

2nd Workshop for Atmospheric Neutrino Production in the MeV to PeV range

Contribution ID: 17

Type: **not specified**

CP violation in sub-GeV atmospheric neutrinos

Tuesday 12 January 2021 17:05 (20 minutes)

Sub-GeV atmospheric neutrino oscillations are a promising source of information on the leptonic CP phase δ . In that energy range the oscillations are very fast, far beyond the resolution of modern neutrino detectors. However, the necessary averaging over those fast oscillations does not wash out the CP violation effects. The propagation/oscillation of 3 neutrinos is reduced to 2 neutrino propagation/oscillation inside the Earth. The analytic results are very accurate and physically transparent for interpretation/understanding.

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