The 19th International Workshop on Neutrinos from Accelerators (NUFACT2017)



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Towards nuSTORM facility - overview of accelerator designs

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The neu¬trino beam originating from muons de¬cay¬ing in a stor¬age ring is an ideal tool for pre-cise neu¬trino cross sec¬tion mea¬sure¬ments due to its exactly known flavour con¬tent, including both muon and electron ones, and spec¬trum. The proposed nuS¬TORM fa¬cil¬ity would use pions di¬rectly in¬jected into a race¬track stor¬age ring, where cir¬cu¬lat¬ing muon beam would be formed. The sketch of the nuS-TORM facility is discussed. The alternative stor¬age ring designs including a FODO and FFAG (Fixed Field Al¬ter¬nat¬ing Gra¬di¬ent) based ones are presented in details including their estimated physics potentials.

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