

Large fraction of $\pi^0(\rightarrow \gamma\gamma)$ among the produced hadrons, necessity to reconstruct γ 's in such golden modes as $\tau \rightarrow \mu\gamma$ requires a high resolution electromagnetic calorimeter, which detects γ 's in the wide energy range: 10 MeV – 6 GeV

The main tasks for the calorimeter

- High efficiency detection of γ with good energy and coordinate resolutions
- Electron/hadron separation
- Provides signal for the trigger of the detector
- Online/offline luminosity measurement

Full absorption calorimeter based on the fast scintillation crystals with large light yield (LY) is one of the main approaches

Requirements to the calorimeter

- Thick calorimeter to provide good energy resolution in the wide energy range: $(16 - 18)X_0$
- Minimize the passive material in front of the calorimeter: $< 0.1X_0$
- Good time resolution to suppress beam background: < 1 ns
- Fast scintillator (small shaping time) to suppress pileup noise