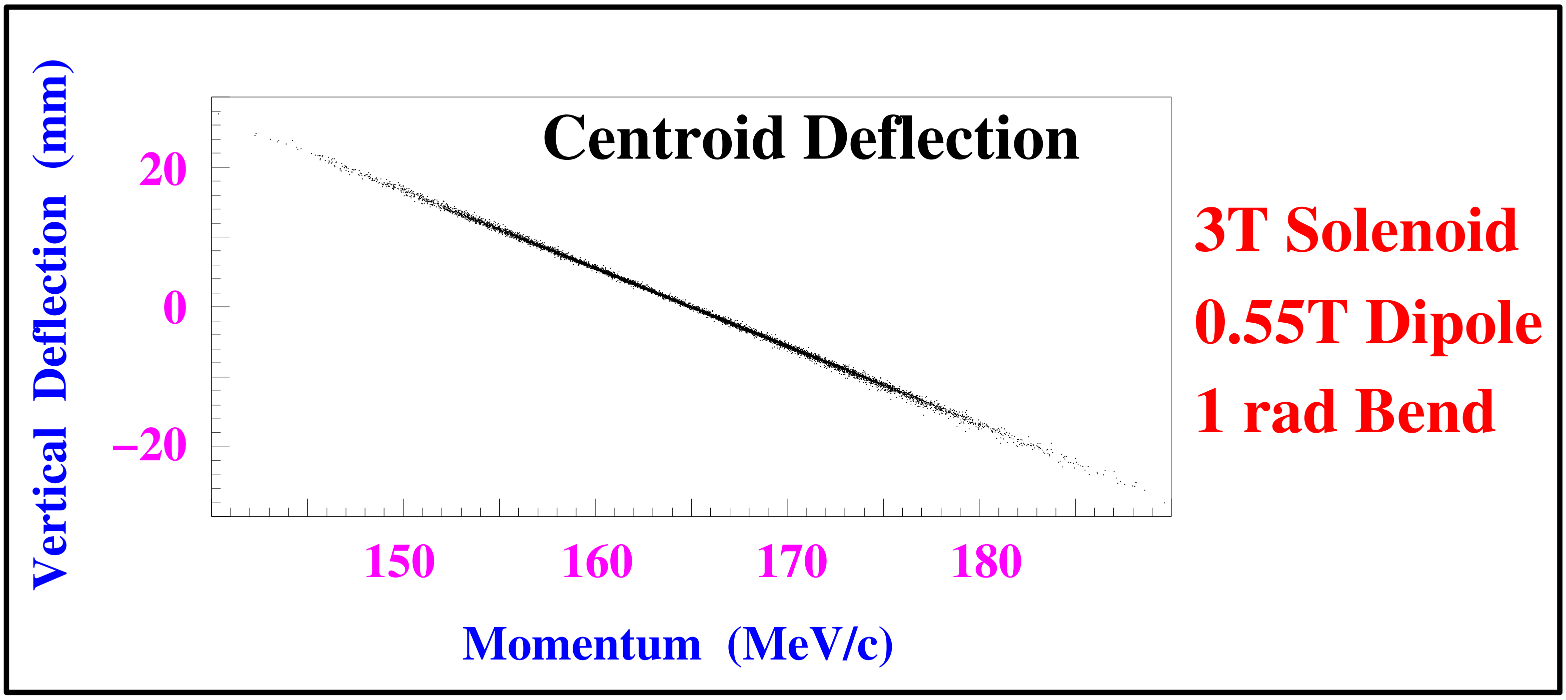
Muon Measuring Systems

- We must measure (x, y, x', y', p, t) of the incoming and outgoing muons.
- The large beam phase–space must be confined within the measuring system ... use a solenoid channel.
- We need a momentum spectrometer within the solenoid channel. An elegant way to implement this is to use the curvature drift effect within a bent solenoid embedded in a guiding dipole field:



- Example: To measure momentum with a precision of 0.2 MeV/c using a horizontal bend requires the vertical helix deflection to be measured with a precision of 220 μm.