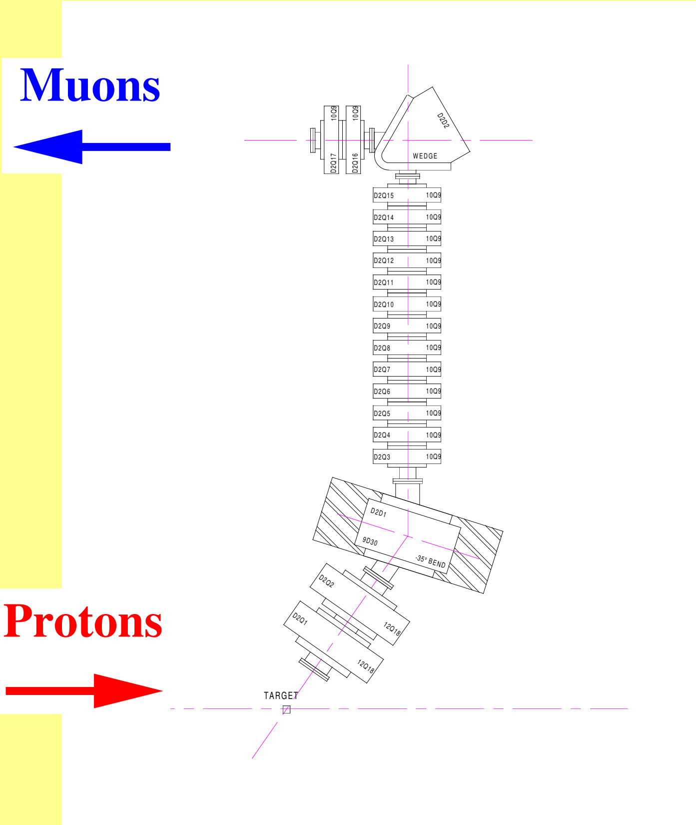
Low Energy Muon Beam



Existing low energy muon beamlines consist of a proton source, pion prod– uction target, and large aperture quadrupole decay channel with big bends to suppress backgrounds.

Need :

- P_{beam} = 100 – 300 MeV/c
- $\Delta P/P$ ~ 5%
- Purity > 99% after tagging
- $\varepsilon_{\perp}$ ~ 1500 π mm–mrad

- **Initial beamline design studies based on BNL D2 Quads which are potentially available.**

Q1:	12Q18,	B = 4.65 kG
Q2:	12Q18,	B = 3.88 kG
Q3–Q15:	10Q9,	B = 9.16 kG
Q16:	10Q9,	B = 4.22 kG
Q17:	10Q9,	B = 4.28 kG
Q18:	10Q9,	B = 1.44 kG

- **Large aperture quads from the MEGA beamline (21 Quads with ≥12 inch apertures) at LANL are also potentially available.**