

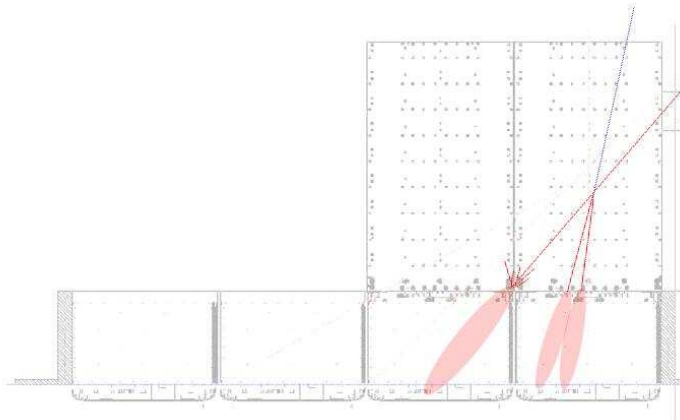
# GLAST CERN 2006 Beamtest



## Xtalk in the calorimeter

Johan Bregeon (INFN-Pisa)

Beamtest Analysis - March 2<sup>nd</sup>, 2007



# RUN 700002720

## Charge Injection

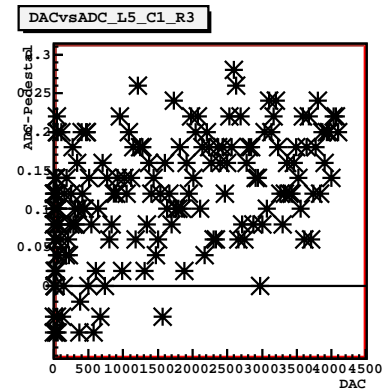
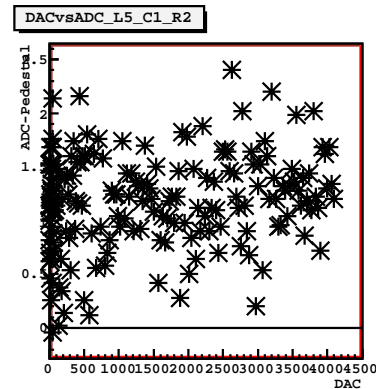
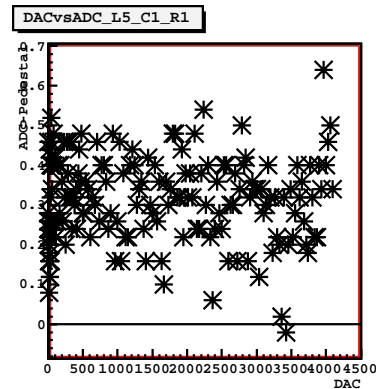
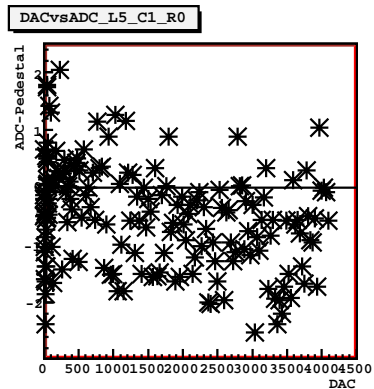
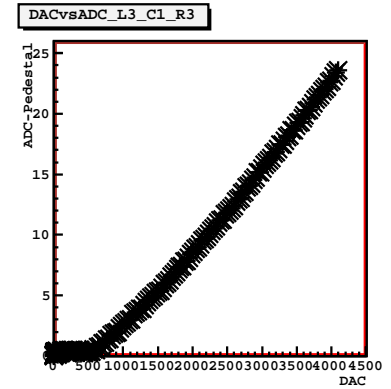
