Tech Talks: Astronomer Hoyle Contemplates Universe

by Giselle Lohr

One of the amazing things about the Caltech environment is the ease with which one can approach professors, even visiting ones from Britain, yet even realizing that, I was thoroughly astounded to find myself sitting in Professor Fred Hoyle's office one Friday morning not long ago, with intent to interview him. He was a quite charming man who kept throwing his fountain pen around his desk and grinning an impish grin, and he seemed extraordinarily pleased that I had read The Black Cloud, a work of his at the close of our interview. He shook hands, then he walked me to the door, and escorted me toward the end of the hall, all in an incredibly dignified manner; he then grinned incredibly, called out "Cheerio!"; and bumbled up the stairs, leaving a very happily bemused Techcr behind. Here is the interview.

Tech: I wanted to ask you first how you became interested in astronomy.

Hoyle: Well, I suppose I was always interested; when I was very young, I read books three and quite a number of them. At the time Edmond and Jeanie, in particular, which I read. But I had a pretty clear view that it wasn't profitable to do astronomy without learning quite a bit of physics and mathematics. I and think this probably was brought home to me by some of my school books, where, obviously, these chaps were using as a basis of argument what you find in physics. I realized I had to learn this, and so I took mathematics and physics in the university. I pretty well forgot about astronomy for quite a while, then I realized, it must have been 1960-1970 something happened. Nuclear physics, which I had done graduate work in, had clearly contributed.

Continued on Page Two

John Chemist

Hammond Wins Prize

St. Louis, Mo. George S. Hammond, chairman of the division of Chemistry and Chemical Engineering, has been selected as one of the ten recipients of the 1971 E. Harris Harbison Award for Gifted Teaching presented by The Danforth Foundation.

As a winner of the Award, Dr. Hammond received a $10,000 grant to be used at his discretion in the furtherance of his academic career and interests. The Award was presented November 6 during a dinner held at Whittemore House, the Faculty Club of Washington University in St. Louis, Mo.

Winners of the E. Harris Harbison Awards are chosen annually by panels of educators, who then make their selections from nominations submitted by colleagues, students and university presidents. To be eligible for a Harbison Award the candidate must be teaching in an accredited college, junior college or university in the United States and have served as full-time faculty for at least five years.

An educator nominated for the Award is judged on the basis of his capability as an articulate, passionate teacher who views education as a spiritual act, a genuine teacher who cares about values, society, his students and the world around him; with an incredible ability to inspire enthusiasm and to teach the very essence of his subject; not merely a gifted teacher, but the most hardworking teachers imaginable who believes in the value and goodness of what he is doing and sees it as a necessary task of his; to his students, and to the world.

Now in its tenth year, the Harbison Awards are given annually, not only to recognize outstanding gifted teachers, but also to encourage all of us to continue the study of the art and importance of teaching.

From the Money Tree

NSF Seeks Student Ecology Proposals

In about a month, the National Science Foundation will conduct a competition among student-written proposals to select those to be supported in 1973. Two million dollars has been earmarked for this purpose. The successful proposals will be picked by judges composed of undergraduate students and science faculty members from schools in all parts of the nation.

Over one hundred student-originated and student-initiated studies of environmental problems were supported by the National Science Foundation in 1971 in 97 colleges and universities. These interdisciplinary projects involved 10-12 weeks work by groups of 5 to 20 participants. More than 1100 college students participated in the research, 450 of whom were involved in environmental studies. The studies were conducted at centers or laboratories concerned with environmental problems, in the laboratory, in places where there was no available data and already had to make concrete recommendations to avoid some of the problems they identified.

For more information, watch the California Tech: The Campus News and the Student-Originated Studies Program, National Science Foundation, Washington, D.C. 20550.

Two Caltech Grad Students Hurt in Crash

Aero Association Plane A Total Loss

Wednesday, November 3

Investigation is under way by Al Ham and Alan Wray as to the condition. No further details yet.

Thursday, November 4

Received a call from Sally Harris at 4:45 p.m. She says Dan is unconscious, but has the crushed vertebrae as reported. He will probably in the hospital for two months, then will operate on his back. He was well enough to relate the accident.

