including all-conference forward John Stene, the addition of former all-conference guard Fred Newman, who didn't play last year, and several men from last year's strong freshman team, should more than make up the difference.

X-Country Squad Might Win Crown

Beaver cross-country men journey to Redlands Saturday for the annual conference meet. The Techmen, possibly the strongest team ever assembled at this school, should finish no lower than second, and may even pull the big coup and beat track-minded Occidental to grab first spot.

The race is held on a four-mile, hilly course near Redlands, and is a truly rugged test of endurance. The Beavers have been running six miles a day in preparation for the meet.

Success in the meet depends on the ability of the squad to display the depth it has demonstrated throughout the season. Although the Beavers probably will not finish a man either first or second, they plan to dominate the first 10 places, with Dick Tuft and Bob Juola in the first five, thus piling up a near-insurmountable lead.

The winner is determined by adding up the placings of the first five men to finish from each school, the winner being the school with the lowest point total.

Fall Banquet Slates Coker On East Africa

Monday evening, December 7, at 6:15 p.m., Caltech will hold its annual Fall Athletic Awards Banquet at Brookside Park.

Tickets for the traditional steak dinner can be purchased from Joe Bocklage in Blacker, Larry Long in Dabney, Carl Gottschall in Fleming and Bob Juola in Ricketts. As usual team members can buy tickets for \$1.50, while others will pay \$3.25.

The main speaker this year will be Chuck Coker-Occidental's football and track coach. This summer Mr. Coker received an American Specialist Grant through the State Department to go to East Africa and help coach the native athletes in preparation for the 1960 Olympics as well as spread United States good will and understanding through athletics. The talk will be accompanied by colored slides and promises to be enlightening as well as entertaining.

All-conference ratings will be presented to water poloists Dave Tucker and Bob Ruby and the winner of the Wheaton Trophy in football will be announced.



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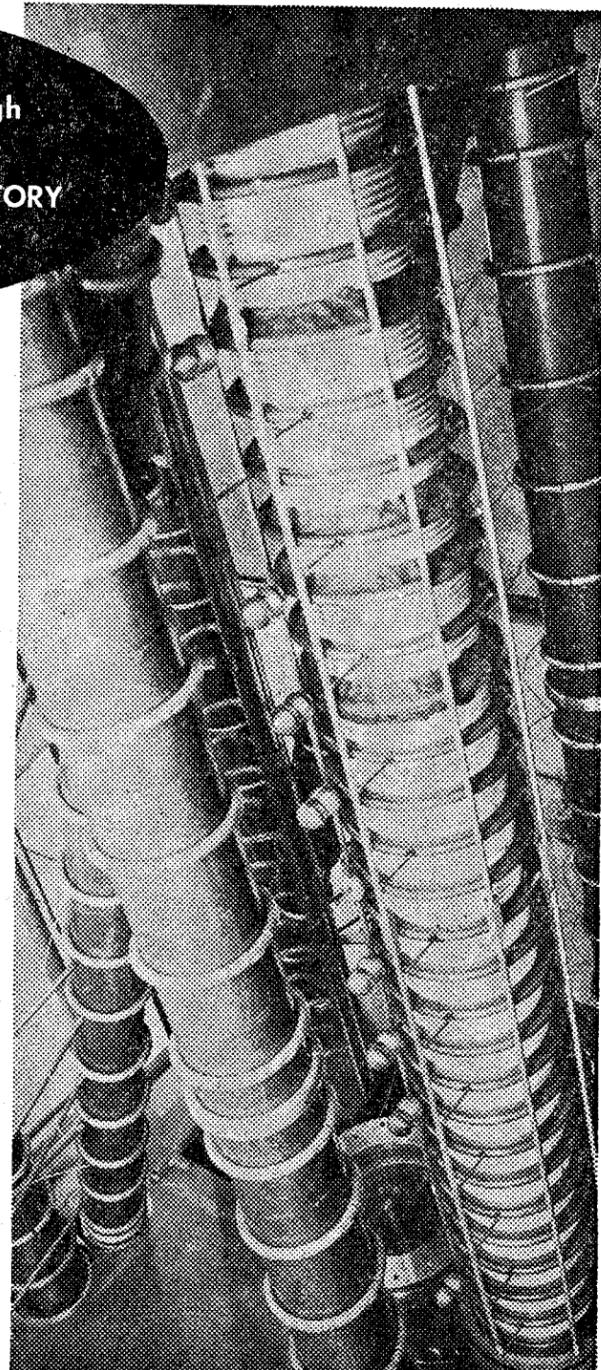
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Poloists Drown Occidental; Ruby, Tucker All-Conference

Climaxing a comeback season, the Caltech water polo team edged heavily favored Oxy 4-3 last week to finish the year with a 4-4 conference mark, good for third place.

