

Measuring Atmospheric Neutrinos and Muons with ANTARES

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Located at a depth of 2480 m in the deep sea, the ANTARES telescope measures upgoing neutrino events with energies varying from few GeV up to several PeV. It measures also downgoing high energy atmospheric muons which penetrate a varied effective depth of seawater depending on their direction. Both measurements are particularly interesting for geophysics measurements. Good knowledge about the high energy atmospheric muon flux is important for volcano tomography, the absorption of high energy neutrinos crossing the Earth may allow inferring useful information about the Earth inner structure. The Monte Carlo simulation employed in the ANTARES collaboration to predict events rates from atmospheric neutrinos and muons, as well as the results of a comparison with measured data are presented. Furthermore, the current efforts to improve the description of the detector and environmental properties in the simulation, and thereby the sensitivity to the physics behind the atmospheric neutrino and muon fluxes are explained.