

## Ramo Next YMCA Leader

Dr. Simon Ramo, a distinguished scientist-industrialist, will visit the campus next week as the YMCA's Leader of America. During Wednesday, Thursday, and Friday Ramo will deliver four discussions in Winnett Lounge, one in Dabney Lounge, a major address in Beckman, and a few random bull sessions in the YMCA Lounge.

The first discussion will be in Dabney Lounge Wednesday at 11 a.m., the usual assembly hour, and is entitled "Which Is It—the Atomic, Space, or Electronic Age?" This will be followed by the major address in Beckman at 8 p.m. entitled "The Coming Partnership of Man and Intelligent Machines."

### Soapbox in Winnett

Ramo will give three daily 4 p.m. talks in Winnett Lounge in addition to an extra-added attraction at 7:30 p.m. Thursday night. The titles of these are: "Where Do We Go From Overkill?"; "Computers, Creativity, and Bach!"; and "Government, Private Industry, and the Scientist — Who Is In Control?" The Thursday eve-

ning discussion is entitled "Needed: A New Direction for Scientific Education."

In addition to all of this, Ramo will have lunch with Blacker and dinner with Lloyd House on Wednesday, attend the coffee hour, and hold a student reception in a faculty home at 9 p.m. on Thursday.

Ramo is particularly concerned with the impact of technology on modern society, and therefore many of his discussions will cover the topic in some depth. Oddly enough, he is also an accomplished violinist and will perform some of Bach's violin sonatas in Winnett Lounge at 4 p.m. Thursday.

Ramo will be the first Y Leader this academic year, since Dr. Abraham Maslow unfortunately could not appear due to ill health. The YMCA Leaders of America program was originally started in 1954 with the funds left along with an endowment bequest by the late Robert A. Millikan.

### Techman Makes Good

Ramo received his PhD magna cum laude from Caltech in 1936, when he joined the General Electric Company. He became Director of Physics Section, Electronics Research Laboratory and attained prominence for his work in microwaves and electrical optics, and as co-developer of G.E.'s electron microscope.

In 1946, he joined the Hughes Aircraft Company as Director of Research, Electronics Department, and Director of Guided Missiles Research and Development. Ramo originated and supervised Hughes' electronic and missile operations and organized one of

the largest technical teams in the nation.

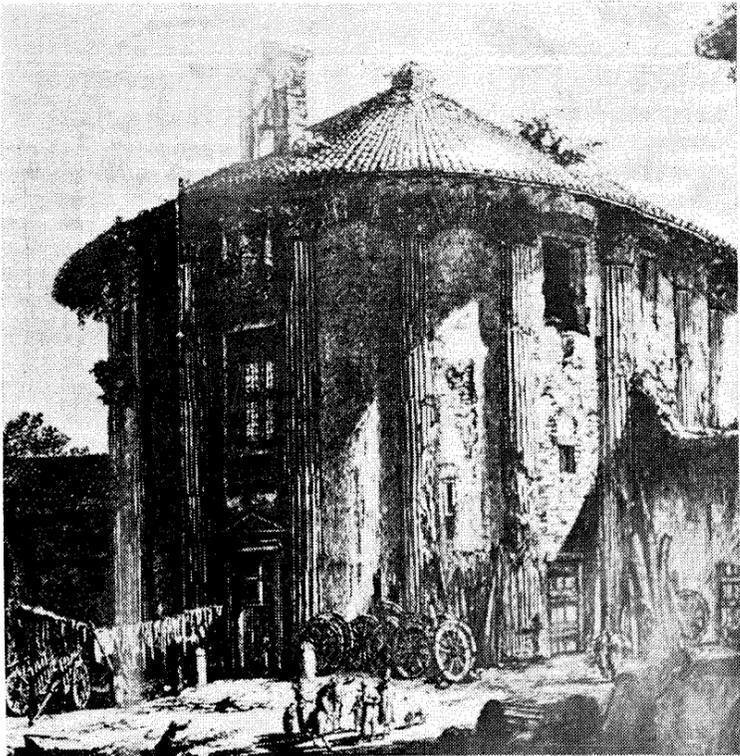
In 1953 Ramo and Dr. Dean Woodridge founded the Ramo-Woodridge Corporation which merged with Thompson Products in 1958 to become Thompson-Ramo-Woodridge Inc. The TRW organization had a 1964 sales receipt in excess of \$500 millions.

During the period from 1954 to 1958, Ramo was also Scientific Director of the U.S. Air Force Ballistic Missile Program. The job carried the awesome responsibility of closing the missile gap as rapidly as possible. This was done by initiating the development of the Atlas, Titan, Minuteman, and Thor missile systems.

### Busy Man

He has recently been engaged in the founding of the Bunker-Ramo Company, a joint enterprise of TRW and Martin Marietta, to pioneer in electronic control for operations of industry and government. In the field of education, Ramo is a trustee of the California State Colleges, Case Institute of Technology, and Caltech, where he is also a Research Associate.

Ramo is a member of the Editorial Board, McGraw-Hill Electronic Science Series, Panels for the President's Science Advisory Committee, and the organizing committee of the National Academy of Engineering. He is also a director or trustee of many philanthropic and cultural organizations including the City of Hope, the American Museum of Electricity, and the Hollywood Bowl. He presently resides in Brentwood with his wife and two sons.



—by Da Vinci

Caltech's beautiful new Beckman Auditorium, the epitome of modern architecture, will soon be more accessible to student use. See editorial, page 2.

## Oliver In Run-off Today

Municipal polls in Pasadena are open until 7 p.m. today to decide the contest between Caltech's Dr.

