



Poster session 3 – Wednesday 6 July

P3.040 Constraining the non-standard interaction parameters in long baseline neutrino experiments

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In this poster we investigate the prospects for probing the strength of the possible non-standard neutrino interactions (NSI) in long baseline neutrino oscillation experiments. We find that these experiments are sensitive to NSI couplings down to the level of 0.01-0.1 depending on the oscillation channel and the baseline length, as well as on the detector's fiducial mass. We also investigate the interference of the leptonic CP angle $\bar{\delta}_{CP}$ with the constraining of the NSI couplings. We concentrate the consequences in the case of the $\nu_e \leftrightarrow \nu_\mu$ transition, where the interference is strong. In our numerical analysis we apply the GLoBES software and use the LBNO setup as our benchmark.