

Space Optical Frequency Combs

We have developed a frequency comb for future long-term missions in space having a volume of 6.5l, a weight of 7.5kg and a power intake of 30-55W, depending on mission and application. The system will be part of the COMPASSO mission by the German space aerospace center (DLR), testing future optical clock and quantum technologies on the BARTOLOMEO platform located outside of the ISS. After finalization of the Engineering Model we start now building a Protoflight Model system from qualified components, with an expected launch date for the COMPASSO experiment in 2026.

Author: LEZIUS, Matthias

Co-authors: Dr BÖHLE, Frederik; Dr HOLZWARTH, Ronald

Presenter: LEZIUS, Matthias

Track Classification: Miniature, Portable and Space Systems