nuSim run Conditions

March 16, 2021

1 Runs

Run	Events	E GeV	Description
0010	20000	6	BM1: E_{beam} parabolic $\pm 15\%$, β is π, emittance is 25000
0011	20000	4	BM1: E_{beam} parabolic $\pm 15\%$, β is π, emittance is 25000
0012	20000	2	BM1: E_{beam} parabolic $\pm 15\%$, β is π, emittance is 25000

2 Beam Models

2.1 Beam Model 1 (BM1)

Production straight 180m
Transverse acceptance 1 π mm rad
Transverse β function 25000 mm; taken as representative of the production straight
Emittance (acceptance) and β are momentum independent at zeroth order.
The Energy is parabolic $\pm 15\%$ around the mean. Muons decay down the straight with the correct (β corrected) lifetime.
Muons are not tracked beyond the end of the production straight, they are bent away and disappear.
Flux of the neutrinos is measured at a plane 50m beyond the end of the production straight