

**XVI Neutrino Telescopes Workshop Palazzo Franchetti - Venice, 2-6  
March 2015**

## **Poster Session – Submission of Abstract**

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Title of the Poster: The GINGER Project and status of the ringlaser of LNGS

### **Abstract Text:**

GINGER (Gyroscopes IN General Relativity) is an INFN project for measuring in a ground-based observatory the Lense-Thirring effect (the inertial frame dragging, foreseen by General Relativity, induced by the proper rotation of a massive source). It will consist in a structure of three laser gyroscopes mutually orthogonal with about 6m of side, located in a deep underground location, possibly the GranSasso INFN laboratory. The triaxial structure will provide full determination of the laboratory frame angular velocity to be compared with the Earth rotation rate in the fixed stars frame given by IERS through VLBI.

Large-size gyrolasers have already reach very high sensitivity, allowing relevant geodetic measurements. The accuracy required for LT effect measurement is better than  $10^{-14}$  rad/s: Earth angular velocity must be measured at  $10^{-9}$  accuracy, with one order of magnitude improvement on actual level. A 3.6m side, square ringlaser, called GINGERino, has been recently installed inside LNGS.

The poster will show the present status of the experimental and theoretical work, in particular the current status of GINGERino.

Summary: (no longer than 400 characters. Insert a tag, key word, topic, etc.)

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Kindly follow the instructions above and send the abstract in a .pdf file to the local organizing committee e-mail address by January 30<sup>th</sup>.

Response will be sent to the submitter's e-mail address indicated above, by February 10<sup>th</sup>.

Posters will be exhibited all week long at the workshop site. Discussion will take place on Thursday 5<sup>th</sup>, during the Poster Party. At least one author must be available for "question-answer" time.

Best 3 posters will be awarded on Friday 6<sup>th</sup>, during the closing plenary session of the workshop.