



1891 – 1964

KARL ALMSTEDT

Co-Developer of Refraction Seismics

Karl Friedrich Almstedt was born in 1891 in Jerxheim near Helmstedt and he grew up in Braunschweig. From 1909 to 1913 he studied mathematics, physics and chemistry at the universities of Braunschweig, Göttingen and Munich. Subsequently, he completed his doctorate at Göttingen university under the supervision of Emil Wiechert, another later co-founder of the German Geophysical Society (Deutsche Geophysikalische Gesellschaft - DGG) or more specifically, its predecessor organization. In his doctoral thesis from the department of meteorology with the title *"Die Kälterückfälle im Mai und Juni"*, he dealt with the meteorological phenomena known as *"Eisheiligen"* and *"Schafskälte"*. With his studies, he was able to determine with regard to the *"Eisheiligen"* that this phenomenon of night frost occurs only irregularly, and that the *"Schafskälte"* is usually accompanied by a longer period of cold weather.

During the 1st World War, Karl Almstedt initially served in the airship battalion, but was then transferred to the artillery examination board in the last year of the war due to his acquaintance with Ludger Mintrop, another future co-founder of the DGG. There he was able to gain his first experience in the registration of ground movements with geophones.

After the end of the war Almstedt worked as a school teacher for a short time before Ludger Mintrop offered him a job at the newly founded *Seismos GmbH* in Hanover in 1921. There he belonged to a small circle of people to whom Mintrop, the founder of applied seismics, entrusted his closely guarded company secrets, in particular the mathematical-physical fundamentals of his seismic methods. During his time at *Seismos GmbH*, Almstedt developed various formulas and graphical representations that could be used to determine depths and inclinations of layer boundaries as well as wave velocities for individual rock formations. With his pioneering work, he therefore contributed significantly to the development of refraction seismics, which revolutionized oil and gas exploration.

However, in 1923 Almstedt left the company again, having decided on a career in school services. He devoted himself to this profession until his retirement in 1957. Karl Almstedt died on November 30, 1964 as a result of a traffic accident.

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