Robert Oliver and the incumbent Director Clarence Oakley for the Pasadena City Directorship. In the earlier municipal elections, Oliver polled more votes than his opponent, but the presence of a third candidate and the necessity of a majority of the votes cast for election made today's run-off election necessary.

Oliver, who has been a professor of economics here since 1959, supports an active program of urban renewal and has campaigned for strong zoning in Pasadena. According to Bill Satterthwaite, one of Oliver's active supporters on campus, there is a very good chance of Oliver winning if he can get out all of his support.

"The election will probably be decided by who can get the most voters out," he said. "So remind everyone to go out and vote if they haven't already done so."

## ASCIT Presents Judy Collins

When school started this year, signs proclaiming, "Tell Whitlock You Want Judy Collins" graced the campus. Thursday, April 29, Miss Collins herself will grace Caltech, according to the newly-elected ASCIT Activities Chairman, Jerry Yudelson. She will appear in Beckman; student prices for the evening will be \$1.50 and \$2.00, nonstudent \$2.25 and \$2.75.

Miss Collins is a folk singer in the same mold as Joan Baez: guitar, long black hair, origin in the northeastern US. Her admirers bill her as the star of the 1963 Newport Folk Festival, but she shares this honor with several other performers. In any event, she has cut several excellent records and is certainly prettier than her rival. According to the MIT Tech, she was recently the star of "the most successful concert in Institute history."

## Choices In Vietnam Are Heard

BY BEN STACKLER

"Choices in Vietnam," a symposium featuring experts on the Far East, will be held at Caltech this Saturday afternoon and evening. Co-sponsored by the Caltech YMCA, the American Friends Service Committee, and the Pasadena Friends Committee on Legislation, the program will follow a seminar-discussion format during the afternoon and will conclude with an address by Professor Gilbert F. White of the University of Chicago, "Toward a Peaceful Solution in Vietnam."

The afternoon will begin with background talks by Dr. Herbert Alexander of LA City College and Dr. George Noronha in Winnett lounge. At 3:00 there will be a panel discussion involving Dr. Joel Edelman of the Rand Corporation; Dr. Jason Finkle, a member of the Michigan State Advisory Group in Saigon from 1959 through 1961; J. Stuart Innerst, China expert and Washington observer; and Stanley Sheimbaum, director of the Michigan State Technical Assistance Project in Vietnam from 1955 through 1959 and presently staff member at the Center for the Study of Democratic Institutions in Santa Barbara. The afternoon will conclude with small group discussions.

White, who will speak at 8 in Beckman, has recently returned from Saigon. He is national chairman of the American Friends Service Committee, consultant to the Lower Mekong Co-ordination Committee, member of the UNESCO Advisory Committee on Arid Zone Research, chairman of the U.N. Panel on Integrated River Development, and the author of "Vietnam: The Fourth Course" in the December, 1964, *Bulletin of the Atomic Scientists*.

Admission to both the afternoon and evening sessions is free for Tech students, while others must pay a small fee. Register in the Y lounge.



New House Presidents take office this term. Standing, left to right: Tom Williams, Ruddock; Bill Colglazier, Page; Howard Powell, Dabney; John Eastment, Blacker. Seated, left to right: John Walter, Lloyd; Gordy Myers, Fleming; Gary Ratner, Ricketts.

## New Admission Procedures Bring More Imaginative Frosh

BY MIKE BEESON

Among the innovations at Caltech have been recent changes in traditional policies of undergraduate admission. These changes might someday bring about a reappraisal of the "Techman."

Prior to last year, applicants were listed in order of desirability for admission. This "rank list" was prepared by computer using a formula developed on the basis of the records of previous Techmen. College boards formed a major part of the formula, with

the advanced math test given the most weight and the English the least. High school grades entered in exponentially.

The top seven hundred on the rank list were interviewed. Although the interview had some effect when the Admissions Committee reviewed the applications, it was felt that too much weight was accorded to the rank list. Consequently, no rank list was prepared for the selection of the Class of 68. More attention was

(Continued on page 6)

### Notices

#### FREE NIGHT AT THE ICE HOUSE

The Y has arranged for Caltech students to have a night at the Ice House—free. Techmen are invited to bring dates. The show will be given this Sunday night from 6:00 to 8:30 p.m. and features the comedy team of Jerry and Myrna Music and the folksinger Stewart Clay.

This is a rare opportunity to visit the Ice House and only about 25 people per House (including dates) can attend. Sign up now on your House bulletin board for an evening of enjoyable comedy and folk music.

#### COFFEE HOUR TODAY

Come, drink coffee, eat doughnuts, and absorb infinite wisdom from random faculty members. Good for your name-dropping file. Today at 3 in Winnett.

#### IF YOU WANT ASCIT MONEY

get your budget requests in to Eric Young soon. ASCIT always has much more demand for money than supply of money, so if you want any, get your requests in.

#### VISTA INFORMATION

Information on VISTA, "Volunteers in Service To America," is now available at the Y office. This is the domestic "peace corps" arm of the war on poverty program.

#### THE HUNTER-MEAD MEMORIAL CONCERT

will premier the Caltech Band May 2, 1965 in Beckman. Included in the program will be numbers by Kleinsinger, Moussorgsky, Tschai-kowsky, and Weber. Carmen Dragon will be guest conductor; Albert Klinger and John Johnson are featured guest soloists. General admission is set at \$1 for adults, \$.50 for students and children.

Plan now to attend; it should be an excellent and entertaining concert.

#### SOPH BEACH PARTY SATURDAY

Little Corona Del Mar; starts at noon.

