CALTECH NEWS

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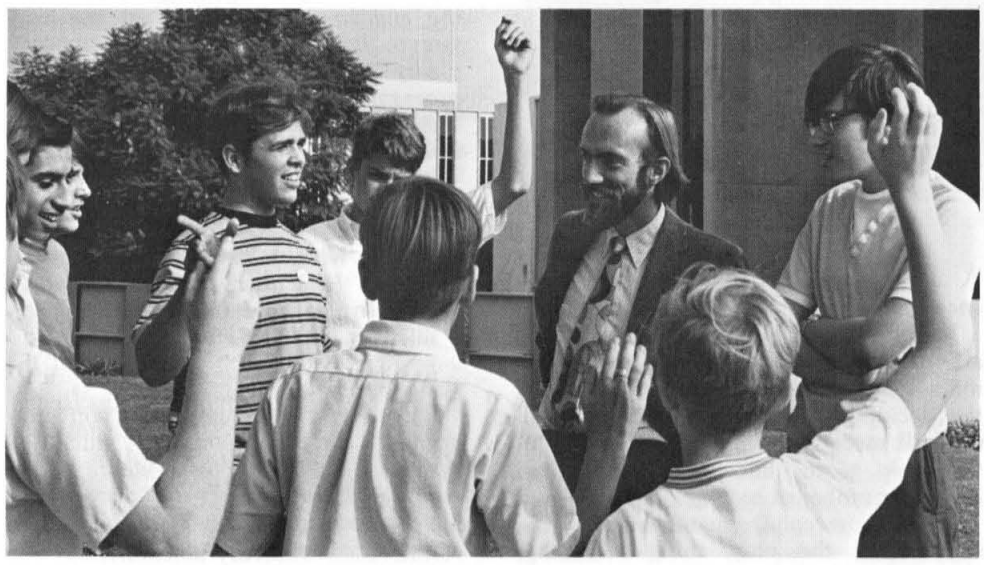

Kip Thorne, professor of theoretical physics, answers questions for students following his Wednesday lecture in Beckman auditorium on "When the Sun Stops Burning."

Secondary schools program brings science to students

In an ambitious move to bring junior and senior high school students closer to science, Caltech has introduced a series of eight programs offering a wide range of opportunities from lectures to personalized tutorial projects.

Lee Browne, director of secondary school relations, says the programs will introduce Caltech to the young students while affording them an opportunity to pursue personal scientific interests beyond the public school classroom.

These are the programs:

► A secondary school science project offers 32 Saturday study sessions to seventh, eighth, and ninth grade students from Los Angeles County. Students are allowed a free choice of classes including mathematics, biology, chemistry, physics, space science, photography, computer science, and electricity. The first sessions have attracted an average of 96 students. Graduate student volunteers serve as classroom tutors for this project.

► A monthly Wednesday afternoon lecture series in Beckman Auditorium is offered to junior and senior high school students. Kip Thorne, professor of theoretical physics, launched the series on October 7, talking about "When the Sun Stops Burning." George Hammond, chairman of the division of chemistry and chemical engineering, speaks on "The Fruitful Fantasies of Science" on November 4. Jerome Pine, professor of physics; Norman Davidson, professor of chemistry; and John Benton, professor of history, are scheduled for future talks. Students will be asked to write essays about the talks, and in June prizes will be awarded for the outstanding essays.

► Caltech's annual Students' Day will be replaced by a series of 12 Saturday programs for students and teachers from a few high schools at a time. In groups of five to ten, students will be given campus tours, talks, science demonstrations, and lunch on campus.

► Lecture teams, usually consisting of Browne, a professor, a graduate student, and an undergraduate, will conduct demonstration lectures at high school science assemblies. Kip Thorne started this program with a presentation to Manual Arts High School in Los Angeles. Eighteen other schools have already requested the lectures.

► In a cooperative program with the Pasadena school system, Caltech graduate students will go to classrooms on a short-term basis to teach certain specifics of science, mathematics, and social science.

► Caltech graduate students are also available to tutor junior and senior high school students upon request by their teachers.

► Older high school students (eleventh and twelfth grades) who want to undertake independent study programs can arrange with Browne to work in laboratories on campus. At present, six stu-

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History 40: Now U.S. politics

"Practical Politics"—History 40—is a new Caltech course in American political and governmental processes being given this fall for academic credit. Sponsored by the Division of Humanities and Social Sciences, the Caltech Y, and the Committee on Institute Assemblies and Programs, the course consists of ten weeks of class discussion of subjects ranging from presidential power to minority politics and the organization of communities. The class periods are supplemented by visits from outside speakers who are active in American politics and government at a variety of different levels.

