

## ASCIT Charities Drive Begins Next Week

The ASCIT Consolidated Charities Drive will be held this year during the week of February 5-9 under the general supervision of ASCIT Representative Don O'Hara. Contributions may be made by cash or check as well as by the usual "Give now; pay later" arrangement in which pledges are collected along with tuition on third term bills. The participating charities include World Universities Service, the Pasadena Community Chest, and the American Cancer Society; contributions can be earmarked for a particular organization or simply donated to the general fund to be split equally among the three. The activities and programs supported by these agencies provide a wide range of social, educational, and medical benefits.

### Helps Students

The World Universities Service, a perennial favorite with Caltech students, provides scholarships, housing, food, medicine, and textbooks for college students in underdeveloped areas of the world. In 1961-62, the largest single allocation will go towards financing scholarships and loans for student refugees

(Continued on page 6)

## Notices

### CLEAN SHOP WANTS MEMBERS

The student shop is having a general shop cleanup for both old and new members on Saturday, February 3, 1962. It will be held from 10 a.m. until noon.

Applications for new members are also being accepted at this time. Those interested can see Bob Bump or Bill Rosenberg (Ricketts), Bill Reining (Dabney), Al Cosand or Bill Burke (Fleming).

### Y SETS FILM

The Caltech YMCA will present "All the King's Men" on February 4, 1962, in Culbertson Hall. Robert Penn Warren's prize-winning story depicts the corrupting influence of power on a small-town lawyer when he becomes governor. Tickets may be purchased at the Caltech YMCA office or at the door.

### HONOR APPLICATIONS OPEN

Application for Honor Keys and Certificates may now be made. Applicants should include lists of activities participated in during the past terms; seniors should also add prospective third-term activities. Applications should be placed in the S box in Dabney on or before February 12.

### CAMP COUNSELORS WANTED

Applications are now being accepted from would-be Frosh Camp counselors. If you're interested in the job, send a letter to the K box, Page House, no later than February 12. Applications close at the BOD meeting on the evening of February 12.

### FROSH PICK OFFICERS

In the recent elections for freshman class officers, John Beamer was named president, with Guy Jackson assisting him as vice-president. Class secretary is Murray Sherman, treasurer is Gerry Steiner, and athletic manager is Barry Dinius. Butch Neill and Bob Sweet were elected to the Board of Control.



Masha Schweitzer and one of her many faces.

## Pike Visit Discussed By Reverend Keys

Rt. Rev. James A. Pike will be a familiar figure on the Caltech campus from February 13 to February 15. As this year's first guest on the Y.M.C.A.'s Leaders of America Program, he will be here to discuss his views on religion in general. By way of introduction, the Tech presents an interview with the Rev. Colin D. Keys, All Saints Church, Pasadena, and chaplain to Episcopal students at Caltech, regarding Pike's qualifications as a representative of the Episcopal Church.

### Rise To Prominence

What factors would you say are most responsible for Bishop Pike's rapid rise to prominence in the Episcopal Church?

"Many things. First of all, his abundant energy in everything he does. Next, his awareness of the faith and its relation to its environment. His ability to communicate is certainly important, as is his leadership in what he does. He is an efficient worker himself, and an expert at delegating authority to those under him. Some people may disagree, but I think he seems to love and enjoy the acts of worship."

### Church and State Separation

As a strong liberal, Pike must feel that there are many things the organization of the church could do to improve society. At the same time, he believes strongly in separation of church and state. How is this resolved?

"The church must take a stand in all areas of life. This is the doctrine of the incarnation — that God entered into every living thing. The church, as a col-

lection of individuals, must make a stand, based on religious conviction, toward political matters, such as the racial question. When the bishop speaks out on a particular matter, he speaks as an individual, not as the church. He is not one person speaking for the rest of the church.

"The leaders of the church have the right to proclaim the faith to the church; and if this requires them to speak on political issues, they must do so by speaking to the individuals within the church. It is then up to these individuals to act. In other words, a "nation under God" means that God speaks and has authority over the nation through the people who make up the nation. If change is necessary, it must be brought to the attention of the individuals, and left up to them to act. The church as such should not lobby for what it thinks is right."

### H. U. A. C.

Bishop Pike is opposed to the House Un-American Activities Committee. Just what has he done with respect to it?

"He has made statements to the press, on television, and in his sermons condemning the H.U.A.C. on the grounds that it denies to the individual the rights of due process of law."

Rev. Keys could not say whether or not Pike bases his position with respect to the H.U.A.C. primarily on moral grounds, as a result of his faith, or on legal grounds, as a result of his years spent as an expert on constitutional law.

### Anti-Communist Crusade

Are there other institutions that Bishop Pike has similarly opposed?

"One which comes to mind is the recent 'Christian Anti-Communist Movement' sponsored jointly by political right-wing extremists and fundamentalist Christian sects."

### Catholic in White House

Prior to the 1960 election, Pike wrote a book, "A Roman Catholic in the White House." In it he expressed some predictions of what could happen. Have these actually come true?

"Pike pointed out that Kennedy could have been strongly intimidated by either the Catholics or the rest of the nation,

## Art Students To Arrive Tomorrow

Five art students and a TA in art aesthetics will visit the Student Houses this weekend in the YMCA Visiting Artists program. While the students have arranged a display of their work in Dabney Lounge, the main focus of the three-day program will be conversations with Techmen.

The artists will arrive Friday, February 2, at 4 p.m., in the YMCA lounge for a short introductory meeting with all interested students, undergrads or grads.

After dinner in the Student Houses, the visiting artists will remain in the lounges with small exhibitions of their work of an evening of talk.

### Free Day

Saturday is not scheduled, so that interested Techmen may

engage in further debate on creativity, discipline in art and science, or whatever. After dinner, Rosalind Greenberg from UCLA will show slides in the Lloyd conference room to the rest of the artists and all interested Techmen. Coffee and doughnuts will be served and it is expected that the talk will again continue until the wee hours. This is an excellent chance to converse with all the artists in an intimate group.

Sunday is also left unplanned for the convenience of those who still have voice. The artists will leave sometime on Sunday.

### Teaching Assistant

Rosalind Greenberg, a teaching assistant in art aesthetics at UCLA, will be Blacker's guest for the weekend. She prepared the following statement for the California Tech:

"To be a visiting art critic at Caltech might be like sending Orville Faubus to meditate in the Congo or St. Joan to Orleans or the dove to Noah. I hope the last is true, for in a special sense great art is justly symbolized by an olive leaf betokening the turning back of the flood. It is not the means of salvation, but a sign of earthly grace.

"Men of science and technology may find such metaphorical language a distinct barrier since their work is anti-poetic, and explicitness is valued for both means and ends. Fortunately, life is never as explicit as science, and there is yet room for art and nuance in this fragile world. However, in the discussions which we will have, I will try to be as logical and clear as possible.

### Values

"The artist as a man is concerned with values; the artist as an artist is concerned with the good of his art. The scientist as a man (I hope) is concerned with values; the scientist as a scientist is concerned with the accuracy of his science. The difference lies primarily in the fact that the values of the artist become incorporated into his art, but the scientist usually believes that scientific pursuits require the strict separation of church and state.

"Today it is a common fallacy to view the artist and the scientist as opponents. If we were to grant this competitive viewpoint, what significance would there be in saying: 'May the best man win'?

"I look forward to some vigorous conversations on February 2nd and 3rd."

### Roy Owens

Roy Owens, a second year graduate sculptor at Otis Art Institute, will stay in Page. Roy wrote the following to stimulate thought for the weekend:

"I make art to concretize my being. Out of the general disorder of reality I try to define what I am and what I am not. However, I must always be alert to myself and to my circumstances because their relations

(Continued on page 5)



Ray C. Owen

## Owen Named Bio Chairman

Dr. Ray C. Owen, geneticist and immunologist, has been appointed chairman of the Biology Division. Dr. DuBridge announced Monday.

The 46-year-old professor of biology, who is widely known for his research in the fields of tissue transplantation and inherited blood groups, has served as acting chairman since Dr. George W. Beadle resigned a year ago to become chancellor and then president of the University of Chicago.

