

30th International Symposium on Lepton Photon Interactions at High Energies

Monday, 10 January 2022

Neutrino physics: Poster session (16:15 - 17:15)

time	[id] title	presenter
16:15	[200] Decoherence effect on neutrino oscillation probabilities	Mr SARKER, Arnab
16:16	[172] Improving Hyper-Kamiokande sensitivity to CP violation with high precision near detector electron neutrino cross-section measurements	NASEBY, Charlie
16:18	[159] Exploring the effects of scalar Non Standard Interactions at DUNE and T2HK	Mr MEDHI, Abinash
16:19	[51] The T2K experiment measures the neutrino oscillation parameters by observing $\bar{\nu}_\mu$ ($\bar{\nu}_\mu$) disappearance and ν_e ($\bar{\nu}_e$) appearance from a ν_μ ($\bar{\nu}_\mu$) beam. The events are observed in the near detector ND280 and the far detector Super-Kamiokande (SK) situated at 280 m and 295 km respectively from the beam production target. In SK, the products of ν and $\bar{\nu}$ interactions produce Cherenkov rings. Charged current quasi-elastic (CCQE) interactions, the most dominant in the T2K energy region produce single ring CC events used for analyses. Resonant 1π production, the second dominant CC interaction in this energy region will have multi-ring topology and can be included to increase statistics. The addition of CC $\nu_{e1\pi^+}$ ($\bar{\nu}_{e1\pi^+}$) samples are expected to improve the precision on $\sin^2\theta_{23}$ and $ \Delta m^2_{32} $ (leptonic CP phase δ_{CP}). Studies on the selection of CC 1π like events accumulated from forward horn current (FHC) operation are performed for ν_μ and $\bar{\nu}_\mu$ samples. Estimation of different systematic uncertainties are important for oscillation sensitivity studies. One main contribution is detector systematic uncertainties related to the selection variables of samples including multi-ring samples. These are estimated via a fit to atmospheric neutrinos events collected in Super-K. We present the selection of multi-ring samples as well as the process of estimation of detector systematic uncertainties.	Dr LAKSHMI, S Mohan
16:20	[26] A New Approach to Probe Non-Standard Interactions in Atmospheric Neutrino Experiments	Mr KUMAR, Anil

Tuesday, 11 January 2022

Neutrino physics: Parallel 1 (14:00 - 16:00)

-Conveners: Andrzej Michal Szelc

time	[id] title	presenter
14:00	[196] Establishing non-maximal 2-3 mixing with DUNE in light of current neutrino oscillation data	KUNDU, Ritam
14:20	[116] Constraining CPT violation with Hyper-Kamiokande and ESSnuSB	SINGHA, Dinesh Kumar
14:40	[14] Hyper-Kamiokande experiment: status and plans	MALEK, Matthew
15:00	[56] Latest Three Flavor Neutrino Oscillation Results from NOvA	SZTUC, Artur
15:20	[67] T2K Status and plans	DOYLE, Tristan
15:40	[115] JUNO experiment: physics goals and current status	Dr BASILICO, Davide

Neutrino physics: Parallel 2 (16:30 - 18:10)

-Conveners: Kendall Mahn

time	[id] title	presenter
16:30	[17] Status of the Short-Baseline Near Detector at Fermilab	MCCONKEY, Nicola MCCONKEY, Nicola
16:50	[18] The SNO+ Experiment	Dr WILSON, Jeanne
17:10	[253] Recent neutrino cross-section results from MicroBooNE	GU, Wenqiang GU, Wenqiang
17:30	[209] Search for K ⁺ decays to a lepton and invisible particles	WANKE, Rainer
17:50	[254] First results from the MicroBooNE search for a low energy excess	KAMP, Nicholas

Wednesday, 12 January 2022

Neutrino physics: 1 (17:45 - 18:45)

-Conveners: Ewa Rondio

time	[id] title	presenter
17:45	[295] Long baseline experiments	MAHN, Kendall
18:15	[296] Short baseline neutrino experiments	CARATELLI, David

Thursday, 13 January 2022

Neutrino physics: 2 (11:30 - 12:20)

-Conveners: Andrzej Michal Szelc

time	[id] title	presenter
11:30	[297] 0n2b and neutrino mass measurements	MERTENS, Susanne
12:00	[298] Observation of CNO cycle at Borexino	RE, Alessandra Carlotta

Neutrino physics: 3 (15:00 - 16:30)

-Conveners: Ewa Rondio

time	[id] title	presenter
15:00	[299] Astro and atmospheric neutrinos	KLEIN, Spencer Robert
15:30	[300] Neutrino phenomenology	MACHADO, Pedro
16:00	[301] Neutrino theory	VALLE, Jose