

LABORATORI NAZIONALI DEL GRAN SASSO

**THEORETICAL SEMINAR
ANNOUNCEMENT**

On **January 18, 2007** at **15:00**, **Alexander Sakharov** from **MERPHI Moscow** and **CERN** will give a seminar entitled:

**Near-Critical Collapsed Primordial
Black Holes and Supersymmetric
Relics**

Abstract:

We exploit the effect of accumulation of small near-critical collapsed primordial black holes (PBHs) which are capable to emit unstable supersymmetric relics before or during the epoch of nucleosynthesis. Such accumulation may take place under the assumption of doubly ination power spectrum of initial density perturbations with high mass variance on small scales. We calculate the abundance of supersymmetric relics produced by evaporating near-critical collapsed PBHs and use the big bang nucleosynthesis (BBN) constraints to obtain limits on the mass fraction of PBHs for a wide range of their possible masses. We also consider the constraints imposed on low-mass PBHs in models with metastable relic particles.

(“B. Pontecorvo” room)