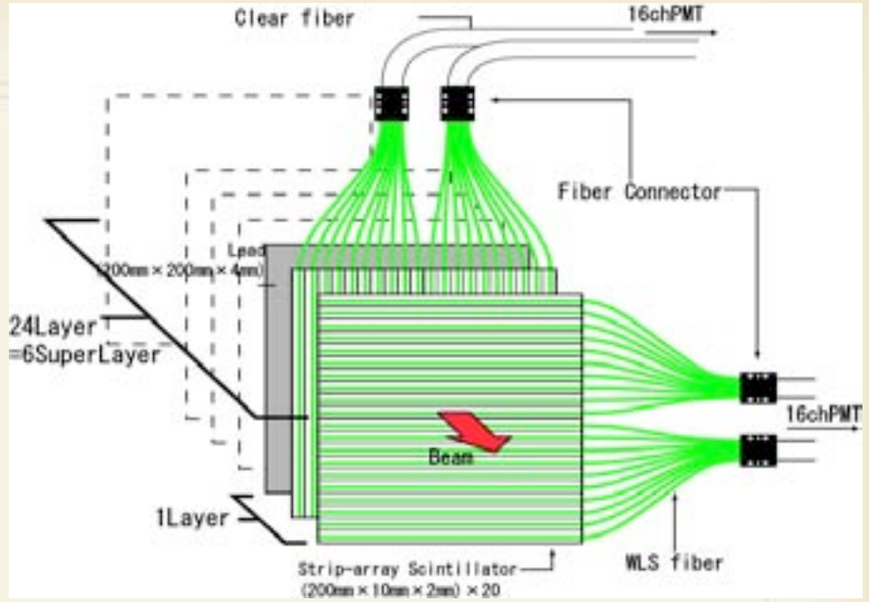
GLD-CAL Review and Tasks

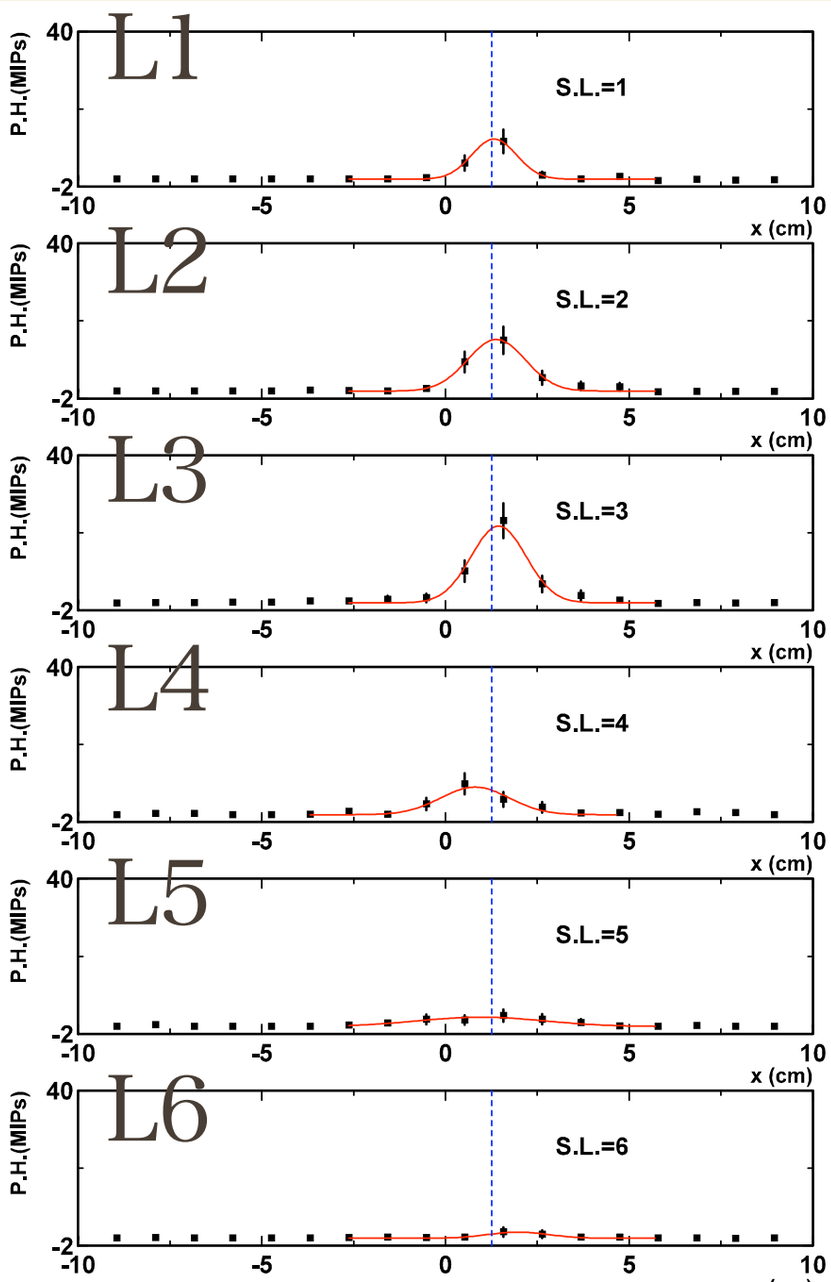
T.Takeshita @Snowmass-GLD

Recent Achievments Review
ECAL/scintillator/Photon sensor
Missings
Tasks to do

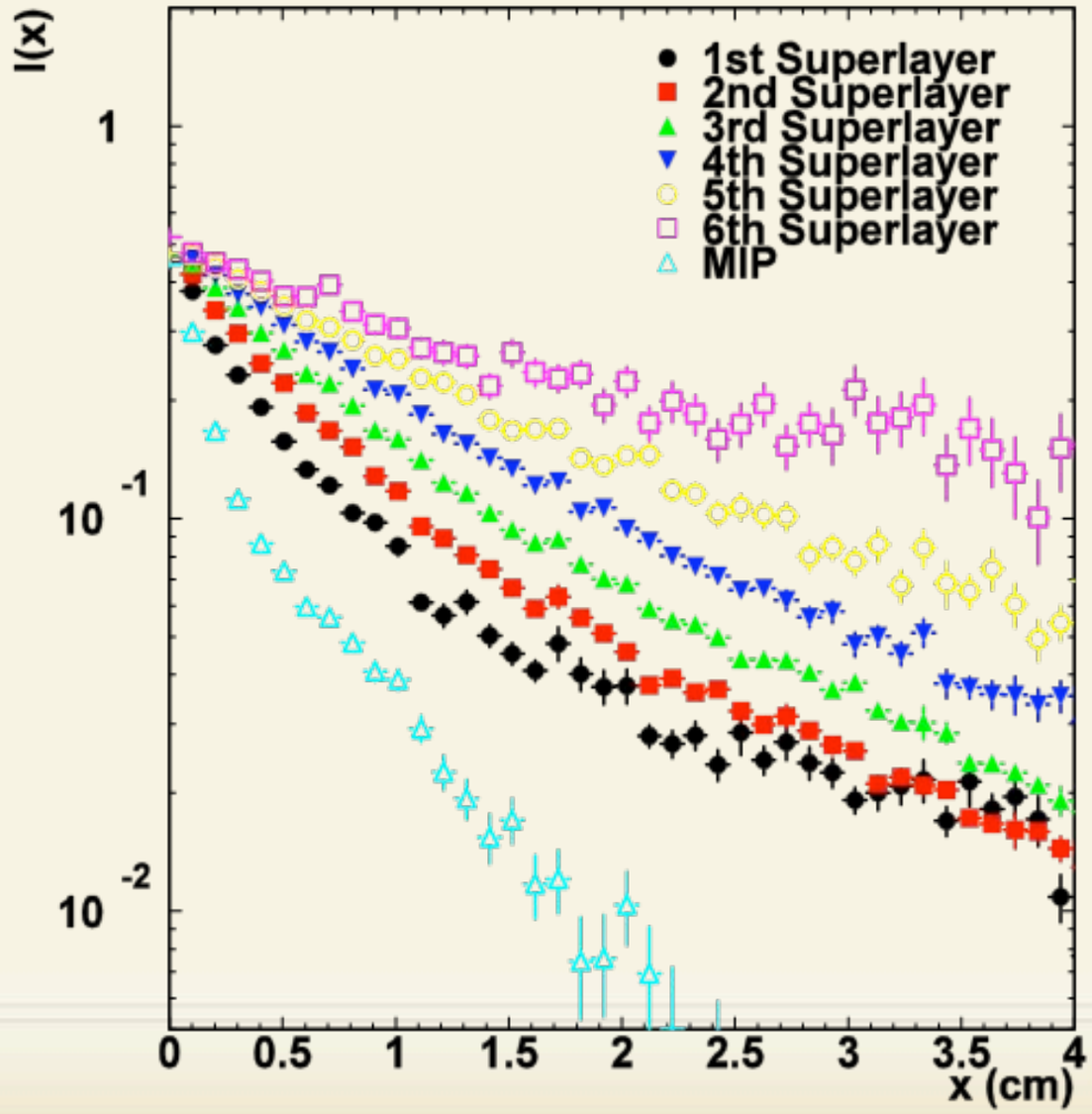
GLD-ECAL Strip results



