The EmCal structure is intrinsically homogenous; so his response doesn’t depend on kinematic parameters of impinging particles (except for threshold effect on the energy deposition).

High efficiency in detection is guaranteed if enough active material is fired, that is the EmCal has adequate transversal dimensions which allow full sampling, even for strongly divergent particles.

As far μ/e identification concerns, the ”KLOE-like” EmCal shows a tag efficiency greater than 99%. To reach 1% of misidentification, the simple visible energy measurement is not enough; some pattern recognition - already experimented in KLOE - has to be implemented to distinguish electrons from stopping muons. Therefore we need adequate readout granularity.

“the tail of the high energy muon spectrum could generate some light in the Cerenkov and be counted as an electron”; (apparently) no problem for EmCal thanks to the peculiar and very clean pattern shape of a minimum ionizing particle.
Info on MICE EmCal

- Construction schedule:
  1 year for a detector 60x60x15 cm³
  but:
  pending technical decision about final layout and dimensions, major involvement of LNF infrastructures and external firms have to be considered

- Spending profile:
  ready to place 90% of orders
  needed to do asap (procurements will take lot time) but pending financial approval

- Work going on and planes
  - recovery of equipments & tools
  - “prototype” test @BTF
  - look at KLOE data analysis for MICE goals
    (reproducibility of simulations)