

Muon R&D

Drift-tube + scintillator strip

Bing Zhou

June 26

Recent activities

- Michigan hold **weekly** meeting for test beam analyses, cover topics of muon scintillator strip measurements (calibration, timing, and special resolution) and straw dN/dx measurements
- DRD1 (WG1+WG2) workshop (June 16, 2026) : Technologies and applications of Gaseous Detectors at FCC: <https://indico.cern.ch/event/1675383/>
- Jiajin Ge (Michigan) gave a presentation in the workshop



R&D Activities

For a Muon System Made of Drift Tubes and Scintillator Strips For FCC-ee

Jiajin Ge

University of Michigan

On Behalf of UM FCC-ee R&D group

June, 2026 @DRD1 workshop at CERN

Muon detector R&D

- Continue study the drift tube + scintillation strip performance with data collected in the March-April test beam at CERN. Figure out how to improve the timing/special resolution using better electronics and readout system.
- Design and build the infrastructure: black light-seal long (4 – 5 m) box to test long scintillation strip performance
- Simulation studies – detector digitization and physics studies (such as LLP detection); layout studies combining with magnet design for the experiment
- 2027 R&D funding is essential for us to continue the R&D effort