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nuSTORM accelerator; challenges and opportunities JONATHAN GALL, CERN, JAROSLAW PASTERNAK, Imperial College London, CHRIS ROGERS, STFC RAL, NUSTORM COLLABORATION — The nuSTORM facility uses a stored muon beam to generate a neutrino source. Muons are captured and stored in a storage ring using stochastic injection. The facility has aims to measure neutrino-nucleus scattering cross sections with uniquely well-characterised neutrino beams; to facilitate the search for sterile neutrino and other Beyond Standard Model processes with exquisite sensitivity; and to provide a muon source that makes an excellent technology test-bed required for the development of muon beams capable of serving as a multi-TeV collider. In this paper, we describe the latest status of the development of nuSTORM, the RD needs, and the potential role of nuSTORM as a Muon Collider test facility.

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