Dr. Owen's appointment continues the strong genetics tradition in Caltech's outstanding Biology Division. Its first chairman, Dr. Thomas Hunt Morgan, and Dr. Beadle, who succeeded him in 1946, were both awarded the Nobel prize for work in genetics.

Dr. Owen is president of the Genetics Society of America and has been treasurer and vice-president of that organization. Also he is chairman of the Genetics Study Section of the National Institute of Health, and with Adrian Srb of Cornell University is co-author of the textbook, "General Genetics." He has contributed some 60 scientific papers on his work.

Dr. Owen came to Caltech in 1946 when he was awarded the coveted Gosney post-doctoral fellowship in biology. He became a full professor in 1953.

## Editorial

## Atmospheric Testing

We feel the issue of the resumption of bomb testing by the United States is of vital concern to all members of the Tech community. We recently received a release from a group known as the Student Ad Hoc Committee on Letters to Kennedy. They point out that the number of letters written to President Kennedy has declined since the Bermuda Conference between Kennedy and Macmillan. Apparently most people have assumed that the decision to resume testing has already been made, using Christmas Island as the test site. Irony?

In any case, there appears to still be time to influence Kennedy's decision. He is under heavy pressure from the military "to increase our preparedness," and every effort on our part to indicate that we are opposed to the resumption of atmospheric testing will support Kennedy's present position.

That Kennedy would probably prefer not to test is indicated by a White House announcement of last October: "The existing nuclear weapons arsenal is superior in quantity and quality to that of any other nation. The U.S. today has ample military power to destroy any nation which would unleash nuclear war."

There are a number of cogent reasons for not resuming testing, among them the damage to the image of the United States abroad, the increase in the level of atmospheric radioactivity, and the addition to tension in the Cold War.

Former Ambassador James J. Wadsworth said last November in the "Saturday Review": If the U.S. resumes atmospheric testing, within our country and throughout all nations, men will be forced to conclude that in reality primitive military and political considerations are our true guide regardless of our protest that a more lofty goal inspires us to champion the cause of reason and peace."

We urge you to indicate the support by the academic community of President Kennedy by writing to President Kennedy, c/o McGeorge Bundy, Special Assistant to the President, White House, Washington 25, D. C.

—benzon

## Bell Engineer To Address IRE

Monday evening, February 5, Mr. W. W. Nestler, a Bell Telephone System engineer, will be on the campus to address the Caltech Student Branch of the IRE-AIEE on the subject, "Communication by Satellite."

Mr. Nestler, a Caltech graduate, has an interesting inside story on the Bell System Project Telstar, an experimental, active satellite, communications re-

peater which will be launched from Cape Canaveral this spring. In addition to the design and construction of the bird, he will discuss the associated ground station equipment.

The meeting, scheduled for 7:45 p.m. in 142 Keck, is open to non-members as well as members, and all EE's are especially urged to attend. The usual free refreshments will be served.

## LETTERS

## Green Suggests Letterwriting

Editors:

It has come to my attention from a functionary in the Pasadena chapter of SANE that President Kennedy and several other responsible members of the government are meeting in Washington this weekend to make some determination with regard to the resumption of atmospheric nuclear testing.

I would like to urge all of the students, faculty and other concerned individuals who are so motivated, to write, telegraph or in some other way communicate their feelings regarding this crucial action.

The best means of communication is a privately-sent telegram. If you write, make it typewritten, signed in ink, and sent via air mail.

Whether or not you write, the responsibility for the decision rests on all our shoulders. I hope you care enough to write. It will have an effect if enough letters and wires are sent.

Alan Green  
Caltech YMCA

Editors:

I am writing to correct several misquotations and false implications made in an article published in the California Tech of Thursday, January 25th. The tone of arrogance achieved by cropped statements without correspondingly broken quotation marks, and the resulting "all or nothing" implications made a comical farce of the last sentence: "Artists go through courses in art esthetics and examine their personal goals in becoming artists" . . . (hence gaining) "Greater powers of observation of greater depth."

The phrase "gives me kicks" (Continued on page 6)



By Steve Schwarz

## MEASURE FOR MEASURE at UCLA through February 7

Practically nobody has ever seen Shakespeare's "Measure for Measure" performed; it is a strange, unsettling, but nonetheless excellent play, which, thanks to our Victorian heritage, has been almost entirely neglected. Now at last a live production has appeared: that of John Houseman and his UCLA between-terms thespians, the Theatre Group. Houseman has chosen to play down the perverse aspects of the play, and to emphasize its comic nature. The result is like "Lolita," rather queasy, but utterly hilarious.

"Measure for Measure" has long been an object of controversy. Coleridge called it "the only painful part of Shakespeare's genuine works, the comic parts being disgusting and the tragic parts horrible." On the other hand, John Masefield called it "one of the greatest works of the English mind." The disagreement lies in whether one takes the plot seriously or not; for in laying out his comic situation, Shakespeare seems to have hit on a plot more serious than he intended.

## Groping For Trouts

The scene is Vienna: the Duke is leaving, and deputizes his puritanical friend Angelo in his place. Angelo immediately reinstates every archaic law on the books, including the statute against fornication, and soon a poor fellow named Claudio has been sentenced to death for, as Shakespeare chuckles, "groping for trouts in a peculiar river." Claudio has a sister Isabella, who is about to become a nun; he implores her to go to Angelo and plead for him. This she does; but unfortunately, when the strait-laced Angelo sees her

beauty and piety, something snaps, and suddenly he is consumed with lust: he proposes that Claudio be set free if he may grope for a few trouts himself. Isabel will have none of it: "better it were a brother died at once, than that a sister, by redeeming him, should die forever;" moreover, she is sure her brother will understand her position and agree. Naturally she is upset when Claudio doesn't quite see it that way.

## The Rest is Trivial

Unfortunately, this is about as far as the plot really goes. For the remaining three acts Shakespeare solves the problem in a completely trivial fashion, after the manner of the early comedies; at the end everybody is married off to everybody else, and all's right with the world—the machinations that go into it really aren't worth repeating. The trouble is, that one comes away with the lingering feeling that this silly windup hasn't really solved the problem at all; the situation is too loaded with feeling, too meaningful, to be discharged as frivolity. For this reason many writers have suggested that the play was originally meant to be a tragedy—following perhaps the plot-line of "Tosca"—and that it would then have been a very great work indeed. But something happened; perhaps the groundlings only wanted comedies that year, and the Globe had to come through. The result is a hermaphroditic play that leaves one quite a lot to think about.

## Theatre Group Tops

Director Houseman, however, has probably done what the author would have wished: ignored the contradictions and expertly treated "Measure" as a comedy. Usually our best play— (Continued on page 8)

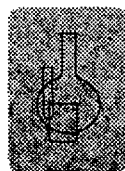
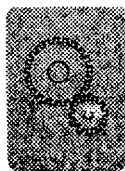
# CAREER OPPORTUNITIES FOR ENGINEERS

MACHINERY, CHEMICALS,  
DEFENSE OPERATIONS,  
RESEARCH AND DEVELOPMENT

Senior and graduate students in chemical, mechanical, or electrical engineering will want to talk over career opportunities at FMC Corporation\*. Appointments should be made today with the college placement office for individual interviews with company representatives who will be on campus February 6, 1962.

FMC Corporation's dynamic growth and diversification offers challenging and rewarding careers in a wide range of engineering specialties. The important first step is to make arrangements now for a FMC career facts interview.

