

### Quantum Physics Made Relatively Simple

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Intended for an audience of Professor Bethe's neighbors at Kendal, the lectures hold appeal for experts and non-experts alike. The presentation makes use of limited mathematics while focusing on the personal and historical perspectives of one of the principal architects of quantum theory whose career in physics spans 75 years.

- *This content was implemented as a website.*

### Three Lectures by Hans Bethe

<http://bethe.cornell.edu/>

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Intended for an audience of Professor Bethe's neighbors at Kendal, the lectures hold appeal for experts and non-experts alike. The presentation makes use of limited mathematics while focusing on the personal and historical perspectives of one of the principal architects of quantum theory whose career in physics spans 75 years.

A video introduction and appreciation are provided by Professor Silvan S. Schweber, the physicist and science historian who is Professor Bethe's biographer, and Edwin E. Salpeter, the J. G. White Distinguished Professor of Physical Science Emeritus at Cornell, who was a post-doctoral student of Professor Bethe.

### Remembering Hans Bethe

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"Hans A. Bethe, who discovered the violent reactions behind sunlight helped devise the atom bomb and eventually cried out against the military excesses of the cold war, died late Sunday. He was 98, among the last of the giants who inaugurated the nuclear age." William J. Broad, New York Times, March 8, 2005.

Remembering Hans Bethe makes available a collection of more than five and one half hours of videos of one of the legendary figures of physics of the past century. [Bethe interprets the transcripts](#) of secretly recorded conversations of interned German atomic scientists when they first heard of the use of the atomic bomb. [Hans Bethe \(pronounced BAY-tah\) and Robert Wilson](#), a co-participant in the Manhattan Project discuss the development of the bomb. In 1993 [Bethe and friend, Victor Weisskopf](#), fondly reminisce about their early years as immigrants to upstate New York. Kurt Gottfried, Physics Department Chair, moderates these

discussions. In 1994 [Bethe describes the Manhattan Project](#) for Cornell students, after being introduced by Carl Sagan, and entertains their questions.

This ‘...unpretentious man of uncommon gifts,’ as the New York Times described him, received the Nobel Prize in Physics in 1967 for his work explaining how stars shine. In 1995 his friends and colleagues celebrate his influence and the 60 years he had been at Cornell. He continued as an active and productive researcher and published original scholarship for many additional years beyond his ‘official’ retirement. A complete list of his publications is included.

At the age of 96 (!) [he discusses with a Physics faculty colleague, David Mermin](#), the early history of solid state physics.

## **Hans Bethe: Celebrating “An Exemplary Life”**

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Hans A. Bethe: Celebrating “An Exemplary Life” portrays the life and works of a towering figure of the twentieth century. Dale R. Corson, President Emeritus of Cornell University characterized the breadth of Bethe’s influence: “Hans Bethe participated actively in many different communities: the world of physics, the university faculty, disarmament and national defense policy, science advice to the President. In every one of these communities his intellectual impact was enormous. In addition he was the moralist and the ethicist. He was the community’s conscience.”

This DVD presents nearly two hours of video of the September 18, 2005, celebration held in honor of Hans Bethe. Speakers included [Hunter R. Rawlings III](#), President, Cornell University; [Silvan S. Schweber](#), Professor Emeritus, Brandeis University, Physicist, historian and Bethe biographer; [Richard L. Garwin](#), IBM Fellow Emeritus, Physicist, Bethe arms control collaborator; [Kurt Gottfried](#), Professor Emeritus, Cornell University, Physicist, Bethe arms control collaborator; [Dale R. Corson](#), President Emeritus, Cornell University, Physicist, Bethe colleague; [Edwin E. Salpeter](#), Professor Emeritus, Cornell University, Astrophysicist, Bethe scientific collaborator; [Freeman J. Dyson](#), Professor Emeritus, Institute for Advanced Study, Physicist and writer, Bethe colleague; [Henry Bethe](#), son; [Rose Bethe](#), spouse; [Saul A. Teukolsky](#), Physics Department Chair, Cornell University.

The articles published in the October 2005 special issue of *Physics Today* with guest editor Kurt Gottfried are reprinted (on the DVD) and describe his early years, his personal attributes and many of Nobel Laureate Bethe’s seminal contributions to physics and astrophysics: Silvan S. Schweber, “The Happy Thirties”; John N. Bahcall and Edwin Salpeter, “Stellar Energy Generation and Solar Neutrinos”; Freeman Dyson, “Hans Bethe and Quantum Electrodynamics”; Richard Garwin and Kurt Gottfried, “Hans in War and Peace”; John W. Negele, “Hans Bethe and the Theory of Nuclear Matter”; Gerald E. Brown, “Hans Bethe and Astrophysical Theory”.

The 16-page special supplement to the September 15, 2005, *The Cornell Chronicle*, “Hans Bethe: Celebration of His Life and Times”, is also reprinted (on the DVD). [http://www.news.cornell.edu/Chronicle/05/09\\_15\\_05.pdf](http://www.news.cornell.edu/Chronicle/05/09_15_05.pdf) A photo gallery (on the DVD) includes both a formal collection from the Rare and Manuscript Collection of Cornell’s Kroch Library and an informal collection of images by physicists John Negele and Michael Nauenberg.