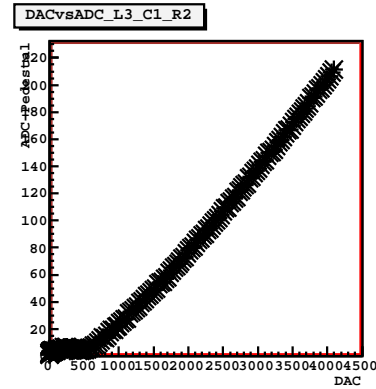
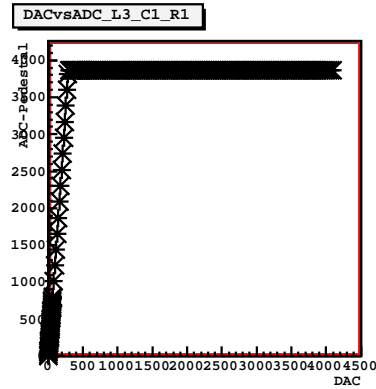
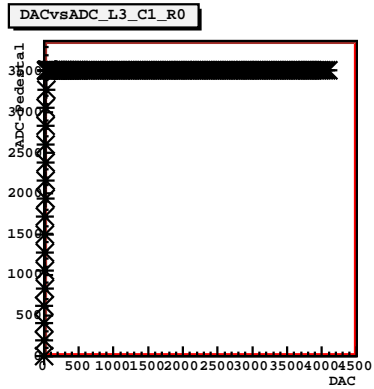
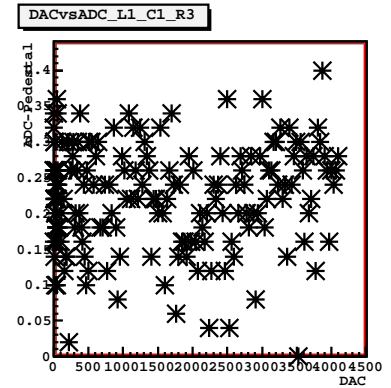
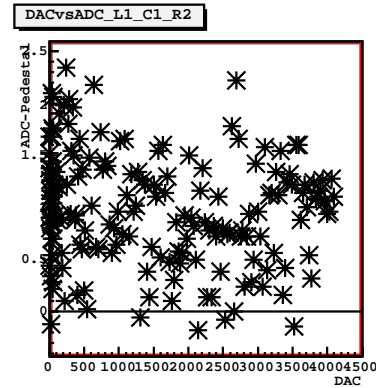
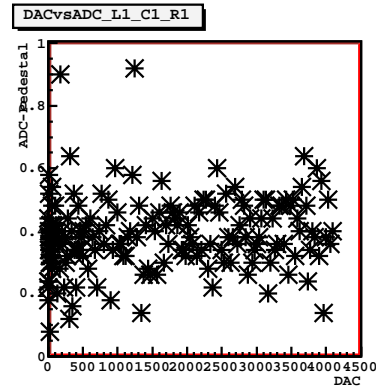
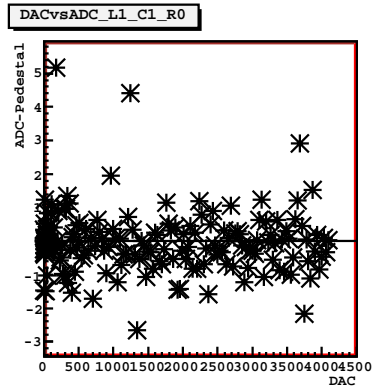
- Layer 3
- Loop on all columns (0-11)
- Injection charge in LE electronic only
- Reading everything: 4 range, non zero suppress

