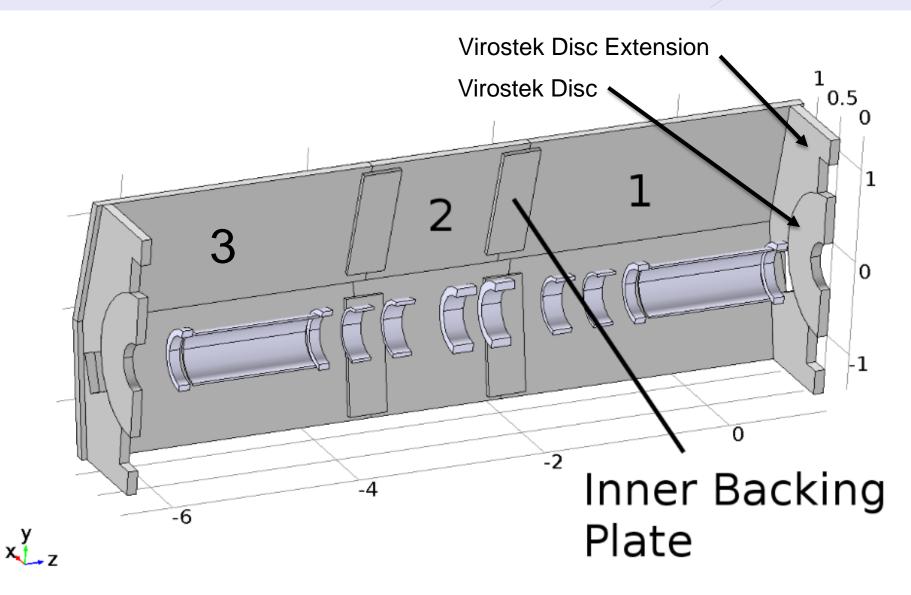


# MICE PRY Forces

Holger Witte Brookhaven National Laboratory Advanced Accelerator Group

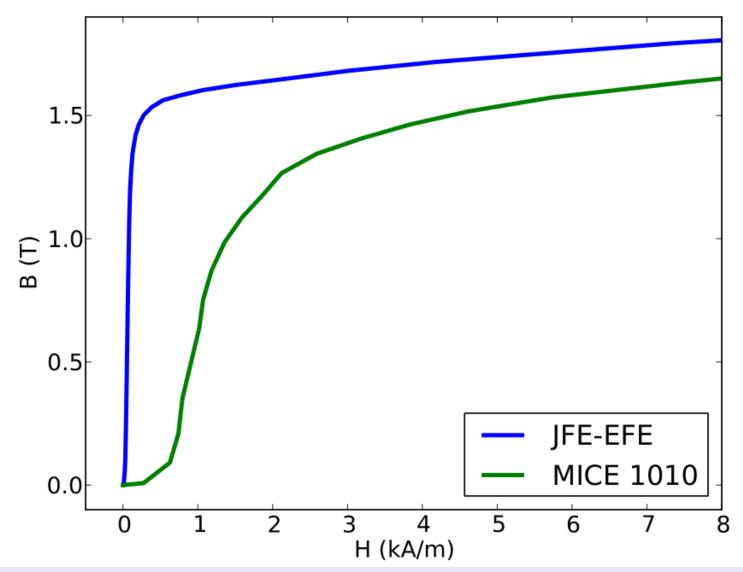
## **Geometry / CS**





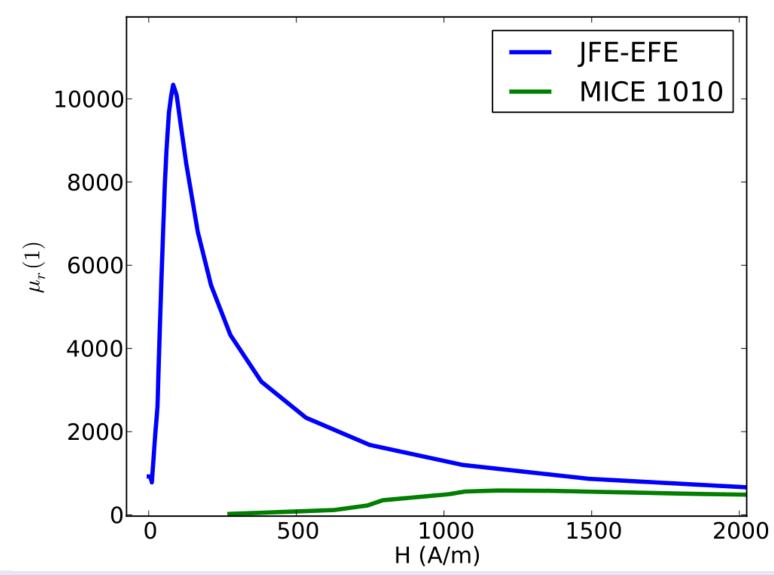
## **Magnetization Curves**





### **Permeability**





#### Cases



- MICE Step IV
  - 240 MeV Flip mode
  - 240 MeV Solenoid mode
- Parameters
  - Parameter 1: All coils powered
  - Parameter 2: FC not powered
  - Parameter 3: MC1 not powered
  - Parameter 4: MC2 not powered
  - Parameter 5: E1 not powered
  - Parameter 6: SS not powered
  - Parameter 7: E2 not powered