The come-from-behind win over Oxy was the first time in six years that the Beavers beat the Tigers. Leading the team were Bob Ruby and Dave Tucker, who fittingly enough were named on the All-SCIAC Conference second team.

Tucker, always brilliant on defense and probably the only guard in the league that was a scoring threat, closed out his collegiate career with his third all-conference mention. Junior center forward Ruby, a deadly shooter and top team scorer, won his first all-league mention.

On a short end of a 3-0 reading at half-time, the Beavers went on a scoring binge to deadlock the game at 3-3 at the close of third quarter.

Ruby started the scoring with a fast hook shot from in front of the goal. Roger Bland netted the second and guard Tom Tisch scored the tying goal. Tisch's shot came on a scoop from a sharp angle that whipped high into the left corner of the goal.

Midway in the fourth quarter, Ruby tallied the decisive point on a penalty shot. Fouled within the four-yard line, Ruby blasted a high shot in the extreme left corner of the net.

Defense actually proved to be

Football -

(Continued From Page 6)

flew 96 yards for the longest Beaver score of the season. The wide placement attempt knotted the score at 6-6.

Holland, closing out his career with a brilliant game, intercepted a Doty heave and the Beavers were off to their second six-pointer. Arndt grabbed a three-yard bootleg pass from Holland for the score and left end Herm Hartung added the decisive points with a good catch of another Holland pass.

CHM and Caltech traded wasted scoring chances in the last quarter. The Beavers smashed inside the Stag five-yard marker early in the final stanza but were thrown back by the heavier visiting line.

A 95-yard scoring march put the Claremont squad within reach of a deadlock but Gottschall and Carl Baum stopped the conversion attempt to save the game.

With six minutes to go, another Beaver fumble set up another Stag march which ended on the Caltech 15.

Holland, Arndt, Gottschall

Standouts in a great team effort were quarterback Holland, soph end Arndt and team captain Gottschall. Graduating seniors who won their final collegiate game were Lee Hood, Jerry Siegel, Larry Long, Hartung, Art Rubin, John Cooper, Gottschall and Holland.

Seven sophomore starters in the CHM game, plus several standouts from the frosh squad, give hope of improved play next season.

Adding flavor and beauty to the Homecoming win was Pasadena High senior Sue Tangen, who was crowned Homecoming Queen at halftime by senior class prexy Jim Sorensen. Members of the court were lovelies Heather Goss, Natalie Johnson, Georgia Jones and Judy Rockley.

all-important as the Beavers rallied to their best showing of the season. Tucker held all-conference forward Army Luters scoreless, and Tisch, also showing fine clutch play, held his man goaless, too.

Senile 7 Plus 4 Still Undefeated

One of Caltech's two undefeated fall athletic aggregations will take on a secret, unannounced foe in what will probably be its last endeavor of the season Saturday morning at 9 in TP.

The Caltech Faculty, Staff, Alumni and Friends Soccer Team barely maintained their undefeated record in their last game when the varsity held them to a 4-4 tie.

(The Beaver cross-country squad is the season's other undefeated team.)

Soccermen Travel North, Meet NCAA Champ USF

Conference hopes were dashed for the Caltech soccer team as Redlands and Pomona both took narrow victories last week to set the Beaver loop slate at 2-4-1. UCLA closes out the season Saturday in a final league game.

Redlands started the downward spiral with a night 5-2 win on the small Redlands field. Ellis Cumberbach, consistent scoring threat for the Beavers, scored a pair of goals to make the half-time reading 3-2 but the coachless Beavers failed to tally in the final half.

After beating Pomona the first time they played Caltech, hampered by vacation schedules, absorbed a stinging 2-1 loss last Wednesday. The Sagehens scored in the first half and again in the third quarter. Only a goal by George Behrman in the final five minutes averted a shutout.

Over Thanksgiving vacation, the Beavers flew to San Francisco to take on University of San Francisco and California, generally conceded to be ranked one and two in western collegiate soccer circles and emerged with two defeats and plenty of experience.