⇒ in the following plots  $T_i L_j C_k R_l$  means:  
Tower i, Layer j, Column k, Range l

# Analysis for Tower 2

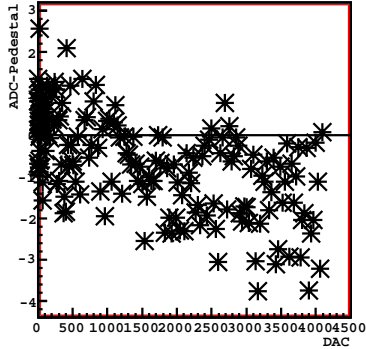
- For charge injection in C0, C1, C2
  - △ Looking at C1, in layers: 1, 3 and 5
  - △ for ranges 0, 1, 2, and 3: positive side
- For charge injection in C4, C5, C6
  - △ Looking at C5, in layers: 1, 3 and 5
  - △ for ranges 0, 1, 2, and 3: positive side
- For charge injection in C7, C8, C9
  - △ Looking at C8, in layers: 1, 3 and 5
  - △ for ranges 0, 1, 2, and 3: positive side
- For charge injection in C9, C10, C11
  - △ Looking at C10, in layers: 1, 3 and 5
  - △ for ranges 0, 1, 2, and 3: positive side

# Looking at C1 when Injection in C1

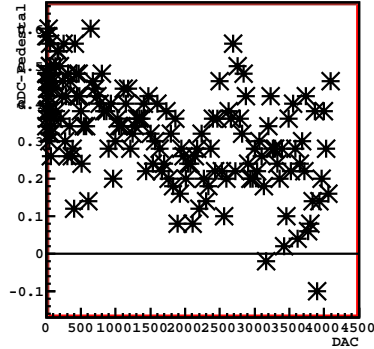