#### GRADUATION ANNOUNCEMENTS

Seniors order graduation announcements at the Bookstore. The deadline is today.

## Editorials

## Beckman Solution

A meeting March 10 brought potential steps toward a solution of the Beckman Auditorium problem. The meeting was attended by President DuBridge, Dean Eaton, K. Jacobson, and Dr. Pings of the faculty Beckman Committee; ASCIT president Fred Brunswig, YMCA president Mike Cunningham; and representatives of the Band, Glee Club, Drama Club, and Tech. Little by little there evolved what we consider to be an entirely satisfactory Beckman fiscal policy.

The administration's position had been that it would be an "irresponsibility to our donors to permit indiscriminate free use of so valuable a facility, thereby using up funds so desperately needed in our academic program." The imposition of a "token" \$150 use fee was a means to this end. This fee would also help defray the fixed operating costs, estimated at \$75,000 for the current year.

The students had been contending that the use fee was not a "token" fee to activities operating on limited budgets. Indeed, the "out of pocket" expenses, which must be paid in addition to the fixed use fee, have been sufficient to restrict undergraduate use of the building. Moreover, the \$75,000 overhead would be present whether the auditorium were used once or a hundred times.

Previous available ways to avoid this use fee—through not charging admission or through approval of Institute sponsorship by the faculty Beckman Committee—had proven impossible for most student activities. Either the purpose of a concert or event had been to raise funds, or it had proven necessary to charge admission simply in order to break even.

Prepared to meet ogres, the students were surprised to face men of reason. DuBridge frankly admitted that the criterion of whether or not admission was charged had been an "unfortunate experiment." Events providing "official Institute representation to the public," such as Glee Club and Band Concerts and Ascit-Alumni Assemblies, will henceforth have the use fee waived whether or not admission is charged.

But most important, it was agreed that some sort of student committee should be set up and provided with a fund by the Institute. This student committee would use the fund to pay the use fee for such events as ASCIT Concerts, the Y Film Series, other Y sponsored programs, and appropriate student events. Besides providing students with a degree of control and responsibility, this program would still avoid indiscriminate use of the auditorium by compelling the committee to budget their fund for worthy and general events.

It must be emphasized, however, that at this stage these plans are still flexible. Brunswig and Cunningham are meeting now with Eaton's committee to outline an acceptable plan, but it will be some weeks before the program is completely finalized.

And so it has been done, quietly and effectively—without demonstrations or extremes. For this a number of people are to be commended: President DuBridge, Dean Eaton and his committee, for their cooperation and willingness to seek a solution; Brunswig and Cunningham, for their efforts at getting the job done; and finally the former Tech editors, Galley and Oliver, for placing the matter before the Institute community. We hope this reasonable plan works.

Bob Berry, Norton Greenfeld, Tim Hendrickson



BY DUVID HELFMAN

As a disclaimer, I must start by saying that I heard the Yale Russian Chorus last Monday from the middle of the first row of the balcony of Beckman, and hence must have a better impression than most of the way they sounded in that chamber of horrors, for, of all places in B.A., sound from the stage is at its purest at the front of the balcony.

It was, in fact, with some trepidation that I went to Beckman, having heard the Russian Chorus the two previous times they were here, in Culbertson, and remembering how well the starkness of that hall fit the bold sound of the chorus, meshing in many brilliant moments of vital intensity.

## Hears Yale Russian Chorus

Knowing the acoustics of Beckman, I felt that letting the chorus sing in that place would be roughly equivalent to pelting the Mona Lisa with rotten rutabagas.

However, it seems that the Yale Russian Chorus is the only group I have yet heard, with the exception of two exuberant moments in Fleming's recent Interhouse Sing venture, to break through the vocal shroud surrounding the Beckman stage. But the happy point is that the Russian Chorus can do it consistently — and consistently well.

Yobcya

There are ways in which this performance was unpleasant, though. The most significant missing factor is Denis Mickiewicz, the chorus' founder, music direc-

tor, and former conductor. Daniel Gsovski, the present conductor, does a more than adequate job, and can easily be seen as one who has risen from the ranks, by his union with both the men and the music, but he lacks the dynamic vitality that Denis glowed with, and was disappointing in his announcements, as well as in his faintly phlegmatic conducting.

The group seemed to want to work into their own spirit, rather than be goaded there, and the electric climaxes I anticipated did not come until fairly late in the program. The problem involved with this is reflected in the necessary tiring into a less disciplined club, resulting in greater sloppiness as well as greater freedom of interpretation. This is not to say that the first part of the program was not well done — in fact, perhaps the problem lay in its being too well done. One of the greatest pleasures in hearing the Russian Chorus was in its freedom and lack of rigidity. It is possible that in reaching the heights as a performing organization, the chorus has had to sacrifice individual enjoyment on the part of the singers — a dangerous thing to sacrifice, for without enjoyment, there can be no music. Music can not be created by half-hearted singers.

But it is obvious that all the enjoyment has not been sacrificed, for that would have precluded the marvelous, and prolonged, times during the concert when they sounded as I had hoped. Gusto mixed with freedom, mixed with understanding, mixed with love — these are the only qualities which can create true musical expression, and which are available only in a small number of choruses. The Yale Russian Chorus can still be high among their ranks.

## From Other Campuses

BY M. SCHMIDT

A news release arrived the other day from the International Union of Students, Prague, Czechoslovakia, telling a warm and moving tale of Imperialist Aggression against the Free and Peace-loving Working Classes and Students of the Democratic Republic of Vietnam.

