

Alfred Loomis FREE

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we hear that

Thomas Nagylaki, formerly at the University of Wisconsin, has been appointed assistant professor of biophysics and theoretical biology at the University of Chicago.

Paul R. Engle has been appointed director of the planetarium and assistant professor of planetarium education in astronomy at the University of Arkansas at Little Rock.

Gordon R. Charlton, formerly at the University of Toronto, has joined the high-energy physics program staff in the Division of Physical Research of the US Energy Research and Development Administration.

James G. Brennan, former chairman of the physics department at The Catholic University of America, has become the Dean of the Graduate School of Arts and Sciences. **Daniel Sober**, formerly adjunct assistant professor at UCLA, has joined the CU faculty.

B. Samuel Tanenbaum has become the Dean of Faculty at Harvey Mudd College. He was formerly professor of electrical engineering and applied physics at Case Western Reserve University. New assistant professors at Harvey Mudd College are **Daniel C. Peterson** and **John S. Townsend**.

Margaret Waggoner has been installed as president of Wilson College, Chambersburg, Pennsylvania. She was formerly professor of physics and dean of Smith College.

obituaries

Alfred Loomis

Alfred L. Loomis, one of the most influential American physicists of this century, died on 11 August at the age of 87. Although he was first a lawyer and later a highly successful investment banker, he thought of himself as a physicist. During World War II he was chief of the radar division of the National Defense Research Council, which was responsible for all the US research and development work in radar, including the famous Radiation Laboratory at MIT. The best known of his inventions is LORAN, a pulsed long-range navigation system which is installed and operating throughout the world.

After graduating from Harvard Law School, Loomis went to work in the law offices of his cousin Henry Stimson, who was later Secretary of State and, during World War II, Secretary of War. In World War I, stationed at the Aberdeen Proving Grounds, Loomis did research in exterior ballistics. During that period he met R. W. Wood, with

whom he collaborated in founding the science of ultrasonics. Wood and Loomis worked symbiotically for many years in a private laboratory Loomis established in Tuxedo Park, N.Y.

Loomis was vice-president of a large firm of Wall Street investment bankers at this time, but his evenings and weekends were devoted to physics in the Loomis Laboratory. Modern physicists look forward to a summer at a school on Lake Como or in Sicily, but in the 1920's and 1930's the big deal was an invitation to spend a summer at Tuxedo Park, working with the best physicists Loomis and Wood could find, from Einstein, Bohr and Heisenberg on down.

Although the laboratory had the finest spectroscopic equipment in the world, Loomis was more interested in other matters. Hans Berger, in Germany, had recently demonstrated the phenomenon of brain waves, but in America his results were widely disbelieved. In his last published work before World War II, Loomis showed that Berger was right, and he further investigated brain waves of subjects in various stages of

sleep, to open a rich new field in electroencephalography.

In the depression years many schools were unable to pay the page charges assessed by *Physical Review*. The form letter from the Physical Society in those days had a postscript that said, "In the event that the author or the institution is unable to pay the page charges, these will be paid by an anonymous friend of the Physical Society." Now that Alfred Loomis is dead, it is probably fair to identify him for the first time as patron of the depression-plagued *Physical Review*. He also played an active role in the establishment of the American Institute of Physics, to put the affairs of the physics community on a sound business footing.

The last project of the Loomis Laboratory, before it was closed in order to staff the MIT Radiation Laboratory, was the building of one of the first microwave radar sets in the world. One of the earliest production klystrons went into this pioneering radar, which was demonstrated in late 1940. When the "Tizard Mission" brought the British



The "scientific establishment" meets informally on 29 March 1940 in Berkeley, California and endorses Ernest O. Lawrence's plans to build

the 184-inch cyclotron. Left to right: Lawrence; Arthur H. Compton; Vannevar Bush; James B. Conant, Karl T. Compton and Alfred Loomis

