

THE MONTH AT CALTECH

Physicists and the Hydrogen Bomb

■ CHARLES C. LAURITSEN, Professor of Physics and Director of the Kellogg Radiation Laboratory, was one of 12 prominent American atomic scientists to sign a joint statement last month urging the United States to make a solemn declaration that it would not use the hydrogen bomb in warfare unless an enemy used it first against us or our allies.

The physicists, who were attending the annual New York meeting of the American Physical Society at Columbia University, released their statement just four days after President Truman ordered construction of the hydrogen bomb.

The statement follows, in full:

A few days ago, President Truman decided that this country should go ahead with the construction of a hydrogen bomb.

This decision was one of the utmost gravity. Few of the men who publicly urged the President to make this decision can have realized its full import. Among the reports in the press was a great deal of misinformation. However, it was stated correctly that a hydrogen bomb, if it can be made, would be capable of developing a power 1,000 times greater than the present atomic bomb. New York, or any other of the greatest cities of the world, could be destroyed by a single hydrogen bomb.

We believe that no nation has the right to use such a bomb, no matter how righteous its cause. This bomb is no longer a weapon of war but a means of extermination of whole populations. Its use would be betrayal of all standards of morality and of Christian civilization itself.

Senator McMahon has pointed out to the American people that the possession of the hydrogen bomb will not give positive security to this country. We shall not have a monopoly of this bomb, but it is certain that the Russians will be able to make one

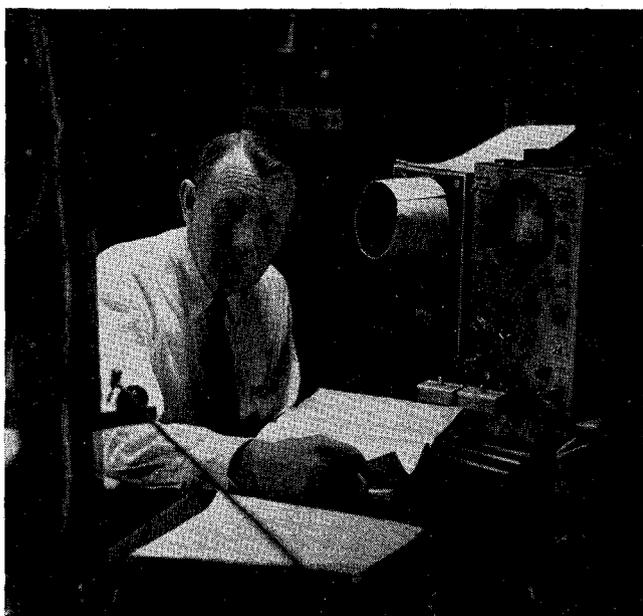
too. In the case of the fission bomb the Russians required four years to parallel our development. In the case of the hydrogen bomb they will probably need a shorter time. We must remember that we do not possess the bomb but are only developing it, and Russia has received through indiscretion, the most valuable hint that our experts believe the development possible. Perhaps the development of the hydrogen bomb has already been under way in Russia for some time. But if it was not, our decision to develop it must have started the Russians on the same program. If they had already a going program, they will redouble their efforts.

Statements in the press have given the power of the H bomb as between 2 and 1,000 times that of the present fission bomb. Actually the thermonuclear reaction on which the H bomb is based is limited in its power only by the amount of hydrogen which can be carried in the bomb. Even if the power were limited to 1,000 times that of a present atomic bomb, the step from an A-bomb to an H-bomb would be as great as that from an ordinary TNT bomb to the atom bomb.

To create such an ever-present peril for all the nations in the world is against the vital interest of both Russia and the United States. Three prominent senators have called for renewed efforts to eliminate this weapon, and other weapons of mass destruction from the arsenals of all nations. Such efforts should be made, and made in all sincerity from both sides.

In the meantime, we urge that the United States, through its elected government, make a solemn declaration that we shall never use this bomb first. The only circumstance which might force us to use it would be if we or our allies were attacked by *this* bomb. There can be only one justification for our development of the hydrogen bomb, and that is to prevent its use.

Besides C. C. Lauritsen, the signers—all professors of physics at their respective universities with the exception of Dr. Tuve—were: S. K. Allison, Director of Institute for Nuclear Studies, University of Chicago; K. T. Bainbridge, Harvard University; H. A. Bethe, Cornell University; R. B. Brode, University of California; F. W. Loomis, Chairman of Physics Department, University of Illinois; G. B. Pegram, Dean of Graduate Faculties, Columbia University; B. Rossi, Massachusetts Institute of Technology; F. Seitz, University of Illinois; M. A. Tuve, Director, Department of Terrestrial Magnetism, Carnegie Institution, Washington, D.C.; V.F. Weisskopf, Massachusetts Institute of Technology; M. G. White, Princeton University.



