

# CALIFORNIA TECH

California Institute of Technology

Volume LIV

Pasadena, California, Friday, January 9, 1953

No. 11

## Egypt to be subject of report by Richard H. Nolte of AUFS

Returning from Near East After Two-Year Stay, Nolte to Address Faculty and Some History Classes

A representative of the American Universities Field Staff will visit the Caltech campus from January 13 to January 21 to report on present-day Egypt. He is Richard H. Nolte, an authority on the Moslem nations, who has recently returned from a stay in Egypt.

### Organization of AUFS

The American Universities Field Staff is an organization set up in 1951 by Caltech and several other colleges to obtain accurate, first-hand information on foreign areas. By sending correspondents to various parts of the world, the AUFS can furnish information to these colleges about current world affairs. Each of these correspondents returns home every two years to report on the area he is studying.

### Speaks on Near East

While he is here, Mr. Nolte will speak to several history classes on aspects of Middle Eastern civilization. He will be a guest for dinner in Blacker, Dabney and Ricketts houses. On January 15, he will address graduate students and faculty at lunch and dinner in the Athenaeum. His topics on this occasion will be "The Anglo-Egyptian Dispute" and "Islam as a Religion."

Mr. Nolte is the first of four AUFS representatives who are to visit Caltech to report in January and February. Others include Lawrence Witt, who will report on Brazil; Richard D. Robinson, from Turkey; and H. Doak Barnett, who has been studying China.

### Distinguished scholar

Mr. Nolte is well-known as an authority on Middle Eastern affairs. He graduated from Yale in 1943 and took his master's degree there in 1947. He was awarded a Rhodes Scholarship and has studied at Oxford University, England.

Dr. David C. Elliot of the Humanities Division is the representative of AUFS at Caltech. He is in charge of all arrangements for receiving the AUFS field men. Dr. DuBridge represents Caltech on the organization's Board of Trustees.

### Program of R. H. Nolte

January 13-21. Subject: Egypt. (Date, time, place and subject in order).

Jan. 13, 8 a.m.—310-D.

Jan. 13, 12 noon—Geology Lab, Lunch and discussion.

January 13, 3 p.m.—206-D, "Islam as a Religion and a way of life and the impact of western civilization upon it."

Jan. 14, 10 a.m.—102-D, "Population problems in the Middle East."

Jan. 14, 11 a.m.—206-D, "Islam as a Religion."

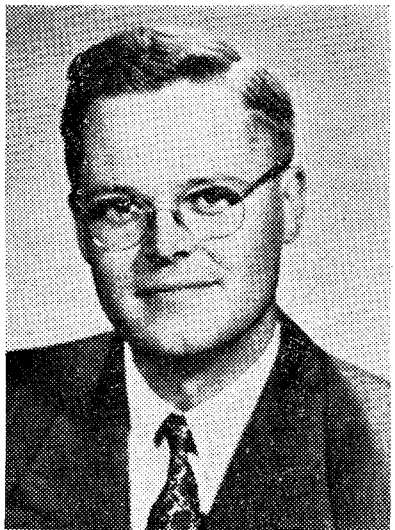
Jan. 14, 6:30 p.m.—Blacker, Dinner and discussion.

## Campus Calendar

**FRIDAY, JAN. 9**  
7:30 Friday Evening Demonstration Lecture, 201 Bridge  
8:45 Frosh Basketball vs. Whittier at Oxy

**SATURDAY, JAN. 10**  
8:45 Varsity Basketball vs. Whittier at P.C.C.

**SUNDAY, JAN. 11**  
8:00 Chamber Music Concert in Dabney Lounge



Richard H. Nolte

## Business, Pleasure joined at Asilomar

Last week 19 men from Tech were privileged to attend the annual YMCA-YWCA conference at Asilomar. The conference was an exciting and fascinating study of sex, religion, politics, sex, social struggles, sports, and sex.

The theme of the conference was "Christian Dynamics in a Shaken World." Upon arrival each delegation was assigned living quarters and given about two weeks' reading in the form of pamphlets and dope sheets. The first night the delegates were acquainted with the programs that would ensue through the rest of the week. Each morning they were privileged to hear Dr. Howard Thurman give one of his "platform" speeches which consisted of ideas and suggestions for the student involved in the modern world.

After the platforms came the morning seminars during which the delegates were divided into nine groups. The topics of the seminars ranged from "Proposals for Peace" to "Steps in Religious Living" and "Courtship and Marriage." Of the 19 delegates from Tech, seven were in the discussion group titled "Specially for Skeptics." This discussion group assumed nothing but attempted merely to show a path for understanding of some of the problems that face the individual in today's religious living.

After the seminars came chapel service. It was usually a quiet service in which the members renewed further their dedication toward God, his existence, and his meaning. Afterwards a period of one hour was dedicated in whatever way the individual so desired. Many students lounged on the beach and tried to conceive a clear understanding of the things that had been presented to them that morning. The ocean itself was seething with unrest and nervousness and, as the preacher put it, "was a great mind laid bare before us."

An air of investigation was the chief aim throughout the convention. Investigation of God, of the area in which we were

(Continued on Page 7)

## Caltech YMCA to co-sponsor art film series with society

### Friday evening lecture series

The Friday evening demonstration lectures for the term promise to be varied and fascinating. This is the time for the well-known "High Volts" and "Liquid Air" demonstrations which many may wish to see again.

### Harrison Brown tonight

Tonight Dr. Harrison Brown will start off the week-end lecture series with "The Age of the Earth," a problem which has always been of first importance to geologists. Specializing in radio chemistry and chemistry in geology, Prof. Brown came to Tech just a little over a year ago. He will include radioactive dating as an important part of his program this evening.

Next Friday Dr. Lindvall, Division Chairman for Engineering, will take over with "The Universities and Industries of Italy." On January 23, Prof. L. Davis will give a demonstration of those remarkable instruments which are used in our modern world in so many ways—"Gyroscopes." Then on January 30 Prof. R. W. Sorensen will deliver "High Voltage" with the accompanying fireworks in the High Volts Lab.

### Guided tours of campus continuing this term

Guided tours of Caltech were resumed on Tuesday, January 6, it was announced by Chuck Benjamin, head of the student guide service.

The tours will be held on Mondays, Thursdays and Saturdays at 11 am and on Mondays through Fridays at 3 pm, originating in the YMCA Lounge in Dabney Hall. Arrangements for groups may be made through the Institute News Bureau, SYcamore 6-7121, extension 204.

## Moon, Mars, Jupiter subject of new pix by Palomar scope

Public interest in the neighboring planets of our solar system has been so great that astronomers at Palomar broke down and took some pictures which were released for the first time last month in National Geographic. By now they have appeared in practically every magazine and newspaper in the country.

Although these photographs are far from the best that the 200-inch eye is capable of producing, they are the best of the planets that have been obtained so far. They were released because it may be years before the atmospheric conditions and the positions of the planets are right for really clear sharp plates.

As a matter of fact excellent

### Committee of seven to offer top foreign and American movies starting Jan. 12

Martin Karplus, chairman of the Film Art Society, has announced that the Caltech YMCA will co-sponsor the society's film series for the rest of the academic year. The series, inaugurated by Karplus and his associates, will become a feature of the YMCA program. The change is expected to assure the continuation of the project and to provide an opportunity for more students to help choose the film programs in the future.

### Y sex lectures to come soon this year

The Caltech YMCA is sponsoring a series of lectures on sexual problems. Now is the opportunity for each and every Techman to learn "the facts of life." Coincidentally, this is the subject of the first lecture. The second is titled "Sexual and Social Aspects on the Techniques Involved in Dating." The third is titled, "Picking a Date."

Come men, let us no longer be known as an "out of it" bunch of self-centered egoistic dead-heads. In a very short number of days you will see signs and posters picturing these great forums as presented by practicing clinical psychologists. Regard these posters well for they carry the true clue. They tell the story—and the dates.

Don't miss these discussions. You can't help but benefit from them.

### Notice!

All students interested in working part-time the second term must fill out a new application card in the Placement Office. All applications filed the first term are being retired.

Last term the society operated on a \$375 budget. About 150 people purchased tickets. Most of these were graduate students and faculty members.

### Six on film committee

Working on the film committee with Karplus, a graduate student in chemistry, will be Al Mishaan, Ken Lunan and Al Helgesson, Blacker; Dick Jaffe, Dabney; Mike Boughton, Fleming, and Tom Bergeman, Ricketts.

### First showing January 12

Karplus also announced the films to be shown this term. Showings are on alternate Monday nights in Culbertson. A German spy picture, "The Loves of Jeanne Ney," will be shown January 12. "The Lower Depths," a French film, is scheduled for January 26, and two films by the French director Jean Vigo are to be shown February 9.

On February 23, the feature is "Our Daily Bread," an American picture directed by King Vidor. The last film of the term, to be shown March 9, will be a comedy, "The Italian Straw Hat." Each of these films is accompanied by one or more short subjects.

### How to join

Membership cards for the Film Art Society are available in the Y office and from film committee members. A bulletin with complete descriptions of all scheduled films can also be obtained in the Y office. Because only non-commercial showings are permitted for the films, no tickets can be sold for single showings. Membership cards are the only means of admission.

## Interview Schedule

As a service to all those who are arranging for interviews in the next six months, the California Tech will attempt to publish the schedule every week. It will be ahead of the issue date at all times if possible. Since these schedules are not being doled out at the Placement Office, some may find it convenient to cut them out as reminders.