Alan Wray is in worse shape. He has many facial cuts and an apparently fractured skull. It is suggested that he may have sustained brain damage, but the doctors are not sure of that yet.

The accident took place on a strip on the east side of Lake Mat­

Pato, Santa Ana winds were forecast, which evidently required them to land toward a hill. They landed with a tail wind it is believed (Riverside Sheriff) on a soft field, but then decided to, continue as a torch-on-go. The R.C. was evi­

dently not good enough, and as they came over the hill, Dan took over on the controls. They evidently could not make it over even them, and in a last attempt to clear the hill, tried a steeper R.C. and then Wray stalled the plane and crashed.

"This is the story as best as Sally [Harris] knows it."

Saturday, November 6

The latest word on the condition of Al and Dan is pretty good. The surgery on Dan's back scheduled for Fri­

day was postponed because he was regaining feeling and some move­

ment in his leg. He was taken off of intensive care today.

Al has regained consciousness and is doing much better. He will be moved soon to Loma Linda for plastic surgery.

Continued on Page Four

House Giving Most to Y Will Win a Car

by Claude Anderson

Tomorrow on the Y, we will begin its annual student fund drive. The monetary goal of the drive is to top last year's record of $400. But a more important goal is that of acquainting every student with the Y, the programs and opportunities it offers, and the ways in which students can involve themselves and even initiate programs of interest to them.

The drive, headed by Y treasurer Belal Bazaghe, will run through next Friday. Representatives in each undergraduate house and graduate department will distribute pledge cards and talk to students. Contributions, may be made by cash, check, or by deduction from term bill.

On November 19, in the Winnett Lounge, there will be a casino party for everyone who has contributed to the drive. No one will win; all proceeds will go to the Y, but everybody will run their own game.

The Y has received as a gift, a 1953 Chrysler New Yorker Custom Linusome with fluid drive transmission, power steering, and power brakes. Present plans are to give the car to the house which contributes the largest amount of money to the drive.

The second new and continuing program areas for which money will be used include a look at the Human and Ethical Problems which accompany new discoveries in biological fields such as genetic engi­

neering. This problem is of major concern to the large number of Caltech people and is becoming more of a problem as each new discovery is made.

More emphasis will be placed on camping and sports events. Most of these things are now done only by individual houses. The Y wishes to promote an interaction among stud­

ents in the different houses. The programs about social and political issues will continue; all of the major candidates in the 1972 primary have been or will be invited to Tech. There will also be a continuation of the video tape/film workshop which had an excellent response this year.

The 1972 Candidates for the House Council will be announced at a dinner held at Whittemore House on Thursday, November 4 (evening). For more information, watch the Tech News and the Student-Originated Studies Program.

Wednesday, November 3

StudentsOriginated Studies Program

National Science Foundation, Washington, D.C. 20550.

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Cannet food

must be edible...

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Dabney eats it.

Subscribe to the Tech

Liberation and Growth

ZPG members listened to Lana Phelan, western vice president of the California Council for the Repeal of Abortion Laws at their regular meeting last Thursday.

"Photo by Owens"
Huttenbook Wins Prize

Robert A. Huttenback won the third annual Walter D. Love Memorial Prize for his book, "Gandhi: The White Death." The book was published by Cornell University Press on January 8, 1971. The award, a citation and honorary degree, was presented on October 30 during the fall meeting of the Conference of British Studies at the University of Colorado in Boulder. In making the presentation, the award committee cited the author for his "humanist and compassionate understanding of the subject, imagination, literary grace, and scrupulous scholarship." The Walter D. Love Prize was established in 1968 for outstanding published works in the fields of British, Irish, and Commonwealth studies.

