
Frank von Hippel

Professor of Public and International Affairs, Woodrow Wilson School
Director, Center for Science and Global Security
Ph.D., Oxford University, 1962



Research Interests

Von Hippel, a theoretical physicist, is a Professor of Public and International Affairs and co-principal investigator with Harold Feiveson of Princeton's research program on Science and Global Security. From September 1993 through 1994, he was on leave as Assistant Director for National Security in the White House Office of Science and Technology Policy, and played a major role in developing U.S.-Russian cooperative programs to increase the security of Russian nuclear-weapon materials. He is the chairman-elect of the American Physical Society's Panel on Physics and Public Affairs. He also chairs the editorial board of *Science & Global Security* and is a member of the editorial board of the *Bulletin of the Atomic Scientists*.

Von Hippel received his B.S. degree in physics from MIT in 1959 and D.Phil. in theoretical physics in 1962 from Oxford, where he was a Rhodes Scholar. During the following ten years, while his research focus was in theoretical elementary-particle physics, he held research positions at the University of Chicago, Cornell University, and Argonne National Laboratory and served on the physics faculty of Stanford University.

In 1974, von Hippel's interests shifted to "public-policy physics." After spending a year as a Resident Fellow at the National Academy of Science, during which time he organized the American Physical Society's Study on Light-Water Reactor Safety, he was invited to join the research and in 1984 the teaching faculty of Princeton University.

During the late 1970s, von Hippel's research focused on technical questions relating to the containment and mitigation of nuclear-reactor accidents, alternatives to recycling plutonium in nuclear-reactor fuel, and the potential for major improvements in automobile fuel economy. Since the early 1980s his research has focused on developing the analytical basis for deep cuts in the U.S. and Soviet/Russian nuclear stockpiles and removal of their nuclear missiles off launch-on-warning alert; verifying nuclear-warhead elimination, a universal cutoff of the production of weapon-usable fissile materials and the phasing out of their use in nuclear-reactor fuel; and a comprehensive nuclear-warhead test ban.

Von Hippel has served on advisory panels to the Congressional Office of Technology Assessment, U.S. Department of Energy, National Science Foundation, and U.S. Nuclear Regulatory Commission, and on the boards of directors of the American Association for the Advancement of Science and the *Bulletin of the Atomic Scientists*. For many years he was the elected chairman of the Federation of American Scientists.

In 1977, von Hippel shared with Joel Primack the American Physical Society's 1977 Forum Award for Promoting the Understanding of the Relationship of Physics and Society for their book, *Advice and Dissent: Scientists in the Political Arena*. In 1989, he was awarded the Federation of American Scientists' Public Service Award for serving as a "role model for the public interest scientist." In 1991, the American Institute of Physics published a volume of von Hippel's selected works under the title *Citizen Scientist*, as one of the first three books in its "Masters of Physics" series. In 1993 he was awarded a five-year MacArthur Prize fellowship. In 1994, he received the American Association for the Advancement of Sciences' Hilliard Roderick Prize for Excellence in Science, Arms Control and International Security.

Courses

WWS 304: Science, Technology and Public Policy

WWS 556d: Protection against Weapons of Mass Destruction

Selected Publications

Zhang, H., and F. von Hippel. 2001. Eyes in the sky: Watching for weapons work. *Bulletin of the Atomic Scientists*, July-August, 61-66.

MacFarlane, A., F. von Hippel, J. Kang, and R. Nelson. 2001. Plutonium disposal: The third way. *Bulletin of the Atomic Scientists* 57:53-57.

Chunyan, M., and F. von Hippel. 2001. Ending the production of highly-enriched uranium for naval reactors. *Nonproliferation Review* 8:86-101.

von Hippel, F., and M. Bunn. 2000. Saga of the Siberian plutonium-production reactors. *Federation of American Scientists Public Interest Report* 53 (November-December).

Blair, B., H. Feiveson, and F. von Hippel. 1997. Taking nuclear weapons off hair-trigger alert. *Scientific American* 277:74-81.

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