a typical event



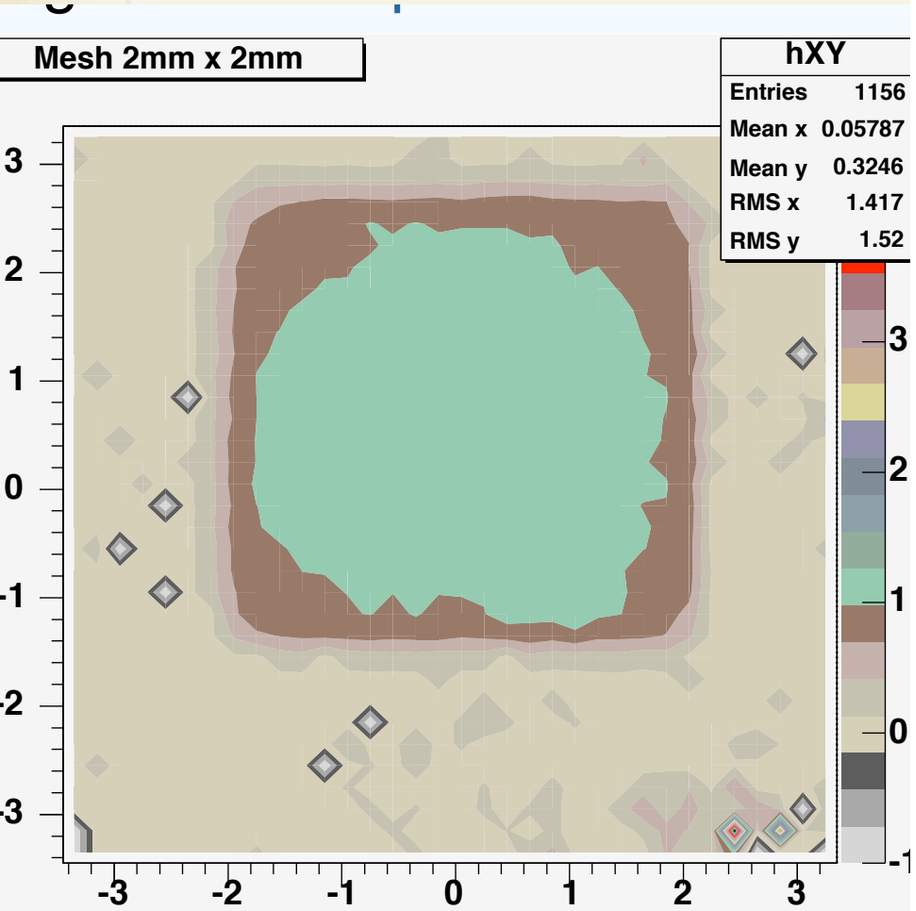
Integrated lateral shower profile



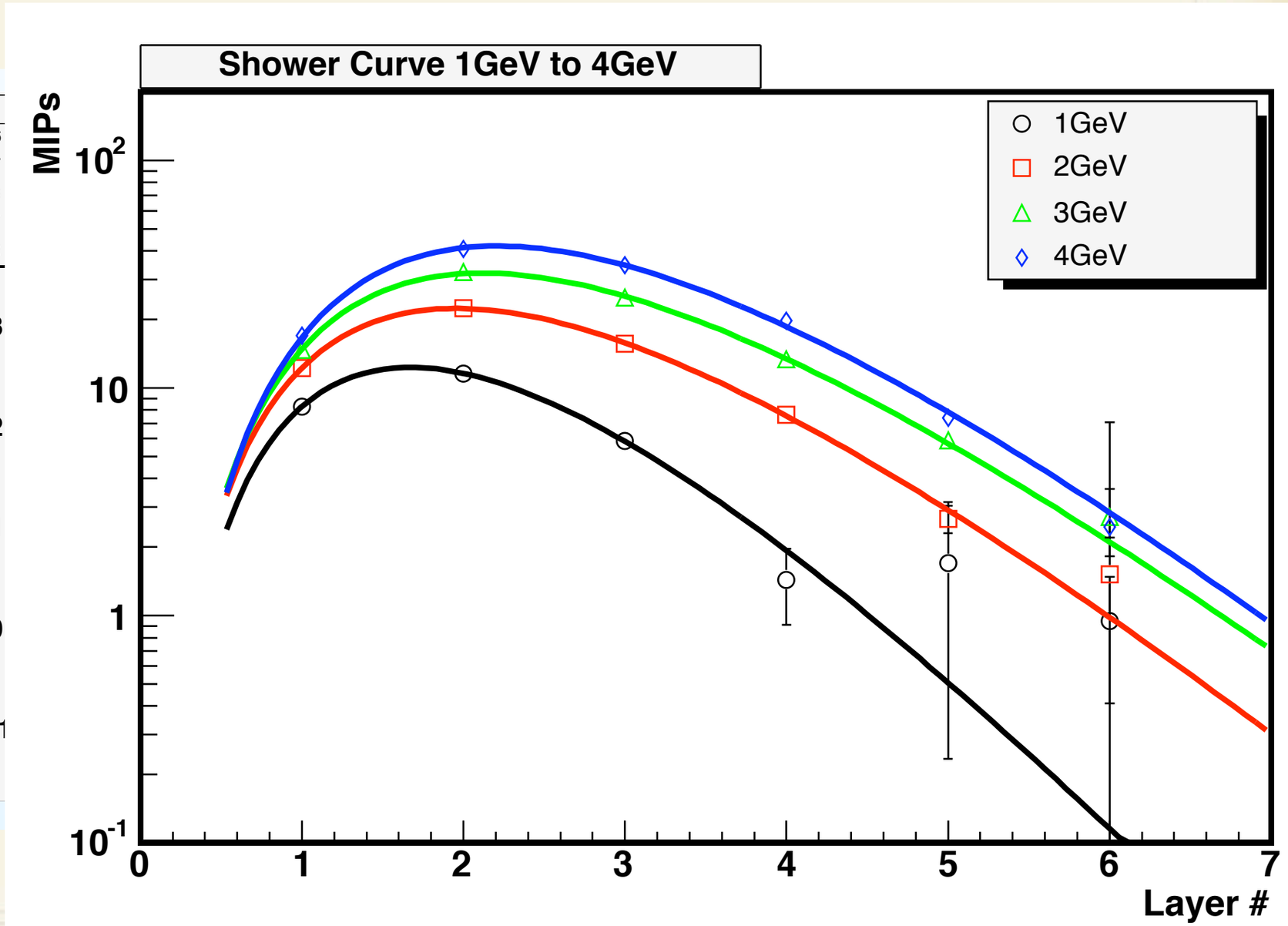
GLD-ECAL

Tile results

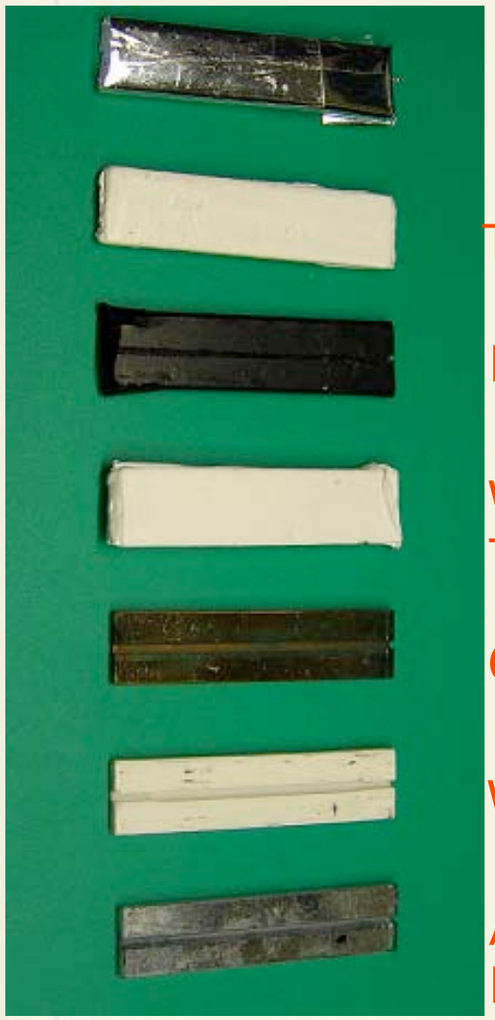
mapping in 2 dim



Longitudinal shower profile



GLD-CAL scintillator



