

# Astrophysical Neutrinos and Beyond Standard Model Physics

## Abstract content

The origin and composition of the Ultra-High Energy Cosmic Rays (UHECR) is currently one of the major questions in astroparticle physics. Gamma Ray Bursts (GRBs) have been considered among the possible sources of UHECR that, according to the theoretical models, should be accompanied with a UHE neutrino flux detectable at neutrino telescopes such as IceCube. Moreover, the IceCube Collaboration have reported the non-observation of UHE muon neutrinos from GRBs and set an upper bound on this neutrino flux. We have considered two scenarios in which there could be an answer for the suppression of the UHE neutrino flux: An active-sterile conversion due to neutrino spin precession or an active-sterile oscillation by resonant effect.

## Summary

**Primary author(s) :** Mr. PARADA, Alexander (CINVESTAV)

**Presenter(s) :** Mr. PARADA, Alexander (CINVESTAV)