

The Month at Caltech



Portrait of a Visitor

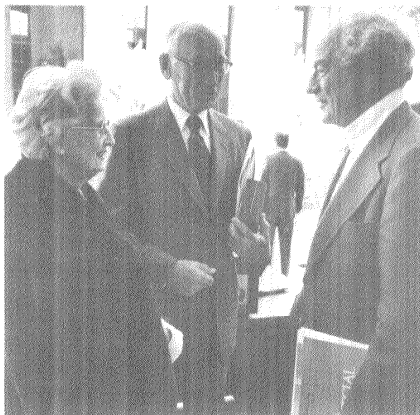
For millions of amateurs, Comet Kohoutek didn't live up to its advance billing as the celestial spectacle of the century. Still, it did provide some dramatic photographs for astronomers, plus a lot of scientific information that they will be analyzing and discussing for a long time.

This photograph is the first to be released by the Hale Observatories after the comet rounded the sun on December 28—at a distance of about 13 million miles—and headed outward toward the farthest reaches of its orbit. It was recorded at 7:35 PDT on January 12, when research assistant Charles Kowal focused the 48-inch Schmidt telescope at Palomar on the comet for a three-minute exposure.

Since the tail of a comet is always blown away from the sun by the solar wind and light pressure, Kohoutek's tail is now at its leading edge. Actually, Kohoutek has two tails. The one that resembles a corkscrew is composed of ionized gas; the cloudy streak beside it is made of dust. The overall length of Kohoutek and its tails is at least 13 million miles.

At the time this picture was taken, the comet was streaking away from the sun at the rate of more than 100,000 miles per hour toward the aphelion of its very long elliptical orbit—so long, in fact, that its next good picture-taking session is about 80,000 years away.

**The Month
at Caltech . . . continued**



**Beckman Behavioral
Biology Laboratories**

Caltech's new Mabel and Arnold Beckman Laboratories of Behavioral Biology were dedicated on January 14. President Harold Brown presided at the ceremony, and three of the happiest participants were the Beckmans and Robert Alexander, architect for both the new building and for its fraternal twin, Baxter hall, across the mall.



Taylor-made

Theodore B. Taylor, BS '45, recently showed up as the subject of a three-part profile ("The Curve of Binding Energy") in *The New Yorker* for December 3, 10, and 17.

The profile follows Taylor's life from his childhood in Mexico City through his education at Exeter and Caltech, his stint in the Navy, and his brief stay at UC Berkeley. He then became a conceptual designer of nuclear bombs in the Theoretical Division at Los Alamos Scientific Laboratory—designing Davy Crockett, Hamlet, and the Super Orally Bomb.

In 1957 he went to work for General Atomic in San Diego in a civilian laboratory set up to make creative use of atomic energy. Project Orion was his main interest there, requiring the design of a spacecraft as large as a 16-story building, carrying 150 people, and powered by nuclear explosions of small bombs detonated about a hundred feet below the spacecraft. But the limited test-ban treaty of 1963 forbidding nuclear explosions in space also caused suspension of work on Orion.

Taylor now heads his own firm, International Research and Technology. Its main purpose—a subject that is intensively and exhaustively pursued in the profile—is to promote safeguarding the fissile material produced in the nuclear-powered fuel cycle. Taylor believes that theft of this material by people who want to make atomic bombs for personal use is quite possible.

The profile provides considerable information on the nuclear age—from its inception to its current awesome proportions—and includes mention of the contributions of Caltech's provost, Robert Christy.