



## Walter Thirring - Commemoration

Walter Thirring left us on 19 August 2014 in his 87th year. He was an Austrian physicist after whom the Thirring model in Quantum Field Theory was named.

Walter Thirring was born in Vienna, where he earned his Doctor of Physics degree in 1949 at the age of 22. In 1959, at the remarkable age of 32, he became Professor of Theoretical Physics at the University of Vienna.

Thirring participated in challenging and profound life experiences, growing up under Nazi occupation, serving in the war, striving to establish scientific excellence and reaching out across the Iron Curtain.

Thirring is one of the last physicists who worked on the greatest discoveries and with the greatest scientists of the 20th century. He recollected his encounters with old masters like Einstein, Schrödinger, Heisenberg, Pauli and others.

Starting from his degree in 1949 Walter Thirring extensively travelled abroad. He worked for one year with Erwin Schrödinger in Dublin, with Werner Heisenberg in Göttingen and Wolfgang Pauli in Zürich. In 1953, when he was 25, he went to Princeton and met Albert Einstein, 48 years his senior. During the two long encounters, they discussed politics, freedom and, of course, physics. A healthy mutual skepticism developed between the two men over new ideas about Gravitation and about the influence of Quantum Mechanics.

Thirring held various positions at other leading institutes and universities such as the Swiss Federal Institute of Technology (ETH Zürich), the Institute for Advanced Study in Princeton, and the Massachusetts Institute of Technology.

He then returned to Vienna, teaching as Professor at the University of Vienna until 1968, when he took the position of Head of the Theoretical Physics group at CERN which he held up to 1971.

I personally met Walter when he arrived at CERN in 1968. Our friendship continued since then in very different locations and most importantly during my visits to Austria where meeting him amongst my many friends was for me a recurrent event.

Besides pioneering work in quantum field theory, Walter Thirring devoted his scientific life to mathematical physics. He is the author of many scientific papers, of one of the first textbooks on quantum electrodynamics as well as of a four-volume course in mathematical physics, which he published during a 10-year-long period from 1988 to 1998.

In his writings he presented the challenges faced when the shift away from atomistic theory and Newtonian physics towards field theory and quantum mechanics took place. Every step is presented in clear, understandable language that reflected Thirring's extensive experience in training the next generations.

In 2007 Walter Thirring authored *«Cosmic Impressions»*, with the introduction of Cardinal Franz König on the relation between Science and Religion. In that book he sums up his feelings about the scientific discoveries made by modern cosmology: *«In the last decades, new worlds have been unveiled that our great teachers wouldn't have even dreamed of. The panorama of cosmic evolution now enables deep insights into the blueprint of creation... Human beings recognize the blueprints, and understand the language of the Creator... These realizations do not make science the enemy of religion, but glorify the book of Genesis in the Bible»*.

Thirring was also a music composer and played the organ. In his biography he wrote: *"Music is a subject that one cannot clarify through physics concepts"*.

Throughout his life he received numerous awards such as the Erwin Schrödinger Prize, the Max Planck Medal, and the Henri Poincaré Prize.

In addition to being a member of our Pontifical Academy of Sciences he was also a member of the Austrian Academy of Sciences, the German Academy of Sciences Leopoldina, the National Academy of Sciences, USA, the Academia Europaea, and of the Hungarian Academy of Sciences. He held an Honorary doctorate from the Comenius University in Bratislava (1994).

**He received many honors:**

Eötvös Medal (1967); Erwin Schrödinger Prize (1969); Max Planck Medal of the German Physical Society (1978); Prize of the city of Vienna (1978); Austrian Decoration for Science and Art (1993); Honorary Medal of the Austrian capital Vienna in Gold (1993); Honorary doctorate from the Comenius University in Bratislava (1994); Henri Poincaré Prize of IAMP (International Association of Mathematical Physics) 200

His memory will be respectfully remembered by all of us.