

Insulation for Superconducting Magnets

Michael A. Green (LBNL)

Al Zeller (NSCL/MSU)

The Targetry Zone Radiation Problem

- ◆ **Heating of the superconducting coils due to radiation energy affects the amount of helium refrigeration needed to cool the coils and the temperature at the high field point in the coils.**
- ◆ **Radiation damage to the insulating material in the coils is a severe problem. Resins and other plastics are badly affected.**
- ◆ **Radiation damage to the superconductor in the coils might be a problem particularly at the coil high field point.**
- ◆ **Radiation damage to the superconductor matrix material is minimal because the superconductor and the coil insulation are damaged first.**