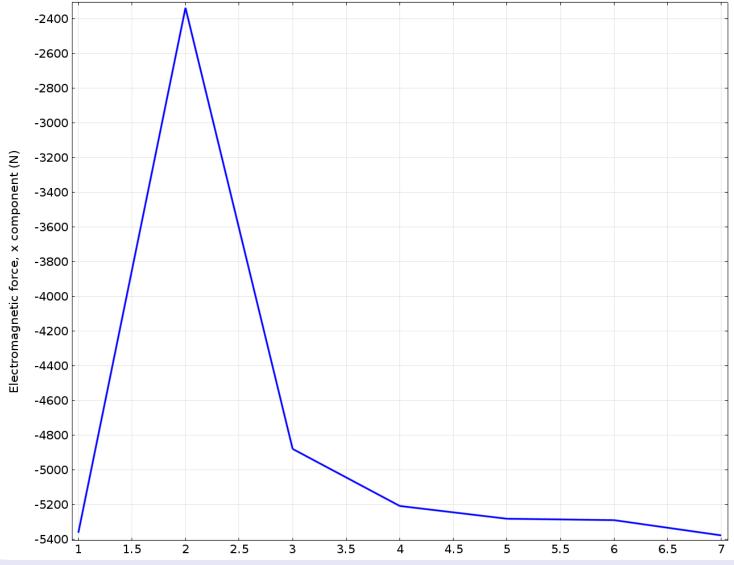


# 240 MeV Flip Mode

## **PRY 1: Force in x**

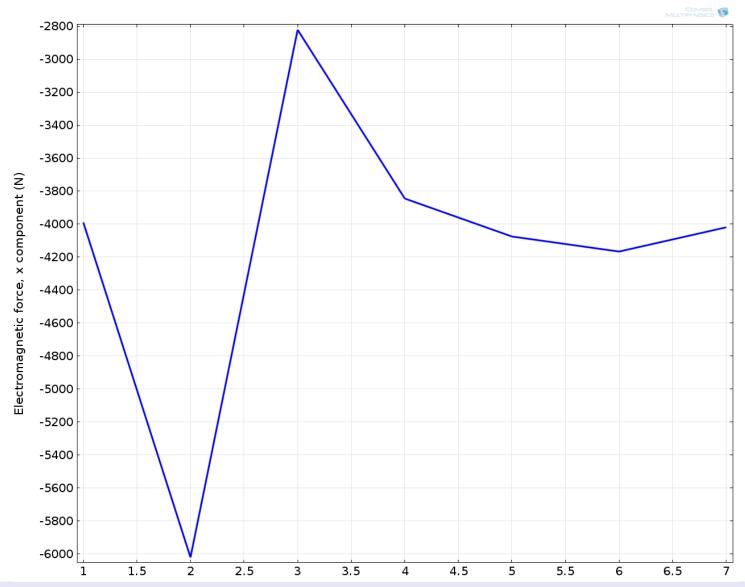


COMSOL MULTIPHYSICS



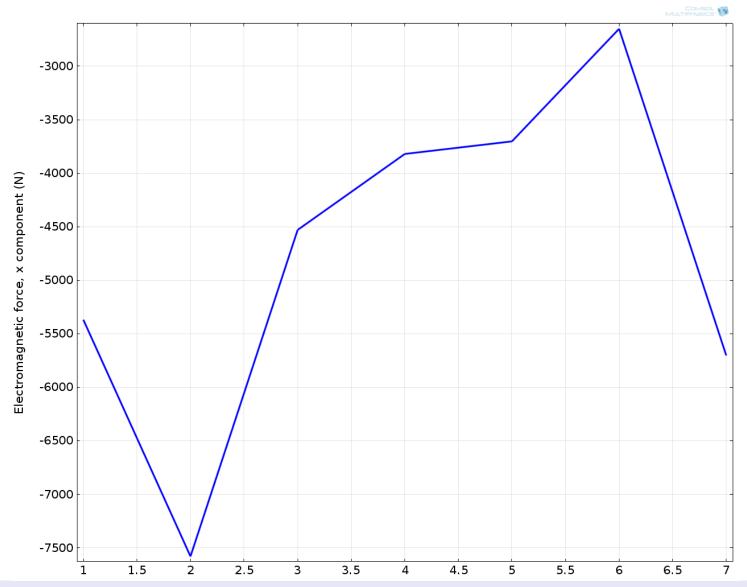
