



## **First Steps for a Giant FOG: Searching for the Limits**

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Based on recent experiences in constructing very low noise fibre-optic gyroscopes (FOG) dedicated to seismology, we will present first performance results of a large fibre-optic coil (approx. 1m diameter). Next to in house (iXBlue) factory testing the self-noise of the new sensor is estimated by co-locating it to existing high performance large ring lasers located in Wettzell and Fürstenfeldbruck (Germany), respectively. The reason for constructing this huge FOG is to evaluate experimentally the physical limits (if any exists) of this kind of technology. While this experiment is probing the fundamental limits of FOGs technology and thus is interesting from the construction point of view, it also serves as a first step for cost effective very low noise laboratory rotational seismometer and leads in a second step to performance improvements on portable rotational seismometer