Robert F. Bacher, Provost of the California Institute of Technology.

The Month at Caltech

Caltech's First Provost

Robert F. Bacher has been appointed Caltech's first provost. This is a new position created by the Institute's board of trustees.

Dr. Bacher has served as professor of physics and chairman of the Institute's division of physics, mathematics and astronomy since 1949. He will assume his new post in September 1962.

The purpose of his new position, according to President DuBridge, is "to create a closer link between the faculty, the administration, and the trustees in order to increase the effectiveness of the Institute in the development and improvement of its academic program."

As provost, Dr. Bacher will:

1. Serve as principal academic officer to assist the president in carrying out his responsibilities for the development and operation of the Institute's program.

2. Assume the duties now handled by the dean of the faculty, which post will be discontinued.

3. Serve as acting president in case of the absence or disability of the president.

4. Work closely with the chairman and other elected officers of the faculty in providing better communication among faculty members, and between faculty members and the administration, for the purpose of improving mutual understanding and expediting action on academic matters.

5. Take responsibility for the development, in collaboration with faculty members, of proposals for improvement of Institute academic practices and policies, and for making recommendations to the president and the board of trustees when administrative action is appropriate.

6. Carry on such other consultation, studies, discussions, and activities which he and the president believe are to the benefit of the Institute.

Dr. Bacher is a graduate of the University of Michigan (BS 1926, PhD 1930). He first came to Caltech as a National Research Council Fellow in 1930, and subsequently did research and teaching at MIT, Michigan, Columbia, and Cornell. During World War II, he worked first at the Radiation Laboratory at MIT, then at the Los Alamos Laboratory, where he headed the experimental physics division from 1943 to 1944 and the bomb physics division from 1944 to 1945. He was awarded the President's Medal for Merit in 1946.

Dr. Bacher was the first scientist member of the Atomic Energy Commission, on which he served from 1946 to 1949. He was a member of the President's Science Advisory Committee from 1957 to 1960, and was one of three U.S. delegates to the Geneva technical conference on nuclear test cessation in 1958. He is currently a member of the Naval Research Advisory Committee and is consultant to the President's Science Advisory Committee, the Department of De-

fense, and the Atomic Energy Commission.

Because Dr. Bacher had already asked for and been granted a scholarly leave for the second and third terms of the academic year 1961-62, his appointment as provost will become effective on September 1, 1962. Dean William N. Lacey will retain the title and duties of dean of the faculty until that time.

Eastman Professor

James Bonner, professor of biology, has been appointed George Eastman Visiting Professor at Oxford University for the academic year 1963-64.

The Eastman Professorship was established in 1929 by George Eastman, founder of the Eastman Kodak Company, to send senior American scholars to Oxford for one year. In the past, this visiting professorship has gone to such men as Felix Frankfurter, Arthur Holly Compton, Herbert Spencer Jennings, Simon Flexner, Linus Pauling, Wallace Notestein, Donald A. Stauffer, Roger S. Loomis, Harold C. Urey, George F. Kennan and George W. Beadle.

National Science Foundation Grant

Caltech's W. M. Keck Laboratory of Hydraulics and Water Resources has received two grants totalling $129,300 from the National Science Foundation for research work in the field of mechanics of sediment-laden streams $45,000), and for the construction of a unique tilting flume ($84,300). This research is directed jointly by Vito A. Vanoni, professsor of hydraulics, and Norman H. Brooks, associate professor of civil engineering.