MON., JAN. 12—BS/ACh, ME. Ray-onier, Incorporated.

MON., JAN. 12—Food Machinery and Chemical Corporation. Group meeting, 4:15 p.m., 109 Mudd. Film to be shown.

TUES., JAN. 13—BS, MS, PhD/ME, ChE, Ch. Interviews. Food Machinery and Chemical Corporation, San Jose, Calif.

TUES., JAN. 13—BS up/Ae, EE, ME, Ma, Ph. Aro, Inc., Tullahoma, Tenn. MS degree for Research and Development; PhD degree—field of Aerodynamics.

TUES., JAN. 13 and WED., JAN. 13—All degrees and options. Standard Oil of California.

THURS., JAN. 15 and FRI., JAN. 16—BS up/ME, EE; MS up/Ae, ChE, Ph, Ch, ME (Metallurgy). Minneapolis-Honeywell Regulator Co.

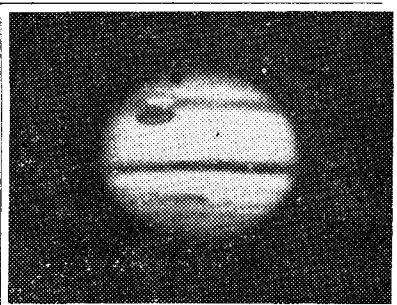
THURS., JAN. 15 and FRI., JAN. 16—BS up/Ae, ME, Ph. Pratt & Whitney Aircraft, East Hartford, Conn.

FRI., JAN. 16—BS up/CE. U.S. Bureau of Public Roads. Openings for Jr/CEs with a real interest in highway work.

MON., JAN. 19—Westinghouse Electric Corp. Group meeting, 4:15 p.m., 109 Mudd.

MON., JAN. 19 and TUES., JAN. 20—BS, MS, PhD/Ae, ME, CE, EE; MS, PhD/Ph, Ma. Chance Vought Aircraft (Division of United Aircraft Corp.), Dallas, Texas.

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Jupiter

pictures of the moon and planets have been obtained earlier with much smaller telescopes. Since atmospheric conditions are ideal only a few nights in every year and the Hale Telescope was built to search hither to unknown space, it is quite

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### What a stinking paper this is

Most people when they read a newspaper don't realize what really goes into the production of it. Perhaps they think of all the writing that must be done just to make a few news stories. But there is much more; journalists don't go into the business and people don't work for the California Tech just because they like to write. It is the experience that precedes the story that is really interesting. Reporters are the first ones to experience the news, they meet interesting people and see interesting things.

Even on a rather insignificant weekly such as the California Tech, the reporters do interesting things. A reporter was once asked to find out what all that construction was behind the physics building and found that investigating the story led to interviews with Drs. Neher, Leighton, Cowan, Anderson, and Millikan. Every time a new play opens at the Pasadena Playhouse, the California Tech receives a pair of complimentary

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### Secretary's report . . .

#### Institutors

The house chairman of the temporarily inactive Institutors will within the next few weeks hold a meeting of all Institutors for the purposes of reorganizing the club and of electing a new president. The chairman in your house will announce the meeting.

#### What they do:

For those who are new to Tech this year, it might be mentioned that Institutor activities include the following:

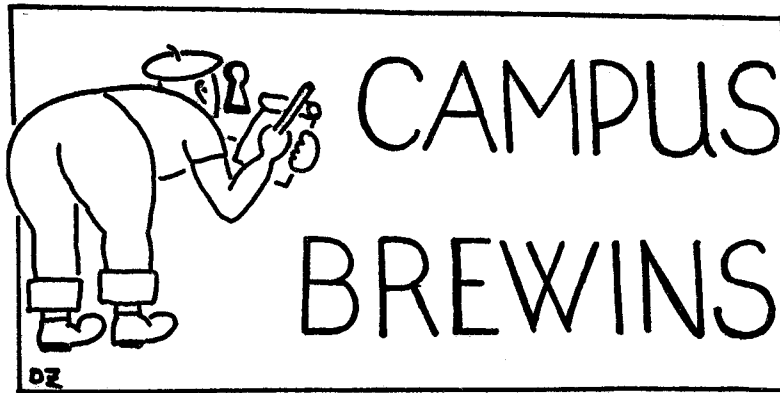
- decorating for ASCIT dances
- painting signs for campus activities
- advertising weekly assembly programs
- assisting at track meets as officials

#### Elections

ASCIT elections are held this term. Anyone who thinks he might like to run for an office should take note of the following schedule and make plans sufficiently early.

- Feb. 12—Nominations
- Feb. 19—Nominations close
- Feb. 23-26—Active campaigning
- Feb. 26—Elections

George Johnston,



Da com on more under  
mist hleothisum  
Grendel gongan. Godes  
yrrre baer.

—From "Beowulf"

#### Requiem

We will now bow, our heads in silence for a few moments in fond memory of those so recently departed from the beloved halls of Ricketts. (Indian runners have not yet brought lists of the dear departed from the other Houses). The following have gone to their reward by shuffling off this mortal coil and leaving this vale of tears:

- Dick Millard (Sob)
- Bill Parker (Sob)
- Shel Kaganoff (Sob)
- Larry Schwartz (Sob)
- Kay Hoke (Sob)
- Van Conway (Sob)

and  
Kim Hamburger  
(Double Sob)—

Kim had the misfortune of getting married, not flunking!

#### Hello, down there!

To these good men, we can only say: Requiescat in Pace.

To Bill Gardner goes the term's first stellite jock. This eager engineer, ever conscious of the value of time, poured several quarts of oil into the engine of Bob Easton's car, on

which the two were working. He was mildly startled by a strange black face peering out from under the car and gurgling, "If you're trying to feed me, I prefer SAE 20, and if you're trying to put it into the engine, wait until I get the pan back on!"

#### Jet ace

Over the vacation, daring, fearless Chuck Benjamin tried to put Al Pitton's Studebaker through the sonic barrier, and while whistling along at 25 he managed to amaze spectators by a spectacular ground loop.

A rather comical anticlimax occurred when Pitton was leaving a local Studebaker agency after getting a repair estimate, and was forthwith struck in the rear by one of the agency's courtesy cars. Some people just don't live right.

Several Flemingites, notably Ed Gehle, Ken Kastella, and Ray Grieser, have not yet recovered sufficiently from New Year's to return to fair Pasadena. The Beak fears that members of the opposite (perish the thought!) sex may be keeping them from their beloved books and beans.

#### Any wagers?

A rather confused story regarding an occupied bed in the bottom of a swimming pool during a New Year's party at Smitty's house is going around. But this is still not as ridiculous as Rod Supple's resolution, he claims he is off sex in 1953. Bets

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#### "LEAVE IT—"

#### "WE DO IT."

8 a.m. to 6:30 p.m.

Sat. 8 a.m. to 6:30 p.m.

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**California Tech**

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**THE SPACE  
BEAVER**

By WALT LEE

**Beyond—New Fantasy Mag**

H. L. Gold, editor of **Galaxy Science Fiction**, has announced that a fantasy magazine is soon to be published as a sister publication to **Galaxy**. The new magazine will be published bi-monthly, be digest-size, have 160 pages, and sell for 35 cents. **Beyond** is to be the title of Gold's new magazine. **Beyond** will be on the stands either late April or early May, 1953.

Although the general format will be similar to **Galaxy**, the cover design will not. The editor wants "pure fantasy" stories of the "wishful" type. He does not want the weird-horror type of story. We might well imagine that a good example would be his own story, "None but Lucifer," co-authored by L. Sprague de Camp in the September, 1939, **Unknown**.

It

A review of the SF fan magazine **It** appears in the latest **Startling** now on sale. **It** features a story by Ray Bradbury. See **Startling Stories**, February, 1953, on page 143. Copies may be obtained in room 36, Blacker.

**Paramount**

Robert Louis Stevenson's **Lenningen Versus the Ants** has been bought by Paramount studios. The movie is to be made by George Pal. The script will be written by Philip Yordant. Stevenson wrote it in the latter part of the nineteenth century.

**Fantasy**

There seems to be a trend of magazines coming out to imitate the old **Unknown**. If they're reasonably good imitations, this will be great; but I have my doubts. Lester del Rey's **Fantasy** is to be patterned after **Unknown** as seen by editor del Rey. His **Rocket Stories** has been post-

*(Continued on Page 3)*

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# SEC'S AT TECH

by Bernie Schweitzer and Tom Taussig

Happy New Year, fellow sufferers, and may your days be brightened by such creatures as the one smiling at you from the right.

Her name is Patricia Ann Murphey, though she answers only to "Pat." Born in Birmingham, Alabama, Pat and family wandered through Texas, Louisiana, Arkansas and Alabama, before reaching California. This last was accomplished 13 years ago, when Pat was five years old (mathematicians take note).

By the time she got to McKinley Junior High, Pat was a native California. At present, Pat attends PCC in the mornings, working at Tech from 1 to 5 in the afternoon, Monday through Friday.

As to her work here, Miss Murphey is officially a clerk-typist in the Graduate Office. Her main job is transcribing whatever accumulates during the day on the office dictaphone. In addition, she types the usual letters and forms, and, being located nearest the door, Pat is often called upon to do a little footwork on the side.

Pat worked at Tech this summer, and from February to September she will be here on a full-time basis. After September she will go back to the present part-time arrangement.

Pat's outside activities are va-



ried. Whenever the weather permits, which is usually every Sunday, she takes off for Little Corona beach. She likes to dance, and when the snow is available she likes nothing better than a toboggan ride.