\*Formerly Food Machinery and Chemical Corporation



Putting Ideas to Work in Machinery, Chemicals, Defense

## SPACE, MISSILE & JET PROJECTS AT DOUGLAS

have created outstanding  
career opportunities for

### SCIENTISTS and ENGINEERS

B.S. degrees or better

Assignments include the following areas:

**Servo-Mechanisms**—relating to all types of control problems

**Electronic Systems**—relating to all types of guidance, detection, control and communications

**Propulsion**—relating to fluid-mechanics, thermodynamics, dynamics, internal aerodynamics

**Environmental**—relating to air conditioning, pressurization and oxygen systems

**Human Factors**—analysis of environment affecting pilot and space crews, design of cockpit consoles, instrument panels and pilot equipment

**Heat Transfer**—relating to missile and space vehicle structures

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

**Aerodynamics**—relating to wind tunnel, 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

with a Douglas representative

Thursday, Feb. 1 and Friday, Feb. 2

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

S. A. Amestoy, Staff Assistant to VP Engineering

**DOUGLAS AIRCRAFT COMPANY, INC.**

3000 Ocean Park Blvd., Santa Monica, California

An equal opportunity employer



# graduate rattle

BY FLETCH MURPHY

With the threat of midterms over everybody like a piano dangling from a frayed rope, there weren't many significant happenings last week. To the best of my knowledge, nobody got married, or engaged; even dated a beauty queen. Nobody bought a car or even washed his car. Perhaps nobody even started his car.

## Weather Strikes

The index of irritability was comparable to that of a bobcat with poison ivy. The weatherman outdid himself by producing thunder, lightning, and snow on consecutive days, which happens about as often as a kangaroo stampede around here. While most of Pasadena's residents were standing on the street corners taking pictures, Techmen strolled unimpressed to class with notebooks already full of snow and thunderbolts, wishing they could get their hands on some to throw back.

## Stove God Strikes Back

Once or twice daily, from each Graduate House, a burnt offering has been made to the stove gods. One day last week, the student chefs in MJ overlooked this ritual, and the gods manifested their displeasure by shorting out a burner and blowing a fuse. Up to this time, intentional burnt offerings had seemed unnecessary, but they are at present receiving some consideration.

## Mosher Mashed

Tempers also ran high as the Mosher Mashers were out-bas-

ketballed by the Keck Killers by a decisive margin. The Mashers have at this moment an effigy of their coach hanging from their bulletin board, and have been heard to say, "If we don't win the game next Saturday, we'll win the fight afterwards." Enter the salesmen of spiked gym shoes and elbow sharpeners.

## Lend an Ear

And why oh why does it take only eighteen minutes to drive to Hollywood, while costing \$0.45 to talk on the phone for three minutes (night-person) and taking four days or more to get a letter delivered there. We can't really undersell the postman too much, though. I understand that he correctly delivered a letter to GALCIT which was addressed to the "Guganime Arrow Lab., Cow Tech." And I think we can hook up a microphone to you-know-who's hi-fi to cut down the phone bills.

# Agricultural Aid Discussed

BY JAY LIPPMAN

"Americans are altruistic by nature," commented Lawrence Taylor of the University of California when enumerating the reasons for American aid to underdeveloped countries. Taylor, Assistant to the Dean of the College of Agriculture at UC, spoke to the Technical Cooperations Seminar Wednesday, January 24, on the general subject of agricultural problems of underdeveloped countries. According to him, the Cold War is not the only reason for American aid to underdeveloped countries. A second reason is our altruistic desire to help such countries; we have helped them through government aid and private aid such as the Rockefeller Foundation. Taylor noted that our occupation troops helped bolster the economies of occupied countries by buying their goods and services.

## Obstacles

According to Taylor, there are several obstacles to progress in underdeveloped countries that

(Continued on page 6)

# frets and frails Makeba Sings At Ash Grove

BY JOHN D. CROSSMAN

Appearing presently at the Ash Grove are Sarita Heredia and Miriam Makeba. Sarita Heredia is a gypsy Flamenco guitarist. She appears on stage in a complete Spanish getup and has a very polished stage presentation, emphasizing intricate finger work.

Miriam Makeba is a South African singer who is accompanied by a group consisting of a bass, a guitar, and congos. Her repertoire consists mainly of songs of the South African natives, however, she is at home in songs and ballads of other lands and cultures as well.

She has toured extensively with Harry Belafonte and was with him last summer in the Greek Theatre. Her singing has appealed to the jazz enthusiast as well as the folksong buff (leaving only the classical fan in the lurch) and is reported to be "excellent."

One warning: The Ash Grove is now charging \$2.50 per.

\* \* \*

If you're looking for something that's free, The Cat's Pajamas, a coffee house in Arcadia, is sponsoring a folk festival to be held Sunday, February 25, 1962, in Sycamore Grove Park (4800 block, North Figueroa) in Los Angeles. (That's about 15 minutes' drive from Tech-Ed.) The festival will run from noon until 5 p.m.

Les Claypool will be M.C. and a number of professional acts from local coffee houses will be presented. However, a large number of non-professional acts are needed to make the festival a success.

Anyone interested in performing can contact the Cat's Pajamas (166 East Huntington) at HI 6-5934 for an audition.

# THE BELL TELEPHONE COMPANIES SALUTE: BILL PIGOTT

Six years ago Bill Pigott graduated from college with an engineering degree. Today he is responsible for the performance of 12 microwave relay stations, numerous communications cables, and other equipment. He also supervises the work of some sixty transmission specialists.

Bill Pigott of Pacific Northwest Bell Telephone Company, and the other young engineers like him in Bell Telephone Companies throughout the country, help bring the finest communications service in the world to the homes and businesses of a growing America.



BELL TELEPHONE COMPANIES



BY JOHN BERRY

There has been quite a demand for reprint of the articles mentioned in week-before-last's Brewins column. The specific brew mentioned does not look promising, but very good beer has been homebrewed from the recipe used by the Brewins brewer.

Assuming that anyone who was interested in the basic bars has by now acquired them, I shall now indicate ways to branch out from them. The fruit-flavored brandies have long been my favorites for slow sipping, and are the basis of many a good drink. Here are two of a series of them.

## VOLGA BOATMAN

1½ oz. vodka

1½ oz. cherry brandy

1½ oz. orange juice.

Shake well with ice and strain into glass. Garnish with fruit.

## WESTERN ROSE

½ dry gin

¼ dry vermouth

¼ apricot brandy

1 dash of lemon juice

Stir with ice and strain into glass.

HARRY'S ★  
★ CAMERA

COURTESY DISCOUNT TO ALL  
CALTECH STUDENTS AND FACULTY

910 E. California Mu. 1-1388

Free Parking



TELEPHONE MAN OF THE MONTH

# SPORTS



—photo by Dennis Lomax

Bopp lays one up for two points against Redlands defender.

## Redlands and Oxy Down Beavers In League Games

The Caltech basketball team lost two more games this week, but demonstrated that the improvement shown last week against Azusa was no fluke. They lost to Redlands here 65-50 after an exciting and close game, then fell to a sharpshooting Oxy five Tuesday by the score of 74 to 58.

Redlands came into the game as the highest-touted team in SCIAC. They boasted of a 62 percent shooting average from the floor, the league high scorer, Schroeder, and a twenty-four game winning streak. They barely left with their twenty-fifth win. Though down by fifteen points after the end of the first half due to some sharp outside shooting by Fey, Tech came back in the second half to outscore Redlands and with ten minutes left they led 40-39. In that first ten minutes, Tech outscored Redlands 20 to 4. However, Schroeder, riding the bench with a sore thumb, came back in and Redlands pulled into a lead which wavered between one and five points. Even with Schroeder in, they were unable to extend their lead to a more comfortable margin; however, with two and a half minutes left, Redlands went into a stall with a five-point lead.

### Lose or Gamble?

Tech was presented with a tough decision. Should they continue the good defense which had kept them so close, and thus lose by only five points (also thereby shocking the whole league, none of whom has lost by less than twenty points to the powerful Redlands team) or should they gamble and try for the win. There was never any doubt as they took the second choice.

Redlands capitalized on the fouls and heavy press to add seven more points to their lead and finally win 62-50. Nothing can be taken away from the Beavers for their fine play. Schroeder, in for over half the game, was held to only five points. Redlands' bread and butter plays were stopped cold time after time, and the Tech offense worked crisply against the zone defense. The forward line took the scoring burden as all three starters ended up with point totals in the double figures. Bopp played his finest offensive

(Continued on page 5)

## Beaver Golfers Organize And Meet Coach

The Caltech golf team held its first organizational meeting last Thursday and appears to have withstood the loss of four lettermen and a coach from the 1961 team. Present at the meeting were seven men, including two lettermen and the new coach, Tom Walsh. Ken Larson was elected captain for the coming season.

