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Cosmogenic neutrinos in KM3NeT

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Cosmogenic neutrinos are produced during the propagation of ultra high energy cosmic rays (UHECR) through the cosmological microwave background radiation. Extragalactic origin of UHECR guarantees generation of the high energy cosmogenic neutrinos, however the flux depends on the currently unknown properties of UHECR, for example the chemical composition and distribution of the sources. Estimations of cosmogenic neutrino flux, which are constrained by UHECR observations, includes a range of models in which a detectable signal could be produced in a very large volume high energy neutrino telescope. In particular the favorable scenarios are based on the models with a pure proton composition of UHECR.

The possible event rates of cosmogenic neutrinos in KM3NeT telescope and a current status of simulations of ultra high energy neutrino events are discussed in this talk.

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