At PCC, where she is taking a business course, Pat is vice-president of PAM. Just before coming to Tech, Pat was a secretary in the main office of the Huntington Hospital.

When asked what she thought of the guys here at Tech, Pat replied, "Well, they're studious." She also remarked that the Interhouse dance, which she was at, even when compared to any other social she had ever seen, "was the tops, just fabulous."

## GRAD CRIER

by Elihu Goldish

Chap named Carlyle has observed that "the true university is a collection of books." For grad students especially, books are a sine qua non. It is therefore to be regretted that the campus bookstore so frequently proves inadequate as a source of technical books.

### Strange Interlude

The runaround usually proceeds along the following lines:  
I: Do you have (here I name a well-known reference work or text, perhaps suggested in course work)?

Salesperson: No, but if you'll leave your name, we'll order it for you.

I: How long will it take?

She: A week or ten days.

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## Radio-stars located by Wil-Pal astronomers

Three new sources of "radio noise" from outer space have been identified photographically by the Mt. Wilson Palomar telescopes after their presence was detected by astronomy's newest tool, the radio telescope.

### Big crack up

Two of the sources, Cassiopeia A and Puppis A, appear to be turbulent gas clouds in the Milky Way, and the third, Cygnus A, the scene of a collision



"I should go home to the little woman - but I love these Old-Fashioneds with plenty of Angostura\*\*"

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\*P.S. Without Angostura to marry the flavors, it's not an Old-Fashioned - and that's true of many another cocktail, too! Angostura is the dash you put in - to make the flavor come out!

on a scale so gargantuan that it could occur only beyond the borders of our own galaxy and out in space. These identifications were made by Drs. Walter Baade and Rudolph L. Minkowski, staff members of the observatories, who are working in close co-operation with active radio research centers in Australia and England.

### Radio receiver

Briefly, radio astronomy has emerged with the development of microwave and VHF receiving equipment which is used to detect radiation from space in the radio spectrum which is not detectable by using optical instruments.

Such radiations were first discovered originating in the Milky Way and later in our sun. But astronomers realized the importance of identifying other radio sources with known objects in the cosmos by optical correlation by radio astronomy.

### Diameters checked

Although the Crab Nebula and a few other radio sources were identified before the last war, the two strongest emitters just found had not been located. Drs. Baade and Minkowski set out to find them, knowing their approximate locations, supplied them by radio astronomers in England and Australia.

### Noisy cloud

Cassiopeia A coincides with the center of a remarkable emis-

(Continued on Page 7)

## SPACE BEAVER

(Continued from Page 2)

poned again. I wish they'd postpone it permanently—there are about twenty-five too many science fiction pulps on the market now.

### News Notes

Wyman Guin, author of *Galaxy's* "Beyond Bedlam," also wrote "Trigger Tide" in the October, 1950, *Astounding*, using the pen name Norman Menasco.

The sequel to Sam Merwin's *House of Many Worlds* has been purchased for *Thrilling Wonder Stories* by Sam Mines.

*Galaxy's* second new type photo cover will appear on the March, 1953, issue illustrating Gold's own *The Old Die Rich*.

*New Tales of Space and Time* is a pocket sized anthology of new stories edited by Raymond J. Healy. It's worth getting.

There are rumors that there is to be a new SF magazine published with more stress on science than any other magazine in the field today.

Ray Bradbury is to do an article for *The Nation* on science fiction.

*Punch*, the famous British humorous weekly, came out with a Christmas Almanac issue which has a section on space travel; there are some fine colored items and some cartoons.

*The Saturday Evening Post* has bought another Bradbury story and *Esquire* has bought two.

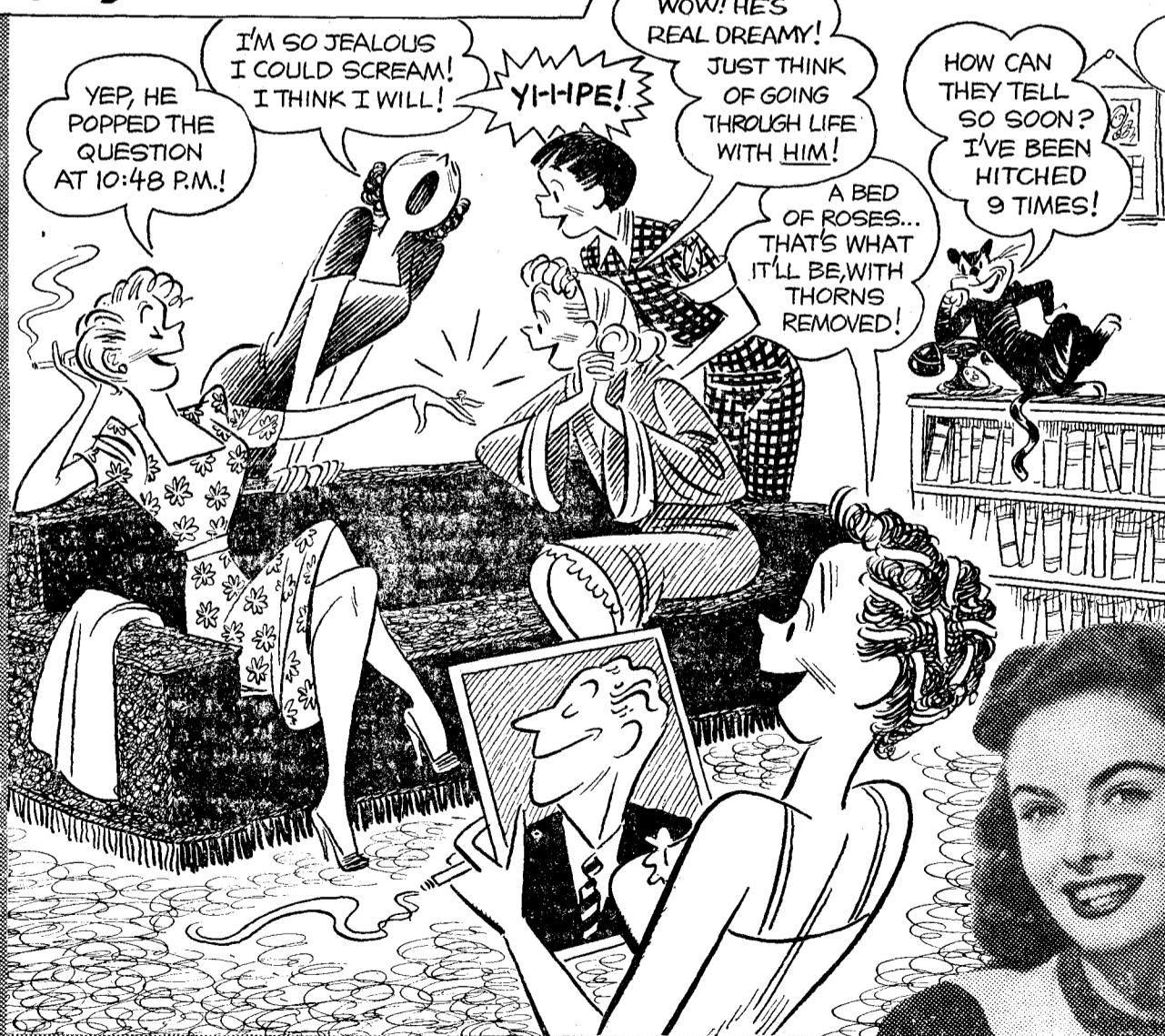
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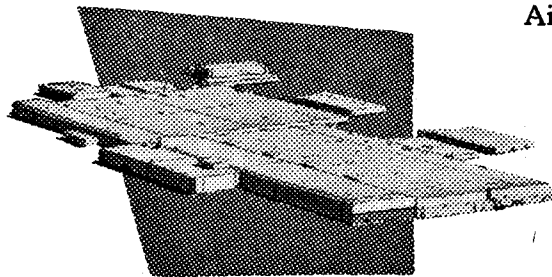
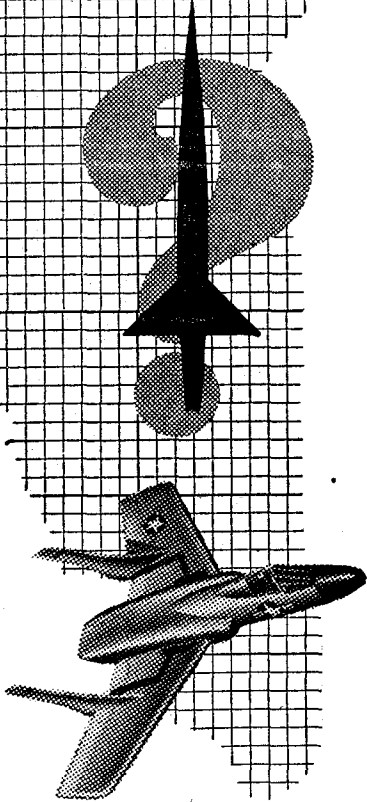
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# Your Future as a Chance Vought...



G. H. ORGELMAN, Engineering Personnel Representative, Chance Vought Aircraft, will interview graduates of the class of '53 in the Placement Office, JAN. 19th, 20th. Mr. Orgelman is looking forward to the opportunity of discussing with you...

# engineer



Chance Vought Aircraft, a designer and builder of military aircraft for 35 years, offers the graduating engineer and scientist an opportunity to join in the design and manufacture of fighter aircraft and guided missiles.

