

EGU22-6357

<https://doi.org/10.5194/egusphere-egu22-6357>

EGU General Assembly 2022

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blueSeis-1C Fiber Optical Gyroscope for enhanced and versatile ground rotation measurements

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First results have been already shared about large mockup of giant Fiber-Optic Gyroscope from iXblue, having diameter as large as 1.2 meters, and the development road to reach an industrial product have been drawn.

Finally it appears that even if an improved performance is always wanted by scientists, a portable instrument remains the first criteria. Therefore blueSeis-1C is the smallest giant FOG achievable to our knowledge with only 400mm diameter. Moreover, it has been made to open various application use, thanks to its particular mechanical design.

With some delays, the first production units of blueSeis-1C are finally manufactured, and their tests results will be disclosed in this paper, including self-noise at 5nrad/s/VHz, flat on a very broadband from 50Hz to 10^{-3} Hz. Scale factor variation in time and in temperature, bias variation in temperature, linearity, magnetic sensitivity, and transfer function results will be presented too.