Robert Bates, assistant professor of political science, is the Caltech faculty coordinator for History 40. He and four other members of the humanities and social science faculty are taking turns

Continued on page 2

60-inch telescope dedicated at Palomar

A new 60-inch telescope embodying unique advances in electronic and optical design was dedicated at the Palomar Observatory on October 23. It is the first major addition to the observatory since the installation of the 200-inch telescope in 1948, and is designed for the investigation of astronomical objects with new photoelectric and photographic instruments, which can be readily attached.

This telescope fills a critical need at the Hale Observatories for an instrument of moderate size that will allow for more efficient operation of the other large telescopes already in use. These include the 200-inch and 48-inch Schmidt telescopes at Palomar and the 100-inch and 60-inch telescopes at Mount Wilson. The observatories are under joint supervision of the California Institute of Technology and the Carnegie Institution of Washington.

Weighing 19½ tons, the new telescope occupies a three-story circular observatory building adjacent to the 200-inch telescope facility on Palomar Mountain. The building contains the telescope; observing space; an extended coudé room (where the chemical analysis of light is performed); a combination office, library, and photographic plate assessment room; dark rooms for developing plates; and a galley, elevator, and service facilities. The dome is insulated to minimize temperature changes, and work rooms below the observing floor are air conditioned.

The new instrument offers a unique combination of power and versatility in that it is one of the first major telescopes to operate with a computer that not only controls its operation but also acquires its data. It has an unusual optical system of six mirrors and a corrector lens developed by Ira Bowen, former director of the Mount Wilson and Palomar Observatories. The mirror system enables the telescope to combine the maneuverability advantages of a short tube—only

Continued on page 3

Dean Huttenback appointed interim Humanities chairman

Robert F. Huttenback, dean of students and professor of history, has been appointed acting chairman of the Division of Humanities and Social Sciences. He succeeds Hallett D. Smith, professor of English and chairman of the division for 21 years.

Smith, an Elizabethan scholar and author of many books and articles on English literature of the 16th and 17th centuries, has accepted an appointment as a senior research associate at the Huntington Library. He will also continue to teach English at Caltech.

As acting chairman, Huttenback is expanding programs of study in both the humanities and social sciences. Within the present framework, the humanities faculty is developing traditional classes such as English and history into courses that do more than just supplement science and engineering options.

In the social sciences, the faculty is building a department based on theoretical as well as applied studies. At present there are 13 faculty members in the social sciences, teaching undergraduate courses in political science, geography, economics, and anthropology. According to Huttenback, within two years Caltech will have a staff large enough to teach sociology, economic theory, social psychology, the theory of social science, and analytical political science. There will be new interdisciplinary applied studies in the social sciences, like those already begun by professors Alan Sweezy (economics) and Harrison Brown (geochemistry, government and science) in population growth. In the second and third terms of this year, Institute psychologists Ian Hunter and Nancy Beakel will teach an

Robert Huttenback

undergraduate course in psychology. The faculty is also planning a graduate program in social sciences that will be interdisciplinary rather than departmental, coordinating with studies in other science and engineering divisions.

Devising the new theoretical studies program are Burton Klein, professor of economics; Lance Davis, professor of economics; Thayer Scudder, professor of anthropology; Frederick Thompson, professor of applied science and philosophy; and Roger Noll, professor of economics.

Huttenback, whose own field of research is British imperial history, received his AB degree from UCLA in 1951 and his PhD there in 1959. He has done field work in England, India, and Africa. Last summer he studied the history of immigration policies in Australia. Huttenback has been on the Caltech faculty since 1958 and, until his appointment as dean in January 1969, was master of student houses.

CIT athletes make fair fall showing

It's fall sports time again, and the Caltech cross country, water polo, soccer, and football teams have been in action for over two months. Here is a roundup of where they stand.

Cross Country

Returning lettermen Martin Smith, Gary Pope, and Ratchford Higgins join outstanding freshman Al Kleinsasser to form the nucleus of this year's team. The team's record stands at three wins and five losses but Coach Bert La Brucherie has hopes of improving over last season's 3-6 record.

Water Polo

Injuries and lack of depth have dampened hopes of a promising season, and Coach Lawlor Reck's water poloists have won only three of their first 12 games. Injuries to top players Larry Watkins, Ken Hanson, and Steve Sheffield, and the use of inexperienced freshmen are chiefly responsible for the slow start.