Members of the team are Fred Dorr, Bob Gershman, Chuck House, Dave Hyde, lettermen Larson and Tim Little, and Frank Schultz. Coach Walsh is a research fellow in chemistry and a member of the Professional Golfers' Association. He obtained his professional status in March, 1961, after serving a five-year apprenticeship under a registered professional. He was an undergraduate at the University of Notre Dame, but did not play any golf there.

The home course this year will again be Brookside Park Golf Course. An attempt was made to acquire privately-owned

(Continued on page 5)

## Ricketts Leads IH Football; Page Strongest Challenger

BY BOB LIEBERMANN

The northern confines of Tournament Park have resounded this past week with the echoes of bone-crushing blocks, exhortations to the struggling combatants, and the mixed cries of victory and defeat. All of these awesome sounds were consequences of the first half of the InterHouse football season. By the end of the first week, Ricketts had firmly established itself in first place with victories over Lloyd (33-6), Ruddock (33-0), and Blacker (21-0).

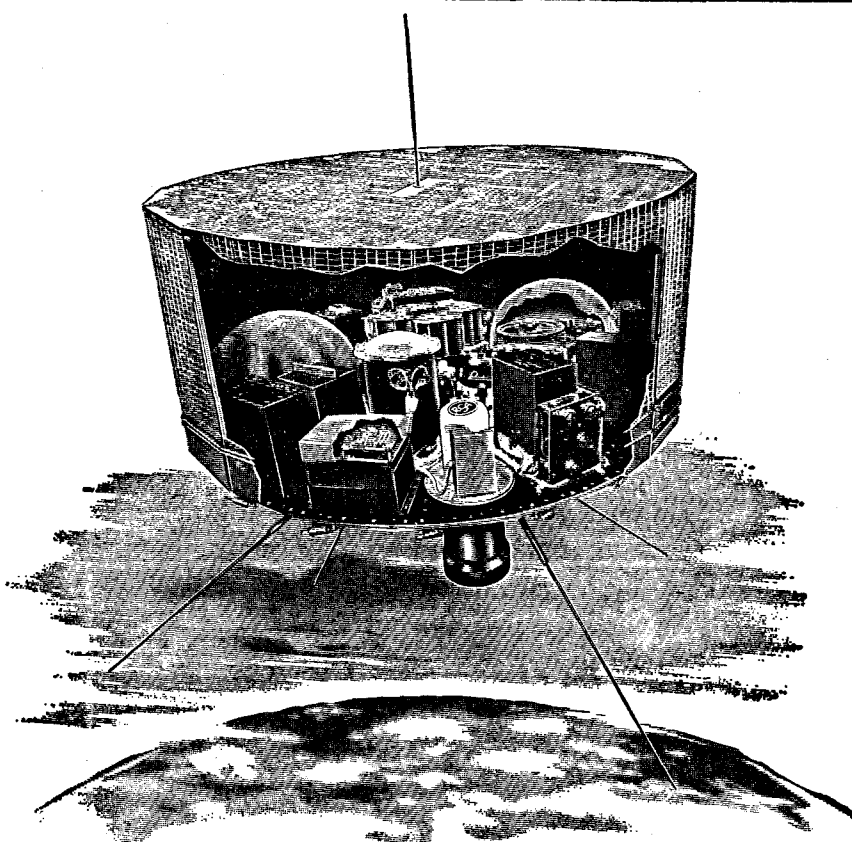
### Ricketts, Then Page

The powerful Ricketts combine seems headed for a sure first place finish. Page, at this juncture, would have to be conceded the strongest challenger to Ricketts' supremacy after defeating Ruddock (13-0) in their opener. Page went on to take a close one from Dabney (13-6). The crucial Page-Ricketts game won't be played until the end of the season, but some indication of the outcome of that contest should emanate from the result of the Lloyd-Page fracas

which took place yesterday. Lloyd, after overcoming some of its initial weaknesses, should prove to be the acid test for the size and class of the Pagemen. Lloyd presently boasts victories over Blacker (19-6) and Fleming (27-6). In another crucial game, Dabney edged Fleming (19-12). Although first place appears cinched, the battle for second place sets Page and Lloyd in the fore with Dabney rated an outside chance. Ruddock, Blacker, and Fleming round out the league and might pull some upsets in the remaining games.

The standing as of Monday were:

HOUSE	W-L-T
Ricketts	3-0-0
Page	2-0-0
Lloyd	2-1-0
Dabney	1-1-0
Blacker	0-2-0
Fleming	0-2-0
Ruddock	0-2-0



## RCA, builder of Tiros Satellite, needs young engineers today for spectacular achievements tomorrow

Tiros has broadened man's scope of the heavens and earth. From an orbiting observation post high in the sky, it transmits a new wealth of meteorological information to earth-bound stations below.

Tiros is only one of many RCA successes in the wide, wide world of electronics. And as the horizons of electronics steadily expand, the need for more and more competent and creative engineers increases in direct ratio. That's why RCA, now in the forefront of electronic progress, offers such tremendous opportunities for Electrical Engineers, Mechanical Engineers, and Physicists.

If you already know what you want to do in engineering... and are qualified, RCA can offer you direct assignments in your chosen field, and back you up with training and guidance by experienced engineers.

If you're not quite sure which direction you want to go... RCA's Design and Development Specialized Training will help to point the way. You'll receive full engineering salary while you progress

through engineering assignments that give you a clear picture of various fields you might choose.

Or, if you'd like to continue your graduate study... RCA will pay full cost—tuition, fees and approved text—while you go to school or study two days a week, and work at RCA three days.

These are only a few of the many reasons for getting all the facts about a career with RCA. See your placement officer now about getting together with an RCA representative, for an interview on:

**FEBRUARY 20**

Or, send your résumé to:

College Relations  
Radio Corporation of America  
Cherry Hill, Camden 8, N.J.



The Most Trusted Name in Electronics  
RADIO CORPORATION OF AMERICA

An Equal Opportunity Employer



Golf

(Continued from page 4)

Annandale Country Club for the home course; Occidental has had a monopoly on this course for several years. Unfortunately, the coup d'etat against Oxy was unsuccessful.

The team will play its first match on March 2. All six positions on the team are open as of this writing.

Basketball Games

(Continued from page 4)

game of the season and potted 20 points to be game high scorer. Weiss, well on his way to his best game as a varsity player, had 13 points when he fouled out. His fouling out was probably the biggest blow to the Tech cause, for it was Joe's clutch baskets which had helped the Beavers pull ahead. Noll had eleven points, no mean feat with Schroeder guarding him.

Oxy Sharpshooters

Again the forward line held most of the scoring against Oxy Tuesday, but it wasn't enough as sharp shooting by the Oxy Tigers pulled them into a steadily increasing lead. The game started well enough for Tech due to good drives by Bopp and Noll and headsup defense. However the Beavers seemed to suffer a letdown and Oxy moved on to win easily. High scorer was Noll who potted 24 points, and behind him Bopp with 20 points.

Hurting the Tech offense in both games was first, loss of the ball too often without getting a shot off, and second, the surprising lack of scoring by the guards. The total output of the guards in both games was 12 points, eight of which were scored by Gerry Clough, second-string guard.

But on the whole the Beavers showed much improvement. A much stronger defense and the returning of Tom Bopp to his last year's form are encouraging signs.

Fleming Wins Trophy Match

BY BOB GERSHMAN

Fleming retained possession of the Discobolus trophy by defeating Page in what may have been one of the closest discobolus golf matches ever played. The bottom four matches were quickly decided with Jim Simpson and Bob Gershman of Fleming winning the third and fourth matches and Chuck House and Ed Cline taking the second and fifth matches for Page.

The contest hinged on the outcome of the number one match between Dave Faulconer of Fleming and Frank Schultz of Page. Faulconer, down three holes after fourteen, won the fifteenth, sixteenth and seventeenth, then tied the eighteenth to necessitate a sudden-death playoff. By the end of the eighteenth hole the sun had set, and it was too dark to see where the ball went. This problem was remedied by scattering people around the fairway to listen for the impact. The first two playoffs were tied and the match was finally ended by Faulconer's victory on the third. By this time it was so dark that the flag was set on fire to let the golfers know where the green was.

