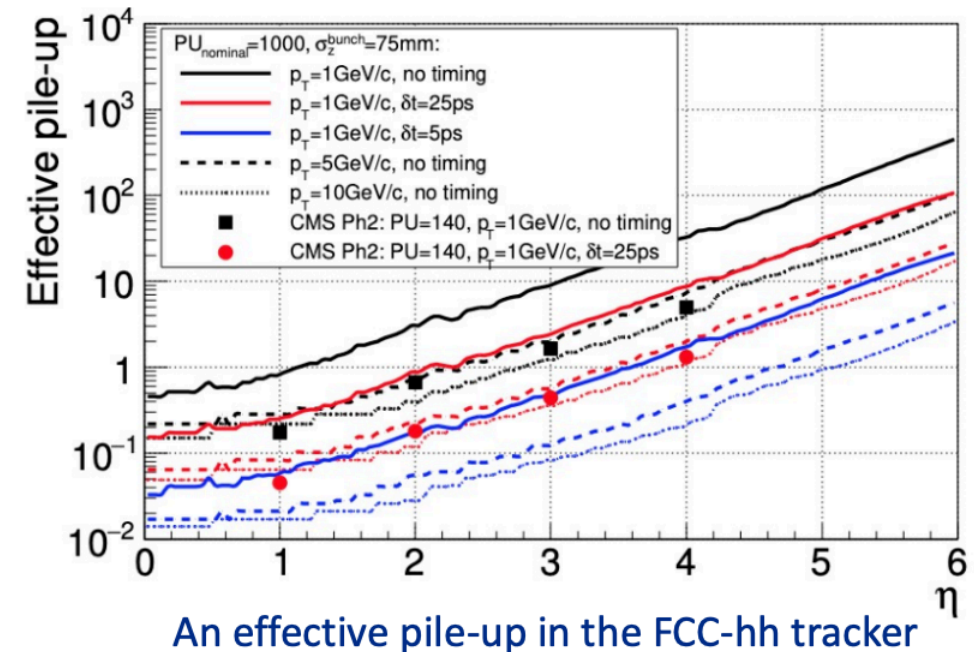
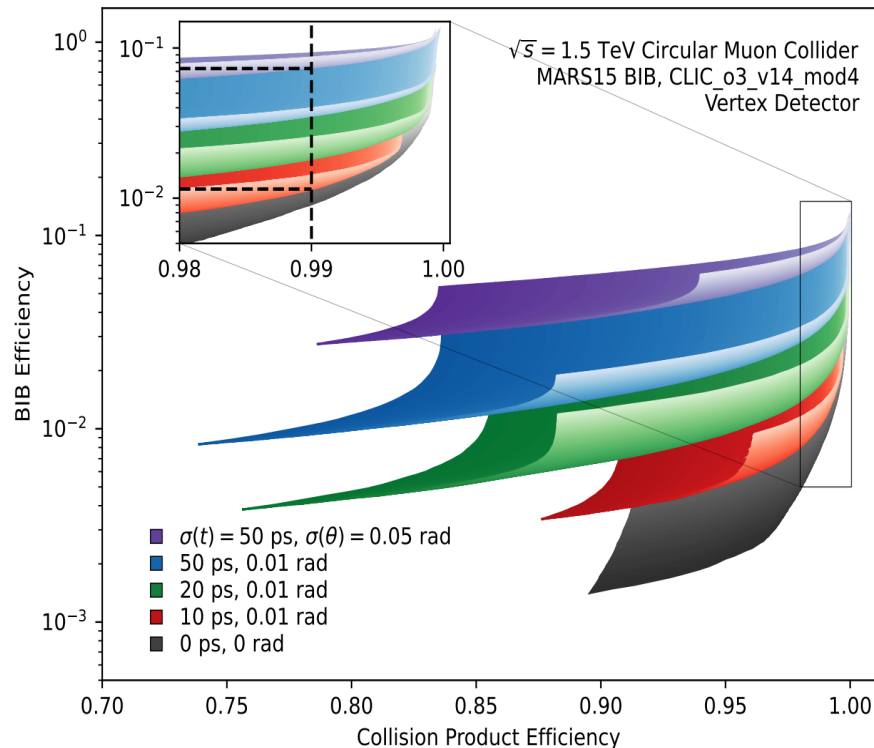