## **PRY 2: Force in x**





## **PRY 3: Force in x**





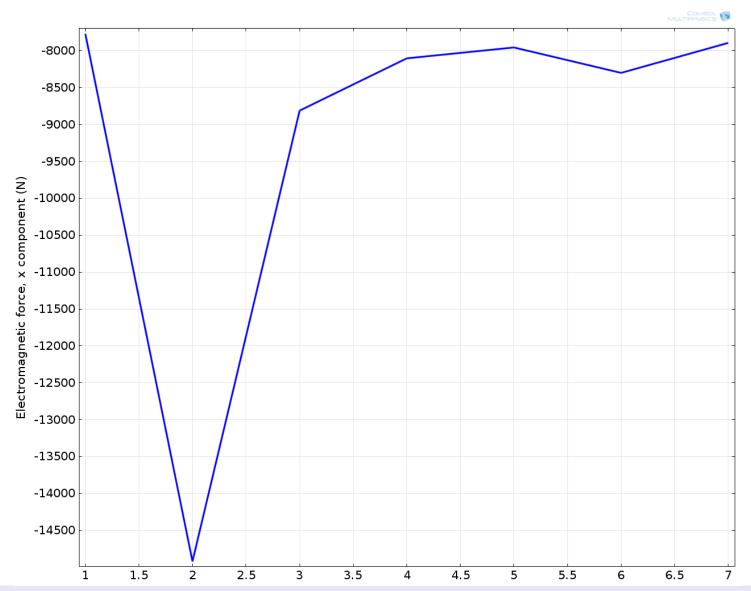
#### **Backing Plate Inner: Force in x**



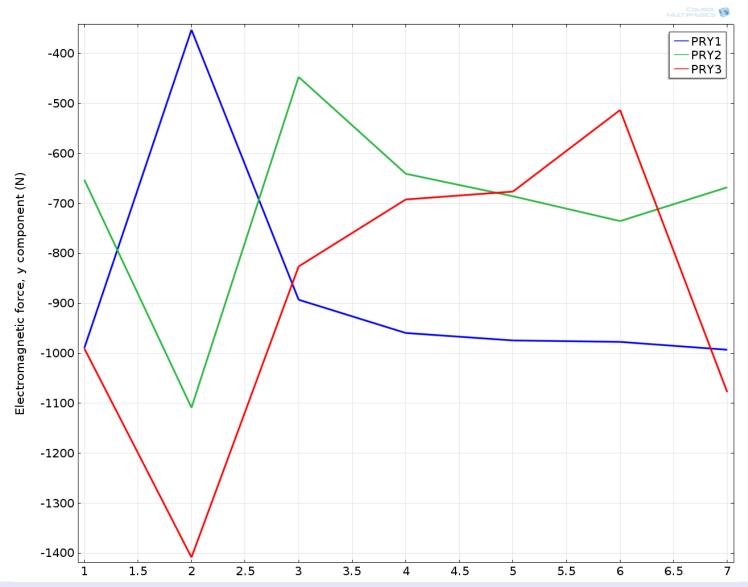
Electromagnetic force, x component (N) 1.5 2.5 3.5 4.5 5.5 6.5 