It seems that these Peace-loving Working Classes and Students of the Democratic etc., were viciously attacked by the Imperialist Lackeys of the War-Mongering Yellow Capitalist Dogs. In a dedicated battle to preserve their workers' paradise, the Working Classes and etc. have declared March 19 "Day of Nation-Wide Struggle Against U.S. Imperialism." The release ends with a plea for Lovers of Peace everywhere to protest against U.S. Imperialism by demonstrating, rioting, and anything else that comes to mind. Like maybe beating up a few dirty, crummy, liepeddling, peace-hating, lousy, yellow, capitalist, fascist dogs.

The Notre Dame Scholastic brings us news of yet another obstacle to peace-lovers of the world. The word is that the beautiful new Totem Park Girl's Dorm at the University of British Columbia is surrounded by an eight-foot wall with spotlighted grounds on either side of it, has a very effective burglar alarm, and is crawling with sensitive microphones. To further frustrate the efforts of leftist sensual

degenerates, a girl has four seconds from the time she and her date get to the door (as indicated by the microphones) to get inside without triggering the burglar alarm. Looks like the big thing at the University this year is going to be a new and more exciting form of "Beat the Clock."

Love in a Clutch

The Associated Press informs us, via the Cal Poly El Mustang, that the Minnesota Senate is considering a bill making it unlawful for the driver of a car to have his/her arm around the passenger or vice versa. Senator F. J. Anderson protested that persons over 65 should be exempt: "If his little spark of romance is still burning, we shouldn't extinguish it." No comment.

We find, in the Georgia Technique, an article dealing with the image presented by our eastern kinsmen to the winsome lasses of Georgia State. The article (Continued on page 3)

## California Tech

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

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California Tech, 1201 East California Blvd., Pasadena, California 91109.

Member of The Associated Collegiate Press

Represented nationally by National Advertising Service, Inc.

Second Class postage paid at Pasadena, California

Printed by Bickley Printing Co., 25 So. Fair Oaks Ave., Pasadena—SY 2-6594

Subscriptions: \$1.50 per term, \$4.00 per year. Life Subscription, \$100.00.



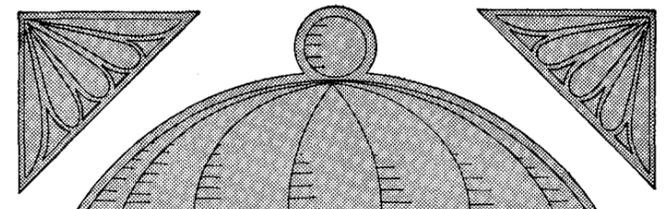
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BY J. C. SIMPSON

Anything would be an improvement after the Goldebriars, so the new show at the Ice House is definitely better than the last one I reviewed. Overall the show is enjoyable, but it is not up to some of the really good ones at the Ice House earlier this year.

The first act this week is also the best. Charles (I think) O'Hegarty is a London pub singer with a haircut that much resembles the Beatles' and a matching beard. He has a unique and very enjoyable repertoire of 17th and 18th century folk and pub songs, most of which were entirely new to me. He presents the songs very well and is a delight to listen to. If he doesn't sing "Body in the Bag" during his act, make sure he does it in an encore.

**Third Strike**

The second act is Stewart Clay, who is making his third appearance at the Ice House. Clay's act this time does not seem as good or as solid as the last time he came, but he seemed to get a good reaction from the audience. In general, his act depends much more on his unique personality than on his singing ability. Many of his songs were old and worn,

such as "Super Skier," but a few were quite good and his many and sundry comments helped make the act more enjoyable.

The lead act is a comedy and singing team, Jerry and Myrna Music (real names), that is also appearing at the Ice House for the third time. The best description I heard for the act was that it was "OK." That it was, but it was also undistinguished. The comedy got good at times, as in their protest song against growing old, but in general it was only average.

**Greenwood County Singers**

If you don't go to this show, be sure to go in two weeks. The Greenwood County Singers will be back from April 13 to 25, along with O'Hegarty and Clay. If you don't believe they're as good as I always say, see them. They really are.

# Selma Marcher Speaks Today

The Rev. James H. Hargett of Los Angeles, one of the 300 who were selected by Martin Luther King to walk the full distance from Selma to Montgomery, Alabama, in the recent voter registration protest march, will report on the demonstration in Winnett Lounge at 4 p.m. today. Mr. Hargett's emphasis will be on the social and political consequences of methods being used to gain full and equal voting rights for all citizens in the South, particularly non-violent demonstrations. Mr. Hargett is a graduate of Yale Divinity School and is Minister of the Church of Christian Fellowship, Congregational, in Los Angeles.

The program is sponsored by the Y Public Affairs Commission. Commenting on Mr. Hargett's report will be Mr. Edwin Sanders, executive secretary of the American Friends Service Committee in Pasadena, who spent two days in Selma working on the preparations for the march to Montgomery.

# Ranger 9 Hits Moon

BY THE FROG

The moon is approaching rapidly now. The crater Alphonsus looms large; we can easily see its crater-dotted rills. A stout peroxide-blond woman near the front of the auditorium begins to get hysterical. There are encouraging cheers and tense sighs as each new frame is flashed on the monitor screens.

A thin, warbling tone is heard above the noise of the room. Then suddenly the tone stops and the monitors go blank. After a moment's silence, the room is filled with cheers and applause. Ranger Nine has hit the moon; Project Ranger has been completed and has been a smashing success.

**Historical Background**

The crater Alphonsus, into which the spacecraft plunged, was chosen for several reasons. It has a central peak, an uncommon structure in craters caused by meteor impacts, but frequently found in volcanic craters. Its

walls are from seven to ten thousand feet high. Astronomers have reported seeing activity in this crater.

