100th Anniversary of the German Geophysical Society (2022)



THE 24 FOUNDING FATHERS

Vol. 14 04.05.2022

GUSTAV ANGENHEISTER

Discoverer of the attenuation of seismic surface waves

Gustav Heinrich Angenheister was born in Cleve in the Lower Rhine region on February 26, 1878. His interest in natural sciences became apparent at an early age, which is why he decided to study mathematics and natural sciences at the universities of Heidelberg, Münster, Munich and Berlin after graduating from school in 1898. In 1902, the year of his graduation, he also completed his doctorate at the University of Berlin on the elasticity of metals.

From 1903 to 1904, Gustav Angenheister initially worked as an assistant to Georg Quincke at the University of Heidelberg. In 1905, however, he moved to the University of Göttingen, where Emil Wiechert entrusted him with the management of the Earthquake Observatory. In the following years, his duties also included stays as an observer and later director at the observatory on Samoa in the South Seas. In 1911 he habilitated at the University of Göttingen with a paper on surface waves of earthquakes. Gustav Angenheister was the first to demonstrate the attenuation of surface waves and he discovered, independently of Ernst Tams, that continental and oceanic crusts have different seismic velocities. He was also involved in the development and construction of new geophysical measuring instruments, and the establishment of measuring stations for meteorology, geomagnetism and atmospheric electricity.

After his last stay in Samoa, Angenheister turned back to academic teaching again from 1921, and he became head of the Geophysical Department at the Geodetic Institute in Potsdam in 1922. In the same year he founded the predecessor society of the DGG together with 23 other colleagues. Gustav Angenheister was also jointly responsible for the establishment of the journal *Zeitschrift für Geophysik* in 1924 and was also its editor until 1943. During his time in Potsdam he published numerous publications for handbooks and textbooks.

In 1928, Gustav Angenheister's professional career took him back to Göttingen, where he succeeded Emil Wichert as head of the Geophysical Institute. In the following years, he refocused his research activities on more applied areas and so he investigated "second-order seismological effects", dealing with large-scale blasting, engineering seismics, glacial seismics, refraction seismics and national surveys.

Gustav Heinrich Angenheister died in Göttingen on June 28, 1945, at the age of 67. He was buried in the Göttingen city cemetery not far from Emil Wiechert's grave. His son Gustav Georg Gunter Angenheister followed in his father's footsteps, studied geophysics and later became professor of applied geophysics at the LMU in Munich.

DGG PRO – Public Relations & Outreach, Hannover

1878 - 1945

Modified after **Ritter J.R.R., Meyer R. & Schweitzer J. (2003)**: Gustav H. Angenheister (1878-1945) as Seismologist. International Handbook of Earthquake and Engineering Seismology, Academic Press; **Jacobs F. & Börngen M. (2019)**: Wiechert, Mintrop & Co. – Die 24 Gründungsväter der Deutschen Geophysikalischen Gesellschaft. Publisher EAGLE.