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Twente and Gravitational Waves: How a circle of research life closes.

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In this presentation, I will reflect on two research lines that characterized my research career at the University of Twente; The development of SQUID-based magnetometers systems in the 80s and 90s, mostly focusing on biomagnetic applications, followed by the development of vibration-free cryocoolers.
Since the early 2000s, we have been working on small Joule-Thomson cold stages driven by sorption-based compressors initially focusing on cooling of infrared detectors in scientific space missions. Pushed by the extremely low level of vibrations and the long lifetime this technology was also investigated for terrestrial applications in large space observatories such as the European Extremely Large Telescope (ELT) in Chili in the mid 2010s, and more recently in the Einstein Telescope (ET).
In the upcoming Lunar Gravitational Wave Antenna project (LGWA) both lines, SQUID magnetometers and sorption-based vibration-free coolers may be combined, thus closing the circle of my research life.

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