Contribution ID: **74** Type: **Parallel**

The BDF/SHiP experiment at the ECN3 high-intensity beam facility at the CERN SPS

The BDF/SHiP experiment is a general purpose intensity-frontier experiment for the search of feebly interacting GeV-scale particles and to perform neutrino physics measurements at the HI-ECN3 (high-intensity) beam facility at the CERN SPS, operated in beam-dump mode, taking full advantage of the available 4×10^{19} protons per year at 400 GeV. The Collaboration is now in the phase of TDR preparation.
The setup consists of two complementary detector systems downstream an active muon shield: the scattering and neutrino detector (SND), consisting of a light dark matter (LDM) / neutrino target with vertexing capability. and the hidden sector decay spectrometer (HSDS), consisting of a 50 m long decay volume followed by a spectrometer, timing detector, and a PID system. BDF/SHiP offers an unprecedented sensitivity to decay and scattering signatures of various new physics models and tau neutrino physics.

Secondary track

T03 - Neutrino Physics

Author: COLLABORATION, SHiP

Session Classification: T09

Track Classification: T09 - Beyond the Standard Model