Soccer

First-year coach, Geoffrey Morgan, greeted a group of 20 experienced players and the soccer team has responded with four wins, two losses and a tie to open the season. Eleven lettermen, including Gerry Eisman, Jon Hall, and Joe Templeton, who were All-SCIAC last year, should lead the team to an improved record.

Caltech's John Milkovich skirts around right end for big gain in game with La Verne JV.

Football

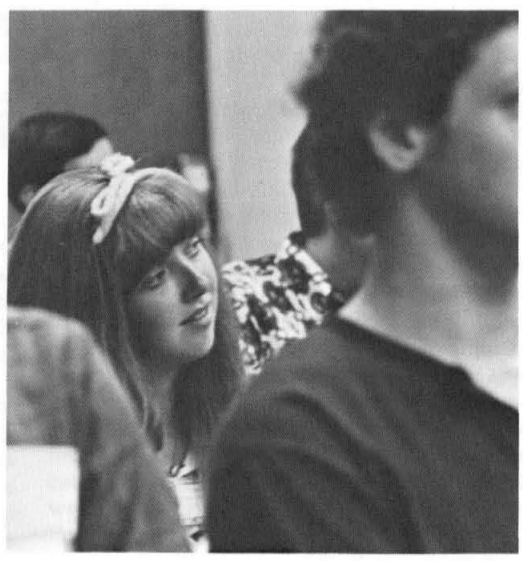
Football at Caltech has always been an uphill battle, and this year is no exception. With a 25-man squad, long on dedication and short on experience, the Beavers have opened the season with a 0-0 tie with Redlands JV and losses to La Verne JV, 20-7, and the University of California at Riverside Frosh, 14-0.

Wins are tough to come by, but hard-working head coach Tom Gutman thinks they can do it. "In our first game the team was very high. The defense did a magnificent job . . . Redlands never got near our goal," Gutman said. "We held them to 32 yards rushing and 84 passing." Offensively it was a different story. "Our offense just didn't click; inexperience and mistakes cost us the win."

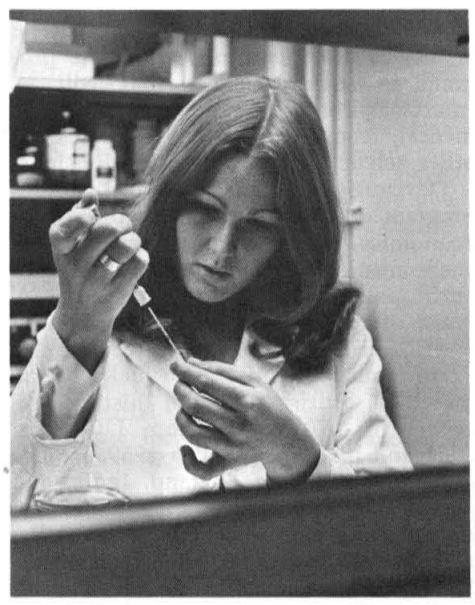
In the loss to La Verne, Gutman cited an endless string of errors (fumbles, missed assignments, dropped passes) as the deciding factor. The offense moved the ball more consistently than it did in the first game, but crucial mistakes halted a number of scoring opportunities.

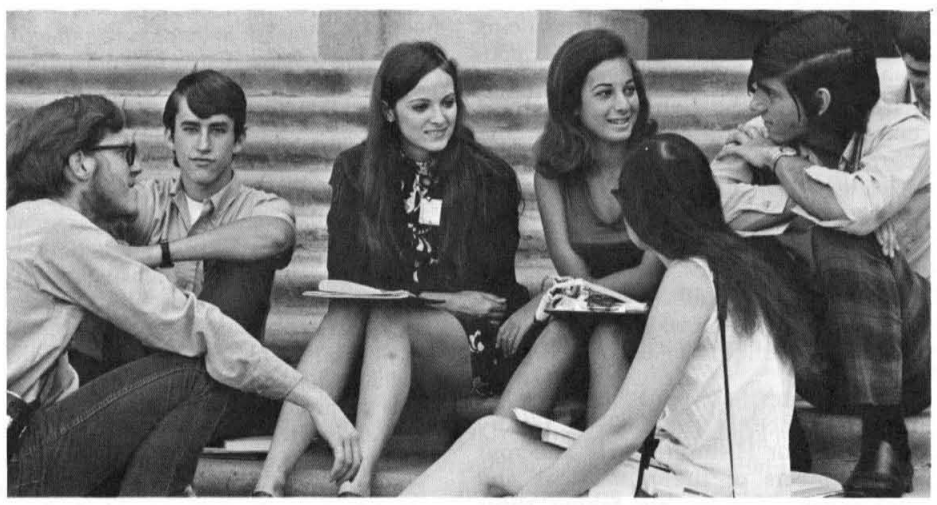
In the homecoming game with Riverside, about the only thing attending alumni had to cheer about was the strong defensive effort turned in by the Beavers. The defensive unit held Riverside to just two touchdowns while intercepting three of their passes. On offense, Caltech hurt their own scoring chances by fumbling the ball in several key situations.

