



First results from the perimeter stabilization of the large ROMY 4C ring laser structure for Seismology and Geodesy

André Gebauer (1), Ulrich Schreiber (1), Heiner Igel (2), Felix Bernauer (2), and Sven Egdorf (2)

(1) Technical University Munich, Munich, Germany (gebauer@geophysik.uni-muenchen.de), (2)
Ludwig-Maximilians-University, Geophysics, Munich, Germany

The ring laser technology allows the observation of very small rotational signals over a wide frequency range. This can be utilized for high resolution rotation sensing in seismology and geodesy. The 4 component large ring laser structure ROMY, located in Fuerstenfeldbruck, Germany, has been built in the shape of a tetrahedron with the tip pointing downwards. The arm length of each triangular component is 12 m on a side. It is the first multi-component large Sagnac interferometer for the geosciences. Over the last year we have achieved free running operation on all of the 4 individual ring laser structures. Here we report on the first results from the perimeter control, which is a prerequisite for continuous long-term observation.