ID de Contribution: **506** Type: **Parallel session talk**

Probing Flavor Transition Mechanisms of Astrophysical Neutrinos

jeudi 21 juillet 2011 10:00 (15 minutes)

The determination of neutrino flavor transition mechanism by
neutrino telescopes is presented. We first propose a model-independent parameterization for flavor transitions (such as standard three-flavor oscillations, neutrino decays or others)of astrophysical neutrinos propagating from their sources to the Earth. We demonstrate how one can constrain parameters
of the above parameterization by performing flavor identifications in neutrino telescopes. Given the anticipated flavor discrimination capability in IceCube, we work out the allowed regions for the flavor transition parameters. The possibility of distinguishing neutrino decay models from the standard neutrino oscillation by IceCube detector is discussed.

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