#### **Backing Plate Outer: Force in x**





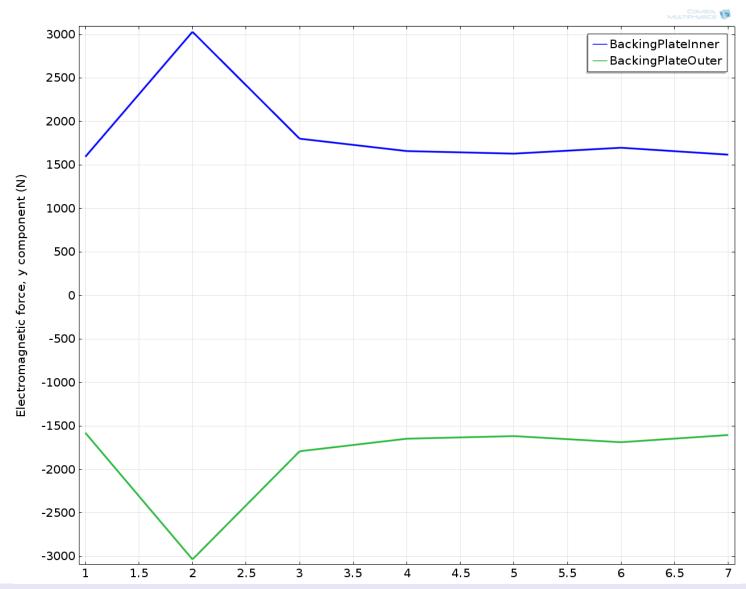




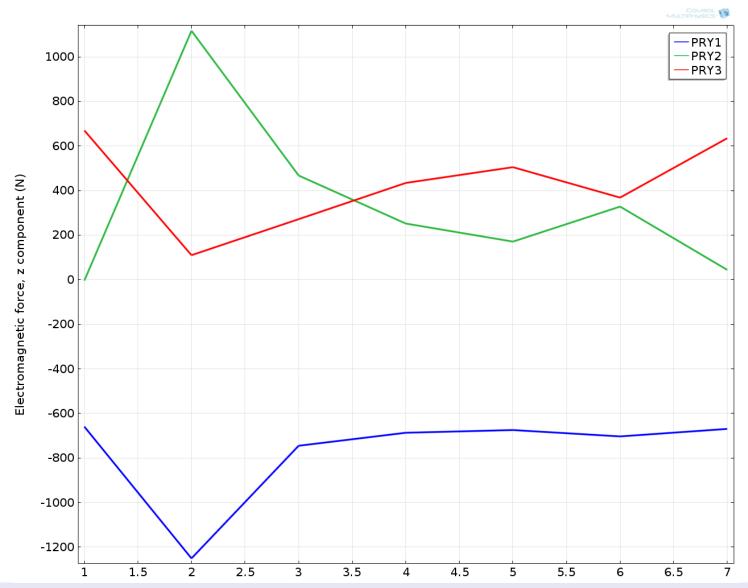








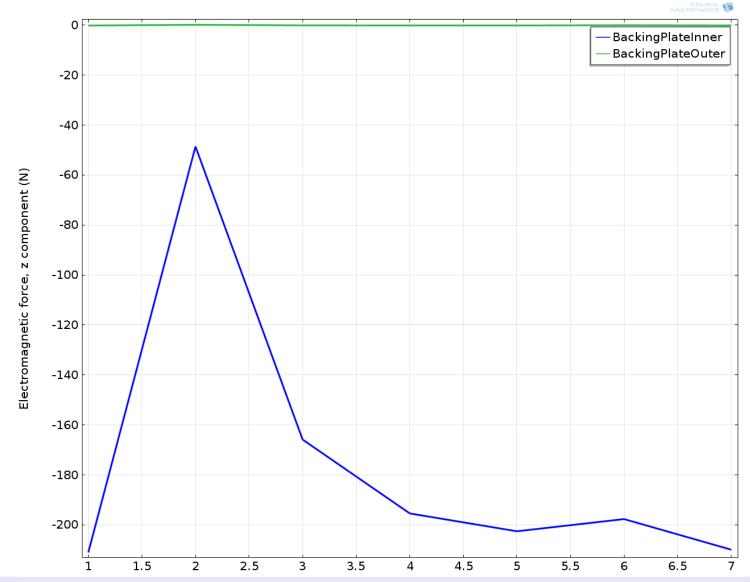














# 240 MeV Solenoid Mode



