

# Proto-60

Beamtime february 2009 @ Mainz with tagged  $\gamma$ 's up to 1.5 GeV

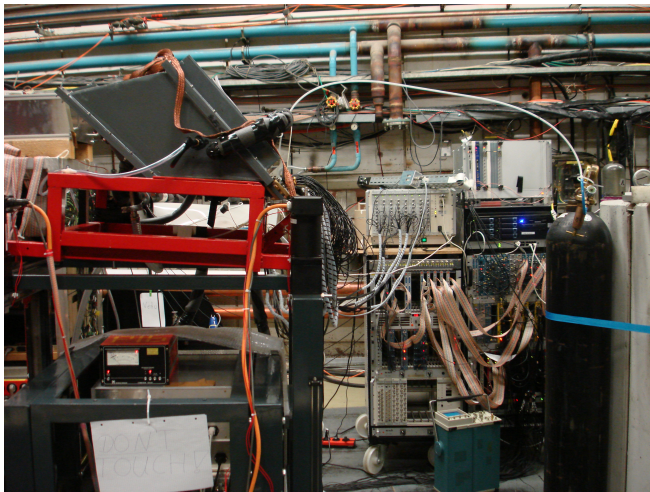
Markus Moritz, W.Döring, P.Drexler, R.Novotny, J.Schneider

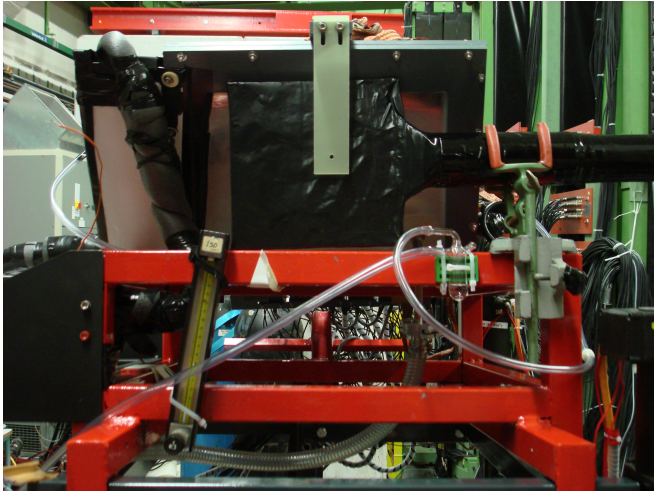
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3.3.2009

- 1 Experimental set-up
- 2 Beamtime procedure
- 3 First data analysis
- 4 Outlook

# Proto-60 @ Mainz with Peak Sensing ADC's







- Accelerator provides tagged  $\gamma$ 's up to 1.5 GeV  
⇒ 15 energies by coincidence with tagger and crystal 35
- Beam in 3 positions  
⇒ center of crystal 35  
⇒ 5mm beside center  
⇒ between 2 crystals
- Readout adjustet to 200 MeV dynamic range  
⇒ 15db attenuator after preamp crystal 35  
⇒ 15db attenuator after preamp crystal 36 except beam in center position.
- Pb-sheet before veto  
⇒ simulating barrel DIRC in front of the  $\bar{P}ANDA - EMC$   
⇒ 2mm Pb approximate 30%  $X_0$
- 2 overnight cosmic runs with/without attenuator (crystal 36)

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## Beam in center of crystal 35

