Contribution ID: **39** Type: **Poster**

Phenomenological investigation of muon neutrino disappearance via CC interaction

Thursday, 25 October 2012 18:00 (1h 30m)

Experimental evidences showed that the time evolution of a particular neutrino flavor state can produce the transition to a different flavor state, a phenomena called neutrino oscillation. In this work we aim to study the oscillation model by doing a phenomenological analysis using the MINOS (Main Injector Neutrino Oscillation Search) published data. We first review the muon neutrino CC disappearance results from SK, K2K and MINOS, then we show some quality tests of the data extracted, including a comparison with the allowed region contour plots. We also show preliminary results of our analysis including 3-flavor oscillation model. This study could contribute to test different sub-dominant models, such as decay and decoherence, trying to improve the oscillation model.

Summary

The study presented in this poster, which is a preliminary result of a Master dissertation, is not directly related to the physics discussed in NuINT, however the student is going to do his PhD on MINOS / MINOS+ experiment which justifies the importance of this workshop for his formation. Nevertheless, to obtain the necessary financial support for the present workshop the student is asked to present a poster.

Primary authors: GOMES, Abner (Federal University of Goias - UFG); Prof. GOMES, Ricardo (Federal University of Goias - UFG)

Presenter: GOMES, Abner (Federal University of Goias - UFG)

Session Classification: Happy hour with posters

Track Classification: Happy hour with posters