Challenges and Opportunities for Higgs Physics

I. Ojalvo, Princeton
Snowmass Energy Frontier Meeting
March 28-April 1, 2022

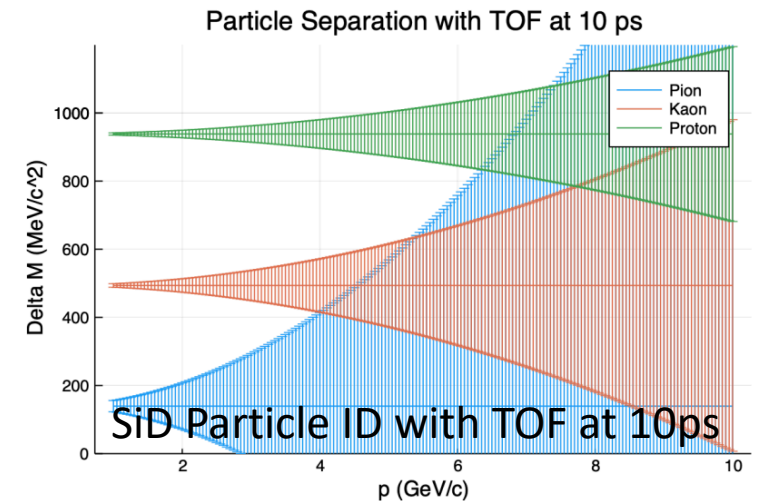
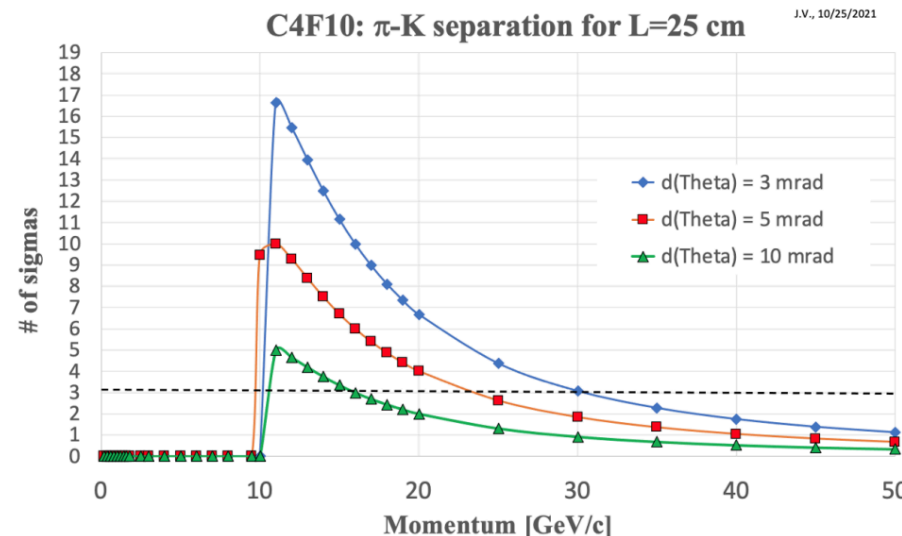
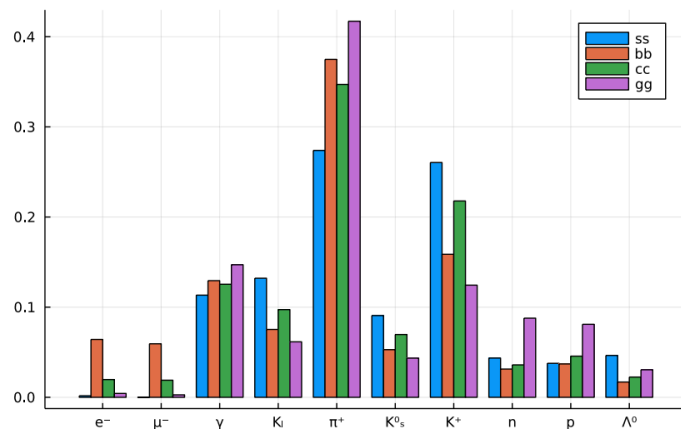
Instrumentation R&D for EF01/EF02 Final Report: Precision Timing

- Precision timing is being incorporated into the HL-LHC, would also have large impacts on BIB reduction at a Muon Collider [link](#) and at FCC-hh [link](#)



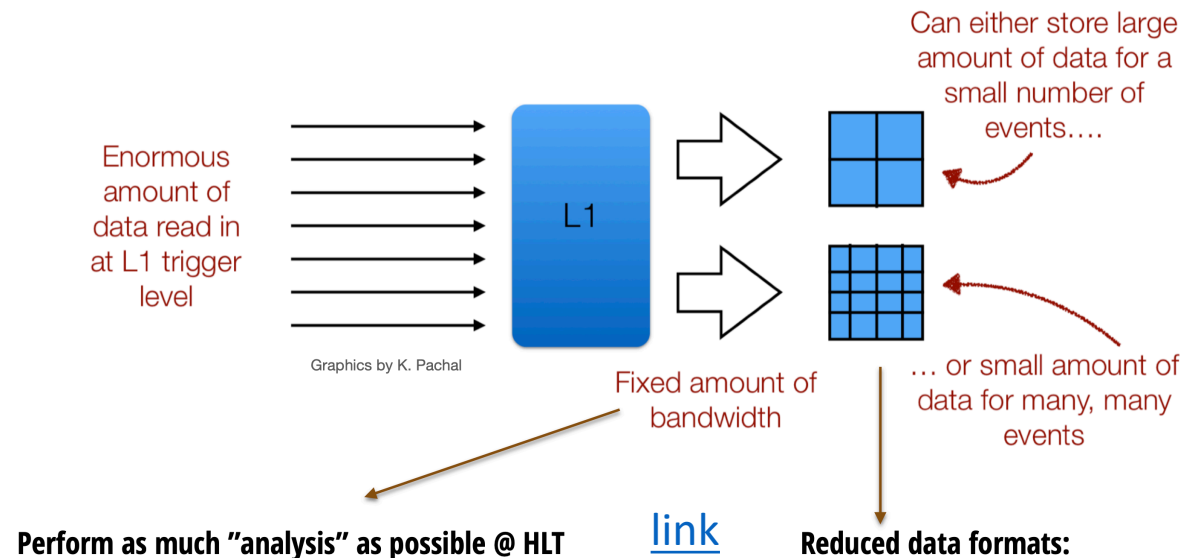
Instrumentation R&D for EF01/EF02 Final Report: Flavor Measurements

- Various detector R&D proposals can improve separation between light flavor jets (Cherenkov, multi-layer tracking, etc.) [link](#)
- Precision timing integrated into tracking layers can also improve particle ID at future e+/e- colliders [link](#)



Instrumentation R&D for EF01/EF02 Final Report: Trigger/DAQ/Real-time reconstruction

- Triggerless detectors, FastML and reconstruction advancements, asynchronous detector readout for improving “rare Higgs” measurements
- Data-rates vary greatly by detector/collider, the definition of “Interesting” physics is equally diverse



What other R&D projects should be tied directly to future Higgs Measurements and Searches?