3M Radiant Mirror Film

Teflon

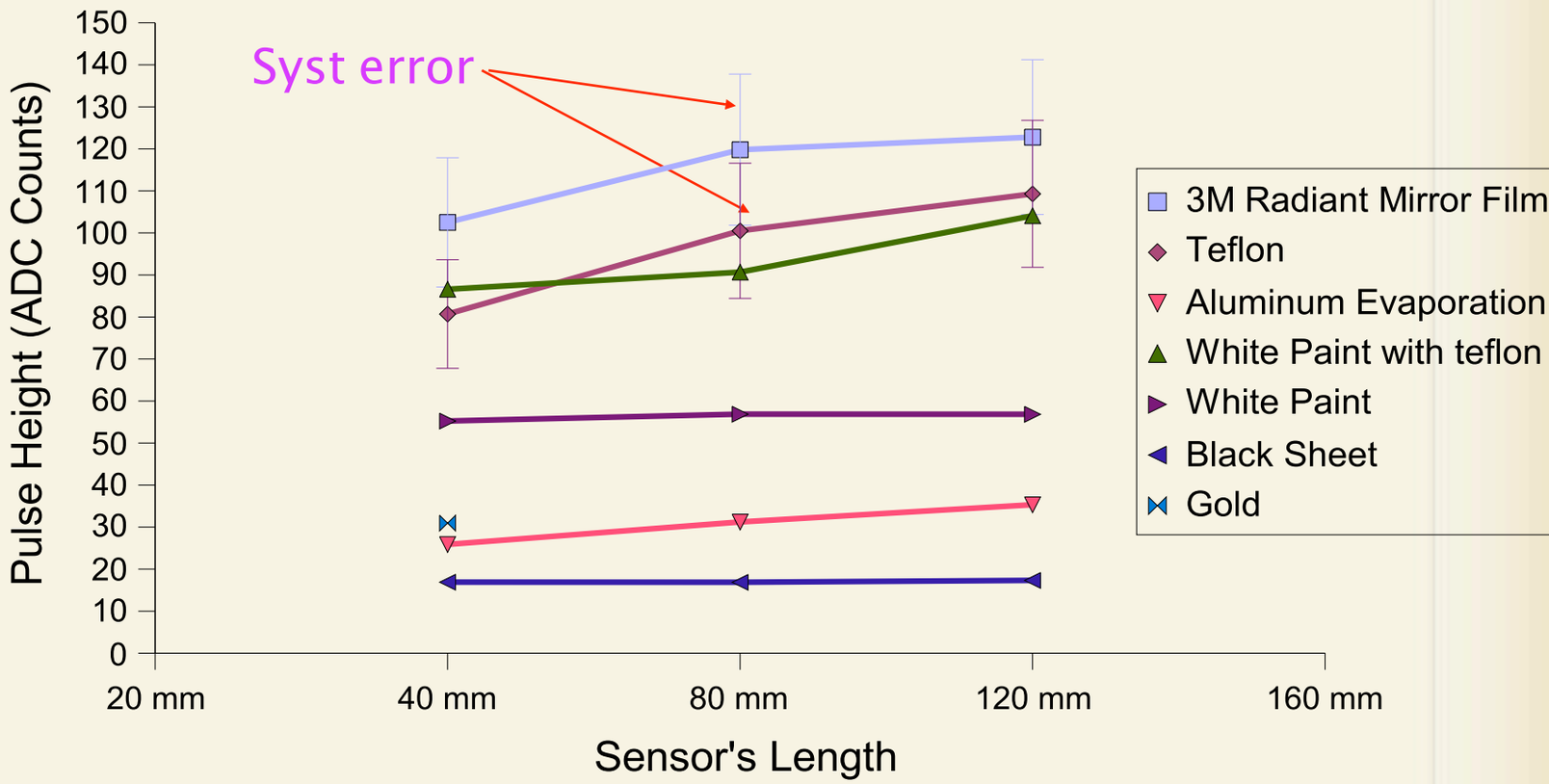
Black Sheet

White Paint with Teflon

Gold Coat

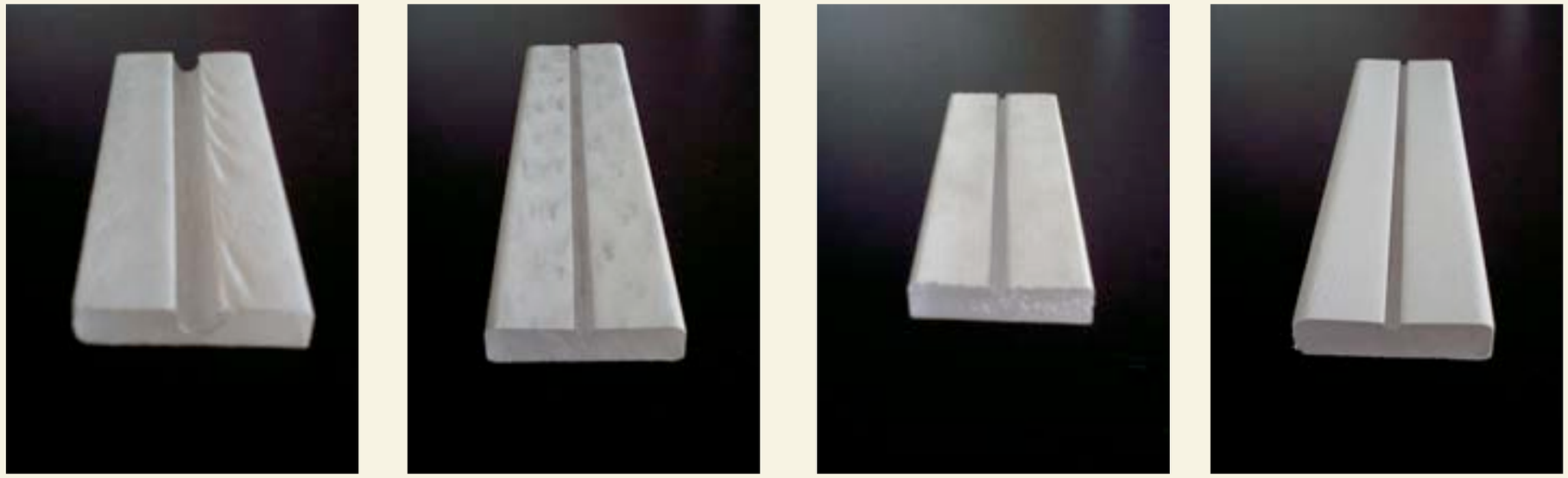
White Paint

Aluminum Evaporation

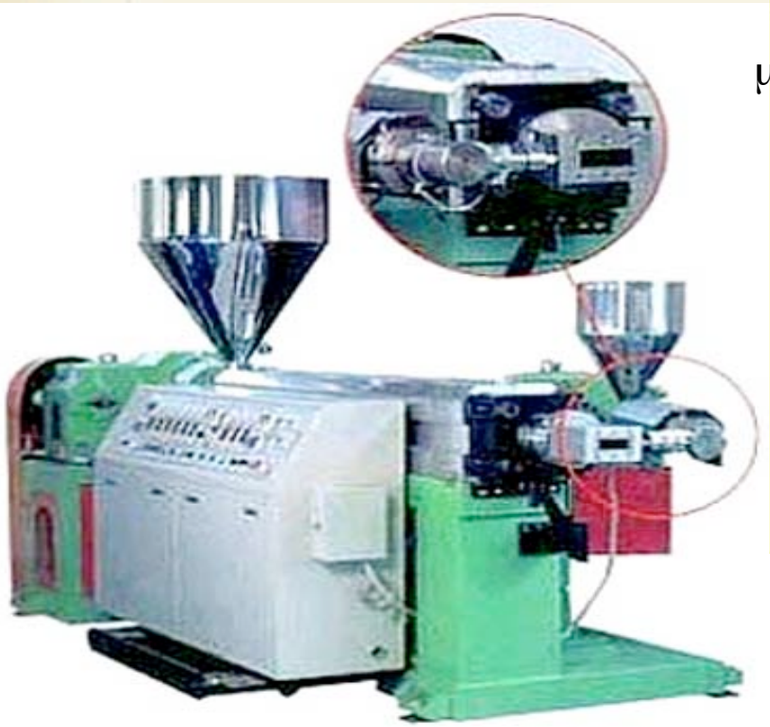


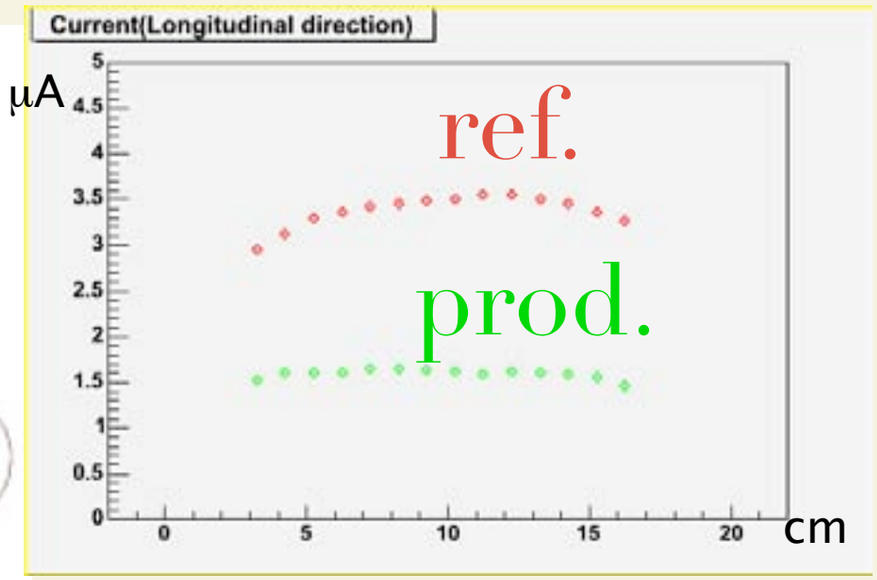
