



Contribution ID: 33

Type: **Talk**

【316】 Mu3e looking for rare muon decays

Tuesday, June 28, 2022 3:15 PM (15 minutes)

Mu3e is a dedicated experiment to search the rare charged lepton flavor violating (cLFV) decay $\mu^+ \rightarrow e^+ e^- e^+$ with a sensitivity down to 10^{-16} under construction at PSI. In the Standard Model, this decay is heavily suppressed with a branching fraction of 10^{-54} . The Mu3e experiment will be able to reconstruct low momentum electrons and positrons from rare μ decays. Mu3e apparatus consists of a tracking detector based on monolithic active pixel sensors for very precise momentum and vertex reconstruction, combined with scintillating fibers and tiles for very high timing measurements. The motivation for the $\mu^+ \rightarrow e^+ e^- e^+$ search will be presented, along with experimental design and subsequent expected sensitivity.

Primary author: DEMETS, Yannick (University of Geneva)

Presenter: DEMETS, Yannick (University of Geneva)

Session Classification: Nuclear, Particle- & Astrophysics

Track Classification: Nuclear, Particle- and Astrophysics (TASK)