Technical reasons also entered into the choice. Slopes are most apparent if the sun is near the horizon, as shadows are lengthened. Thus the target should be near the moon's terminator, or sunrise-sunset line. Also, because of the limited energy available from the Atlas-Agena which launched the probe, the target should lie quite near the plane of the moon's orbit. Alphonsus, being in the moon's "tropical" region, and at that time being just about on the terminator, was thus ideally situated.

**First in Space**

This trip included two firsts. On previous missions, the craft was not reoriented as it neared the moon. As a result, the cameras were not pointed along the line of the craft's travel, so that

(Continued on page 6)

<b>ALL SAINTS EPISCOPAL CHURCH</b>	
132 North Euclid, Pasadena (across from City Hall)	
<b>SUNDAY SERVICES:</b>	
8:00, 9:10, 11:00, 7:00 p.m.	
The Rev. Terence E. Lynberg Episcopal Chaplain	
<b>College Group meets every Sunday evening at 7:00 p.m. in the Parish House.</b>	

## More Campuses

(Continued from page 2)

patted the Techmen on the back with: "The girls found that dating Techmen was superior to going with boys from their own school." Also comforting was the information that these girls felt that Georgia Techers, individually, were no grosser than any other males; and that "anyone, 'without the benefit of female companionship', would have the tendency to vulgarity" found in Techers of all nationalities.

On this same note, we drag out a letter by Chaplain Herbert Hodgson in the Rensselaer Polytechnic discussing the "high degree of anxiety" Rensselaer students showed over having college girls think of them as "Slipstick Norman." Chaplain Hodgson relates of a Rally Day at a nearby college; "among the many clever and creative acts was one involving 'word association.' The last word in the series was 'RPI', and the immediate response, in chorus, was 'animal.' And this was greeted with a cheer from the student body which equalled any that evening." "Are we," asks the Chaplain, "overcompensating?"

**Sex**

Speaking of earrings, which we weren't, we note in the Antioch Union Record that the local med center requires five bucks and parental permission before they'll undertake an ear-piercing operation. Aside from the fact that this price is outrageously high and that a sharp pencil and sadistic roommate can do as good a job any day, we are appalled at the indifference displayed by the Antioch Union Student body: "I should care," writes an apathetic reader, "if people get their ears pierced?" We would. Especially if it was our roommate.

(Continued on page 6)



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# SPORTS

## Baseball Team Ends Term On Happy Note

The baseball team finished off last term in a blaze of glory by coming from behind in the ninth inning to defeat LA Pacific College by the score of 12-11. Things started off pretty fast with Tech scoring 1 run in the first and 3 runs in the second, mainly on walks and hit batsmen. LA Pacific then changed pitchers, but this did not seem to make too much difference, as the Beavers scored 3 more runs in the fourth. Two of these came on a bases-loaded single by Chuck McQuillan. But meanwhile John Diebel was having difficulties with opposition batters. He was roughed up for 2 runs in the first, 2 in the third, and five in the fourth.

### Lucky Win?

At this dramatic juncture of the game Tom Resney stepped up to the mound to save the day. He pitched the last four innings, allowing two runs, only one of which was earned, while striking out four. Meanwhile, our valiant warriors were pecking away at the L.A.P.C. lead by getting a run in the seventh and two in the eighth. Then, in the dramatic ninth, Eastment singled, Myers sacrificed, but was safe on a fielder's choice. Resney was safe on an error, and McQuillan's single tied the score. As darkness closed in, threatening to stop the game as it stood, Phil Paine

(Continued on page 5)

