

CHICANE SHIELDING AND ENERGY DEPOSITION

Hisham KAMAL SAYED

BROOKHAVEN NATIONAL LABORATORY

Target/ Front End meeting

7 August 2014



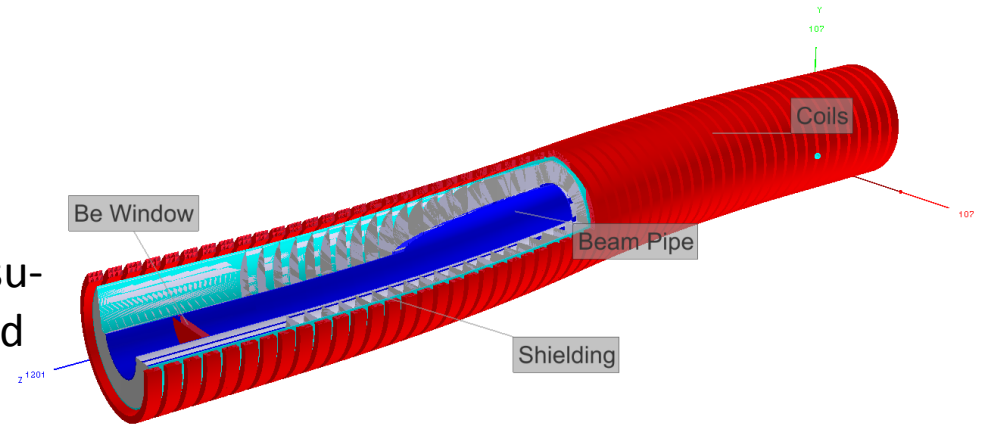
INTRODUCTION & WORK PLANE

- ◆ Received chicane input root+MARS2012 files from Pavel
- ◆ Working on installing them with the new MARS2014 version on BNL - FIDO cluster. ✓
- ◆ Debugging root + MARS installation in FIDO ✓
- ◆ Start with old chicane parameters and new beam input files from Ding ✓
- ◆ Initial energy deposition results
- ◆ Once I receive the new parameters from Scott will run again to find the energy deposition distribution along the chicane

CHICANE ROOT GEOMETRY

Coils:

- Inner radius 43 cm
- outer radius of 53 cm
- Length of 18 cm
- on- axis field of 1.5 T
- MARS material SCON consisting of 90% superconductor (60% Cu and 40% NbTi) and 10% Kapton (C₂₂H₁₀N₂O₅)



The proton absorber:

- 10 cm Be disk
- outer radius of 30 cm.

Beam Pipe:

- stainless steel pipe
- Radius of 32 cm