

“FASER Detector Characterization with a TestBeam” Summary

- FASER is a new experiment at CERN looking for long-lived BSM particles such as the Dark Photon
- A subset of the FASER detector was characterized with a test beam
 - electrons (5 to 300 GeV), muons (150 GeV), and pions (200 GeV)
- We can correct for the preshower material in order to improve the calorimeter resolution
- We measured the timing resolution of the trigger scintillators, preshower, and calorimeter
 - Varies depending on threshold used for time measurement
 - < 1 ns for all detectors
- We measured the non-uniformity of the light collection efficiency for both the calorimeter and the preshower
- We demonstrate our ability to distinguish between electrons, muons, and pions

