



Tauno Turunen

* 28.5.1946 † 5.7.2023

Professor Tauno Turunen (b. 28 May 1946) died suddenly on 5 July 2023. He was the Director of the Sodankylä Geophysical Observatory (SGO) 1992–2011. Turunen began studying mathematics at the University of Oulu in 1966. After three years of studying, he was offered a job as an assistant at the Department of Physics. He therefore decided to switch majors from mathematics to physics.

While working as an assistant, Tauno Turunen reformed almost all the laboratory exercises in the discipline of physics. He was also extremely interested in electronics, so much so, in fact, that he was offered the position of associate professor at the Department of Electrical Engineering and Electronics. As it happens, at the same time the Sodankylä Geophysical Observatory, operating under the Finnish Academy of Science and Letters, was looking for a new head for its Ionospheric Station. In the end, Turunen decided to go to Sodankylä and turn down the associate professorship in Oulu.

Tauno Turunen was head of the Aeronomy Unit at the SGO since 1971, working with the ionospheric sounder (ionosonde). He actually repaired the ionosonde used by the SGO as well as the ionosonde

of the Finnish Post and Telecommunications Department, which was located in Nurmijärvi. When the planning of the EISCAT radar system began in 1975, Turunen was appointed as the representative of Finland on the planning team.

After the EISCAT radar system was inaugurated in 1981, Tauno Turunen delved even deeper into the world of radars. He had a prominent role in the EISCAT Scientific Association, first as a deputy director in charge of technology from 1984 to 1987 and later as the director of the entire association from 1998 to 2002. He was awarded in the Beynon medal in 2003 for his outstanding services to EISCAT.

Tauno Turunen served as the director of the SGO for almost twenty years. The Finnish Academy of Science and Letters made Turunen the director of the observatory in spring 1992, after Eero Kataja had led the observatory for more than 42 years. Turunen became known for his careful financial management and his belief that the financial personnel should, upon request, be able to accurately report the financial position of the observatory down to the penny, even in the middle of the night. During his first years as director,

Turunen's main responsibility was to keep the SGO afloat and move its operations under the University of Oulu in August 1997.

The staff learned to trust Turunen in many ways. He had formerly worked as a workplace steward and an employee representative in a trade union. He was therefore well versed in the terms of employment and other personnel matters.

Turunen believed that the director should be able to fill in for any employee at the SGO, regardless of their role. This is something he virtually excelled at. One spring, he had given the canteen matron of the observatory a holiday, despite the fact that a group of more than ten colleagues from abroad was about to arrive for a week-long visit. Tauno changed his suit jacket into an apron and cooked so much sautéed reindeer and mashed potatoes for the group that it lasted them several days.

When Turunen wanted to take a respite from his duties as the director, he turned to his favourite pastime, building measuring instruments for the electronics laboratory. He would sometimes spend days on end in the laboratory, but the results speak for themselves.

Tauno Turunen was extremely skilled at designing and building new measuring instruments, such as the world's most sensitive ELF/VLF receiver, which has been in operation since 1992 and is still, 32 years later, the best in the world. He also developed an ingenious programme algorithm for filtering lightning strokes and power line harmonic radiation (PLHR). It works beautifully and is so clever that nobody has yet been able to copy it, even though Turunen meticulously explained the programme to several international colleagues a few years ago.

In 2005, Turunen and Laboratory Manager Aarne Ranta built a new ionosonde together, which, again, became the best in the world and is still, 20 years later, the only ionosonde that performs one sounding per minute. Five years ago, the international "standard" was still one sounding per 10 minutes.

The latest instrument upgrade was the improvement of the pulsation magnetometer in 2010 and 2011. SGO's entire pulsation magnetometer chain was upgraded just a few years ago. Turunen was also planning to upgrade the riometers, but he ended up retiring before starting this new project. Even in his retirement, he was actively involved in the improvement of analysis programmes and kept an eye on the registrations of the observatory on its website. He even attended an international conference in 2018, having been retired already for seven years.

Tauno Turunen was an internationally known and esteemed scholar who had numerous friends all over the world. He was appointed Professor in 2003. He was invited to become a member of the Finnish Academy of Science and Letters in 1998.

One of his beloved hobbies was playing the violin in an ensemble called Sodankylän Pelimannit, with whom Tauno toured and performed in several Nordic countries. In addition to playing music, he was also an excellent lyricist and poet. You can even find a framed account, written in verse on a travel invoice and hung on the wall of the Research Council of Finland, explaining why a taxi has been used in Sodankylä when returning from an official journey.

Another favourite hobby was fishing on the lake Inari and on brown trout rivers and hunting small game. Tauno also enjoyed gardening with his wife Brita in

the summers, whenever he was not picking berries. Tauno was also an avid mushroomer whose favourite delicacy was false morel mushrooms. While living in Sweden, he picked several years' worth of false

morels in the freezer and was puzzled as to why the Swedes were so afraid of the species that they would not pick them at all. Tauno will be missed by three adult children and their families.

Jyrki Manninen