At last - the first coeducational freshman class



Girls! After just six weeks on campus, Caltech's inaugural group of coeds is completely involved in university activities. This picture series shows one freshman meeting the Russian cosmonauts during their recent campus visit, while other girls are busy in class, in the lab, and, oh yes, talking with the boys.





Science programs

Continued from page 1

dents are in this program—three in chemistry, two with Jerome Vinograd in chemistry and biology, and one in information science.

► Finally, all students are invited to participate in Caltech's evening art program.

This recent letter to Browne shows what the program means to one of the students:

Dear Mr. Browne,

My son Mike is in your Saturday program. He came home from the first meeting looking like an electric light bulb and couldn't stop talking for two hours.

I spoke to you on the phone about my eighth grader, and I just wanted you to have our name if the opportunity arises to include him in the program.

As I mentioned to you, he is very interested in biology and ecology. When he was five, he was asked to draw a picture of what he wanted to be. He made a stick figure holding a test tube with a bare light bulb over his head. He's always told us he was only going to have one child because a scientist couldn't give much time to a family. Please keep him in mind if you get some openings.

Thank you for doing what you are doing. I can't tell you how much it means to us to have Mike where he is stimulated and can get the answers to all the questions he is always asking.

Very sincerely,
Mrs. David Miller
El Monte, California

History 40

Continued from page 1

teaching the 20 students enrolled in the class. In the first week, Bates covered "Mass Media, Campaigns, and Voting Decisions," and he will end the semester with a look into "The Amateurs and the Professionals—What Can We Do?"

Others teaching with Bates are John Benton, professor of history; Dan Kevles, associate professor of history; Rodman Paul, professor of history; and Robert Rosenstone, associate professor of history. They will discuss such topics as "Minority Politics and the Organization of Communities," "The Politics of Science," "The Power of the Presidency and Presidential Decision-Making," and "Students and Minority Groups."

The speakers who have been invited to talk to both students and the Caltech community about their activities in politics and government include social worker and community organizer Saul Alinsky, who spoke on October 14 about "Making Polarization Work"; Republican Congressman John Rousselot, who discussed "Conservative Politics" on October 19; journalist Don Wheeldin, speaking on October 19 on "Blacks, Politics, and the Uncertain Future"; and Marlow W. Cook, Republican Senator from Kentucky who talked about "The Politics of Defense" on October 23. Cook is a member of the Senate military appropriations subcommittee and the judiciary committee.

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EDITORIAL STAFF

Executive editor: Edward Hutchings Jr.
Managing editor: Laurie Spaulding
Associate editors: Jacquelyn Hershey, Janet Lansburgh, Kathleen Marcum, Kay Walker, and Jeff Zakaryan.
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Coming events

Saturday, Nov. 7, 8:30 p.m. Beckman *FISTS IN THE POCKET.* A sinister-tender black comedy film by Marco Bellochio. Tickets: $2.50 (Students: $2.00).

Monday, Nov. 9, 8:30 p.m. Beckman *SCIENCE AND THE ARTS—CONFLICT AND RECONCILIATION.* A lecture by W. T. Jones, visiting professor of philosophy. Beckman Lecture Series. Free.

Tuesday, Nov. 10, 8:00 p.m. Beckman *DR. JEKYLL AND MR. HYDE.* The original film version of this classic horror movie, accompanied by Chauncey Haines at the organ. Added attraction: *THE CAT AND THE CANARY,* starring Laura LaPlante. Tickets: $2.50 (Students: $2.00).

Friday, Nov. 13, 8:30 p.m. Beckman *VIRTUOSI DI ROMA.* Noted Italian Chamber Music Ensemble, conducted by Renato Fasano and presented in cooperation with the Venice Committee International Fund for Monuments, Inc.