The design of fighter aircraft is constantly being improved as new materials and more powerful engines become available. Guided missile design is in the pioneering stage and progress up to this point, in our opinion, can be compared to the period of development of piloted aircraft prior to World War I. Imaginative thinking as well as sound engineering is an important part of these programs. The young engineer through his creative thinking can rapidly assume a position of engineering responsibility in the Chance Vought organization.

Almost every type of academic specialization can be utilized in some phase of the design, development and test of a jet fighter or guided missile. Technical assignments are available in the design and analysis of specialized electronic components, structural and hydraulic testing, structural and mechanical design, applied aerodynamics, power plant analysis and testing, stress and vibration analysis and flight testing.

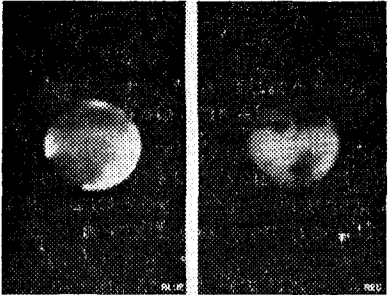
If you are receiving a degree in Aeronautical Engineering, Mechanical Engineering, Civil Engineering, Electrical Engineering, Mathematics or Physics, Chance Vought invites you to discuss your future in these fighter aircraft and guided missile programs. Contact your Placement Director for an appointment with the Chance Vought Aircraft representative.

## CHANCE VOUGHT AIRCRAFT

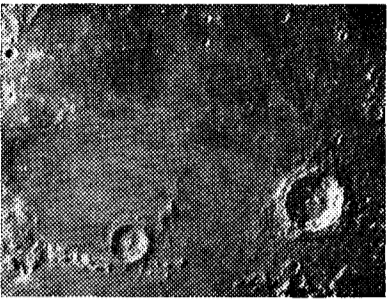


Dallas, Texas

D I V I S I O N   O F   U N I T E D   A I R C R A F T   C O R P O R A T I O N



Mars



Moon

**MOON, MARS, JUPITER**  
(Continued from Page 1)

understandable why the astronomers don't wish to squander those precious nights on objects so close to us.

The left photograph of Mars was taken with a plate especially sensitive to blue light. It shows the variable atmospheric conditions and clouds or haze in the atmosphere of Mars. In the upper portion of the planet and at its lower left the haze is thin. At the top and bottom are the polar caps, which appear in the fall season of Mars and disappear in the spring.

The right photograph was taken through a red filter on a red-sensitive plate 30 minutes before the blue-light photo was made. This shows the permanent surface features of Mars. The large dark areas were

mapped by the earliest visual observers and are well known.

The photo taken in red light shows the surface features because red light penetrates atmospheres (Earth's as well as Mars') while blue light is scattered by small particles in the atmosphere. Most of the blue component of the sunlight illuminating Mars is scattered in its atmosphere before reaching Mars' surface. The red component penetrates that atmosphere, reaches the surface and is reflected back through the atmosphere, showing the surface details. If thin clouds or haze are present they will be best shown by the plates taken in blue light. The photo in red light appears in the January issue of National Geographic Magazine.

Shown in the picture of the moon is a flat region covered with many small craters. The large crater at lower right is Copernicus, one of the best known features of the moon.

None of the markings of Jupiter are permanent, indicating that they are atmospheric in character. The belts running parallel to Jupiter's equator change their shape and position from week to week and month to month. One of the less tran-

(Continued on Page 7)

**WHAT A STINKING PAPER**  
(Continued from Page 2)

tickets. Up till now these tickets have only been waiting for somebody who would see the play and write about his opinions in a short article. Everybody, when they see a play or movie knows whether he liked it or not and usually he knows why, but most people never have a chance to let everybody else know what they think. Besides these tickets to the Playhouse that we get, are tickets to movies and concerts, and copies of books which we can get just for the promise of a review.

This term Fred Hoyle, the English cosmologist who has propounded a revolutionary new theory, is at Tech and the paper is going to have an interview with him. Interesting personalities continually pass through the Institute and many are here permanently and anyone could walk up to them for a conversation just by saying they are from the student newspaper.

A lot of people think that it would be fun working for a newspaper but feel that they couldn't even write the first word of the story. These people are usually just the ones who complain most when they read a badly written article.

These are the ones who when they decide to try their hands at newspaper work end up on the copy staff. When they read a story they know what stinks and what doesn't and they know just how to deodorize a story with a few well-placed words. Sometimes a story is poor just because it didn't follow some of the rules and regulations set down in the newspaper's manual of style and all that is needed is a quick check with the rules.

A lot of people, the editors of the paper especially, often think, "nothing ever happens around here." And that is probably true, so features and columns are used to make the paper really interesting. When a person writes a feature he writes about something that interests him and is new to most people. He generally writes in a style that is easiest for him and doesn't worry too much about the conventional rules of journalistic writing or the more finicky rules of literature. The columnist writes even more as he pleases. What he writes about may not be news to anybody and is usually interesting only for the ideas.

These features and columns often form a major part of a weekly paper and so the California Tech tries to run quite a few; but not many people seem interested in writing about what interests them. As we mentioned before, theater tickets come into the Tech office all the time and many theaters will send tickets for a review. So the California Tech has plenty of room for creative writing although it won't print fiction (that's for Pendulum). Caltech men are interested in hundreds of things and every likes to criticize, so we should have plenty of movie reviews, music columns, bridge columns, ad infinitum, but we don't. Most potential writers probably don't realize that such a column would not have to be weekly (there are few people who would read a column on, say art, every week).

Now and then it happens that an article written for the paper could be used for an English theme in the frosh or junior English courses and usually such articles can be handed in for credit if there is an arrangement made with the instructor and conversely, English themes can be handed in to the paper if they are suitable.

Besides all the need for writers of various sorts we also are looking for editors both present and potential. The Tech now has no real feature editor or copy chief and next month there is going to be an election at which a new editor is going to be chosen. These new editors should be sophomores or juniors and actual journalistic experience is not really necessary since the necessary knowledge can be gained in just a few hours in the Tech office.

Anyone who feels that this article has persuaded them to work for the California Tech can either come down to the office on Monday night or better, see Ron Ratney in room 36 Ricketts or Jim Crosby in 34 Blacker.

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Joan E. Hatch  
Cornell University

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Genevieve Ortaggio  
Northwestern University

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It's easier than you think to make \$25 by writing a Lucky Strike jingle like those you see in this ad. Yes, we need jingles—and we pay \$25 for every one we use! So send as many as you like to: Happy-Go-Lucky, P.O. Box 67, New York 46, N.Y.

*The shipwrecked sailor on the isle Stays happy as can be— Though no one's there, he wears a smile 'Cause L.S./M.F.T.*  
Arnold Hoffman & Joe Harnett  
University of Richmond



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**GRAD CRIER**

(Continued from Page 3)  
(These salespeople are always optimists).

I (bracing myself): What's the price?

She tells me.

I (wincing): Well, never mind. I stagger out. Higher finance

always leaves me dizzy).

**I'm gonna sit right down**

Now I'll tell you what I do (after recovering). I go to my office, dig up the publisher's address, and order the book directly from him. While I'm at it, I also request the 15 per cent academic discount offered by most

publishers. In a week or two, I get my book at somewhat less than bookstore prices. Even better savings can be effected in the case of imported books by writing to an English bookseller (devaluation of the pound, don't y' know).

Carslaw's **Fourier Series and**

**Integrals**, one of the excellent Dover reprints of famous works, was sold out and not reordered for stock despite the evident popularity of this series. This latter failure to keep in stock books which are good sellers is a monumental example of short-sighted business practice.

There's no denying that it would be impossible for a small bookstore to carry in stock several copies of every scientific text. But certain books in every field are standard year-after-year "best-sellers." These are  
(Continued on Page 8)

# PICTURE QUIZ

Answers at bottom of page



**1. Two gallons of today's gasoline do the work of three gallons of 1925 gasoline. On the average, how does the price of today's regular grade gasoline compare with the price of regular grade gasoline of 1925 (excluding state and federal gasoline taxes)?**

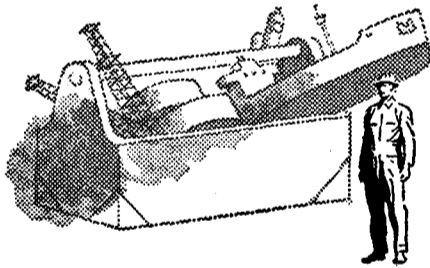
Check one:

- The same       15% greater       50% greater

**2. In 1951 Union Oil made a total net profit of \$27,295,971. Of this, \$15,851,712 was plowed back into the business to meet the expanding needs of our customers. \$11,444,259 was paid out in dividends to our shareowners. What did these dividend payments average per common shareowner?**

Check one:

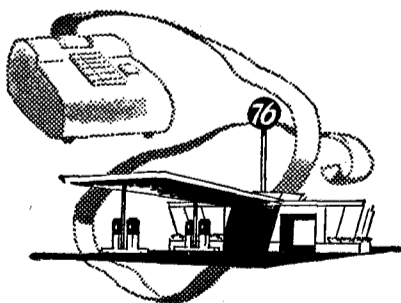
- \$285  
 \$5,276  
 \$10,560



**3. How much investment in "tools" does it require to provide an average job at Union Oil Company?**

Check one:

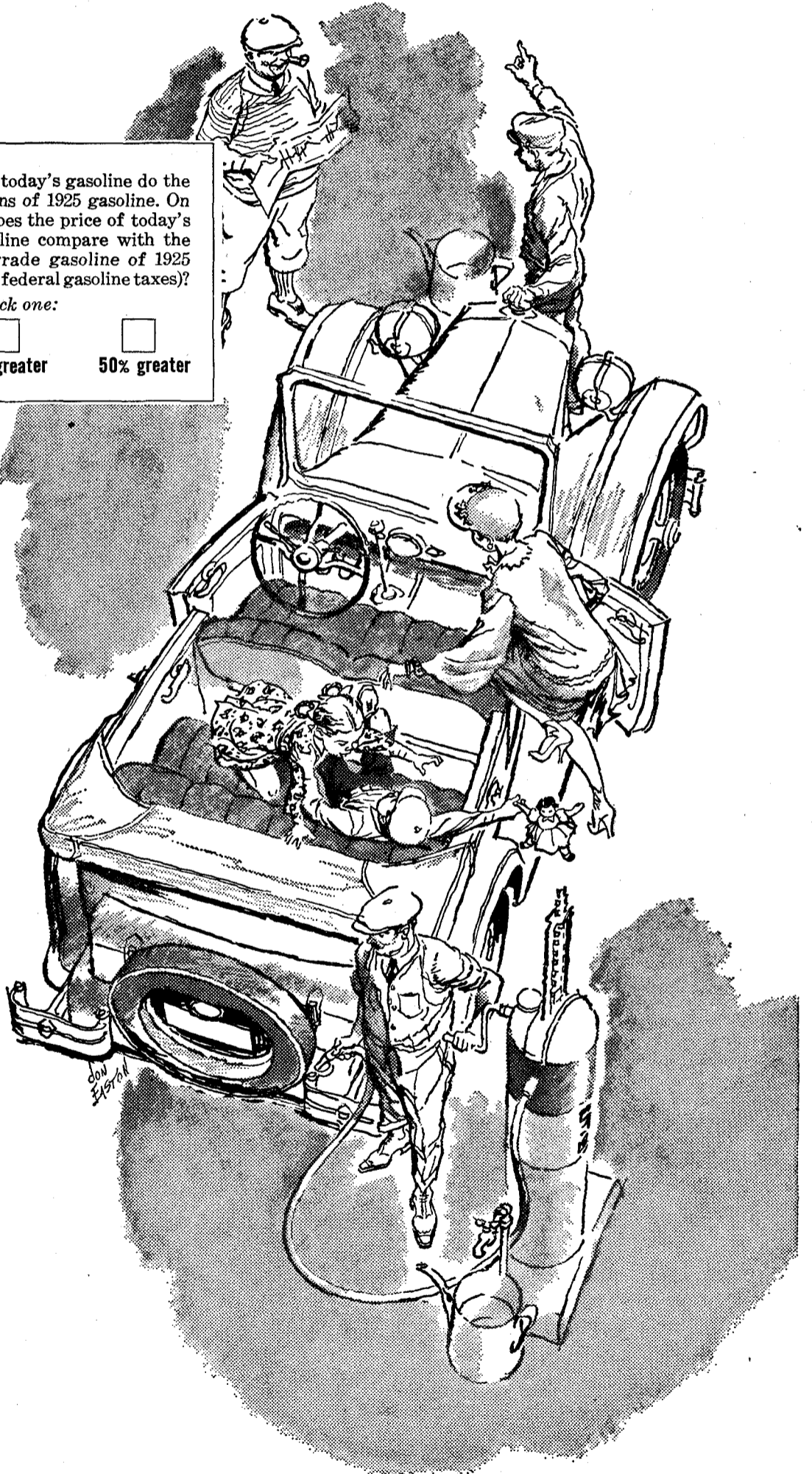
- \$755  
 \$3,100  
 \$70,920



**4. In 1910, Union Oil did an annual volume of \$12 million. This represented 23% of the total oil business in the West. Today we do an annual volume of over \$275 million. What percentage of the total oil business in the West do we have today?**

Check one:

- 31%  
 13%  
 23%



**Answers:**

**1.** The same. The reason: Under our American profit and loss system, U. S. oil companies have the *incentive* to compete for your business. Because of this constant *incentive* they spend millions of dollars every year on research and development to put out the best possible gasoline at the lowest possible price.

**2.** \$285 per shareowner. \$11,444,259 is a lot of money but it was divided among the 40,093 share-

**3.** \$70,920. That's why in most industries today you have to pool the money of a lot of people under legal agreements known as corporations. Very few *individuals* could finance the "tools" required by heavy industry.

**4.** 13%. We do over 22 times our 1910 volume. But we have a smaller percentage of the total business—mainly because the oil industry is far more *competitive*. There are many more oil companies competing for the business today than

**UNION OIL COMPANY OF CALIFORNIA**

INCORPORATED IN CALIFORNIA, OCTOBER 17, 1890

This series, sponsored by the people of Union Oil Company, is dedicated to a discussion of how and why American business functions. We hope you'll feel free to send in any suggestions or criticisms you have to offer. Write: The President, Union Oil Company, Union Oil Building, Los Angeles 17, California.

## Guggenheim gives jet fellowships

The Guggenheim Foundation will grant a total of \$36,000 for 1953 Guggenheim Jet Propulsion Fellowships for graduate study in rocket and jet propulsion engineering at Caltech and Princeton.

### Three-fold purpose

The Guggenheim Jet Propulsion Centers were established at these two locations in 1948 with a three-fold purpose in mind. They train leaders of the future in rocket and jet propulsion technology, promote research and advanced thinking on these subjects, and serve as centers of leadership in the development of peace-time commercial and scientific uses of rockets and jet propulsion.

The sum of \$18,000 is available for fellowships at each school, and a total of 18 to 24 grants will be awarded to qualified ap-

plicants. Each grant provides an allowance for living expenses, and the university provides for tuition.

Since 1948, 37 Guggenheim Jet Propulsion Fellows have been appointed—18 at Princeton and 19 at Caltech. Fifteen Fellows appointed in May, 1952, are currently taking their training at the two institutions. Of the other Fellows, some are continuing their studies, others are employed in jet propulsion research, atomic research, education, aeronautics, and heavy manufacturing; and three are serving with the armed forces.

### Application requirements

Candidates for Daniel and Florence Guggenheim Jet Propulsion Fellowships must be residents of the United States; must have outstanding technical ability and leadership qualities, deep interest in the development of rockets and jet propulsion, and an intention to follow this field as a career; and must be suitably prepared for graduate study in this field.

## BUSINESS, PLEASURE

(Continued from Page 1)

staying, and of the general feeling of satisfaction and contentment.

Every day a student from a foreign land would lead grace, said in his native tongue. It, in itself, was a broadening experience. After that, everyone was dismissed to his committee group. Each person was assigned to a committee and these groups did most of the administrative work around the camp. There was the Choir Committee, the Newscast Committee, the Worship Committee, and many more.

After the committee hour came a recreation period during which the delegates played volleyball, football, or whatever their favorite sport should be. Bob Osgood of television fame led some of the more social-minded members in many and varied square dances.

The swap shops then started and fulfilled exactly what their name implied. Information was traded about on political developments, developments in psychology, and other related discussions. Of course the famous and needed bull session also came into existence and many a Tech man sincerely regretted a statement he had made earlier in jest—now he had to explain it.

At the evening forums questions asked by the delegates were answered by a panel of distinguished men in a certain profession. There were psychologists who attempted to give the delegates an appreciation of life and marriage and a political group who attempted to answer some of the political questions put forward by the last elections. Afterwards came the social dancing and many a delegate never saw his door until about three the next morning.

New Year's Eve was typical of the conference. There was no loud yelling or boisterous abuse of the sacred atmosphere but instead the event was greeted with ten minutes of silence and

## BREWINS

(Continued from Page 2)

placed on Mr. Supple's default are considered almost as sure winners as those on Bert Norvell's failure to make a 3.5 this term.

We wish to commend the vigorous crusade currently being carried on in Ricketts against spinning plates. Ricketteers, tired of taking flying grabs at their lima beans as they flashed by at a tremendous omega, are annihilating the fiendish devices. Both at lunch and at dinner, men and women have smashed the flying discs to the ground with debonaire sweeps.

### Mudeo

Monday last self-styled frosh strategist Dave Cantor's master plan to seize the brake drum at any given instant that it may be brought out was put to the test. The sophs rang the drum n times longer than required, but were forced to report that the Master Plan, and along with it dreams of freshman conquest, fizzled out in a manner even damper than the weather. In the spirit of *noblesse oblige*, the sophs brought out the drum again half an hour later, and after a muddy battle, again made off with it.

Ralph Miles and Bob Hanvey, Asilomarepresentatives extraordinary from Caltech, were lucky in finding a couple of girls, one of whom had a car that they all drove back in. Laest word hath it that Miles is pinned, and Hanvey has that dreamy-eyed stare.

meditation in the chapel after which a communion service followed for those who wished to take part.

## STANDARD OIL COMPANY OF CALIFORNIA

Representatives of STANDARD OIL COMPANY OF CALIFORNIA will be on the campus January 13 and 14 to interview men interested in employment opportunities with STANDARD OIL COMPANY OF CALIFORNIA and its subsidiaries. Further information is available in the Placement Office.

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## RADIO STARS

(Continued from Page 3)

sion nebula, or galactic gas cloud. This is not just a quiet cloud suspended motionless in space, as are most of the galactic nebulae. It contains many filaments having highly random motions, at speeds of about 31 miles per second, and the filaments themselves apparently are in a high state of internal turmoil.