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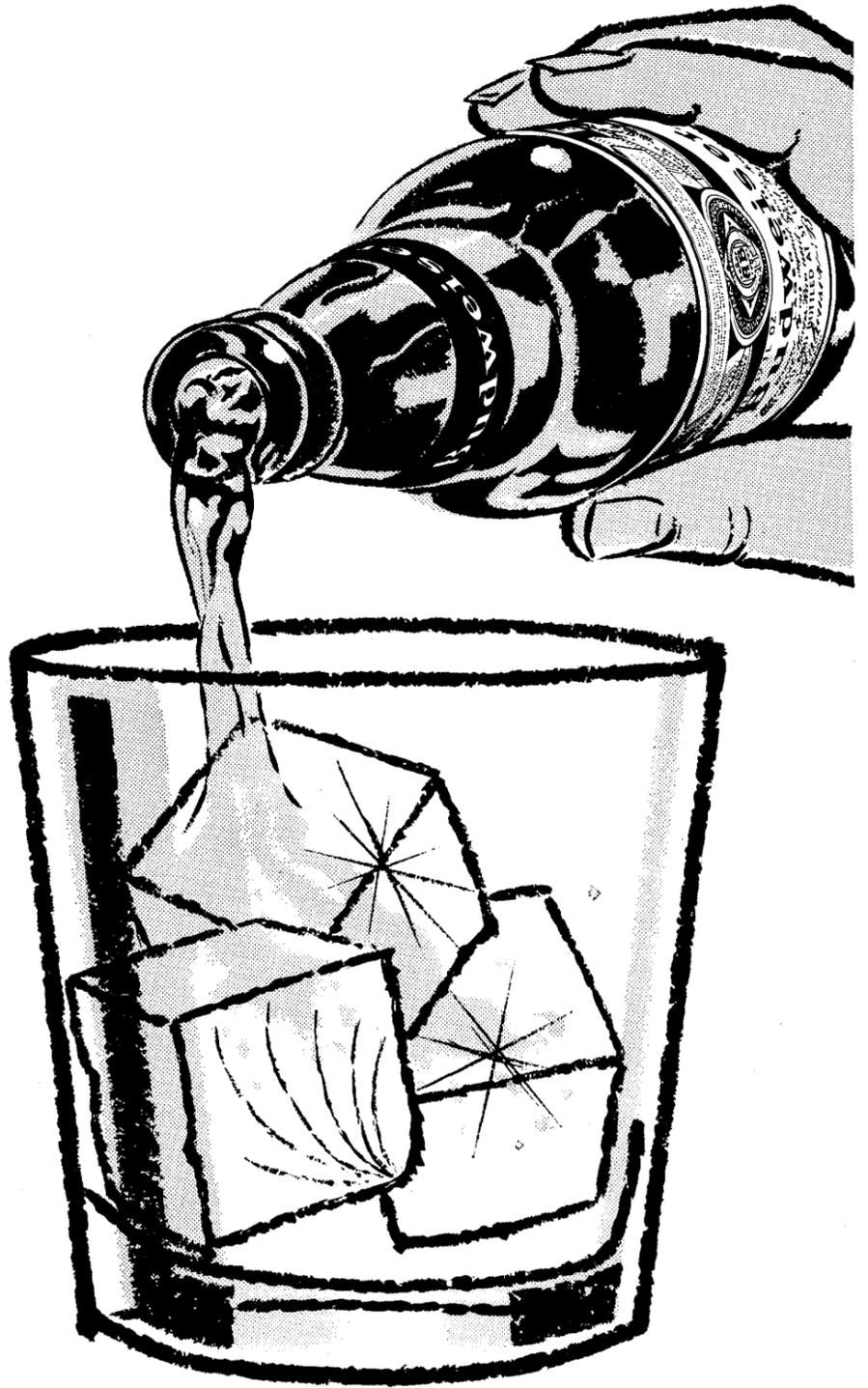
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## Beer on the rocks?

(Oh, no!)

The other day, for the first time, our brewmaster heard of "beer-on-the-rocks." He fell apart.

He really doesn't have anything against ice cubes . . . for scotch or old-fashioned or lemonade. But not for beer. Especially the *King of Beers*.

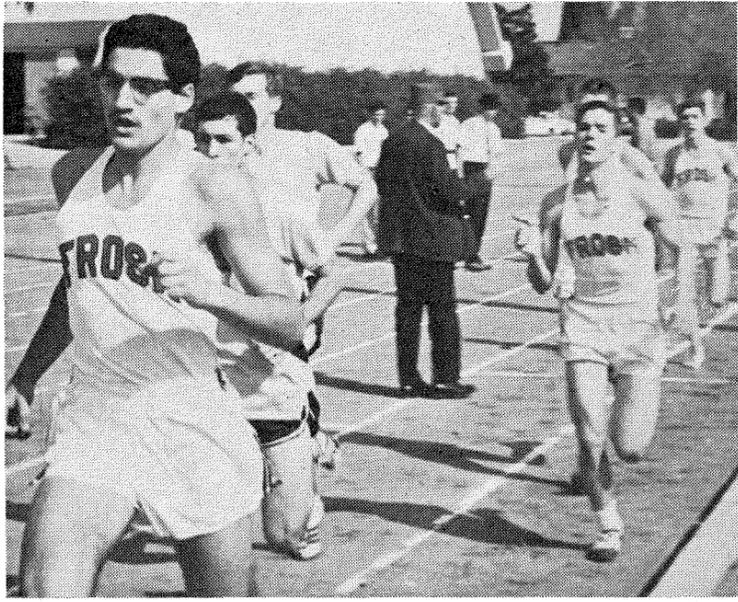
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—by Gleason

Mamma Meo leads the pack after the first lap of the mile. Hard on his heels are two Redlands runners, then Van Stoecker, Dave Kolb, and Bill Putman.

# Attention Football Players

The Dallas Cowboy Football Club has requested the names of players who have future pro football potential.

Anyone who feels he qualifies in this respect should let his friendly sports editor know as soon as possible so that the information may be forwarded. Please list your position, height, weight, age and class. Then come out and watch pro football scouts scrutinize our first spring football practice.

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# IH Basketball Starts

BY JOSE

Who says that the basketball season is over? As far as the seven Student Houses are concerned, the season is just about to begin.

During the first week of the new term, all seven teams have been madly practicing for their first games next week. Each team has been assigned a court each day, either one of the four inside baskets or one of the sun-drenched, sloping expanses outside.

In general, most of the players are in exceptional shape. This is not very surprising when one remembers that all had two weeks to get in shape—finals week and the spring break. So the one-week practice period, if you care to count registration day, is more than sufficient for the players to polish their moves.

### Balanced

The "league" appears to be well-balanced this year — a few good teams, some mediocre teams, and a couple of pretty bad teams. Overall, the caliber of play should not be nearly as good as it was last year or the year before.

The race for first place should be between Page and Blacker. Page is relying heavily on Jubin, who played varsity for half a season this year, and Goodmanson, who finished the season. Blacker also has two varsity players in Josephson, who joined the varsity for the last few games, and Aschbach, who played on the varsity at the beginning of the year.

### Losers

Fleming should not be counted out just yet. Last term the Flems seemed pretty confident of a sixth or seventh place finish, but then Tedder transferred back to Tech at the beginning of third term. He was one of the stars on the frosh basketball team 2.5 years ago.

## Strike Two

(Continued from page 4)

punched a two-out single into left field to win the game and send the team home, able to snake for finals with lighter hearts.