Saturday, Nov. 14, 8:30 p.m. Beckman *JANE GOODALL,* noted for her anthropological studies in Tanzania, speaks on "My Life Amongst the Wild Chimpanzees." Presented in cooperation with L.S.B. Leakey Foundation. Tickets: $2.50 (Students: $1.00).

Sunday, Nov. 15, 3:30 p.m. Beckman *COLEMAN CHAMBER CONCERT.* World premiere of a work by Karl Kohn for string quartet, clarinet, horn, bassoon, and piano. Also works by Beethoven, Brahms, and Berg. Tickets: $5-4-3.

Monday, Nov. 16, 8:30 p.m. Beckman *SPACE & PHOTOGRAPHY AND COMPUTERS & MANKIND.* A lecture by Thomas C. Rindfleisch of the Space Science Division at JPL. Beckman Lecture Series. Free.

Friday, Nov. 20, 8:30 p.m. Beckman *JOHN WILLIAMS.* Classical guitarist, presented by arrangement with Harold Shaw. Tickets: $5.50-4.50-3.50.

Friday, Nov. 20 Athenaeum Alumni Association's Gourmet Dinner and Wine Tasting. Contact the Alumni Office for reservations.

Monday, Nov. 23, 8:30 p.m. Beckman *PULSARS AND SUPERNOVAE.* A lecture by James E. Gunn, assistant professor of astronomy. Beckman Lecture Series. Free.

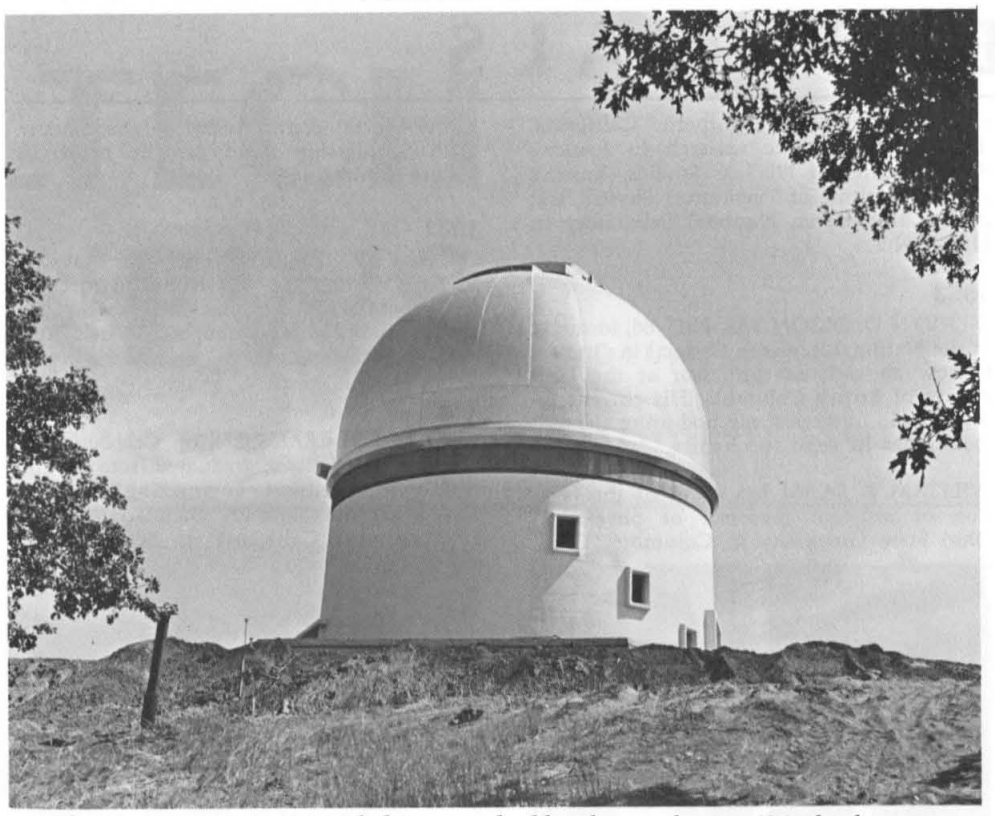
Tuesday, Nov. 24, 8:00 p.m. Beckman *TUESDAY NIGHT AT THE SILENT MOVIES.* The legend of Rudolph Valentino and a new era in films began with this 1921 production. (Contract prohibits name of film to be printed.) Tickets: $2.50 (Students: $2.00).