### Won't blow top

Spectrographic evidence secured by Dr. Minkowski indicates that the velocities of atoms within one filament vary over a range of roughly 3,000 km. per second. There is no evidence, however, to show that the nebula as a whole is blowing up. Hence, he says, the pattern of this peculiar nebula is almost the opposite of a supernova, or exploding star, in that the nebula formed by a supernova expands rapidly while the random motions within that nebula are minor.

The optical diameter of the emission nebula coinciding with Cassiopeia A is roughly 5.4 minutes of arc. While this is about one-sixth of the moon's diameter, the Cassiopeia A nebula is at an enormously greater, though undetermined, distance from us than the moon and consequent-

(Continued on Page 8)

## From brine to dine committee project

President L. A. DuBridge has been named as one of nine advisers to aid the Department of the Interior in a research program designed to discover an economical method of converting sea water into fresh water.

### Private research

This program calls for government-industry cooperation, and the actual research will be handled by private organizations on a contract basis. The appointment of the nine-man advisory committee is a preliminary step in getting work started on a five-year, \$2,000,000 job.

### Committee members

Other members of the advisory committee include Robert G. Sproul, president of the University of California; J. J. Cronin, vice-president of General Motors Corp.; Louis Koenig, director of research at the Southwest Research Institute in San Antonio, Texas; Henry J. Schmitt, editor and publisher of the Aberdeen (S.D.) American-News; George D. Humphrey, president of the University of Wyoming; Sheppard P. Powell, Baltimore consulting engineer; and Frederick L. Hovde, president of Purdue University.

## MOON, MARS, JUPITER

(Continued from Page 5)

sient features is the dark "red spot" shaped like an eye which was shown on drawings made about a century ago. It moves about slowly as if floating in the atmosphere and has disappeared and reappeared a number of times since then. No explanation for the spot has yet been established.

The small bright spot outside side Jupiter is Ganymede, one of the four Jovian satellites discovered by Galileo and one of the 12 known today. Ganymede is larger than the planet Mercury. When this photo was taken the sun—which was to the right of Jupiter—cast Ganymede's shadow on the planet above and to the right of the "red spot."

# MASTER OF SCIENCE DEGREES

## Hughes cooperative plan for

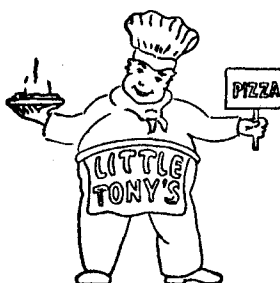
- Purpose** TO ASSIST outstanding graduates in obtaining their Master of Science Degrees while employed in industry and making significant contributions to important military work.
- Eligibility** June 1953 college graduates and members of the armed services being honorably discharged prior to September, 1953, holding degrees in the following fields:  
ELECTRICAL ENGINEERING  
PHYSICS  
MECHANICAL ENGINEERING  
Those chosen to participate in this plan will be from the upper portion of their graduating classes and will have evidenced outstanding ability. They must also have displayed some degree of creative ability and possess personality traits enabling them to work well with others.
- Citizenship** Applicants must be United States citizens, and awards will be contingent upon obtaining appropriate security clearance, as work at the Hughes Research and Development Laboratories may be related to National Defense projects.
- Universities** Candidates for Master of Science Degrees must meet the entrance requirements for advanced study at the University of California at Los Angeles or the University of Southern California.
- Program** Under this Cooperative Plan, commencing June 1953, participants will follow this schedule of employment at Hughes:  
FULL TIME—from June, 1953 to Sept., 1953.  
HALF TIME—from Sept., 1953 to June, 1954.  
FULL TIME—from June, 1954 to Sept., 1954.  
HALF TIME—from Sept., 1954 to June, 1955.  
Recipients will earn five-eighths of a normal salary each year and attend a university half time during regular sessions working on their Master's Degree.
- Salaries** The salary will be commensurate with the individual's ability and experience, and will reflect the average in the electronics industry. Salary growth will be on the same basis as for full-time members of the engineering staff. In addition, the individuals will be eligible for health, accident, and life insurance benefits, as well as other benefits accruing to full-time members.
- Travel and Moving Expenses** For those residing outside of the Southern California area, actual travel and moving expenses will be allowed up to ten per cent of the full starting annual salary.
- Sponsorship** Tuition, admission fee, and required books at either the University of California at Los Angeles or the University of Southern California, covering the required number of units necessary to obtain a Master's Degree, will be provided by Hughes Research and Development Laboratories.
- Number of Awards** Approximately one hundred Cooperative Awards are made each year, if sufficient qualified candidates present themselves.
- Selection of Candidates** Candidates will be selected by the Committee for Graduate Study of the Hughes Research and Development Laboratories.
- Application Procedure** Application forms should be obtained prior to February 15, 1953. Completed applications accompanied by up-to-date grade transcripts must be returned not later than February 28, 1953. Selections will be made during the month of March.

Address correspondence to  
COMMITTEE FOR GRADUATE STUDY

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**GRAD CRIER**

(Continued from Page 6)  
the most frequently requested books, and by now the bookstore management should know their identity and keep them in stock.

**Oh, sweet mystery**

I also suggest that the book-

store keep in closer touch with the professors for advice concerning texts for courses and about books which the professors' graduate students will need. This latter advice would, I believe, be of special value.

It seems to me that the only

reason you pay to a retailer more for an item than the retailer himself paid is that you can take immediate possession of the object desired (or maybe it just isn't available any other way). At any rate, there seems to be

little point in patronizing a store with such a meager line of essential merchandise when the manufacturer is willing to supply it for less.

Anybody urgently need a copy of "Little Man on Campus"?

**Dr. Haagen-Smit still fighting smog**

Although it is hardly noticeable, the battle against smog in the Los Angeles area is making very definite progress. In a talk entitled "Mutiny in the County" delivered by Dr. A. J. Haagen-Smit, professor of biochemistry at Tech, last month he reported on the positive steps taken so far in the foundries and showed how private incinerators contributed to the smog problem.

**Fumes reduced 50%**

Research is now being conducted in the fight against sulfur-dioxide fumes and hydrocarbons from industrial plants. These vapors have been reduced by a factor of 50% at the present time.

At the present, there are 200 foundries in the Los Angeles Metropolitan area which are melting all kinds of metals, as well as large steel mills like Columbia and Bethlehem-Pacific Steel. All except nine of these are now smog-proof and the remainder will be acceptable within six months.

**Public in dark**

The public doesn't know of the  
(Continued on Page 9)

**RADIO STARS**

(Continued from Page 7)

If our entire solar system would merely be a pinpoint in it. The optical figure agrees closely with subsequent radio measurements at the Cavendish Laboratory and the University of Manchester, England.

**Cygnus A—exciting**

Perhaps the most exciting of the three sources is Cygnus A, located about 100 million light years distant from earth in the constellation of Cygnus, the Swan. This source coincides with an extragalactic nebula which is the brightest member of a great cluster of nebulae.

The structure of this spiral subject, says Dr. Baade, appears to make sense only if he assumes that he is dealing with two extragalactic nebulae in actual collision.

Significant in the spectrum are lines traceable to neon V, a form of neon from whose atom four outer electrons have been stripped. This extreme stripping, or ionization, can occur only at very high energy atomic collisions in which the atoms involved are traveling at speeds greater than 1,000 km. per second.