Coming back from vacation, the team was completely out of practice and was thus unable to hit against a relatively easy pitcher. They lost to Azusa 16-4. But with a few days to get back in shape they should be able to get back on the hitting track and do well against Biola, and then against conference competition.

... where flowers pick themselves!

Ricketts has a fairly good team, but is not up to the standards of the other three. Ruddock, Dabney, and Lloyd will need a lot of breaks in order to crack the first division.

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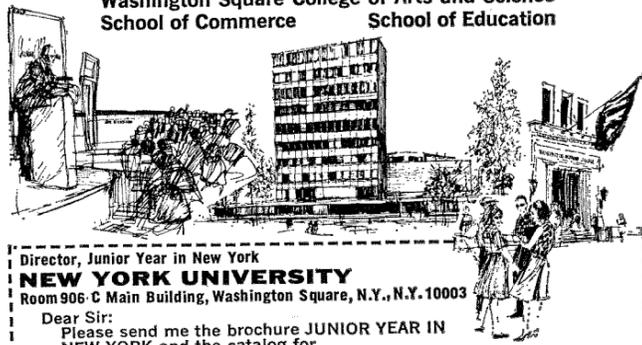
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Wed.	Apr. 7	3:00 p.m.	Whittier at Caltech
		VARSITY TENNIS	
Sat.	Apr. 3	1:30 p.m.	Redlands at Redlands
		TRACK	
Fri.	Apr. 2	2:00 p.m.	Occidental & Pomona at Pomona
Tue.	Apr. 6	3:00 p.m.	Pasadena College at Caltech
		VARSITY SWIMMING	
Fri.	Apr. 2	4:00 p.m.	San Fernando V. S. at S. F. V. S.
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## Moon Invaded

(Continued from page 3)

last few pictures were somewhat blurred. In this flight, the so-called terminal maneuver was performed, so the pictures will be sharper.

The other first was the spectacular live transmission of the lunar photos. There has been live TV coverage from satellites before, but never from a distant probe. A JPL official commented that this show would probably steal a little of the thunder from the previous day's manned Gemini shot. Indeed, nearly all of the interest and questions at the press conference following impact were concerned with the live TV system.

### Plagued with Failures

Project Ranger was perhaps the most frustrating space effort ever made by the US. The first two flights, tests of the Atlas-Agena with dummy Rangers, failed to get out of their parking orbits. Ranger Three performed its mid-course maneuver wrong, doubling instead of eliminating its trajectory error. Ranger Four hit the backside of the moon. Ranger Five also failed. Ranger Six worked fine until the time came to turn on the cameras. Then came the three great successes highlighted by last Wednesday's feat.

NASA originally envisioned Ranger as a lunar reconnaissance probe. This it was, but in the course of its development JPL invented new camera systems, guidance and control systems, and perfected the midcourse maneuver. The Mariners to Venus and Mars are direct descendants of Project Ranger.

Ranger will be followed by the lunar Orbiter and the Surveyor soft landing vehicle, both to come within the next couple of years.

## Blacker Campus

(Continued from page 3)

For those of you in Blacker who think that nothing will ever surpass the piano-smashing craze, take heed, for the University of Utah is trying. A frosh engineer at Utah recently set a record for the world's longest shower by splashing around in a two-by-four foot shower stall in his dorm for 75 hours and 24 minutes. The shower, aside from getting him fairly clean, wrinkled his skin like a dried prune and he had to be rubbed with vaseline every two hours.

When he finally left his watery refuge, the frosh was greeted by cameras, reporters, a horde of students, and an irate telegram from his parents. Well, Blacker frosh, what are you waiting for?

## Which Came First—the Henry Or the Erg?

BY DROLL DESSINGER

One day on the Bar-69 ranch in Texas a problem arose. A state food committee was conducting an inspection of the state's egg producers, and at the same time was trying to find the highest quality hen eggs in the state.

The owner of the Bar-69 decided that Fatty, the chubby cook, would probably be able to determine which hens' eggs were the best by running an experiment with the workers.

After a few weeks, Fatty came to the conclusion that all of their hens laid equally good eggs. This became famous across Texas as the "chubby chef's hen equality."

## Hodge Maps Collagen

Led by Dr. Alan J. Hodge, professor of biology, four Caltech researchers have recently worked out the structure of the protein molecule collagen. The most abundant protein in the body, collagen reinforces bone, gives resilience to the skin, and acts like strong cable in tendons.

Basically, the molecule is composed of three interwoven helices, two of which appear identical. The two similar helices are composed of five subunits, each of which is believed to contain 210 amino acid building blocks, while the third strand seems to include seven subunits of 150 amino acids each. Glycine, the smallest such compound, accounts for about one third of the total amino acid.

These three left-handed subchains are all wound together in a right-handed "super helix" of 35 turns. Furthermore, hydrogen bonds link the strands together along their entire length. In a whole collagen fiber, individual molecules are offset from their neighbors in an array like a brick wall.

## Eager Beavers

(Continued from page 1)

paid to personalities, recommendations, and interviews; the student with "spark"—as Dr. Peter Miller, associate director of admissions, put it — was sought.

### Rationalizing Results

It is difficult to assess the effects of the new admission procedures, partly because it is impossible to distinguish the effects of eliminating frosh grades from the effects of the new procedures, and partly because many of the differences may appear only in very subjective form. Foster Strong, Dean of Freshmen, did make a tentative evaluation: "I think the freshman this year has more interest; that is, interest in the world around him and in the world here. I think we have fewer worry-warts this year. They are more imaginative . . . I feel that some earlier classes would have taken the no-grade experiment harder. This class has the seeds of developing the kind of alumni we want to have . . ."

