

Dark Sectors + CLFV Parallel Discussion



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Summary of discussion session

- the physics cases for CLFV and dark sector programs are very strong and one should strive to do as much of the proposed physics as possible
- a lot of discussion on how to optimize the accelerator complex
 - Jeff Eldred made a strong case to build in stages the ring, build as soon as possible, and make sure that both programs AMF and beam dump are possible
 - Build 2GeV ring and operate first at 0.8GeV. This seems to be possible, with some discussion/input between interested parties on the most optimal operations
- the beam structure needed also depends on how dark sector is being sourced. If it is produced at primary collision then short bunches are probably good, but if it is from muon decays (e.g. from stopped muons), then the duration of the pulse does not matter (i.e. how short it is).
- exotic signatures : they are interesting, but they are most motivated if they can be done as part of already other experiment for the golden signatures ($\mu \rightarrow e \gamma$, $\mu \rightarrow e \text{ conv.}$, $\mu \rightarrow 3e$)
- A lot of discussion on muonium program - different new physics reach