The book, a comprehensive study of the life and work of Mahatma Gandhi, has won praise from scholars and critics alike. It is a major contribution to the understanding of the great Indian leader and his influence on the world. Huttenback's work is not only a detailed biography but also a critical analysis of Gandhi's思想 and philosophy.
**Water Polo Sunk Twice by Same 11-4 Score**

by Bob Kieckhefer

Perhaps it was because of midterms. Perhaps it was because everybody was tired. Whatever the reason, last week the water polo team played much more poorly than it had earlier in the season, dropping games to Occidental and Claremont-Mudd by identical 11-4 scores.

Against a fired-up team at Oxy last Wednesday the Techers never got their offense in gear, as Oxy jumped to a 3-0 first-quarter lead. The visitors soon tired as a result of swimming against the faster Oxy swimmers, and the score was boosted to 6-1 by halftime. Tech came back briefly in the second half, against Oxy's JV, but they couldn't contain the home team's last bursts, and the score mounted to 11-4 by the final gun. Steve Sheffield scored three of Tech's four goals while Tim Hight got the other.

**Comedy of Errors**

At Claremont last Saturday, the Tech team suffered through another game of mistakes, while Claremont's almost flawless polo. Virgil Shields played a good game in the goal, blocking a penalty shot and many shots from the field, but CBM's fast-breaking offense fired so many shots that he was overwhelmed. Meanwhile, Tech's offense suffered from many intercepted passes and shots which missed the goal. Steve Sheffield scored two penalty shots while Russ Desalvo and Tim Hight scored one each from the field.

Hoping to get back on a winning streak, yesterday the tankmen took on Pomona in a battle for fourth place in the conference standings. Saturday morning at 10, UC San Diego will invade Tournament Park for the Techers' last exhibition game of the season. Next Wednesday the tankmen will go to Redlands, and on Saturday, Nov. 20, the regular season ends with a game here against Occidental.

**Caltech Runs Sixth**

Perennial power Occidental ran away with the 1971 SCIAC cross country crown last Friday on the Caltech course in Lower Arroyo Park.

The fleet flyers defeated second place Whitman by 25 points, 32-57, a more than ample margin.

Caltech finished sixth with a total of 111 points. The team of Greg Griffin, Ralph Boyd, Ratchford Higgins, Alan Kleinmiller, and Scott Matthews were ahead of only La Verne, which had only one finisher.

Griffin, the Beavers' top runner this year, ran his first race in three weeks and finished 32nd. His time was 31:58, almost three minutes slower than his course best.

The top finisher for Tech was Matthews, who placed 22nd in the field of 40.

**S.C.L.A.C. CONFERENCE MEET At Lower Arroyo Park, 5:00 p.m.**

_Azusa (C/HM) 25; California (C) 23; Occidental (C) 26; Pomona (C/HM) 29; Redlands (R) 29; San Diego (C) 20; UCSD (C/HM) 19; UCI (C) 14; Caltech (C) 10; Whittier (C) 7; Concordia (C) 5; California Poly Pomona (C) 4._

**Yesterday's Results**

**Soccer Ties Chapman**

The Tech soccer team maintained its unbeaten non-conference record Saturday by defeating Chapman College of Orange, 3-3.

The Beavers went ahead in the first half on a penalty shot by John Rogers and a goal by Peter Groom. Later on, Chapman scored to make the halftime score 2-2.

After tying the game in the third period, Chapman went ahead on a disputed play. Goalie Rogers dropped a shot he had just blocked, and the ball rolled toward the goal box. Rogers fell onto it, but the referee (who was at midfield) signalled a goal had been scored. Tech's protests were to no avail, and Chapman went ahead, 3-2.

In the final period, however, Peter Groom scored again to deadlock the score and give the Beavers a 0-0 non-conference record. Earlier in the season Rio Hondo Academy and Tech battled to a 0-0 tie.

Last Wednesday Redlands beat Tech, 3-1.
O/C Techers: Help Resurrect Throop Club

Crash

Continued from Page One

Monday, November 8 — Dan has been moved from Intensive Care and can now see visitors. Hours are 1:30–4:00 p.m. and 7:00–9:00 p.m. Riverside General Hospital Re- habilitation Unit. He is coming along fairly well. His legs have motor control and the feeling has increased somewhat over the weekend. Doctors estimate he will have to spend six to twelve weeks in the hospital. Once out, Al was moved to Linda Umda yesterday. As soon as the doctor feels it is ready, they will perform plastic surgery on his face and wire his broken jaw. He is in the hospital, his opinion, to get going. He probably will be hospitalized for about a week after surgery and then recuperate for a couple of weeks.