The Trophy Standings:

HOUSE	POINTS
Dabney	15
Fleming	13
Ricketts	4
Ruddock	2
Page	2
Blacker	1
Lloyd	1



Rosalind Greenberg

Visiting Artists

(Continued from page 1)

are not constant. If I pause and rest secure in one definition of things, the natural volubility of reality will create a disparity between my definition of things and the real things themselves. This is a state of false consciousness and also a kind of death. I think that most people are partly dead."

Dick Ellis

Dick Ellis, scheduled for Lloyd House, is another Otis sculptor with strong feelings on the subjective side of life. According to Mr. Ellis the ultimate purpose of science is the personal enrichment of the scientist although he must bear responsibility for the use of his work. Ellis feels that a person untrained in art receives as little from a painting as a layman from a book of higher math.

Louise Bowen

Louise Bowen, a graduate student in ceramics, is slated for Ruddock. Besides throwing pots, she is interested in the problem of understanding and communication between fields of knowledge. How can an artist comprehend something of science without extensive training in science? Alternatively, how can a scientist learn to find significance in art?

Another TA

Masha Schweitzer, Ricketts' guest, has had a romantic past, which led her through Poland,

Keys Talks About Pike

(Continued from page 1)

forcing him to take stands either for or against his church while under heavy public pressure. So far the President has avoided any such circumstances, and he may very well succeed in doing so in the future. Pike's main point was that a good Roman Catholic might be pressured by his church into certain actions, or might be pressured by political groups into actions opposed by his church. So far it appears that this pressure hasn't existed."

Liberal Religion

Bishop Pike is very much a liberal in his religious views. Is this attitude typical in America today? Within the Episcopal church? Within other Protestant denominations?

"Bishop Pike seems to have an intellectual, liberal feeling toward dogma. He tries to de-emphasize what isn't really important. For example, he does not emphasize the virgin birth of Christ as an important matter. People tend to get caught up in the dogma, and lose sight of the forest for the trees. The important thing in the Christian faith is the incarnation of God, not the virgin birth."

"These attitudes do not arouse the wrath of the largest segment of the clergy in America, especially those whose faith is strong enough to permit them to question it. Those who attack such a position are those whose faith isn't strong enough to stand up under questioning."

Siberia, Central Asia, Czechoslovakia, Austria, Germany, France, Canada, and finally to Los Angeles, where she is a teaching assistant at UCLA. Coming to Caltech is for Masha "a challenge to talk to people interested in creativity. Scientific and artistic creativity are really the same, just with different vocabularies." On creativity she said, "Out of life's chaos, an individual sees one aspect as a form. The significance of the creation lies in the

Agnostic to Bishop

Isn't it odd for a former agnostic to become a bishop? And how does one go about becoming a bishop, anyway?

"Personally speaking, former atheists make the best kind. There is usually no controversy among churchmen. It is quite normal that a man must find his faith somewhere along the road of life. He isn't born with it."

"Bishops are elected by the diocese in which they are to serve. The diocese meets in convention, with one house composed of clergy and the other of laymen from the various parishes. Six or more candidates may be named for the post of bishop, quite often men from other parts of the country. Both houses of the convention must elect the same man. He must then be approved by a majority of the other bishops in the country and by a majority of the Standing Committees of the other dioceses. (Standing Committees are composed of laymen.) Once elected and approved, he serves as a bishop the rest of his life, though retiring from active work at 72."

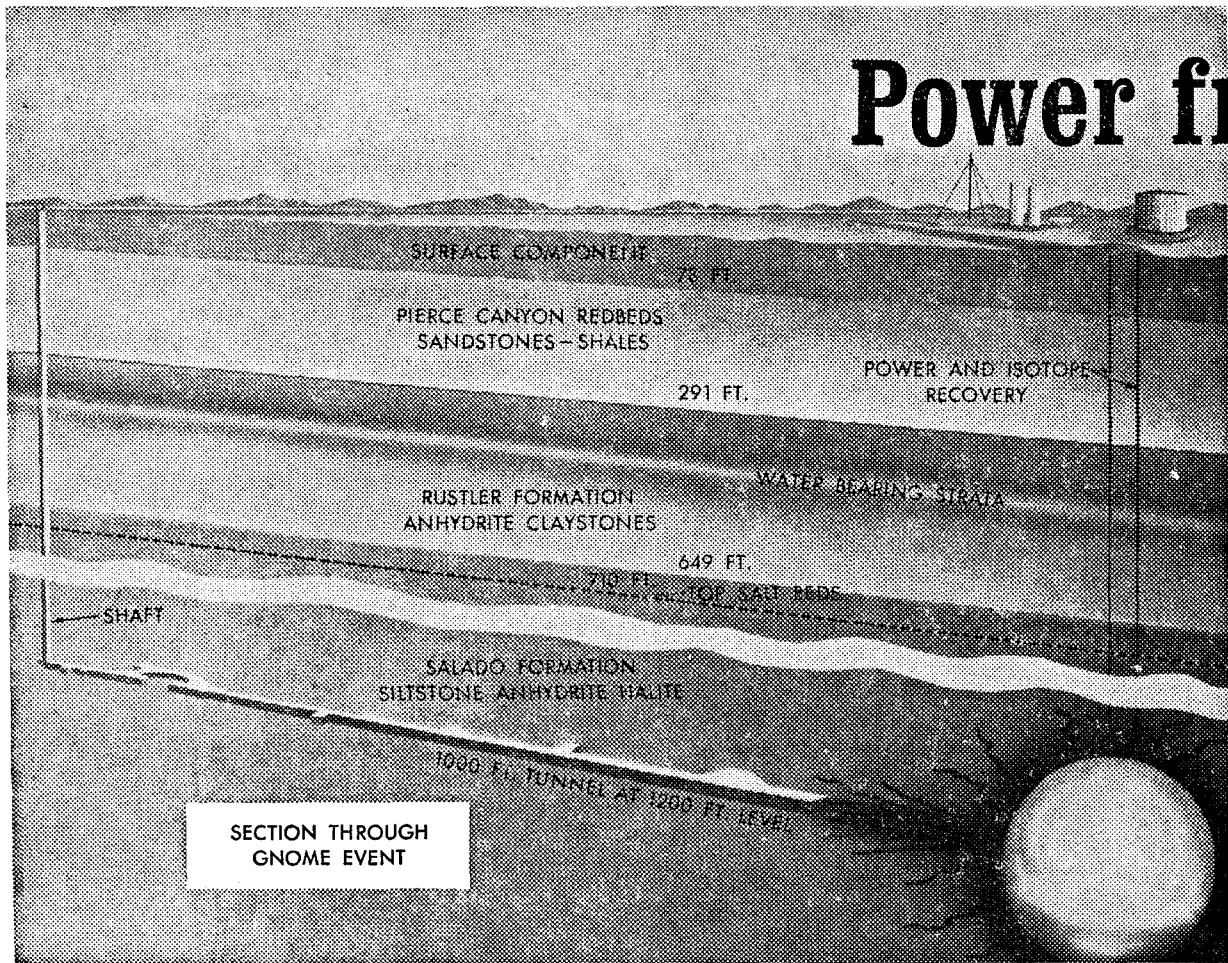
"The state of California has four dioceses. Pike's Diocese of California covers the central portion of the state along the coast, including the Bay area. The Diocese of Northern California, with headquarters at Sacramento, covers the northern part of the state. The Diocese of San Joaquin Valley covers the San Joaquin Valley and the area to the east of it. The Diocese of Los Angeles covers the southern part of the state."

depth of communication, but communication to someone who is trained. The qualities which make art "good" are timelessness, and the intensification of the medium's capacities."