Lauritsen

Not Talking

■ DR. R. A. MILLIKAN has made some great speeches in his time, and he is justly famous for his speech-making. So famous, in fact, that he added to that fame last month by *not* making a speech.

Dr. Millikan was guest of honor at a Chamber of Commerce banquet in Van Nuys. He was scheduled to

deliver an address on "The Road to Peace."

The dinner began at 6:30 p.m. Afterwards, new officers were installed. Then assorted distinguished guests were introduced. The treasurer gave his report. Several committee chairmen gave theirs. The new president made a speech. Some service awards were presented. Andy Devine and Monty Montana, a couple of western movie actors, were sworn in as honorary mayor and sheriff of Van Nuys. At 10:15 Dr. Millikan was introduced.

Dr. Millikan began by giving his definition of an educated person ("an individual who can apply constant attention to one subject for two minutes"). He went on to say that he didn't think that any of the people present could—at that hour of the night, and after all they had been through—give the attention they otherwise might have devoted to the subject he was prepared to speak on. So, he explained, he didn't believe he'd speak at all. That effectively ended the meeting.

Dr. Millikan gave his speech on "The Road to Peace" at a Los Angeles Bar Association luncheon the next day.

Honors and Awards

■ **PRESIDENT L. A. DUBRIDGE:** named by President Truman to a five-man temporary Communications Policy Board, to study present and potential use of radio and wire communications facilities.

DR. H. S. TSIEN, Robert H. Goddard Professor of Jet Propulsion: elected a fellow of the Institute of Aeronautical Sciences.

ROYAL W. SORENSEN, Professor of Electrical Engineering: reappointed by Governor Warren as a member of the State Board of Registration for civil and professional engineers.

ROBERT D. GRAY, Director of the Industrial Relations Section: elected a director of the Pasadena Chamber of Commerce.

King Kong is Dead

■ **DAVID P. WILLOUGHBY,** scientific illustrator in Vertebrate Paleontology at the Institute, shattered the King Kong myth in a recent report to the American Association for the Advancement of Science. After measuring hundreds of gorilla bones and checking photographs and reports of countless scientific expeditions Willoughby came to the disappointing conclusion that gorillas don't grow much taller than people. In fact the tallest reliably reported height he could find for a gorilla was 6 ft. 2 in.—which almost any basketball center could look down on.

Willoughby had to admit, though, that gorillas still run to considerable more heft than most humans—some of them weigh in at more than 500 pounds.

Visiting Lecturers

■ **DR. RICHARD P. FEYNMAN,** Professor of Theoretical Physics at Cornell University, delivered a series of twelve seminar lectures at the Institute last month on "Quantum Electrodynamics and Meson Theories." Dr. Feynman was the third in a series of eminent physicists to lecture at the Institute this year, following Drs. Rabi and Oppenheimer.

DR. JOSEPH SLEPIAN, Associate Director of the Westinghouse Research Laboratories at Pittsburgh, Pa., and an internationally known electrical engineering authority, also came to the Institute last month to deliver three lectures.

THE BEAVER



Some Notes on Student Life

The Bleacher Beaver

ALMOST EVERY WEEKEND during the past term the Beaver had tossed his slide rule down and trudged up to the PCC gym to yell at the basketball games. There was something thrilling about the hot, brightlight tension of the gym and the Beaver felt the stirrings of a budding school spirit in his liver as he perched on the bleacher seats and chanted "ex, ex, ex, dx."

School spirit was a commodity that was largely lacking and cynically viewed among his Tech acquaintances. This was in some contrast to most colleges, the Beaver realized, as he watched the competing schools in the grandstands. The Tech cheering section was usually small and vocally inhibited, and, although he liked Merten and the other cheerleaders, the Beaver saw that their agility never approached the bouncing histrionic talents of the ones from Oxy and the other schools.

He saw it as a lamentable thing and wondered if, after he graduated, he would not look back on his four years here and feel that something had been missing in his experience. So he sat in the bleachers and let himself be carried away by the cheering and the band and the excitement. Every time Tech lost, he was black with despair; Cox, Montgomery, Butler, and the rest always seemed to play a fine game, but there were moments when the Beaver noticed a glint of professional brilliance in the opposition and wondered how many of them depended on their performances that night to continue to keep their scholarships.

The Voter

■ **ELECTION EXCITEMENT** was not confined to England this month, the Beaver noted as he wandered into kitchenettes and rooms where sheaves of cardboard and pots of poster paint overflowed into the superlatives of campaign signs. At the traditional Sunday midnight, campaign week began with an eager throng of carpenters swarming over the east campus, hammering and yelling in the dim glow of the spotlight on top of Throop.