GLD-CAL

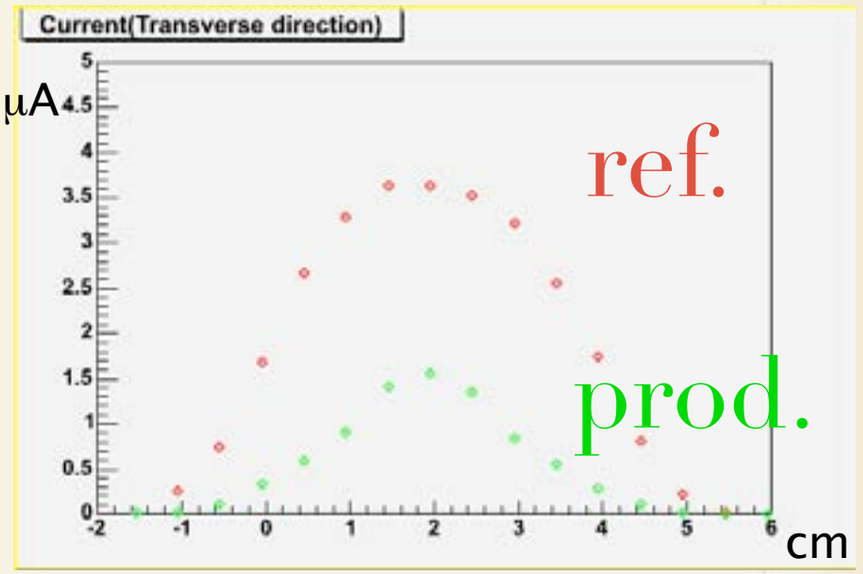
scintillator cont'd

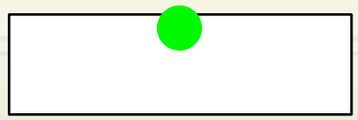


Evolution

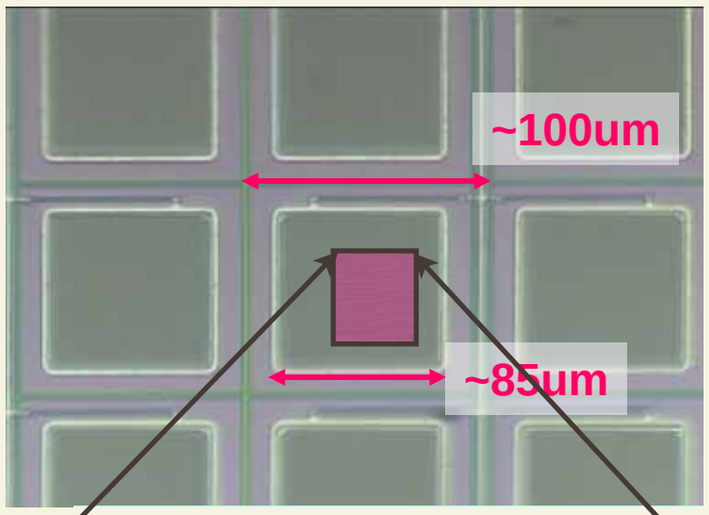




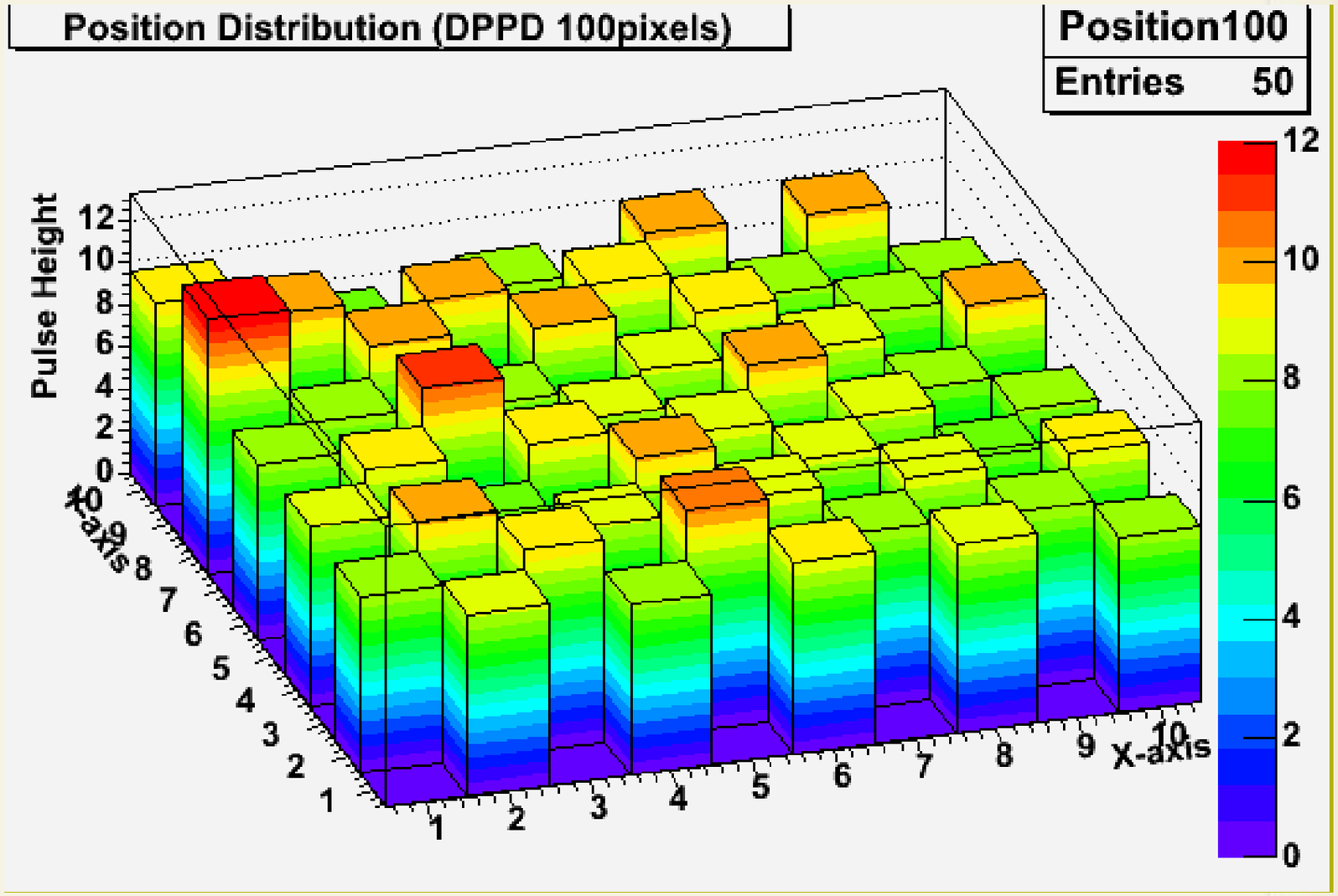




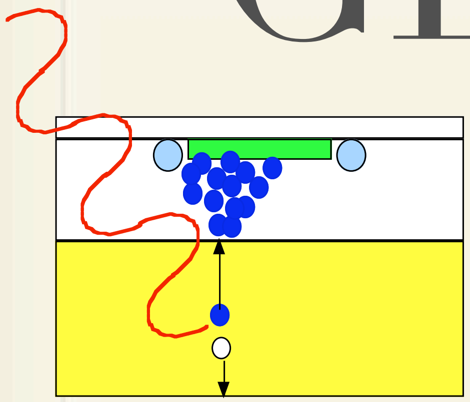
GLD-photon sensor results