Leon Levy

At one stage of his education, Leon Levy was torn between art and science; he is now an artist at Chouinard Art Institute

(Continued on Page 7)



An artist's conception of Project Gnome, a step toward providing power and isotopes from underground thermonuclear detonations. This area of endeavor is part of Project Plowshare, initiated at the Lawrence Radiation Laboratory of the University of California. Other Plowshare projects under study include the excavation of an experimental harbor in Alaska, production of oil from tar sands, control of groundwaters, mining applications, and other novel ideas using the energy of nuclear explosives.

Power from below

The Lawrence Radiation Laboratory is working in the areas of Nuclear Propulsion, Controlled Thermonuclear Reactions, Nuclear Explosives for Industry and Defense, Space Physics, and other advanced problems in Nuclear Physics and Engineering.

ON FEBRUARY 5 & 6

Laboratory staff members will be on Campus to interview outstanding students in the Physical Sciences and Engineering.

Call your placement office for an appointment

LAWRENCE RADIATION LABORATORY

of the University of California  
Berkeley and Livermore, California

# a hand of BRIDGE

BY BILL TIVOL

**NORTH**  
S—A K 4 3  
H—K 3  
D—A K J 7 5 2  
C—A

**WEST**  
S—8  
H—A Q J 7 5 2  
D—10 8  
C—K Q 9 6 4

**EAST**  
S—Q 10 6 5  
H—10 8 6 4  
D—Q 4 3  
C—J 2

**SOUTH**  
S—J 9 7 2  
H—9  
D—9 7  
C—10 8 7 5 3

Both sides vulnerable, West deals.

WEST	NORTH	EAST	SOUTH
1 Heart	Double	pass	1 Spade
2 Clubs	2 Diamonds	2 Hearts	pass
pass	4 Spades	double	pass
pass	pass		

Opening lead: Ace of Hearts

Two weeks ago on Charles Goren's television program, the nation was amazed by a hand which would make grand slam in both directions. Very few people noticed an inglorious, doubled game contract which ignominiously went down one. It is time that this hand gets it just due. This column, being mildly interested in justice, will now attempt to do this.

North's take out double is well within propriety. He is asking for the unbid major, and he has a fine side suit to bid in case South bids clubs. South's response is correct; his minimum holding calls for a bid in the suit North guarantees. North's free bid shows some of his power, and, when South shows dead minimum by passing, North leaps to game. East's double, although based on two trump tricks, is ill advised. He divulges the location of his trumps, and, since North probably has a distributional hand, he cannot be sure of a two trick set.

The ace of hearts was led and then a small club. South decided that he would stuff a small club on the heart king and proceed to cross ruff the hand. This line of play succeeds against a five-zero spade split, and against the queen, six, or five singleton spade in the West hand. Unfortunately, it goes down against the singleton eight—but that is history.

South can make the hand against any four-one split—barring pathological splits in the side suits—if he sluffs a diamond on the heart. He then leads the ace of diamonds, ruffs a small diamond and leads a small trump to the ace. The diamond king drops the queen, and the diamonds can be set up and run. East, even with longer trumps than either North or South, is helpless. If he ruffs in with the queen and attempts to draw trumps, South can pull his trumps and end up on the board; if he forces the board by leading clubs, South can afford to play the little game again.

The really tough part of this hand is the initial decision South must make. The line of play described above will not make against a five-zero spade split. South must decide whether East is daring enough to double the contract with only four spades. Evidently, this time East was daring enough, but decisions like this one, with their basis in psychology, not probability, will plague bridge players until all cards are burned.

## Letter From Louise

(Continued from page 2)

was satiric slang made "off the record" and regrettably reincluded by the reporter.

As for the "evangelistic crusade" planned by we seven fire-breathing "invading" artists, the satire should be obvious.

And before my brother beholds me long distance about his "entirely closed" mind outside of science, I must clarify that he is an agnostic about the value and meaning of other fields.

The paragraph most objectionably skewed, however, is entitled "scientific hacks." The wording of "scientific hack" and "unimaginative hack" are misquotations arising from the reporters confused paraphrase of the word rote. Rote means a "fixed, mechanical way of doing something; routine" and is an un-

loaded descriptive word. The issue raised in the discussion was that the arts and sciences are curiously separated by the order in which their respective students encountered discipline, and the source from which the discipline originally issues. Rote learning of science and undisciplined haphazard "creative" experimentalism in art are equally futile routes by which to expose existence.

By omitting transcription of any of the above comments, the reporter created an image of me as a firebreathing, foolish dragon whose presence on campus would entertain other fools like herself but otherwise meaningless. Understandably I object, but now that 24 hours have passed I can raise a toast to other moles who find themselves inhabiting mythical mountains.

Louise Bowen

## ASCIT Charities

(Continued from page 1)

from China, Hungary, and Algeria. Second on the list is construction of housing and health facilities and expansion of printing facilities in Africa and Southeast Asia.

### Cancer Research

The American Cancer Society carries on a three-fold program of research, education, and service. The research, of course, investigates the cause and treatment of cancer, and it is the biggest single item in the Society's budget. (In the past two years, grants to Caltech accounted for over one third of the L. A. area research allotment of \$4.5 million.) The major portion of the education program is aimed at increasing public awareness of the early symptoms of cancer and of the necessity for prompt and professional treatment of these symptoms. In addition, the ACS conducts a series of seminars and workshops in order to keep doctors and nurses up to date on the latest methods of cancer treatment. Finally, for patients already stricken with cancer,

(Continued on page 8)

## Technical Aid Seminar

(Continued from page 3)

can be alleviated with proper aid. These obstacles are: lack of research facilities to assist farmers; lack of commercial services to help them; unavailability of cheap fertilizers and effective pesticides; unobtainability of cheap credit; lack of marketing facilities. The farmer also lacks the incentive to change crops and experiment, because he knows that he will eat now with his present crop, while if he has

a surplus the government will probably take it.

"We've passed the stage of crash programs; we now need long-range help. The long-range answer is education and technical assistance through such organizations as the Peace Corps." The United States' main problem is to fit the aid to the needs of each particular country. Only if this is done can aid be effective.

## California Tech

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

### Editors

Bruce Abell, Dave Benson, Lee Molho

### News Staff

Walt Deal, Richard Karp, Bob Liebermann, Jay Lippman, Pete Lippman, Charles Michener, J. C. Simpson, Marcia Thamm, Hal Wyman, Bob Greenwald, Matt Couch, Jim Johnson

### Feature Staff

John Berry, John Crossman, Marc Kaufman, Roger Leezer, Bill Tivol, Bjo Trimble, Carl Rovainen, Steve Schwarz, Fletcher Murphy

### Sports Staff

Peter Ford: Editor

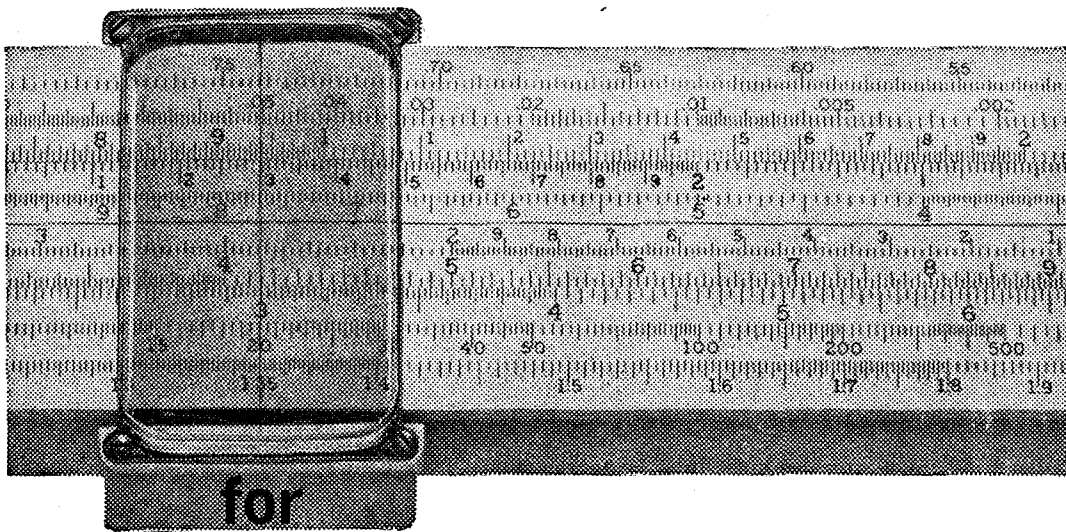
Vince Hascall, Steve Hall, John Letcher, Roger Noll, Julian Prince, Tom Sallee, Gary Chamness, Rick Weingarten

### Business Staff

William Rosenberg, 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.

