

The Muon Ionisation Cooling Experiment at Step IV

1 Ionisation Cooling for Muon Accelerators

2 pages, description of Neutrino Factory, Muon Collider, ionisation cooling

2 The Muon Ionisation Cooling Experiment

2 pages, description of MICE experiment at a "conceptual" level

3 The MICE Muon Beamline

J. Pasternak

2 pages, short review of beamline construction referring to previous papers. Description of updates since 2012 (new proton absorber, new diffuser, rematch-ing).

4 Advanced Diagnostics

P. Soler

4.1 Scintillating Fibre Trackers

M. Uchida

2 pages

4.1.1 Tracker Alignment Procedure

Alignment in absence of fields

4.2 Time of Flight Detectors

M. Bonesini

1 page, short review referring to previous papers

4.3 Threshold Cerenkov Counters

L. Cremaldi

1 page

4.4 KL

M. Bogomilov

1 page

4.5 Electron Muon Ranger

A. Blondel

1 page

5 Trigger, DAQ and Software

D. Rajaram

5.1 Trigger and DAQ

1 page

5.2 Online and Offline Software

1 page

6 Diagnostic Performance

A. Dobbs

6.1 Detector Resolution in Phase Space Coordinates

J. Greis

2 pages; combined resolution in x , y , p_x , p_y , time, energy at upstream and downstream TRP

6.2 Measurement of Beam Purity

C. Pidcott

2 pages; measurement of beam purity upstream; measurement of beam purity downstream; validation against e.g. theoretical muon decay rate

7 Absorber

P. Snopok

Description of the MICE absorbers - 2 pages

I think hold off on "measurement of properties" section - this is a paper in itself

8 The Step IV Magnetic Lattice

J. Pasternak

8.1 Spectrometer Solenoid

A. Bross?

1 page

Description of the spectrometer solenoid, field mapping

8.2 Focus Coil

J. Cobb

1 page

Description of the focus coil, field mapping

8.3 Beam Dynamics

V. Blackmore

2 pages

Description of the beam dynamics design

9 Magnet Performance

J. Pasternak

9.1 Alignment procedure

J. Pasternak

2 pages

Alignment of magnets and trackers to tracker axis; any dipole modes?

9.2 Beam transport

J. Pasternak

2 pages

Measurement of Larmor angle and focussing properties of the lattice, comparison with field maps; don't go past first order stuff; higher order stuff is a paper in itself

10 Conclusions

1 page

Total: 26 pages