

Gemma Frisius, Reiner | Encyclopedia.com

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(b. Dokkum, Netherlands, 1508; d. Louvain, Belgium, 1555)

geography, mathematics.

Gemma Frisius was a native of Friesland; hence his nickname Frisius. He received his medical degree at Louvain, practiced medicine there, and taught later at its medical faculty. Although he was a practicing physician, he is remembered for his contributions to geography and mathematics, his avocations.

At the age of twenty-one Gemma Frisius published *Cosmographicus liber Petri Apiani mathematici...* (Antwerp, 1529), an edition of [Peter Apian](#)'s *Cosmography*, "carefully corrected and with all errors set to right" In 1530 he published at Antwerp his first original work, *Gemma Phrysius de principiis astronomiae & cosmographiae...*, which was translated into several languages and reprinted numerous times. The Spanish Netherlands was in close contact with court and business circles in Spain, and Brussels was an ideal place to gather current information on the discoveries. Gemma Frisius designed globes and astronomical instruments that were well known and much sought after throughout Europe. Several of them still survive and are of key importance in tracing the growth of knowledge of the newly discovered lands. Some of Gemma Frisius' globes were completed by Gerard Mercator, who had attended mathematical lectures that Gemma Frisius at his home.

Gemma Frisius made two significant contributions to the earth sciences. In a chapter added to the 1533 Antwerp edition of the *Cosmographicus*, entitled "Libellus de locorum describendorum ratione," he was first to propose—and illustrate—the principle of triangulation as a means of carefully locating places and accurately mapping areas. Twenty years later, in the 1553 Antwerp edition of *De principiis astronomiae* he added a chapter entitled "De novo modo investigandi latitudinem regionis absq. Meridiani vel loci solis cognitione," in which he was the first to suggest in explicit terms the use of portable timepieces to measure longitude by lapsed time. Although this important idea could not be put into practice until after the invention of optical instruments and accurate portable timepieces, the credit for first suggesting it rests with Gemma Frisius.

BIBLIOGRAPHY

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George Kish