

LABORATORI NAZIONALI DEL GRAN SASSO

SEMINAR ANNOUNCEMENT

On October 24, 2007 at 14:30, Paolo Privitera from Roma 2 University will give a seminar entitled:

“Measurement of nitrogen fluorescence yield by AIRFLY and energy calibration of Ultra High Energy Cosmic Rays”

Abstract:

The fluorescence detection of ultra high energy cosmic rays requires a detailed knowledge of the fluorescence light emission from nitrogen molecules over a wide range of atmospheric parameters, corresponding to tens of km altitudes typical of the cosmic ray shower development in the atmosphere. The AIRFLY experiment is pursuing an extensive program of measurements of the fluorescence emission properties with electron beams in Frascati and Argonne. A precise measurement of the emission spectrum and its pressure, temperature, humidity and energy dependence has been performed. Recent results will be presented, as well as their implication for a precise estimation of the energy of ultra high energy cosmic rays.

(“B. Pontecorvo” room)