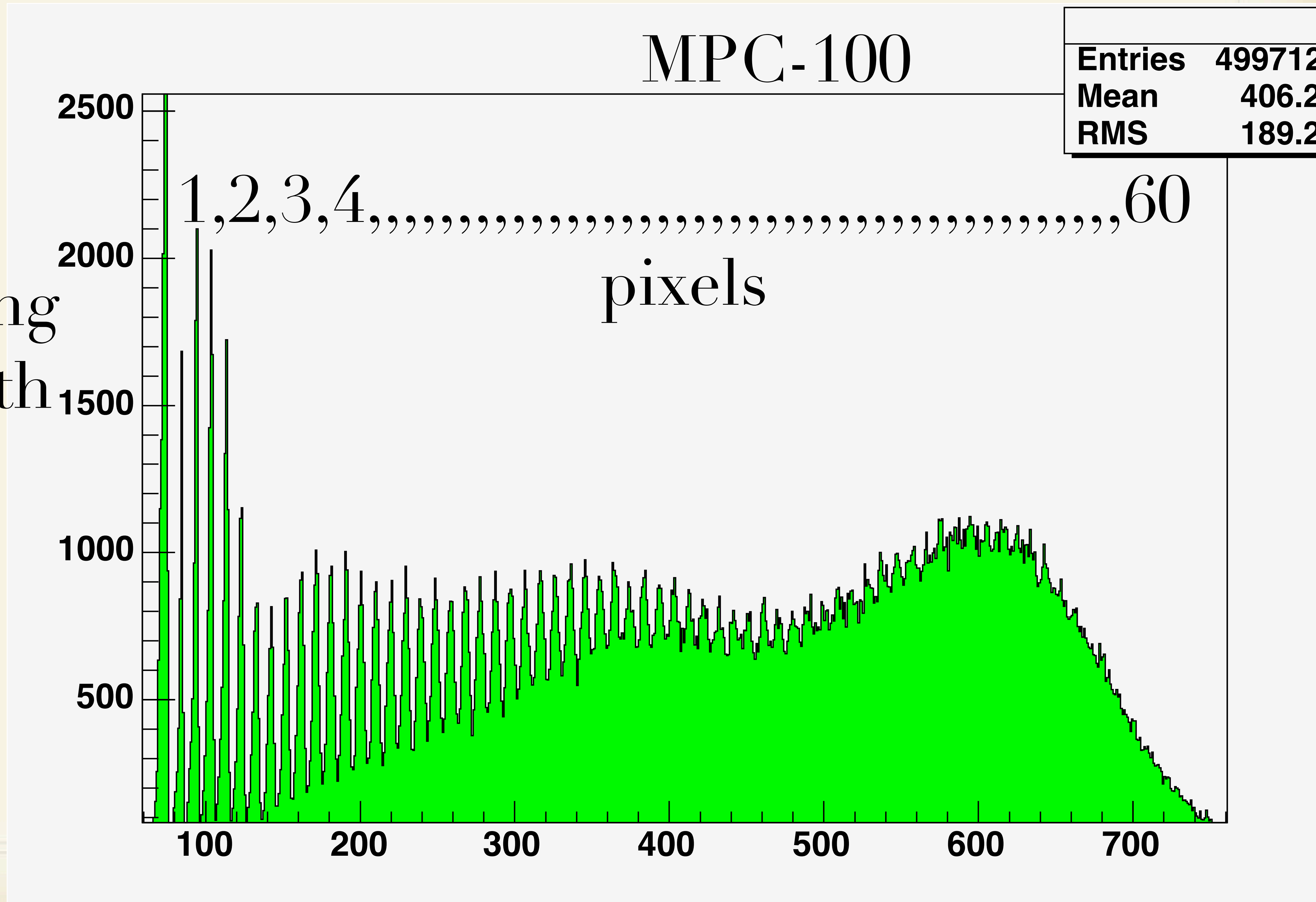
laser beam spot



GLD-photon sensor results cont'd

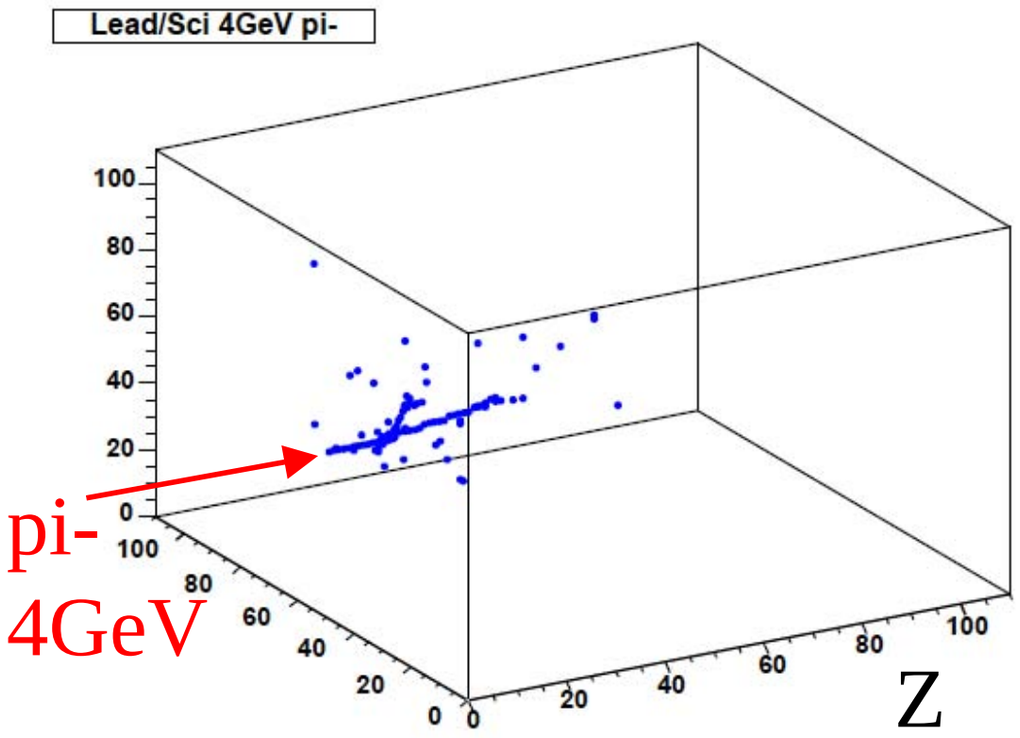


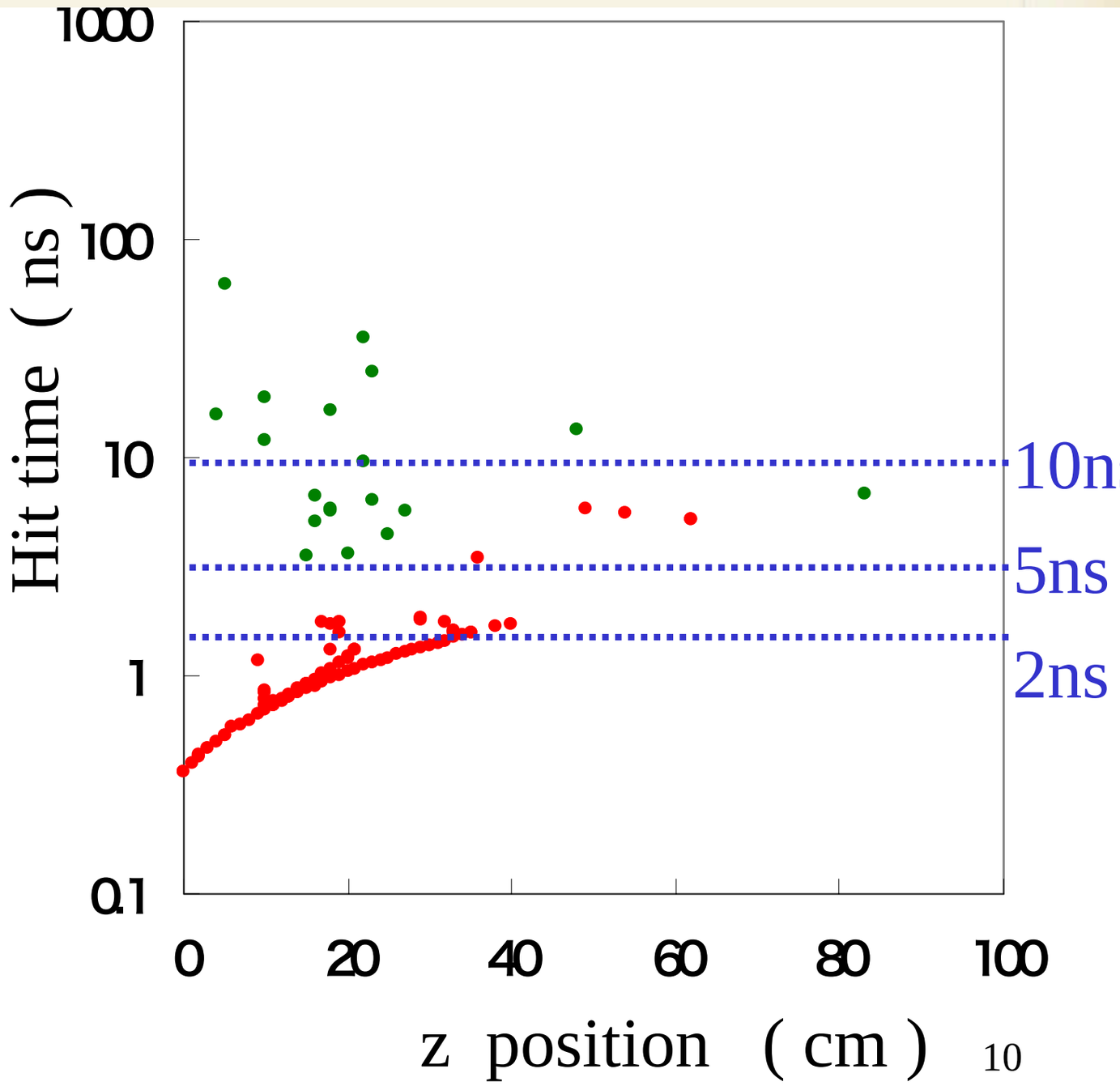
by changing pulse width of led



GLD-HCAL simulation results

4GeV pion
in lead scintillaotor





