LNGS SEMINAR SERIES

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Ultra-high energy cosmic rays and their secondary signals

Although existence of cut-off in the spectrum of ultra-high energy cosmic rays (UHECR) have been confirmed by 3 experiments, there is still no agreement in scientific community about the nature of the most energetic particles. Experiments such as Pierre Auger and Telescope Array give different answers to this question based on observation of the air showers induced by UHECR particles. We will discuss how secondary signals, namely photons and neutrino produced during propagation of cosmic rays through the intergalactic space, could help to identify or constrain the nature of UHECR.

JANUARY 29, 2015 – 2:30 PM LNGS - " B. PONTECORVO" ROOM