

LABORATORI NAZIONALI DEL GRAN SASSO

SEMINAR ANNOUNCEMENT

On **December 10, 2009**, at **3:30 pm**, **A. D. Di Virgilio** from **INFN Pisa** will give a seminar entitled:

“From G-Pisa to G-GranSasso”

Abstract

The G-Pisa team, experiment financed by INFN GV, has matured large experience in gyrolasers construction and analysis; results are briefly reported. Gyrolasers have a large potential for fundamental physics.

Gravitomagnetism caused by the Earth rotation (GEM, Frame-Dragging, LenseThirring) has been tested so far with 10% accuracy with satellite laser ranging. A large size gyrolaser inside LNGS can make measurements for the comprehension of ‘the Earth reference frame’ and geophysics in general, and the comparison with the ringlaser G in Wettzell will be very important, but can make LenseThirring measurements as well. Extrapolating the most recent results of G, the sensitivity of a 6 m side gyrolaser is compared with the sensitivity needed for the LenseThirring test.

Groups of Padoa-LNL, Turin and Roma3 are willing to join the G-Pisa team in order to build a large frame gyrolaser (G-GranSasso), in collaboration with Germany and NewZealand.

(“B. Pontecorvo” room)