Tuesday, November 9 — Dan will undergo spinal surgery tomorrow at Riverside Community Hospital. Al is progressing well. Plastic surgery has not been performed yet. The doctors feel he will only need to wear a back brace for a while to relieve his back injury.

Grid Team Stumbles

Continued from Page Three

far into Cougar territory Tech attempted a 33 yard field goal. The kick by John Rogers sailed out of bounds, slanting toward the right, and Carl left the crows about a foot from the right upright. The aborted field goal turned out to be the last gasp of Pacific offense. The Cougars mustered 26 in the first half, scored the game’s first touchdown, and took a 12-0 lead two minutes later after recovering a Beaver fumble in CIT territory.

Techs suffered a shutout on the last play of the game, which extended their scoring streak to six games this year. On fourth down with ten seconds left, Morris handed off to Sturzo at right half, bobbled the ball away from three would-be tacklers, and then cut back across the middle and into the endzone from the left side. The conversion attempt failed, marking the only blemish on Techs.

Earlier in the quarter the Beavers had a fourth down on the Cougar one-yard line. Right line right went offline, notifying a touchdown. With the ball on the six, Morris tried to run around the right side, but was dropped at the five.

Plans are well underway in the project to create a modern version of the O/C Throop Club, to represent the interests of off-campus Techers.

The one interested in the details should look at the circular to be found in Louise Hood’s Office in the Throop Center.

Tetem New Soliciting New Contributions

Contributions are still being collected for the renovation of the CIT campus. Contributions in honor of children will be accepted, as well as contributions to purchase students’ meals.

Those wishing further information can call Mrs. Botton at 795-0211 or the Office of Community Services at PCC.

Radio Club to Hold Morse Code Class

The Radio Club will hold a class in international Morse code beginning next week. The classes will be held on either Wednesday or Thursday nights depending upon the preference of the taking the course.

Those who attend the classes and practice regularly should reach a proficiency of 10 wpm or more. The slate will contain a classification exam and a competition for the novice class. Successful candidates will be required to have the class during the following semester. People interested in the Morse code classes should contact or send a note to Bert Tucker, 211 Page, or Bob Palitz, 208 Lloyd.

New York City Opera: Opera Education Needs

Adults open “super” (extra) tickets will be auditioned on Sunday, Nov. 11, from 5 to 7 p.m. in the Music Center’s Pavilion, fourth floor, to appear in the forthcoming engagement of the New York City Opera from Nov. 17 through Dec. 5.

No advance arrangements can be made. Candidates should simply report on time at the Artists’ Center, 135 North Grand Avenue, New York City Opera’s offices in Los Angeles.

PCG Offers Two Parent Education Programmes

CIT Techers or preschool children can take advantage of two parent education programs in the neighborhood. Mrs. John Brinton, 3rd-year student, Pasadena City College-administered project, attention to the one on Tuesdays at the Artists’ Center, 255 South Hill and one on Thursdays at the Hamilton School, 209 Rose Villa.

The sessions provide mothers of children from two to five years old the opportunity to observe their children with others and to become acquainted with other parents of young children.

Those wishing further information can call Mrs. Brinton at 795-0211 or the Office of Community Services at PCC.

Master’s Office Needs Thanksgiving Hosts

Any member of the Caltech community who wishes to invite undergraduate students to Thanksgiving dinner is invited to lease his or her name with the Master of Student Houses. Office, c/o 2195, mailing address 1043. Arrangements will be made with students who have indicated a desire to accept an invitation to spend the holiday in someone’s home. Please contact Master’s Office by November 13.

Student’s Tent to Hold Winnet House

George Nelson, an industrial de-

s'or, will conduct a drop-in seminar on "Is America Ugly?" in Winnet House Tuesday at 4 p.m.