



Contribution ID: 86

Type: **not specified**

Evaluation of triggering schemes for KM3NeT

Wednesday, October 12, 2011 5:10 PM (20 minutes)

The future neutrino telescope KM3NeT, to be built in the Mediterranean Sea, will be the largest Cherenkov detector and will include several hundred thousands photomultiplier tubes (PMT). In the deep sea the dominant source of PMT signals are decays of K40 and marine fauna bioluminescence. Selection of neutrino and muon events from this continuous optical background signals requires the implementation of fast and efficient data filtering algorithms. Various schemes for the filtering of background data and the selection of neutrino and muon events were evaluated for the KM3NeT telescope using Monte Carlo simulations. The results obtained in this study will be presented in the talk.

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Session Classification: Parallel Session 1

Track Classification: Physics, reconstruction and software