# Looking at C1 when Injection in C0

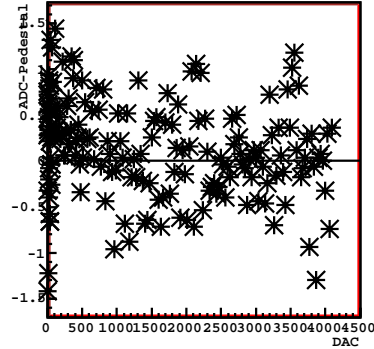
DACvsADC\_L1\_C1\_R0



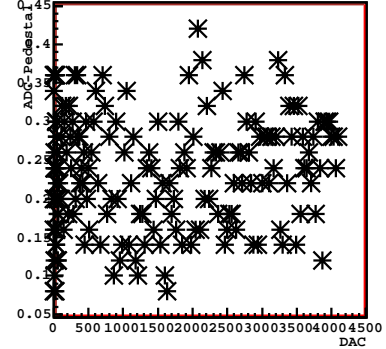
DACvsADC\_L1\_C1\_R1



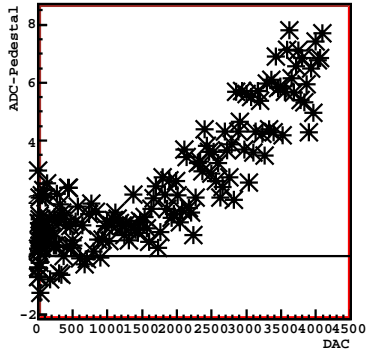
DACvsADC\_L1\_C1\_R2



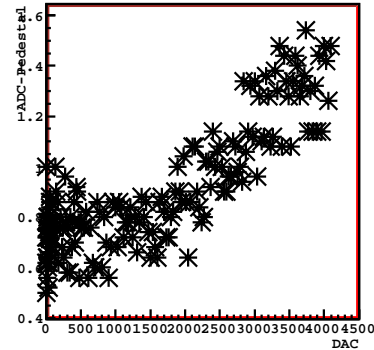
DACvsADC\_L1\_C1\_R3



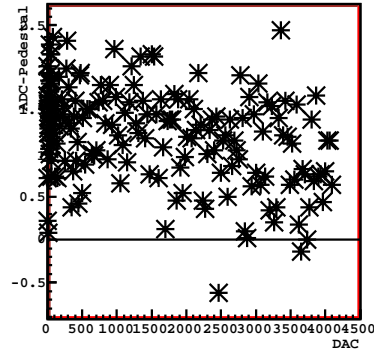
DACvsADC\_L3\_C1\_R0



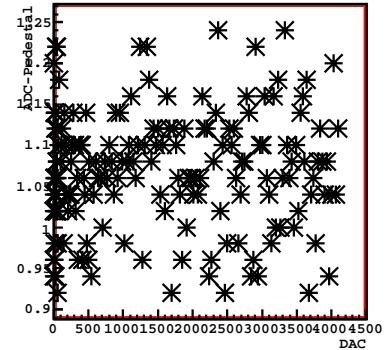
DACvsADC\_L3\_C1\_R1



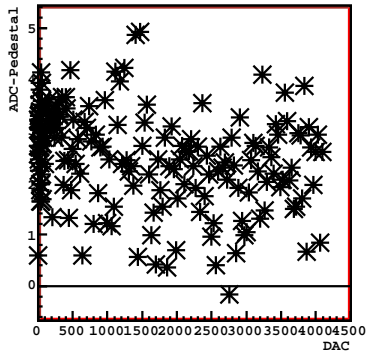
DACvsADC\_L3\_C1\_R2



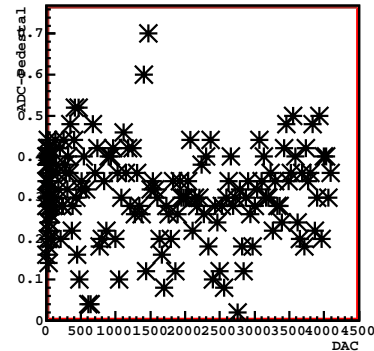
DACvsADC\_L3\_C1\_R3



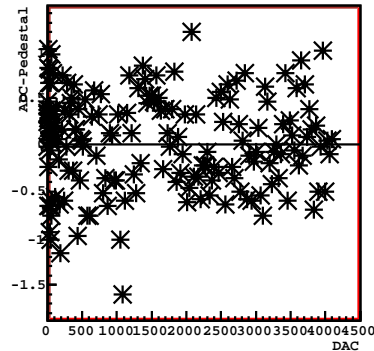
DACvsADC\_L5\_C1\_R0



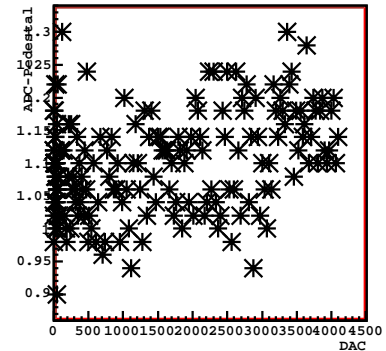
DACvsADC\_L5\_C1\_R1



DACvsADC\_L5\_C1\_R2

