Monitored neutrino beams
ENUBET design and performance

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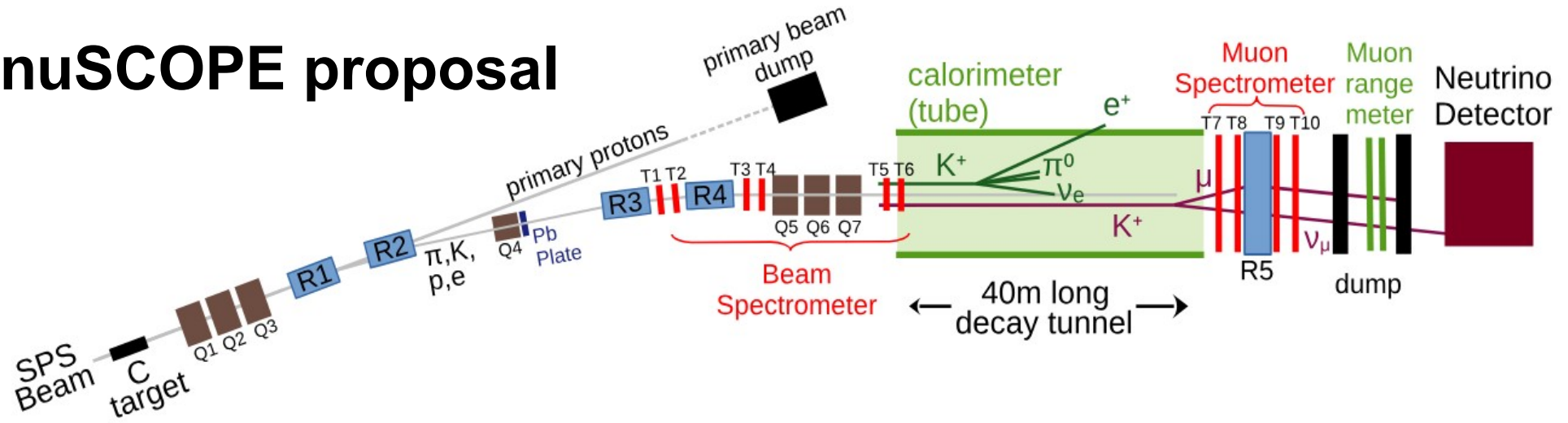
ENUBET – Instrumenting the decay tunnel

- Granular calorimeter based on plastic scintillator technology
- Goal is to observe the large angle charged leptons created in pion/kaon decays
- Number of charged leptons created = Number of neutrinos created

