Workshop on Gravitational Waves and High Energy Neutrinos



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Ultra high energy neutrinos at the Pierre Auger observatory

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The Pierre Auger observatory is able to discriminate between showers induced by Ultra High Energy neutrinos and showers from any other primary. This allows to search for such particles in the data from downgoing showers with large zenith angles (theta > 75°). But the observatory is also sensitive to Earth-skimming tau neutrinos that interact in the Earth's crust to produce a tau lepton that may emerge and trigger an extensive air shower used to sign the presence of the initial neutrino. Both channels were studied, and the last one already gave rise to a publication in PRL based on the data from 1 January 2004 to 31 August 2007. In this talk, we will present the different searches for neutrinos in the Auger data and their present status. In addition, the Auger collaboration has also produced important results, concerning the UHE cosmic rays, that may have important implications regarding the sources of neutrinos, and that we will also discuss briefly.

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