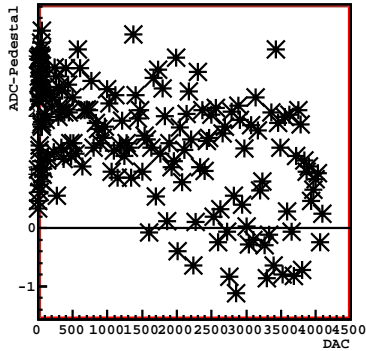


DACvsADC\_L5\_C1\_R3

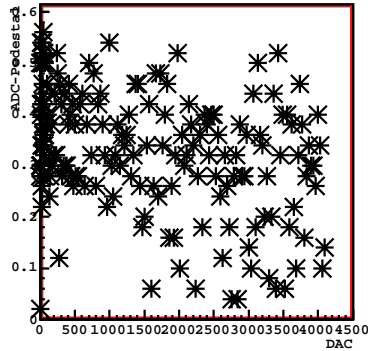


# Looking at C1 when Injection in C2

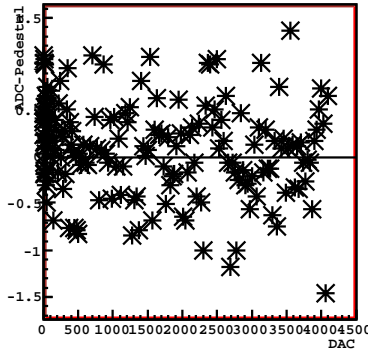
DACvsADC\_L1\_C1\_R0



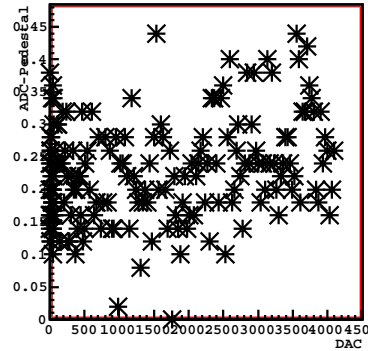
DACvsADC\_L1\_C1\_R1



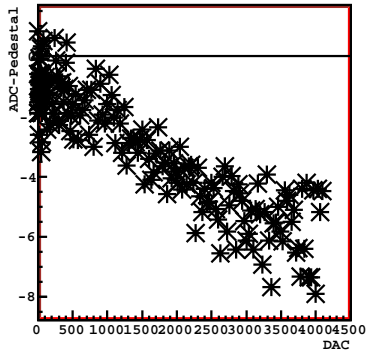
DACvsADC\_L1\_C1\_R2



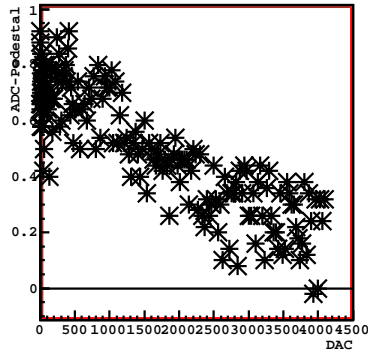
DACvsADC\_L1\_C1\_R3



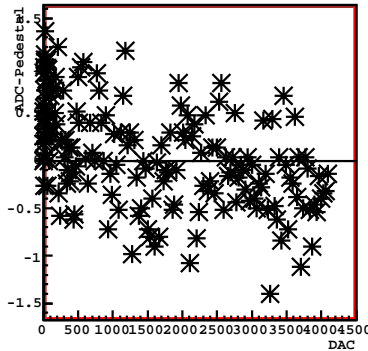
DACvsADC\_L3\_C1\_R0



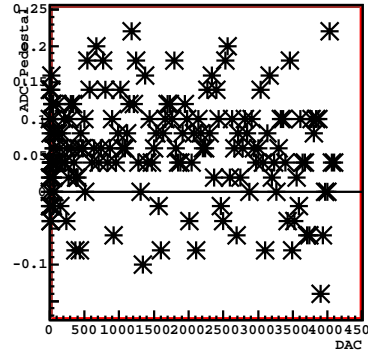
DACvsADC\_L3\_C1\_R1



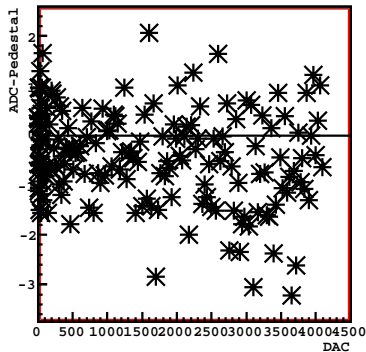
DACvsADC\_L3\_C1\_R2



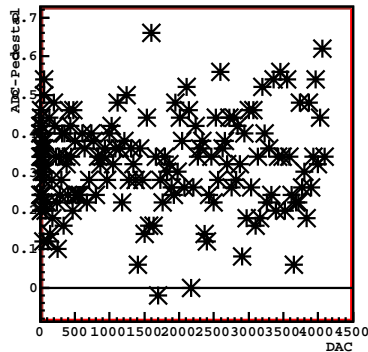
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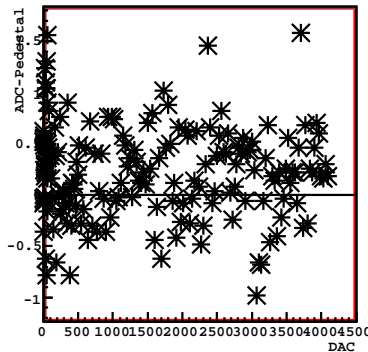
DACvsADC\_L5\_C1\_R0