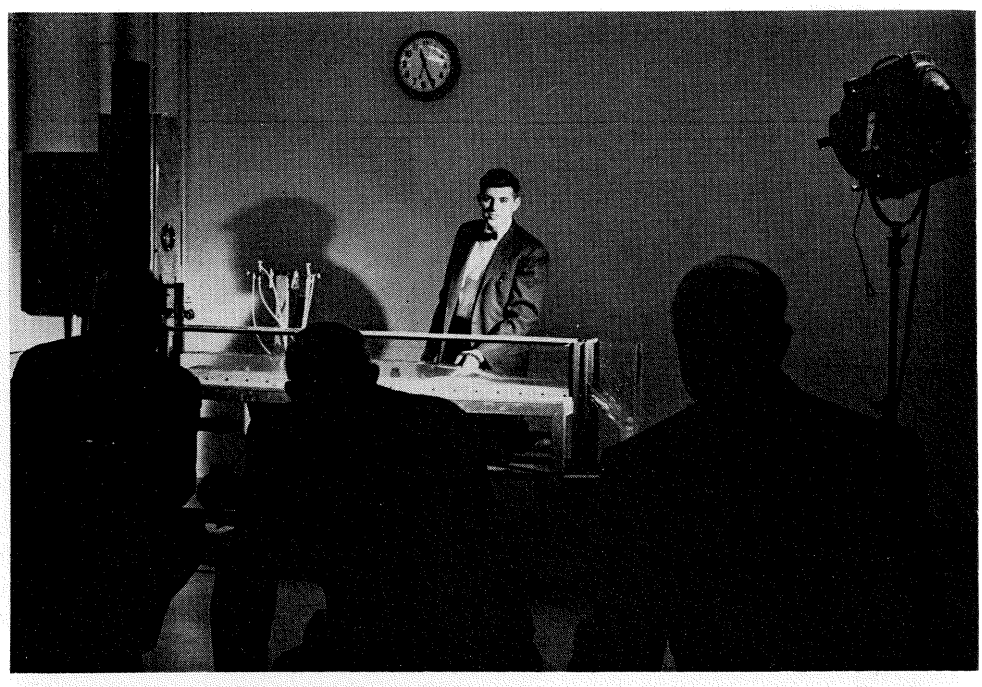
Basically, a laboratory flume is a tool for making a flow of water with an open surface. The fluid mechanics of the flow of clear water may be studied, or sand or other material may be added for sedimentation studies. The new 130-foot flume will be used first to study the transportation of sediment by flowing water. Engineers have learned how to control the flow of water, but have not yet solved many of the complex problems caused by the moving and shifting of mud and silt in rivers. Because of the increased importance of careful and efficient utilization of water resources, Caltech engineers feel that the new flume will be an indispensable research tool.

Valuable studies can also be made of sediment deposits, and of flow pattern over or through such structures as spillways, chutes, or weirs. Miniatures of these structures can be introduced anywhere in the flume and the pattern of flow downstream can be easily studied.

The new flume, to be ready for use early in 1963, will be housed in the longest room at Caltech, the 197-foot sub-basement hydraulics laboratory. The maximum weight of sand and water that will be supported by the flume is about 20 tons.

Research on sedimentation has been going on at Caltech for over 25 years, with smaller flumes, and research reports on flowing streams have been sent to hydraulics laboratories and universities in more than 30 nations. In addition to the general problems of the fluid dynamics of streams, more specific problems have been studied, such as the depositing of silt behind dams on the Colorado River, and the swift stream erosion in northeastern Mississippi.

Construction of the long flume was not possible until the W. M. Keck Laboratory of Hydraulics and Water resources was built. Here, a special area was set aside for the big flume, which Caltech engineers expect will be the most versatile in the world.



The California Institute of Technology's board of trustees, on a campus tour, watch a demonstration by Norman H. Brooks, associate professor of civil engineering, in the W. M. Keck Laboratory of Hydraulics and Water Resources.

Caltech's National Board of Trustees — November 6, 1961

W. Keck *Chandler* *Watson*
Valentine Green Hahn Ingersoll Von Hagen Banks Morton Crandall Mudd
Dubridge Braun Fluor Lyon Beckman Volk Vesper McCollum Williams
Barber McDuffie Minckler Page Ruddock O'Melveny Percy
(Not present: C. Jones, T. Jones, Jorgensen, Stuart, Winnett)

First Meeting

Caltech's national board of trustees held its first meeting on the campus on November 6. A group of national trustees was elected to the board last spring to broaden the geographic base of its membership.

The trustees made a campus tour in the morning, held a business meeting after lunch, heard reports from the Institute's division chairmen, then attended a reception at the President's house, and a dinner at the Athenaeum.

Robert L. Minckler is the new chairman of the board. His election followed the retirement of Albert B. Ruddock, who has been a member of the board since 1938 and has served as chairman since 1954. Mr. Ruddock will continue on the board as an honorary member.

Two other men have been named honorary members of the board — William C. McDuffie, who has been on the board since 1933, and has been vice president since 1946; and P. G. Winnett, who has been a board member since 1939.

A new member of the board, William M. Keck, Jr., was elected to replace Howard B. Keck, who has resigned.

Indian Institute of Technology

Caltech has joined with eight other American colleges and universities to assist in the development of a technological institute in India. The school will be known as the Indian Institute of Technology, and will be established in Kanpur, a major industrial city on the Ganges, about 250 miles southeast of New Delhi. The project parallels technological institutes in India which have been sponsored by other governments, including Russia.

Joining Caltech in the project are MIT, Princeton, the University of California, Carnegie Tech, Ohio State, Purdue, the University of Michigan, and the Case Institute of Technology. The institute was formed at the request of the Government of India and the U.S. International Cooperation Administration.

India will build the classrooms, laboratories, and dormitories for the new institute, and the American institutions will supply key faculty members and help set up the curriculum. Donald Hudson, professor of mechanical engineering, is Caltech's representative on the planning committee.