Playing both games against top-flight competition Saturday, the Beavers were definitely outclassed and outmanned by the northern California squads. USF, furnishing the opposition at 9 in the morning, demonstrated why they were picked western NCAA champs with a convincing 7-1 thumping.

California's Golden Bears, losers to USF by a 2-0 score in their meeting, dealt a decisive 5-0 defeat to the visiting Beavers. Unlike USF, Cal did not substitute freely.

Sports Illustrated Honors Johnson

Wallace J. S. Johnson, star quarterback of the 1934 Caltech varsity football team, has been named to the Sports Illustrated Silver Anniversary All-American football squad.

This makes the second straight year that a Caltech graduate has been named to the team, as last year geology department head Dr. Robert Sharpe was named to the team.

Johnson, who graduated with honors in engineering, was the lightest man on the football squad at 134 pounds, was ASCIT president and a member of Tau Beta Pi. He is president of Up-Right Scaffolds Company, which he founded in 1946.

He also invented, and has patented, the original portable aluminum alloy scaffold, and has designed many aluminum radio towers.

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Ten Selected For Tau Beta Pi Honor Fraternity

Three juniors and seven seniors have been selected to join Caltech's chapter of Tau Beta Pi, the national engineering and science honorary fraternity.

Tom Bowman, Dave Butterfield, Robert Koh, Jarold Meyer, Mel Neville, Pete Rony and Frank Weber are the seniors; Bill Bauer, Larry Brown and Cleve Moler are the juniors.

The seniors were picked from the top one-fifth of their class, the juniors from the top one-eighth. In addition to scholarship, extracurricular activities and general character were used as basis for selection.

Dabney Lounge Features Art By deSwart

BY GEARY YOUNCE

"Search and Research," the exhibit in Dabney Lounge, has left many people confused and puzzled. The structural and art forms were designed and made by Jan de Swart, a Holland-born inventor and designer. In a modest shop in Eagle Rock he experiments with new designs and techniques. "Each material has its natural characteristics," he says, "but it also has 'hidden' characteristics which I try to find." His primary objective is to find new ways of using materials.

He may start with a simple elementary form and wood or plastic and try to put it together in as many different ways as

possible. The same form may be used to make columns and fences, mosaics and walls. Plastic sheets may be stretched and pressed into an interlocking 3-dimensional grid, giving a lightweight sheet of amazing strength.

Many of de Swart's designs in plastic are made to look through rather than to be looked at, and some of his plastic lenses have been used by Walt Disney and U.P.A. for filming cartoons.

Fond of working with wood, he often turns to this medium for relaxation. His intricately cut wood studies have an ethereal quality which makes them appear almost fragile.

"Man has an instinctive knowledge that there is an answer," he says, "which drives him constantly to search." It is this searching for new and different concepts that has made Jan de Swart refreshingly different.

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Here are some straight answers to questions you may have about Aeronutronic:

Who is Aeronutronic? AERONUTRONIC was established in 1956 by Ford Motor Company to engage in research, development and manufacture of advanced systems and products for military and commercial purposes.

What are its major areas of research? Aeronutronic consists of five main technical groups: Advanced Research Operations; Space Technology Operations; Tactical Weapon Systems Operations; Computer Operations; and Range Systems Operations.

What business does Aeronutronic have? More than 40 government and commercial programs are currently in work—programs like SHILLELAGH, the Army's new surface-to-surface missile; FLIDEN, for the Federal Aviation Agency; and Range Planning Study for NASA's Project "Mercury."

What kind of backing does Aeronutronic have? Ford Motor Company resources provide the finest facilities and financial support for carrying out complete research, development and manufacturing operations—plus additional unlimited production support when needed.

What kind of facilities do they have? Ultra-modern \$22 million Engineering and Research Center is now under construction and already partially occupied. When completed in 1962, the new complex will have over eight major structures totalling over one million square feet.

Is individual capability recognized? Yes. Aeronutronic looks for and recognizes the capabilities and potentials of its people. Matching the capabilities of men with the job to be done is a continuing goal at Aeronutronic.

If you are one of these forward-looking engineers or scientists who is serious about the future and a good start toward it, you already have some ideas of your own as to what you require in a career position. Jot down your needs and compare them with this unusual combination of advantages considered the most outstanding in the industry. Then, take a few minutes to

CAMPUS INTERVIEWS

Tomorrow, Dec. 4

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