

LABORATORI NAZIONALI DEL GRAN SASSO

SEMINAR ANNOUNCEMENT

F. Salamida

KIT - Campus North

Institut fuer Kernphysik, Karlsruhe, Germany

***“CROME: Cosmic Ray
Observation by Microwave
Emission”***

Recent measurements suggest that extensive air showers initiated by ultra-high energy cosmic rays emit signals in the microwave band of the electromagnetic spectrum caused by the collisions of the free-electrons with the atmospheric neutrals in the plasma produced by the passage of the shower. Such emission is expected to be isotropic and could allow the detection of air showers with a calorimetric-like energy measurement and 100%. In Karlsruhe we have built CROME experiment, which consists of a 3.5 m diameter antenna with 8 feed-horns in the 4 GHz range. The main advantage of CROME is the use of Cascade Grande array as a trigger in order to reduce the signal to noise ratio.

**DECEMBER 14, 2010 – 2:30 PM
LNGS - “B. ROSSI” ROOM**