Monday, Nov. 30, 8:30 p.m. Beckman *SCULPTURING LIVING FORMS WITH GENES AND CHROMOSOMES.* A lecture by William Dreyer, professor of biology. Beckman Lecture Series. Free.

Wednesday, Dec. 2, 8:30 p.m. Beckman *VLADIMIR KRAINEV.* Award-winning Russian pianist, presented by special arrangement with Columbia Artists Management, Inc. Tickets: $5-4-3-2.

Wed.-Fri., Dec. 2-4 Beckman *THE ROLE OF SCIENCE AND TECHNOLOGY IN ECONOMIC DEVELOPMENT.* Conference IV in a series sponsored by The Industrial Associates.

Friday, Dec. 4, 8:30 p.m. Beckman *ARMCHAIR ADVENTURES.* "Hong Kong," second in a series of travel films, produced by Karl Robinson. Series tickets: $7-6. Single: $2.50-2.00.



The Oscar G. Mayer memorial observatory building houses the new 60-inch telescope.

New 60-inch telescope

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154 inches long—and the higher magnifications possible with a long focal length of 1,800 inches (at the coudé focus) or 525 inches (at the Cassegrain focus). The telescope can detect objects as faint as 22½ magnitude as compared with a limit of the 23rd magnitude for the 200-inch instrument.

Over-all design and construction of the telescope was under the supervision of Bruce Rule, chief engineer of the Hale Observatories. The telescope was built largely in the central engineering services shops of Caltech. Construction began four years ago when the Corning Glass Works of Bradford, Pennsylvania, cast a 61-inch-in-diameter mirror blank of fused silica. The 2,000-pound mirror disk is 10½ inches thick on the outside by 9 inches on the inside. A hole 18 inches in diameter through the center of the disk allows the magnified reflected image of stars and galaxies to reach the Cassegrain focus.

Bowen designed the curvature of the big mirror in the Ritchey-Chretien form. This configuration eliminates the serious optical difficulty of coma, which causes distortion of objects near the outer edge of the field. Thus all objects in the field of photographs taken with the new telescope will be in sharp focus. The photo plates, 12 inches square in size, cover an area of sky 1¼ degrees on a side, or a little more than twice the diameter of the moon.

Optician Floyd Day took two months to grind several pounds of material off the mirror surface and more than 200 pounds off the sides to achieve the desired mirror configuration and disk shape. After that, two years were spent in polishing and figuring to achieve the desired precision of the front surface.

While work on the mirror proceeded, Edwin Dennison, staff member of the Hale Observatories, was supervising the design and development of the electronic equipment in the observatories' astroelectronics laboratory. The control functions and data acquisition system are supported by a Raytheon 703 minicomputer (only slightly larger than a typewriter) and a memory bank. A special input-output unit, designed by Howard Sachs of the astroelectronics laboratory, links the computer with the data-gathering devices, clocks, tracking rate generators, instrument data encoders, operator control panels, and a television data display console.

The National Science Foundation provided $590,000 for the telescope and additional funds for several auxiliary instruments, and the family of the late Oscar G. Mayer, executive of a meat processing company, contributed $373,000 for the observatory building that was named in his honor.

Interhouse Dance

The annual Interhouse Dance will be held at 8:30 p.m., Saturday, November 21. Each house will be brightly decorated and a variety of entertainment will be offered. All alumni, faculty, employees, and their friends are invited.

Alumni hold wine tastings

A wine tasting party on October 3 opened up Caltech alumni activities this fall and drew the largest turnout for a fall chapter event in 20 years. Ninety members of the San Francisco chapter of the Alumni Association gathered at the Charles Krug Winery in St. Helena for a tour of the winery, wine-tasting, and a dinner that was followed by a lecture on California wines. Denton Caldwell, manager of the liquor department of the Hines Grocery Company in Pasadena and guest speaker at past wine-tastings for Caltech alumni, gave the evening lecture. The chapter meeting was organized by Harrison Sigworth, '44, president of the San Francisco chapter.

Alumni in San Diego also had a chance to sample California wines and to hear a talk about them by Denton Caldwell. President of the San Diego chapter, David Wilford, presided over the November 4 meeting, which was held at the Marine Corps Officers Club.

