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# Hit, track and vertex reconstruction using multiplexed micromegas detectors in NA64

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The NA64 experiment is a fixed target experiment at the SPS at CERN, searching for new physics using an active beam dump to detect missing-energy events. It employs a tracker based on multiplexed micromegas detectors, which presents a unique challenge with respect to reconstructing particle trajectories. In particular, the signature of dark photon (or alternatively  $^8\text{Be}$  anomaly X boson) decay to  $e^+e^-$  pair requires the reconstruction of the decay vertex *after* the beam dump calorimeter, where owing to a lack of hermiticity, additional particles may also be present. This talk reports on the progress towards reconstructing such events, using simulation and a test data set from NA64 2017 run comprising dimuon events (which have a similar experimental signature).

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