Polarized Drell-Yan at Fermilab Main Injector

- Polarize Beam in Main Injector & use SeaQuest dimuon Spectrometer
  - measure Sivers asymmetry

Sivers function
- captures non-perturbative spin-orbit coupling effects inside a polarized proton
- is time-reversal odd:
  - leads to sign change:
    - Sivers function in DIS = − Sivers function in Drell-Yan
  - fundamental prediction of QCD