Membership in the Caltech Alumni Association ($10 a year) brings:

—**Engineering and Science** magazine seven times a year

—**Alumni Directory** issued every three years

—**Athenaeum** membership privilege

In October's E&S:

Reflections from the Man Who Landed on the Moon in 1929, by Ray Bradbury

The Implications of Recent Advances in Biology for the Future of Medicine, by Robert L. Sinsheimer

Earl appointed

J. Ben Earl '44

President Harold Brown has announced the appointment of J. Ben Earl as chairman of the alumni phase of the Caltech development program. Earl, a 1944 Caltech graduate in civil engineering, replaces Ruben F. Mettler, also from the Caltech class of 1944. Mettler was recently elected to the Board of Trustees and is now taking part in their development efforts.

As chairman of the alumni group, Earl is responsible for coordinating the continuing fund-raising program with the 85 alumni area chairmen.

Earl is a member of the board of directors of the Caltech Associates and is president of the O. K. Earl Corporation, a Pasadena construction firm. He and his wife and four children live in Arcadia.

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I certify that the statements made by me are correct and complete.

—Edward Hutchings Jr.

PERSONALS

1929

ALBERT E. MYERS, PhD '34, who retired from Shell Chemical Company in New York City after 36 years of service, has accepted a position as assistant professor of chemistry at Cal Poly, San Luis Obispo. He is a former member of the faculty at both Caltech and Occidental.

1935

CHARLES M. BLAIR, PhD, has been elected chairman of the board of Magna Corporation in Santa Fe Springs. Formerly executive vice president and technical director of the firm, Blair is a pioneer developer of corrosion inhibitors for protection of oil and gas wells.

1945

BURTON G. MENDELSON has been elected a vice president of Western Union Corporation, responsible for corporate development. Before joining Western Union in 1966, he had been with Motorola, Inc., for more than 17 years.

1946

DENNIS J. AHERN is now marketing manager for Advanced Technology Operations with Beckman Instruments, Inc. Before this appointment he was eastern regional manager for ATO.

1947

FRANK R. BOWERMAN, MS '48, has joined the faculty of the University of Southern California as a professor of civil engineering, and will be responsible for the direction of USC's new environmental engineering program. For the past 20 years he has worked in environmental pollution control both in government service and in industry.

1949

WILLIAM M. McCARDELL, MS, is now a marketing vice president for the Standard Oil Company of New Jersey in New York City.

LAURENCE H. NOBLES, MS '49, has been named acting dean of the College of Arts and Sciences at Northwestern University. When a permanent dean is chosen, Nobles will become dean of administration, a newly created position in the office of the university's president.

1951

WILLIAM A. KELLEY has been appointed product manager for FMC Corporation's dapon resin and allyl monomer's division, where he will assume sales and market development responsibilities. He worked for the Monsanto Company in commercial development before joining FMC.

EDWIN E. PYATT, professor of environmental engineering at the University of Florida since 1965, is now chairman of the department.

1957

MICHAEL B. DUKE, MS '61, PhD '63, formerly with the U.S. Geological Survey in Washington, D.C., has joined NASA's Manned Spacecraft Center in Houston. He is curator of lunar materials, responsible for the preservation of rocks and other materials returned from the lunar surface, and supervisor of the distribution and documentation of materials circulated to scientists.

1960

CHARLES E. ANTONIAK writes that he has received his PhD in mathematics from UCLA, and that he will be an assistant professor in the statistics department at the University of California, Berkeley. He now has a wife, Jenny, and a daughter, Cathy.

RONALD B. ARPS, project engineer for IBM's advanced systems development division, has been awarded an IBM postdoctoral fellowship to pursue teaching and research at the Swiss Federal Institute of Technology in Zurich. He will continue work in digital image processing as part of the Institute for Applied Physics and as a consultant to IBM Research in Zurich.

1961

RICHARD S. THOMPSON, a specialist in the field of superconductivity, has been appointed an assistant professor of physics at the University of Southern California. Thompson has done research in France's Saclay Center of Nuclear Studies, Russia's Landau Institute of Theoretical Physics, and at the Brookhaven National Laboratory in Upton, N.Y.

1963

MERVYN D. OLSON, MS, PhD '66, formerly at the National Research Council in Ottawa, is now an assistant professor at the University of British Columbia. His current research is in numerical method-finite element techniques in solid mechanics.

WILLIAM F. SAAM has accepted the position of assistant professor of physics at Ohio State University in Columbus, Ohio.

Bowerman, '47

Kelley, '51

1964

DON W. TERWILLIGER writes that he received his PhD in physics at the University of Oregon in June, married Connie Felger in July, and started as assistant professor of physics at Middlebury College, Vermont, in September.