GLD-CAL-collaborators

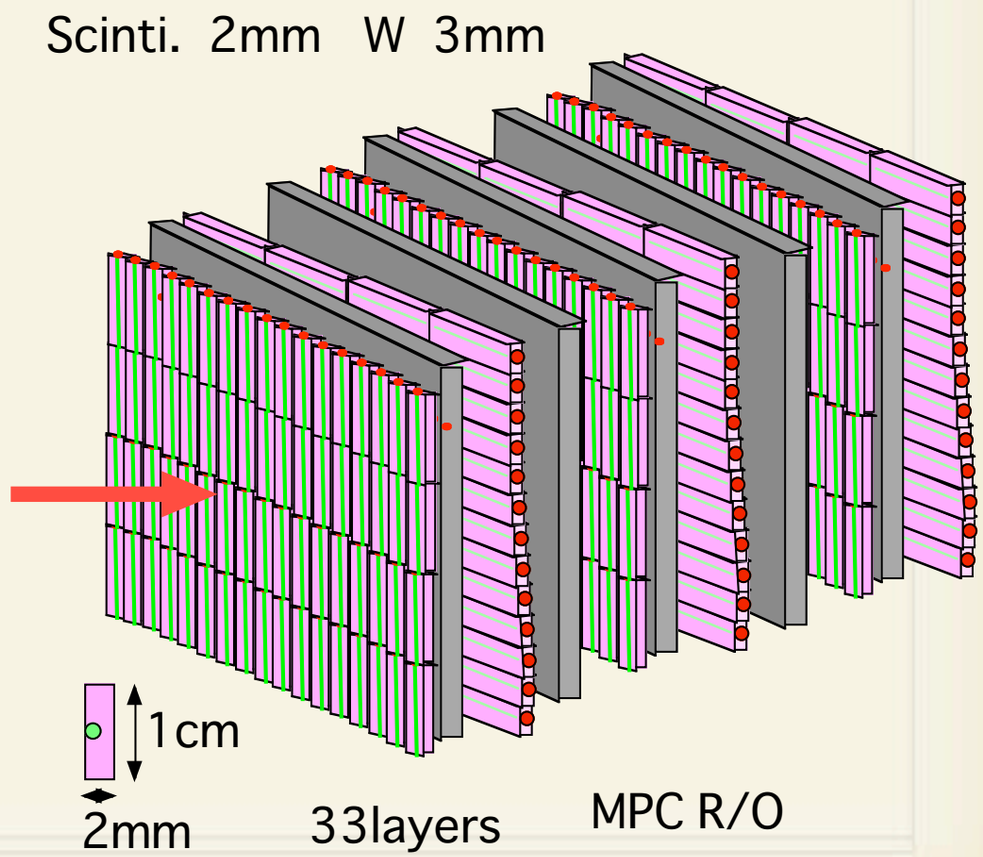
- Kyongpook (D.Kim) : scintillator
- JINR (P.Evtoukhovitch): SiPM
- Kobe (K.Kawagoe) : MPC
- Niigata (H.Miyata) : MPC pixel
- Tsukuba (S.H.Kim,H.Matsunaga) : sim.
- KEK (A.Miyamoto, K.Fujii) : sim.
- Shinshu (T.Takeshita) : BT

GLD-CAL missings

- scintillator dimensions (width,length,thickness) > cost estimation
- MPC R/O electronics > M.Tanaka
- Options
  - Silicon in ECAL
  - digital/SemiDigi. R/O for HCAL

GLD-CAL to do

- PFA
  - optimize segmentation
    - look into others idea
  - electronics
  - MPC
  - BT preparation
    - dimensions, cost



GLD-CAL tasks @Snowmass

- PFA : Yoshioka,Jeri, Fujikawa:
  - clarify differences
- electronics : Matsunaga
  - control Bias Voltage
- BT preparation:Kim,Takeshita
  - get beam time in 2007
  - cost estimation and dimensions