nuSCOPE proposal

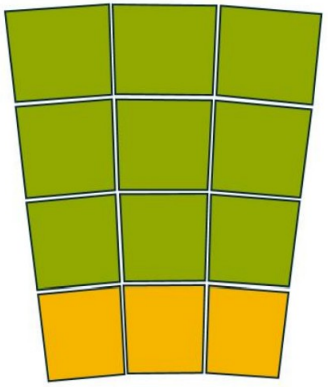


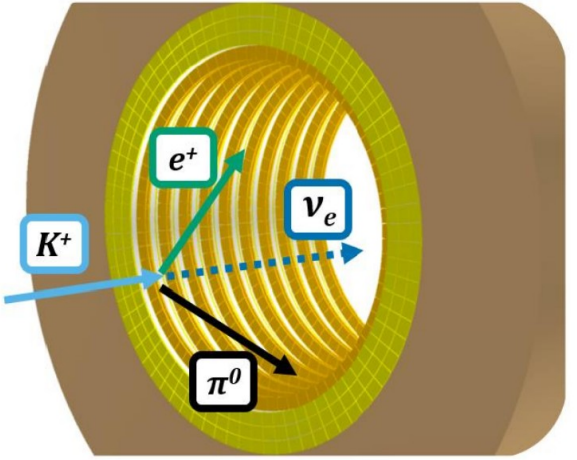
NuTag – Instrumenting the transfer line

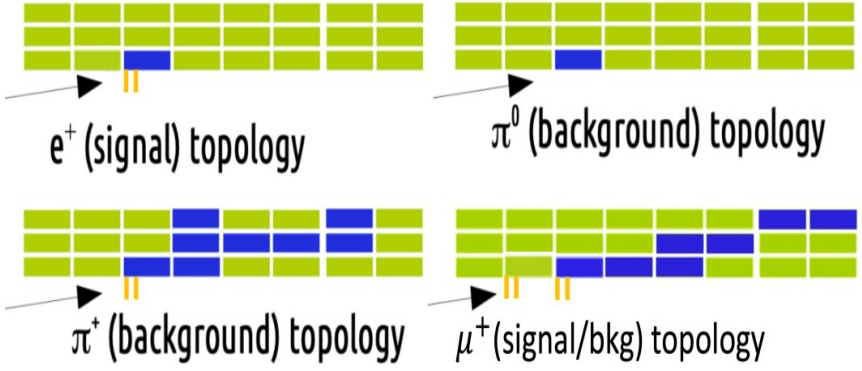
- Silicon GigaTrackers placed in beamline
- Goal is to tag the pions and kaons and measure their momenta
- Giving an event based coincidence between the mother meson and neutrino

ENUBET – Concept & Demonstrator

By observing the charged leptons we can estimate the neutrino flux to ~1% uncertainty



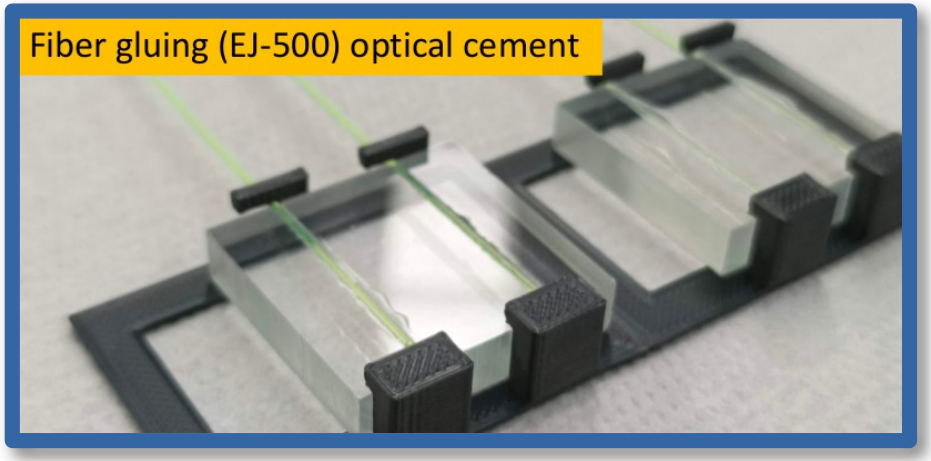


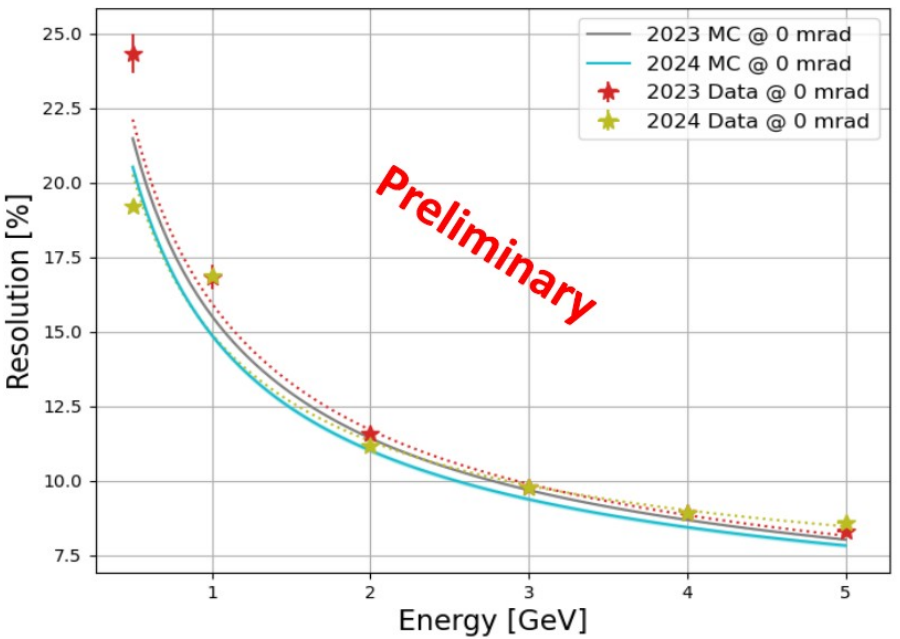


Using a veto layer and singal topology, its possible to ID the particles

ENUBET – Concept & Demonstrator

A prototype of the instrumented decay tunnel – tested multiple times at the PS accelerator





Preliminary results confirm our expectations and promise of giving us 1% flux uncertainty

Interested in more?

Check out my poster!

Ask me anytime!