## a new career



## for the analytically minded

An analytical mind can carry you a long way in the fast-moving field of electronic data processing. If you have a flair for business...and enjoy solving tough problems... you can discover unique satisfaction in this new career.

Openings are available throughout the country in either *Systems Engineering* or *Direct Sales*. IBM is an Equal Opportunity Employer.

The marketing and application of data processing systems is challenging and fascinating. After comprehensive training you help management executives solve problems which include automation of: process control and manufacturing operations, inventory control, document preparation, highway planning, weather forecasting; and complete business

control systems for utilities, transportation, banking, and insurance, to name but a few. New techniques of automatic data processing are making headline news almost daily.

We have a critical need for those who have majored in science, mathematics, and engineering. And we have equal opportunities for majors in business administration, economics, finance and liberal arts with an aptitude and interest in electronic data processing.

It's a new professional field for both men and women in which earnings are high and promotions come quickly. For more information describing the opportunities at IBM, see your College Placement Director or, if you desire, write or call—

R. A. Karlberg, Branch Manager  
IBM Corporation, Dept. 882  
705 N. Brand Blvd.  
Glendale 3, Calif.  
Phone: CI 6-1651

You naturally have a better chance to grow with a dynamic growth company.

**IBM**  
DATA PROCESSING

IBM will interview Feb. 1, 2.



# Brewins



## Scurves Surprised

Members of Scurvey House, always anxious to interfere with stunts of other Houses, decide to participate in Rage House Joe College basketball night. Ricketty men, resplendent in gay coats and slide rules, descended en masse to the site of the game. Much dismayed are they to find that other House Joe College boys never arrive. Calculated misinformation?

## Companies To Host Tours

In connection with the Institute of Radio Engineers Student Day, a number of electronics firms in the Los Angeles area will host students to day-long tours of their plants on Friday, March 2. The tours, which are open to any interested student, IRE member or not, offer a wonderful opportunity to become acquainted with a company before applying for full-time or summer jobs, and usually include a free luncheon. Among the companies participating are Aeronutronics, Ampex, Autonetics, Beckman, Collins, Hoffman Semi-Conductors, Hughes, Librascope, Litton Industries, Pacific Telephone, Space Technology Labs, and System Development Corporation.

Interested students should come to the next IRE-AIEE Student Branch meeting, Monday, February 5, at 7:45 p.m. in 142 Keck for information, or see Gary Turner or Dr. Frank Mullin. Reservations must be sent in by February 14.

## Artists

(Continued from Page 5)

Leon will live in Fleming House and will discuss his ideas on freedom in art, its goals and limitations. At the show in Dabney, Leon left a paper which describes his feelings on art, science, and creativity.

Unfortunately the artist expected to stay at Dabney House is unable to come. Dabneyites are invited to any of the other lounges.

Drugs Sundries Cosmetics Tobaccos

**CALIFORNIA REXALL PHARMACY**

555 S. Lake SY 2-3156

Breakfast Lunch Dinner

## ALVIN'S Photo Supplies

Finest Camera Store  
With Competitive Prices  
Processing +  
504 South Lake  
SY 5-4327

## THE CAMPUS BARBER SHOP

New Location:  
South End of T-4  
ALL HAIRCUTS  
\$1.50

Two Barbers to Serve You

## Light Leaves

Case of mysterious disappearance of B-and-G-supplied Plumbing House sample light fixtures has finally been solved. Inquiries to campus protector Fig revealed that aforesaid object was found suspended from Throop flagpole. Guards, not knowing from whence it came, stored it safely away in office. After several days, Number One Officer, deciding that it did not belong to Tech, gave it to Pasadena Police, to be held until claimed, or until auctioned off for Police Fund. It is a far better use . . .

## Ricketty Refused

It is a long known fact, exemplified recently by Scurvey House, that Blackah is prone to reject challenges for sundaes. Finding that original challenge had been rejected, Scurves also challenged in broccoli, asparagus, brussel sprouts, goose juice, and salad dressing — to no avail. Beak suspects that Blackah wished to retain foodstuffs

for selves.

## We get letters . . .

Through Drubney House's sources, Beak finds that one Miss Cheryl Smith, of 2664 S. W. 42nd St., Oklahoma City, Oklahoma, sent a letter to (ugh!) MIT asking for pencil pal. She said " . . . all the poor boys at MIT are so desperate for a girl to write to . . . I would certainly like to volunteer my services . . . for mutual gain as well as personal profit . . ."

MIT (ugh!) reaction was soon followed by reactions at Harvard, Columbia, Yale, Dartmouth, Princeton, Brandeis, Cornell, Stanford . . . Proposed form letter is to be sent to abovementioned wench, in manner of other colleges. Sources reveal that form letters may be available in Houses shortly. Beak advises that it would be best not to try and wait, however. Note that Cheryl's hair is brown. Letter form is at right.

## Dearest \_\_\_\_\_,

Ah, what a lovely name. I knew when I first heard it that you must truly be an angel. But how can you sacrifice yourself to the heartless automations of MIT when at the California Institute of Technology there are lost souls like myself—wandering, wandering, wandering.

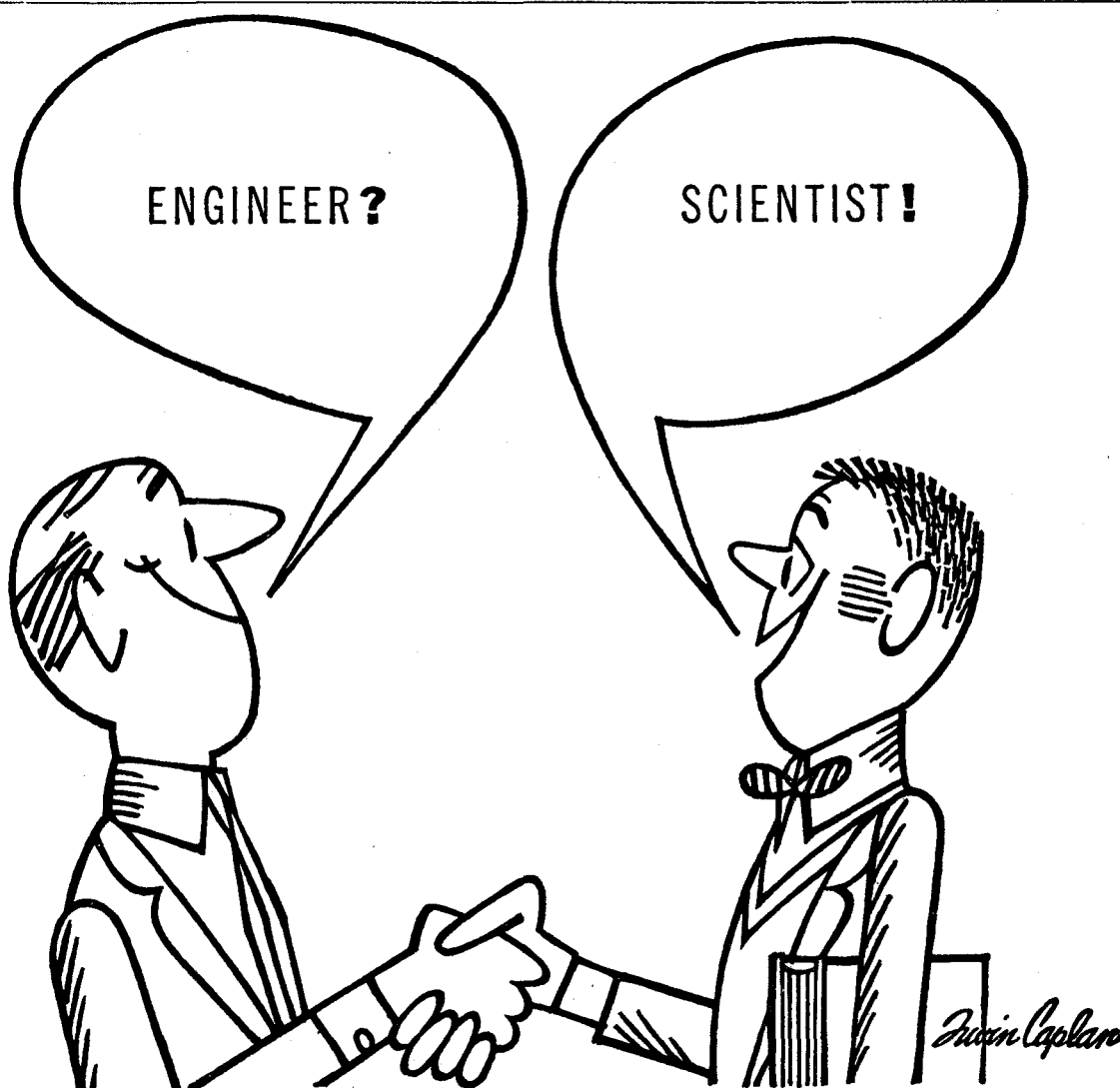
Oh, my dear \_\_\_\_\_, my very being aches for you: to see you, to hear you, to ripple my longing fingers through your soft \_\_\_\_\_ hair, to kiss your lovely, tender, wine-red lips. I cannot eat; I cannot sleep; I cannot do math problems; I lie awake and cry your name into the unsympathetic night.

