Searching for long-lived particles at the LHC and beyond: Twelfth workshop of the LLP Community



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Status of SUB-Millicharge ExperimenT (SUBMET)

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SUB-Millicharge ExperimenT (SUBMET) sensitive to low-mass millicharged particles produced at the 30 GeV proton fixed-target collisions at J-PARC has been proposed. The detector is composed of long scintillators that allow the particles with a small electric charge to produce photons by ionization energy loss. With the number of protons on target of 5×10^{21} , the experiment is sensitive to particles with electric charge $6\times10^{-5}e$ for mass less than $0.2~{\rm GeV/c^2}$ and $1.0\times10^{-3}e$ for mass less than $1.6~{\rm GeV/c^2}$. The status of this experiment will be discussed in this talk.

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