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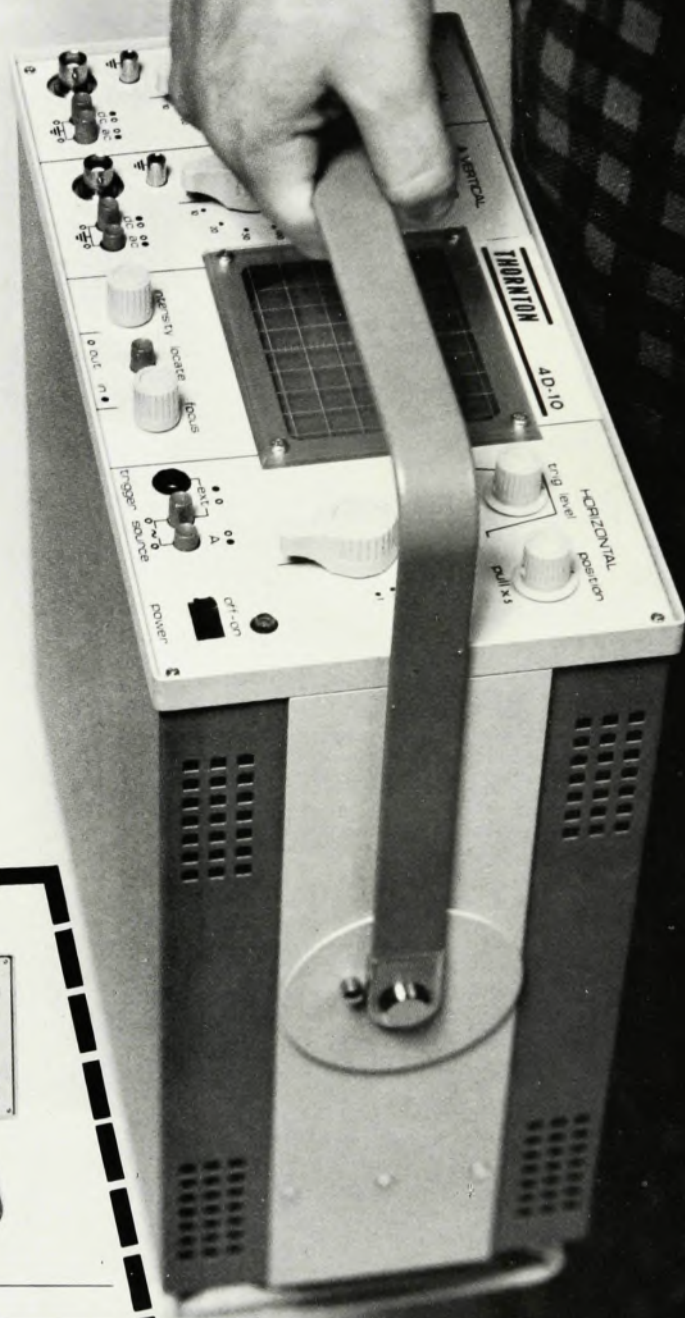
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pulsed magnetron to the US in the summer of 1940, they met with the leaders of the American scientific community at the Loomis Laboratory. Loomis immediately recognized the superiority of pulsed radar to the continuous wave device he had built, so he threw all his energy and talents into the development of pulsed radar. The well-known success of the US radar program is to a great extent a monument to the foresight and organizational skills of Alfred Loomis.

Loomis played another unheralded role in this country's scientific war effort. He was a trusted "ambassador without portfolio" from the scientific community to the War Department. Secretary Stimson knew that his cousin was a man without personal ambition, whose advice he could trust absolutely. There is little doubt that the solid support given by the Army to the Manhattan District was enormously helped by a long series of secret briefings given to Henry Stimson by Alfred Loomis, concerning the activities of his friends Ernest Lawrence, Enrico Fermi, Arthur Compton and Robert Oppenheimer.

For those of us who were fortunate to know him well, he will be remembered as a warm and wise friend, always interested in learning new things. I was his guest for three days in May of this year, and what he most wanted to learn from me concerned programming tricks for the Hewlett-Packard model 65 hand-held computer that was his constant companion. I think it most fitting that my last visual memories of this renaissance man, whose life encompassed and contributed much to the electronic age, should have him operating a hand-held electronic computer containing tens of thousands of transistors.

LUIS W. ALVAREZ

University of California, Berkeley

H. Hunter Hill

H. Hunter Hill, 36, a physicist at the Los Alamos Scientific Laboratory, died in a one-car accident on 12 June. He received his BA in physics at Rice University, his MS at the California Institute of Technology, and his PhD at the University of California at San Diego, studying with Bernd T. Matthias and Linus Pauling.

Although relatively young, he had already accomplished a great deal and had stimulated other work. In 1970 he pointed out that the relationship of the occurrence of 5f bonding (and superconductivity) vs. the occurrence of magnetism may be characterized in terms of a single, simple parameter, the interato-



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