



## **Performance and capability of the large 4C ring laser: ROMY**

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State of the art ring laser technology gives access to measure very small rotation changes in geodesy and geophysics over a wide frequency range. The interferometric observation technique use two counter-propagating laser beams, the Sagnac effect. This yields to the fact that these observation method is entirely insensitive to translational motions. The ROMY project will delivers 4 components in space measuring rotations redundancy for geosciences computed into the Cartesian three directions. Followings that ROMY is the first instrument able to measure the full rotation vector. The sensitivity scales with the size of the instrument and ended up in a tetrahedron shape of 12 m side length standing on a tip. A compromise between the involved parameters and the possibility of physical constructing of such a large instrument. The pure hardware construction has needed more than 2 years. It is outlined the design achieved performance and the potential potential of ROMY now and in future.