MARC J. C. De BLOCK, MS, is now a research engineer in the development laboratories of a company called MBLE (Manufacture Belge de Lampes et de matériel électronique) in Brussels, Belgium.

JOSEPH TAYNAI, MS '66, PhD '70, is now working as an advanced research and development engineer for Sylvania Electronic Systems, a General Telephone research laboratory in Mountain View, California.

1966

PETER H. WIRTZ, MS, and his wife SYLVIE POTIGNY WIRTZ, MS, are both working at the Karlsruhe Nuclear Research Center in Germany.

1967

CONSTANTINE G. SEVASTOPOULOS, MS, writes that he is currently employed by the Hewlett-Packard Company in Palo Alto as a data products specialist in the international division.

1968

ERNEST Y. Y. LAM, PhD, is now an assistant professor of chemistry at the College of Petroleum and Minerals in Dhahran, Saudi Arabia.

Obituaries

1923

FRED F. ROBERTS, on September 23. The former president of the Roberts Development Company in Tucson, Arizona, is survived by his wife, Gladys; two sons; two sisters; and seven grandchildren.

1925

EARL D. STEWART, on September 7, in La Habra. He had retired from Schwarz Laboratories in New York in August.

1927

V. WAYNE RODGERS, on September 14. A partner in the patent attorney firm of Knight & Rodgers, he was one of the original incorporators of the Alumni Association, served on its Board of Directors from 1935 to 1937, and was the long-time secretary of the Gnome Club. Rodgers received his law degree from Loyola University Law School in 1939, was in charge of the International Map Service during WWII, and was discharged as a colonel in the Corps of Engineers. During 1952-53 he was the president of the Patent Law Association in Los Angeles. Rodgers is survived by his wife, Virginia; a son, Bruce; and a daughter, Joyce. Special contributions to the Gnome Club Scholarship Fund can be made in tribute to Mr. Rodgers.

1931

CECIL E. P. JEFFREYS, PhD, on May 30, in San Marino. He was technical director for Truesdail Laboratories in Los Angeles. He leaves his wife, a daughter, a son, and four grandchildren.

1932

WILLIAM H. CLAUSSEN, on October 1, in Kensington. Claussen graduated from the Institute in chemical engineering and received his doctorate in chemistry at the University of California at Berkeley. He joined the Standard Oil Company in 1934 and was vice president of Chevron Oil Trading Co. at the time of his death. He is survived by his wife, Josephine, and two children: Mrs. Keith Trotman of Piedmont, and William B. Claussen of Los Angeles.

1933

CHARLES B. SPICER, on July 5, in Portland, Oregon. He had retired from the U.S. Army Corps of Engineers in 1967. Spicer is survived by his wife and daughter.

1938

HENRY K. EVANS, on September 9, in Walnut Creek. A transportation engineer, he was a senior vice president of the consulting engineering firm, Wilbur Smith & Associates. Survivors include his wife, Margaret; his sons, Henry, Robert, Reginald, Clay, and Christopher; his stepson, Gregory; and his stepdaughter, Cynthia.

1955

WILLIAM A. BERG, on August 23, in Palo Alto. He was marketing director of the microwave and opto-electronics division of Fairchild Camera and Instrument Corporation in Mountain View. He is survived by his wife, a daughter, and two sons.

Faculty honors

Jack McKee, Caltech professor of environmental engineering, received a 1970 Carnegie-Mellon Alumni Association Merit Award this month for "outstanding accomplishments in his field." He was named the most promising engineering student in his graduating class at the Carnegie Institute of Technology in 1936.

McKee has won many honors as a leading authority on environmental health engineering, including election to the National Academy of Engineering, and the Rudolf Hering Medal in sanitary engineering from the American Society of Civil Engineers. He has served on the Atomic Energy Commission's advisory committee on reactor safeguards, and was elected the 1969-70 chairman of the Environmental Engineering Intersociety Board, a national organization set up to improve environmental engineering services.

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John H. Seinfeld, associate professor of chemical engineering, has received the Donald P. Eckman Award of the American Automatic Control Council for his "creative contributions to the field of automatic control."

The award, which carries a $300 cash prize, is given to young scientists for work done in engineering before they are 27 years old. Seinfeld's studies include the theory of chemical processes, analysis and control of chemical systems in which random errors are present, and air pollution. He is now working out possible pollution-control strategies with a computer that simulates the atmosphere of the Los Angeles Basin.

Seinfeld graduated in 1964 from the University of Rochester. He came to Caltech in 1967 after receiving his PhD from Princeton University.

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