Oh, \_\_\_\_\_, my far-away love, if only you were here with me, to hold my hand and perhaps . . . yes, perhaps to say you love me as I love you, I know I could stop drinking. Oh, please, please, my perfect love, send me your picture. I will cherish it, guard it, treasure it, even paste it in my Handbook of Chemistry and Physics.

Oh, if only you would. Then—then I know I could find some small bit of true happiness.

Your infinite lover,

House  
California Institute of Technology  
Pasadena, California



## We're looking forward to meeting you

We'll be on the campus on the dates listed below, ready to give engineering and science seniors information on space-age careers in a dynamic industry. If you are looking for a company offering assignments on programs of unique interest and career potential, you'll be interested in the advantages Boeing can offer you.

Boeing, for instance, is a major contractor on such advanced programs as the Saturn S-1B advanced first stage booster, the Dyna-Soar manned space glider, the solid-fuel Minuteman ICBM, and the Bomarc defense missile system. Boeing is also the world's foremost designer and builder of multijet aircraft, including the eight-jet B-52H missile bomber, the KC-135 tanker-transport, the C-135 cargo-jet, and the famous Boeing 707, 720 and 727 jetliners. In addition, Boeing's Vertol Division is one of America's leading builders of helicopters.

Research projects at Boeing are under way in such advanced fields as celestial mechanics, solid state physics, nuclear and plasma physics, flight sciences, space flight and propulsion.

Expanding Boeing programs offer exceptional opportunities to holders of B.S., M.S. and Ph.D. degrees in aeronautical, mechanical, civil, electrical-electronic and industrial engineering, and in engineering mechanics, engineering physics as well as in mathematics and physics. At Boeing you'll work in a small group where individual ability and initiative get plenty of visibility. You'll enjoy many other advantages, including an opportunity to take graduate studies at company expense to help you get ahead faster.

Drop in to your Placement Office and arrange for an interview. We're looking forward to meeting you!

Wednesday through Friday — February 14, 15 and 16

**BOEING**

Divisions: Aero-Space • Military Aircraft Systems • Transport • Vertol  
Industrial Products • Boeing Scientific Research Laboratories  
An equal opportunity employer



## Audience

(Continued from Page 2)

wright is ignored by our best theaters, (Tennessee Williams is much better boxoffice, apparently), and as a result the perishable comedies have so often perished at the hands of amateurs that many people have forgotten that they can be enormously funny. But here's a real first-class job. The Theatre Group is Los Angeles' best outfit (in choice of material as well as execution); and Houseman, who is a well known movie professional (and retains an unfortunate penchant for the lavish and spectacular), is a very good director nonetheless. Among the principals, Arnold Moss as the Duke is outstanding; Mariette Hartley as Isabel is beautiful and can act too. Really, though, the show is stolen by the bawdy crowd of Pompey, Mistress Overdone, Elbow, Froth, Bernardine, and Abhorson, along with (to quote the program) "ministers, passersby, pimps, policemen, and ladies of the night."

The result is that the too-serious mainstream is utterly drowned in a backwash of outrageous low comedy; it is the same raunchy stuff that Falstaff is made of, perhaps even funnier — honest, I laughed 'till tears came down my cheeks. Yet while one is still shaking with laughter, he may suddenly be struck by the beauty of some line, and realize that this is the same stuff that Hamlet is made of, too. Seeing this play is wonderful fun, and more than that somehow.

### THRONE OF BLOOD

at the Toho La Brea Theater

While we're on the subject of Shakespeare, here is a transposition of "Macbeth" to medieval Japan, with English subtitles. No, it's not as bad as it sounds; Akira Kurosawa (already famous for "Rashomon" and "Seven Samurai" has subtly added measures of oriental mystery and violence and come up with an impressive motion picture.

### Work of Art

Kurosawa's camera-work is reminiscent of Ingmar Bergman's: individual frames are pieces of art by themselves. Macbeth is Toshiro Mifune, world's least motionless actor; in this picture he snarls, grimaces, and screams almost continuously, and a more spirited murderer I have never seen. Lady Macbeth is Isuzu Yamado, and wrapped in her frigid oriental calm she is enough to freeze your blood. The death of Macbeth is uniquely Japanese, and an unforgettable experience. The witches are good, too.

## Charities

(Continued from page 6)

the ACS provides low-cost medical treatment and therapy.

### Many Services

The Pasadena Community Chest supports thirty-three local organizations providing a variety of services in the four major areas of health, family service, child care, and youth work. Sample organizations are: **Health:** Visiting Nurse Association, Pasadena Dispensary, Children's Hospital; **Family Service:** Salvation Army, Legal Aid Society; **Child Care:** Child Guidance Clinic, Rosemary Cottage (for adolescent girls), Children's Home Society; **Youth:** Boy Scouts, Camp Fire Girls, YMCA, Boys' Club.

FRENCHSPANISHGERMAN  
RUSSIANITALIANJAPANESE

THE BERLITZ SCHOOL OF LANGUAGES  
PASADENA, 170 SOUTH LAKE AVE., SYcamore 5-5888  
PRIVATE INSTRUCTION  
SMALL CLASSES STARTING NOW  
Native Teachers Day or Evening Free Trial Lesson

PASADENA  
PLAYHOUSE

"The Dybbuk"

Patricia Huston, John Brinkley  
Richard Hale

"One of the Playhouses most distinguished productions . . . stunning."  
Margaret Harford — Times

Ticket discounts available to students and faculty

Nitely 8:30 Mons.; Sats. 2:30-MU 1-6418—SY 6-5358—Mutual agencies

THE  
SKY  
IS  
NOT  
THE  
LIMIT



For space-age thinkers on the Bell System team. World leader in communications—from missile guidance systems to telephone calls relayed by satellite—the Bell System offers opportunity unlimited for today's graduates. Come in and find out how far you can go with the Bell System.

This team will continue to give consideration to all qualified applicants for employment without regard to race, creed, color or national origin.



Pacific Telephone

Technical graduates for engineering and administrative positions in California.



BELL TELEPHONE  
LABORATORIES

Technical graduates for research and development work in communications and electronics with one of the world's foremost research laboratories.

Western Electric

Technical graduates for engineering and administrative positions throughout the United States.

CALIFORNIA INSTITUTE OF TECHNOLOGY  
PLACEMENT OFFICE

Interviewing for:

Pacific Telephone & Western Electric  
on February 7, 1962

Bell Laboratories on February 7 & 8, 1962