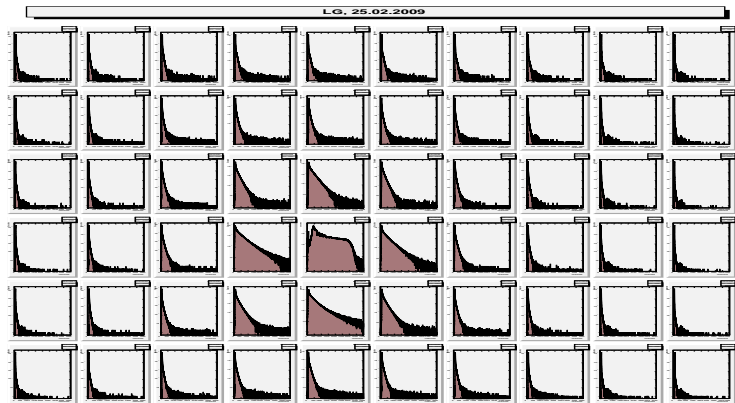


Figure: raw data, hardware-trigger on: tagger and 35, or ped, or cosmics

## Beam between crystal 35 & 36

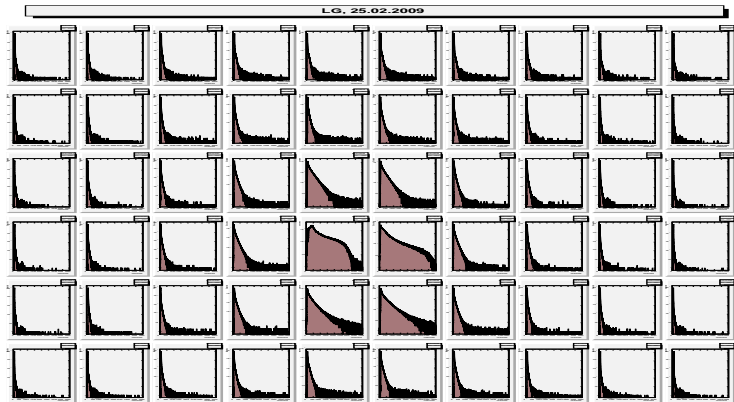


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# crystal 35

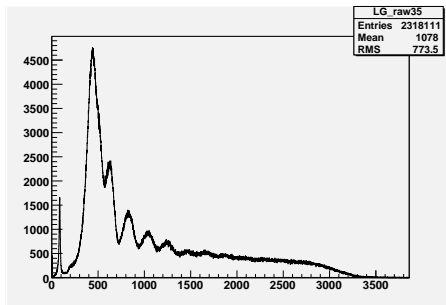


Figure: raw-data

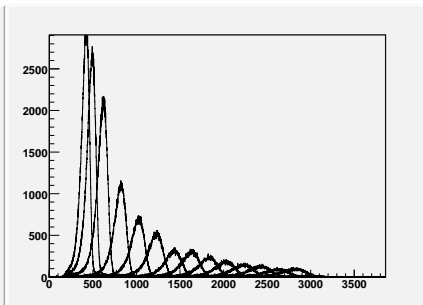


Figure: coincident with tagger



# Cosmics crystal 36

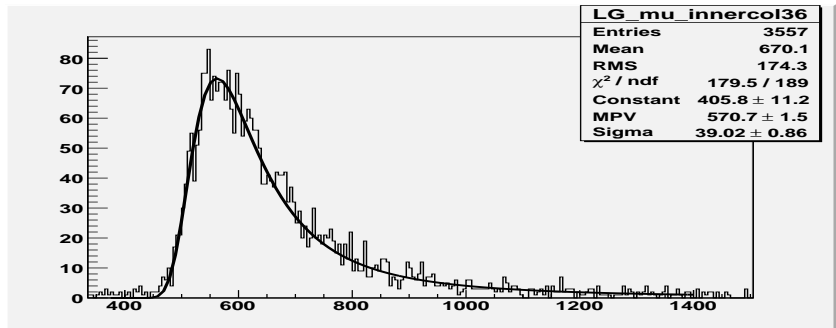
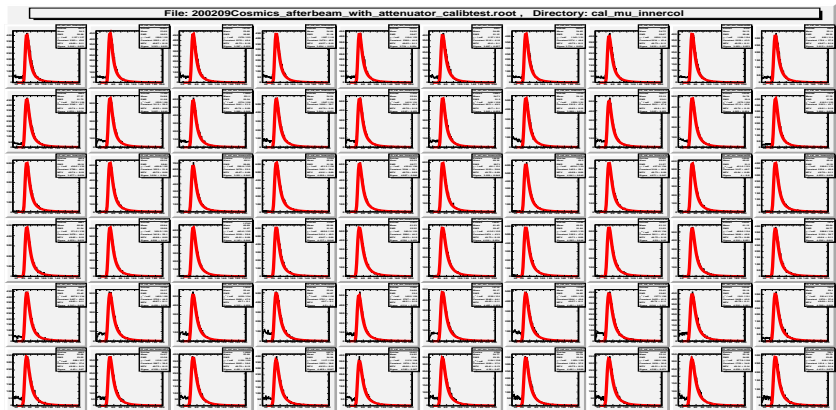


Figure: Result of a coincident cosmic trigger of all crystals in a row

# Calibrated cosmics fitted with Landau-fkt.



- **Response function**
- Position resolution by Daniel Bremer
- Comparison:  
Geant simulation influence DIRC-EMC vs beamtime with  
Pb-sheet by Chris Strackbein

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