**Hoyle confounds complex Cosmos**

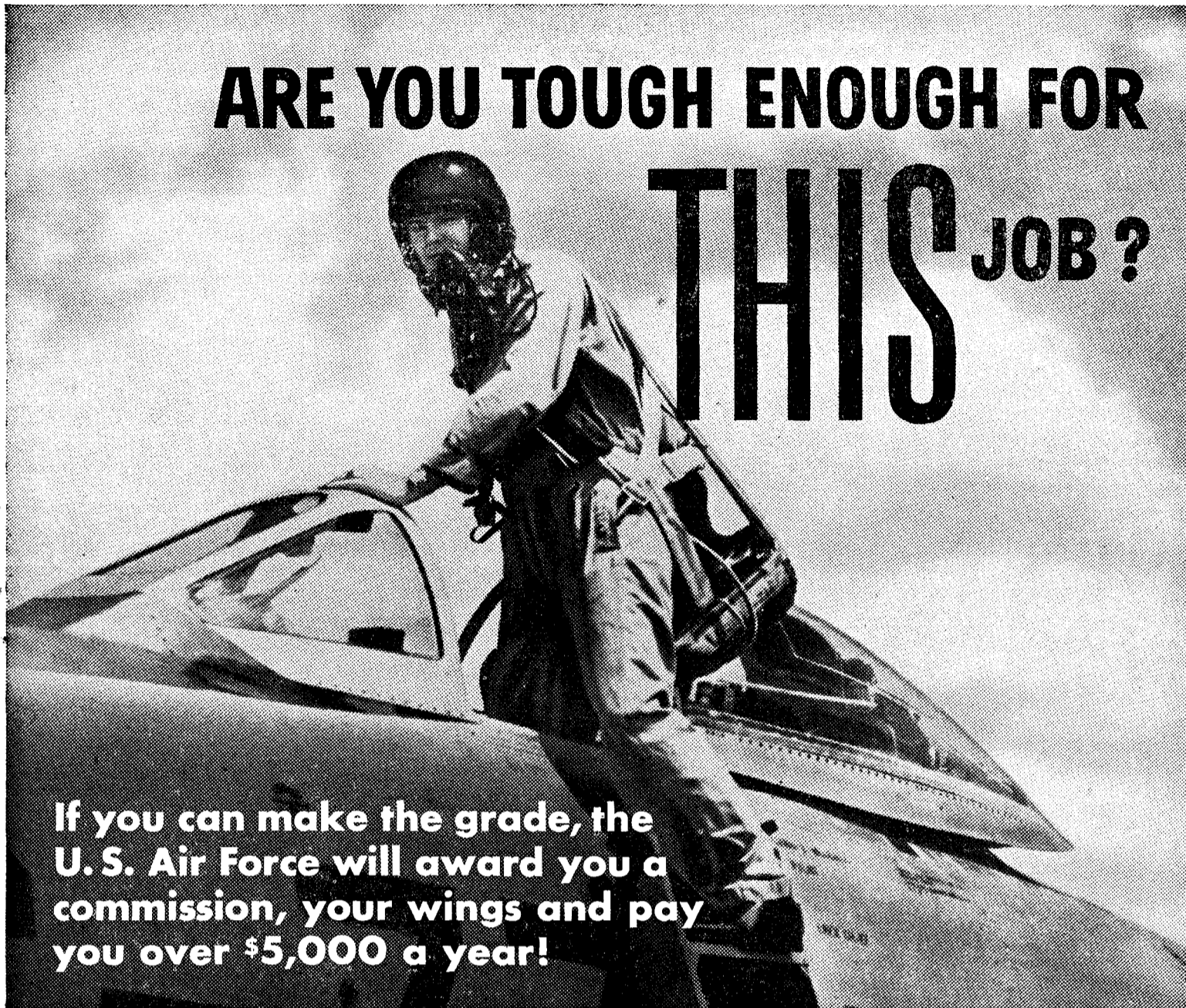
Prof. Fred Hoyle of Cambridge University, England, has arrived at Tech for a term as a visiting lecturer in astronomy after a much-heralded approach. His book, *The Nature of the Universe*, has been a most controversial scientific publication ever since it was issued in 1951.

**Creation of universe**

Acknowledged as one of the world's outstanding cosmologists and theoretical physicists, he is also no novice at presenting astronomy to the layman. He has been expounding his theory that the universe is in a continuous state of creation over BBC for the last three years to the delight of his audiences.

**Speaks at PCC**

However, the 37-year-old astronomer doesn't plan to make any TV or radio appearances here because his schedule is already too crowded. Nevertheless, his talk on "The Expanding Universe" given last week before an American Physical Society meeting in Sexson Auditorium, PCC, was one of the highlights of their four-day conference.



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CAN YOU "take it" 6 days a week? For 52 weeks? Can you meet the high standards required to be an Aviation Cadet? If you can—then here's a man-size opportunity! An opportunity to serve your country and build a personal career that will fit you for responsible positions both in military and commercial aviation.

It won't be easy! Training discipline for Aviation Cadets is rigid. You'll work hard, study hard, play hard—especially for the first few weeks. But when it's over, you'll be a pro—with a career ahead of you that will take you as far as you want to go. You graduate as a 2nd Lieutenant in the Air Force, with pay of \$5,300.00 a year. And this is only the beginning—

your opportunities for advancement are unlimited.

**ARE YOU ELIGIBLE?**

To qualify as an Aviation Cadet, you must have completed *at least* two years of college. This is a *minimum* requirement—it's best if you stay in school and graduate. In addition, you must be between 19 and 26½ years, unmarried, and in good physical condition.

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If you choose to be an Aircraft Observer, your training will be in Navigation, Bombardment, Radar Operation or Aircraft Performance Engineering.

**New Aviation Cadet Training Classes Begin Every Few Weeks!****HERE'S WHAT TO DO:**

1. Take a transcript of your college credits and a copy of your birth certificate to your nearest Air Force Base or Recruiting Station. Fill out the application they give you.
2. If application is accepted, the Air Force will arrange for you to take a physical examination.
3. Next, you will be given a written and manual aptitude test.
4. If you pass your physical and other tests, you will be scheduled for an Aviation Cadet Training Class. The Selective Service Act allows you a four-month deferment while waiting class assignment.

**Where to get more details:** Visit your nearest Air Force Base or Air Force Recruiting Officer.  
OR WRITE TO: AVIATION CADET HEADQUARTERS, U. S. AIR FORCE, WASHINGTON 25, D. C.





# BEAVER SPORTS

## Cagers test four-game streak in SCIC opener

### Whittier Big Block in Road to Championship

The SCIC basketball race opens for Tech at the PCC gym Saturday when they face Whittier. This may be the most important game for the Shymen, both from the league standings viewpoint and from the psychological standpoint. The Poets are perhaps the most feared team in the conference, and if Tech can win the Beavers will be regarded as favorites to cop their first championship in seven years.

#### Tech takes tourney

The rivals have already met, Whittier winning 64-39, in the Redlands Tourney. Since that time Tech has been going like wildfire, winning four in a row.

The first two wins came in the same tournament as Tech swept to the consolation championship by defeating Chapman and Pomona. Whittier lost their next game to Occidental.

#### Record falls

Then La Verne fell before the rampaging cagers as a new Caltech scoring record was set. The score was 98-84. Chapman also lost 77-60. Anson was high man in both games with 31 and 24.

#### Strategy

So far Shy has favored the single-post offense with an occasional switching of Anson off with Tyler and Stevens. Not much of a fast break has been seen so far. Tech has been relying on the pivot shots of Anson and the drives of Tyler and Chambers. Shy has been able to call on subs quite frequently with very good results. Smith and Shanks have been especially prolific under the boards, as the two subs have averaged 7 points per game each.

#### See the game

It is fervently hoped by the sports staff that everyone who can, come to the game Saturday to watch the '53 edition of Tech basketball. Both Tyler and Anson have a lot to offer in spectator appeal. Chambers also shows a lot of flash and speed. Tech can go far with their team of sophs and juniors.

## I. H. Sports

by Benji and Nick

Wihit one-third of the year's Interhouse sports program gone and second-term events coming up, Dabney has what looks like a big, big lead over second-place Blacker in total points. With a tie for first in baseball, a first in cross-country, and a solid second in basketball, the Darbs have 57½ points.

#### Standings

Second-place Blacker has piled up 44 to date, while a lowly third goes to Fleming with 38½. Results (unofficial) come out like this:

	Base- ball	Cross Country	Basket- ball	Total
Dabney	22½	15	20	57½
Blacker	10	9	25	44
Fleming	22½	6	10	38½
Ricketts	15	3	15	33
Throop	5	12	5	22

Second-term schedule reads like this:

Softball—Jan. 14, first game.

Tennis—Jan. 24, tournament.

Track—Feb. 14, Interhouse meet.

Swimming—March 3, trials; March 5, finals.



## New scoring record set

A new CIT scoring record was established the last week of last term as the red-hot Shymen poured 98 points through the hoop against La Verne's 84. Winning their third in a row Tech was paced by Anson with 31. Also scoring in double figures were Chambers with 18, Tyler with 14, and Smith with 11. The Halftime score was 51-44. Tech tried gamely to break the hundred mark but failed when they lost the ball with ten seconds to go.

#### Chapman falls

Next on the list of victims was Chapman, who fell before a first-half Tech onslaught of 43 points. They were never headed and the final score was 77-60. Anson led again with 24. The substitutes scored a total of 21 points as men came and went freely.

#### Frosh hot

The freshmen continued on their mad rampage by beating La Verne 82-44 and Chapman 84-51. Conely (him again) was high in both, scoring an average of 34 points in each. The first-term jinx failed to take its toll of the squad through ineligibilities. So, with high hopes, they take on Whittier frosh at Oxy Friday night. The varsity will test their strength against Whittier at PCC on Saturday (8:45 pm).

## DR. HAAGEN-SMIT

(Continued from Page 8)

great advances that industry has made to control smog because Mr. Gordon Larsen, Director of the Air Pollution District, hasn't told the public. He has been very reticent about giving facts favorable to industry and of the great work that it is doing relative to smog control. Fact-finding committees are good because they bring out definite information on smog for the public good. All citizens should take an interest in smog, but should not sign petitions unless they know just what they are signing.

Following his talk, Dr. Haagen-Smith showed two colored motion pictures of the Pasadena area taken on two Sunday mornings, November 6 and 11. Time lapse photos were used—which telescoped three hours (6 am to 9 am) into 4½ minutes' film time. Roughly seven hours were portrayed in the two films. These films showed that home incinerators do increase smog in the early morning hours. The advent of wisps of smoke from home incinerators were graphically presented as each new fire was started in backyards of

(Continued on Page 10)

## Trackmen!

Sign up for frosh and varsity track in the Athletic Office today! Now! Between 12 and 1 p.m.

Anybody! Be a star. Be a pole vaulter. Any snake can star with a stick. Give it a try. Please, come out for pole-vaulting!

## Tips-N-Tails

by Ralph Kehle

Winter is really here. All Southern California resorts have been blessed with a thick blanket of that white stuff. So it's off to the hills we go to hear the familiar cry of "Ski Hiel."