When the Admissions Committee prepared a rank list from the applicants for purposes of study after the freshmen were selected last year, it was found that more frosh was selected from lower positions on the list than in previous years. Does this mean that the freshmen are less competent

academically?

Some instructors may feel this to be true to a limited extent but feel it more than compensated for by the increased interest and awareness of the freshmen. As Dean Strong put it, "We're not picking freshmen to succeed as freshmen; we're picking freshmen to succeed as seniors."

### Psychologically Meaningless

Dr. Kenneth Eells, Institute psychologist, noted that most of the changes he observed in frosh were probably due to the elimination of grades. He pointed out that increased emphasis on interviews should give the boy who responds well to a tense, nervous situation an edge. When asked if the psychological tests administered to them had shown any changes in the frosh of the last two years, Eells stated: ". . . They would suggest that differences exist, but it is hard to describe in meaningful terms exactly what they are. I wouldn't want to say whether the changes were for

better or worse."

Admissions procedures for the future have not been changed, except that the spirit of the elimination of the rank list will be upheld. Miller pointed out that this year there have been fewer freshman applicants (for the class of '69) than could be wished, and attributed the drop to two causes: first, the tuition increase, which always has caused a drop in the number of applicants; and second, the fact that the Institute, the only American college to do so, required the College Board Level II math test — a new test last year. The test was only administered once and was not well publicized; thus many potential applicants lost their opportunity.

### No Mistake

No one feels that requiring the test was a mistake, however, since it has correlated "amazingly well, almost perfectly" with Math 1 performance. MIT is following our lead, a bit red-facedly, in requiring the test of its applicants.

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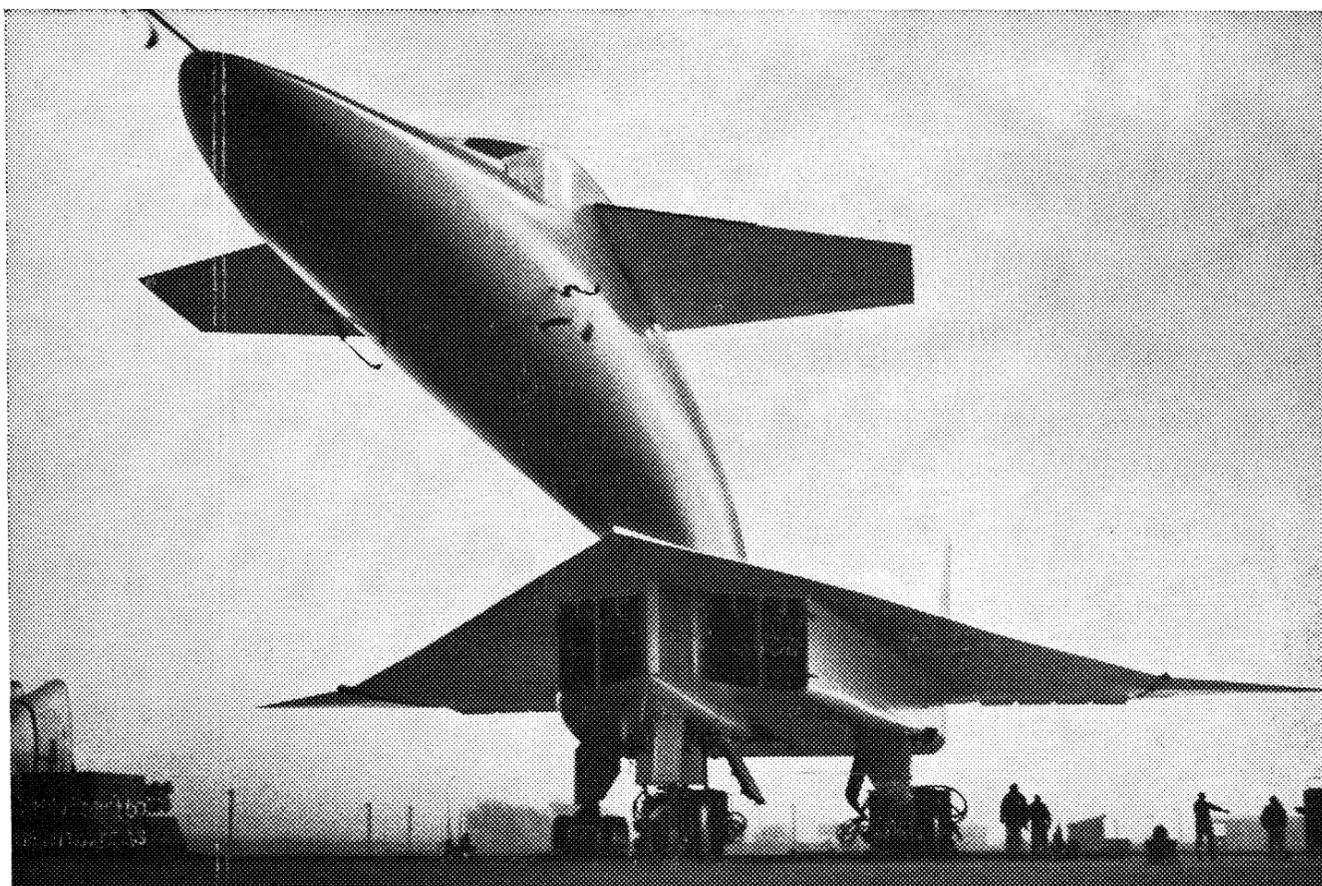
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