

Thomas Gold

May 22, 1920 — June 22, 2004

Thomas Gold died in Ithaca, New York, on June 22, 2004 from heart complications. He was Professor Emeritus of Astronomy at Cornell. Gold was the founder and first Director of Cornell's Center for Radiophysics and Space Research. A member of the United States National Academy of Sciences, and a Fellow of the Royal Society in the UK, Tommy was a theoretical astrophysicist and one of the great original thinkers of the 20th century. His audacious ideas frequently challenged established explanations. He had a vast physical intuition and worked on subjects as diverse as the nature of the lunar surface, the dynamics of planetary rings, interstellar dust and the origin of the universe.

Born in Vienna, Austria, on May 22, 1920, he moved with his family to Berlin, Germany, when he was 13 years old. As Hitler gained power, the family moved to London, England, but Tommy was sent to boarding school in Zuz, Switzerland. In 1938, he became a mechanical engineering student at Cambridge University. Soon World War II started and Tommy, being an Austrian citizen, was sent to a camp in Canada as an enemy alien. When released, he was sent back to England and was appointed to the British Admiralty, where he designed radar detection systems for the war. During this period, he worked with Hermann Bondi and Fred Hoyle. Shortly after the war, they developed the Steady State Theory of the universe according to which the universe has no beginning and no end and remains always about the same by creating small amounts of matter to compensate the observed cosmic expansion. Later observations did not support this elegant theory that had no adjustable parameters.

In 1957, Tommy left England and accepted a Professorship at Harvard University. He moved to Cornell University in 1959 where he founded the modern Department of Astronomy and obtained funding for the construction of the Space Sciences Building. In 1971, he was appointed to the John L. Wetherill Endowed Professorship. He retired from Cornell University in 1986. He earned his B.A. and M.A. degrees in 1942 and 1946 respectively, from Cambridge University, and was awarded a D.Sc. degree in 1969, also from Cambridge. During his early years at Cornell, he supervised the Arecibo Observatory and guided its research in radio astronomy.

The breadth of his work was immense. While in Cambridge, England, after the war, he developed a model of a positive feedback mechanism in the inner ear. At first this theory was ignored, but recently it has been proven essentially correct. He worked on the properties of the lunar soil and devised a stereoscopic camera that the Apollo astronauts used to take close up pictures of the lunar surface. Soon after the discovery of the enigmatic

pulsating radio sources in 1967, he presented the correct explanation: rapidly rotating magnetized neutron stars. Tommy also made important contributions to studies of the thermodynamic “arrow of time”, the alignment of interstellar grains, the nature of quasars, plasmas and magnetic fields in the solar system, the origin of solar flares, interstellar molecular masers, the instability of the earth’s axis of rotation, the dynamics of narrow planetary rings and resonances in the solar system. He was always ready to challenge established theory and thus stimulated many scientists to think more carefully about accepted paradigms.

His most recent ideas explored the possibility that primordial methane and other hydrocarbons are working their way up through the earth’s mantle. He wrote two books on this subject: *Power from the Earth* and *The Deep Hot Biosphere*, which as Tommy expected created controversy but stimulated more detailed studies of the origin and evolution of the Earth’s hydrocarbon inventory.

He was the author or co-author of more than 200 publications and had received many honors, including the Gold Medal of the Royal Astronomical Society in the United Kingdom and membership in the prestigious American Philosophical Society. Tommy was a competitive sportsman who excelled in snow and water skiing, and he was a master carpenter.

He is survived by his wife, Carvel (Beyer); four daughters: Lindy (Bruce) Bryant, Lucy (Norman) Gold/Brown, Tanya Vanasse and Lauren Gold; and six grandchildren.

Edwin Salpeter, Joseph Veverka, Yervant Terzian