

Hall D: Radiation Hard Insert to FCAL

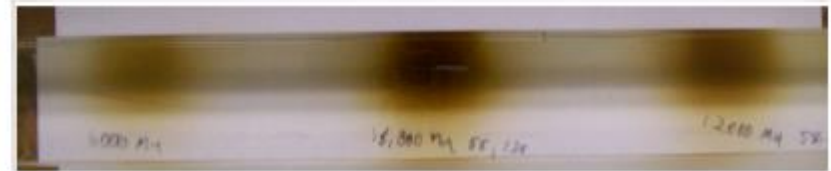
FCAL: 2800 40x40x450mm³ F8 lead glass

- Expected dose (center) 100kRad/10Y at “high intensity” (100MHz in coherent peak) – order of magnitude estimate
- Rad. damage of F8 glass measured
- 100kRad → x1.8 deterioration of the resolution

Insert: 60x60cm² - about 900 crystals PbWO

- Radiation hard
- Improving the resolution in energy and position x2
- Improving the hit separation
- Using the experience with “hybrid” calorimeters: PRIMEX

Measurements using 20 MeV e⁻



300 kRad

700 kRad

500 kRad

Calculations, in kRad/Year at “low intensity”

