Contribution ID: **17** Type: **Poster**

Emittance Exchange in MICE

Highly brilliant muon beams for a muon collider can be made from the bombardment of protons against a target producing pions, which subsequently decay into muons. Such a muon beam occupies a large phase-space volume and must be cooled to achieve luminosities suitable for a muon collider. The Muon Ionization Cooling Experiment (MICE) has demonstrated transverse ionization cooling. A muon collider requires both longitudinal and transverse cooling. This can be achieved through a wedge-shaped absorber, where both the longitudinal and transverse phase spaces are simultaneously manipulated during the ionization cooling process. The change in longitudinal and transverse phase space densities obtained from placing a polyethylene wedge into the MICE cooling channel are presented here.

Mini-abstract

Change in longitudinal and transverse phase space from a polyethylene wedge in MICE is presented.

Experiment/Collaboration

MICE

Primary author: BROWN, Craig (Brunel University)

Presenter: BROWN, Craig (Brunel University)

Session Classification: Poster session 4