#### Fifteen gallons

On Dec. 20, Dick Millard, John Bailey, Stan Kamany, my brother Jerry and myself started our 1200-mile trek to Aspen. All was fine until we reached St. George, Utah, where we broke a piston. We left such a thick smoke screen that we were afraid of being arrested by the forest rangers for bringing smog to Zion National Park. Two days and fifteen gallons of oil later,

(Continued on Page 10)

## Tidbits by Turcotte

In our present division of sports into major and minor status fair and reasonable? I would like to present here some of the arguments on the negative side of this question.

#### Rub out

Some people say that we should go so far as to eliminate all minor sports by either changing them into the major bracket or else doing away with them as a recognized activity. Others just argue that the status of some particular sport should be changed. The proponents of this switch for soccer, cross-country, water polo, and golf all seem to have good reasons.

#### Soccer

First, let's take soccer. We have a better record in this sport than in almost any other, winning the Southern California

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(Continued on Page 10)

## Over the wall

By John Wall

Greetings, sports fans! I hope you haven't sobered up yet, 'cause a little C<sub>2</sub>H<sub>5</sub>OH will make this term's sports outlook (and sports page) look a lot better. Speaking of spirits, we get to parties:

Kenny: What kind of a dress did she wear to the party last night.

Mel: I can't remember, I think it was checked.

Kenny: You don't say! That must have been a real party.

Back to Business: My sympathy to the UCLA rooters and Wisconsin rooters who may have eaten a little crow instead of turkey this Christmas.

What I'm trying to say is that Tech has been out of it (in sports) for the last few weeks, so there just isn't anyone to chew on this week.

See you at the basketball game and I hope over the wall next week.

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Under the Graduate Plan the candidate will work full time at the McDonnell Aircraft Corporation until September, 1953. From September, 1953, to June, 1954, candidates will work at M.A.C. from 28 to 16 hours per week,

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#### COMPENSATION

Compensation will be commensurate with the individual's ability and experience. Compensation growth will be on the same basis as the full time members of the engineering staff. In addition, the candidate will be eligible for all other benefits accruing to full time employees.

#### TUITION

Tuition covering the required number of units necessary to obtain an advanced degree will be paid by McDonnell Aircraft Corporation.

#### SELECTION OF CANDIDATES

Candidates will be selected by officials of McDonnell Aircraft Corporation and Washington University.

#### DATES FOR APPLYING

January, 1953, graduates should make informal applications prior to January 10, 1953. McDonnell Aircraft Corporation will then forward formal applications which should be returned by January 20, 1953, accompanied by up to date grade transcripts. Selections will be made during the month of February. June, 1953, graduates should make informal application no later than March 15, 1953.

ADDRESS CORRESPONDENCE TO

Technical Placement Supervisor  
McDonnell Aircraft Corporation

Post Office Box 516

St. Louis, Missouri

**TIDBITS**

(Continued from Page 9)

championship two years in a row against such teams as U.C.L.A. and U.S.C. Anyone who has played or even watched a game realizes that it requires as much conditioning as almost any other sport.

**Cross-country**

Next we have cross-country. Why should someone running one or two miles get a major sports award when someone running five or ten miles gets only a minor sports award? This is a good question and can it be answered? Does one require less conditioning than the other? Does one require less skill than the other?

And finally we come to golf. What sports will be of value to you when you graduate from this school? Certainly not football or basketball, not baseball or track. But golf is not only good recreation and sport regardless of age but it is also important in business. Especially for engineers this should be one of the most important sports, yet it has a minor rating. Does it require less skill and effort than other sports? Just ask Lloyd Mangrum or Julius Boros and thousands of others who have spent twelve hours a day year-around trying to master the game.

**TIPS-N-TAILS**

(Continued from Page 9)

we arrived in Aspen.

We were all eager to try out the famous runs where the World Ski Championships had been held in 1950. God blessed our first day with six inches of new powder to slip, slide and fall into. Unfortunately this snow soon wore off and ever-to-frequent rocks and dirt spots plagued our skiing. Even with this lack of snow, Aspen proved to be one of the finest ski resorts we have visited.

**This weekend**

How about going skiing this will be held at Snow Valley this weekend. For information and transportation see me in Dabney House.

weekend? We have many fine resorts within 100 miles of Tech.

There are chairlifts at Waterman, Baldy (2), Blue Ridge, Holiday Hill, Snow Valley, Big Bear and Snow Summit. For you ambitious ones, the Southern California District Slalom and Downhill Championships

**DR. HAAGEN-SMIT**

(Continued from Page 9)

homes in Pasadena and Altadena. The pictures also showed the definite movement of smog as it swept along in its travels, finally blanketing the Pasadena area.

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**INTERVIEW SCHEDULE**

(Continued from Page 1)

**WED., JAN. 21**—BS, MS/Ph, ME, ChE. The Fluor Corp., Ltd. Opportunities for men in both the Physical and Chemical Engineering Sections of the Research and Development Division.

**THURS., JAN. 22 and FRI., JAN. 23**—BS, MS, PhD/ME, EE, ChE, Ph. Westinghouse Electric Corp. Interviews.

**SPECIAL NOTICE**

BS, ME, EE. Heliport Corp., South Pasadena, Calif. Men interested in the possi-

ble employment at HELIPOT are asked to sign up in the Placement Office as soon as possible so that a visit to the plant may be arranged.

BS/ME MS, Engr./Ae. USC's Aerodynamics Test Center, Point Mugu, Calif. The personnel office of USC's Aerodynamics Test Center, Point Mugu, is attempting to arrange a tour of the laboratory sometime in January. They ask that men who may be interested in employment with them please sign up as soon as possible so that arrangements may be completed. Transportation will be furnished.

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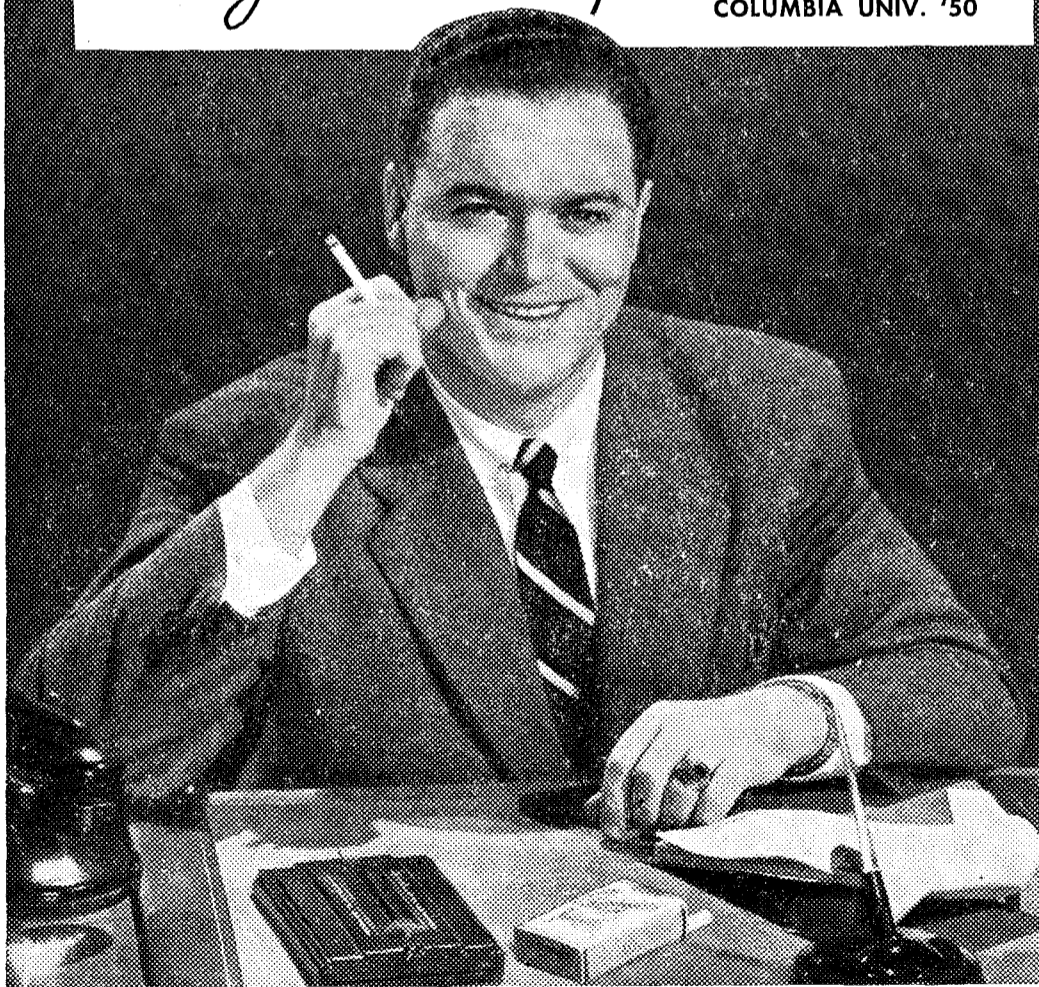
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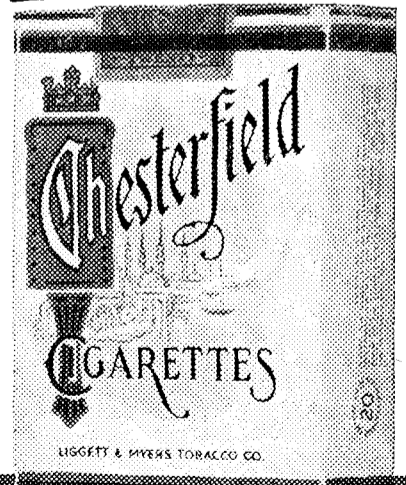
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