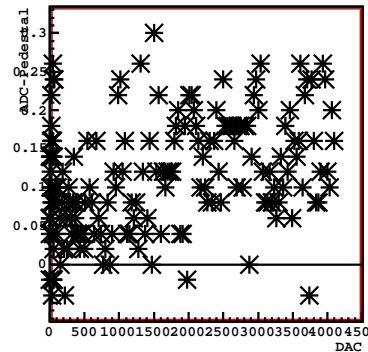
DACvsADC\_L5\_C1\_R1



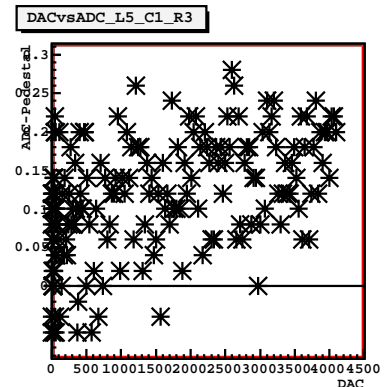
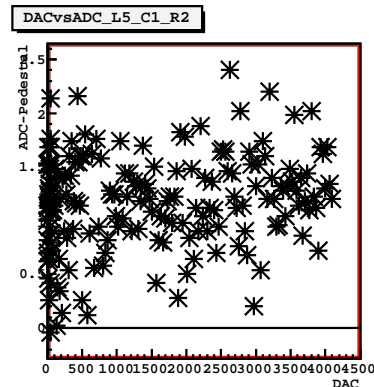
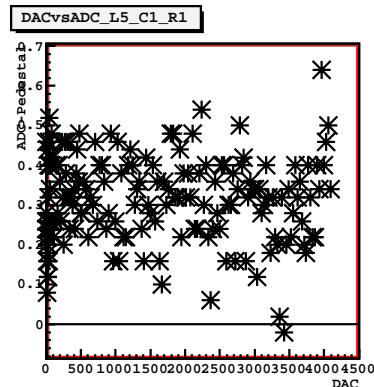
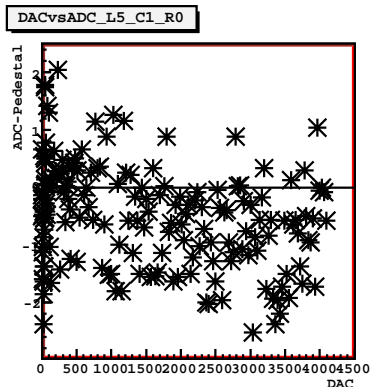
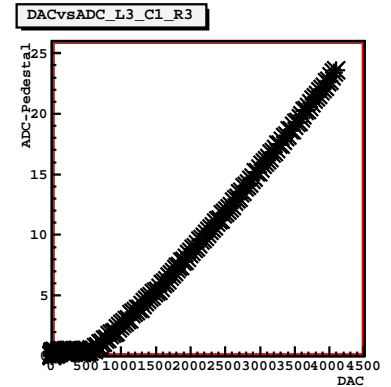
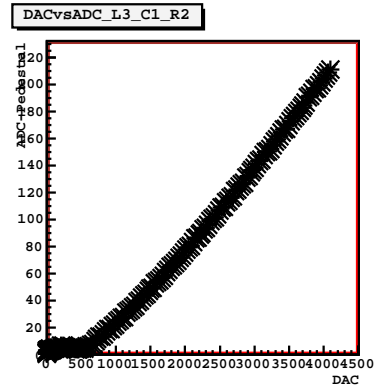
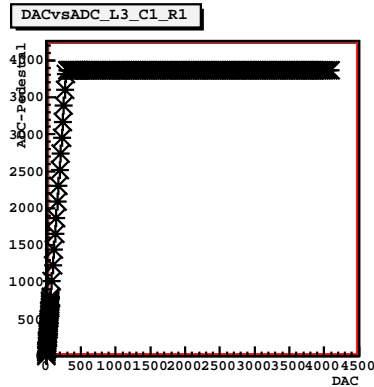
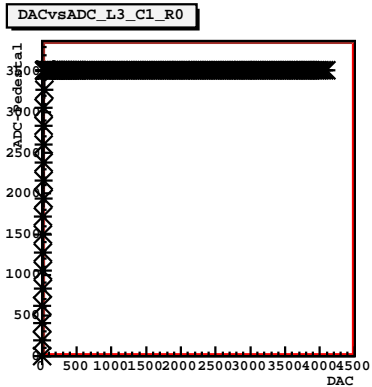
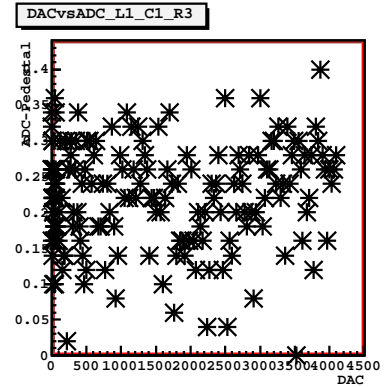
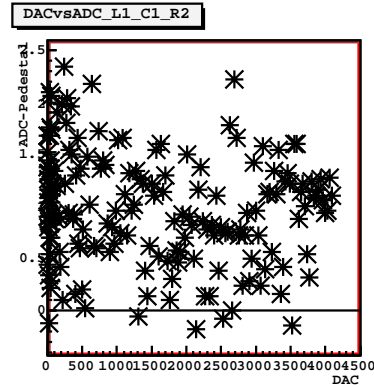
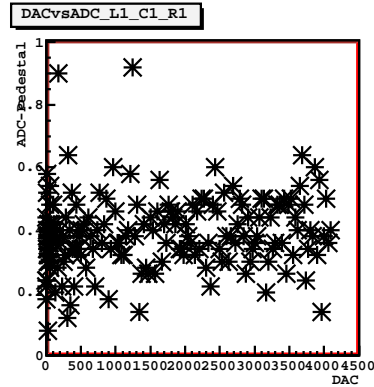
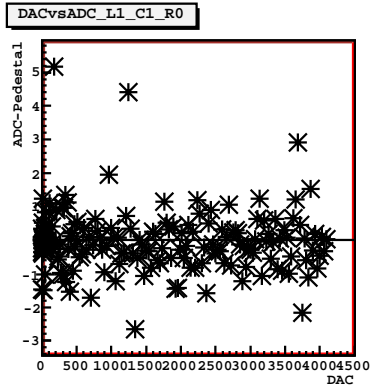
DACvsADC\_L5\_C1\_R2



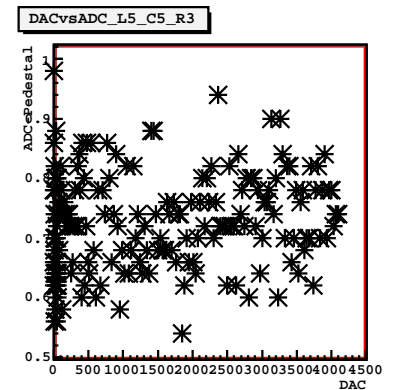
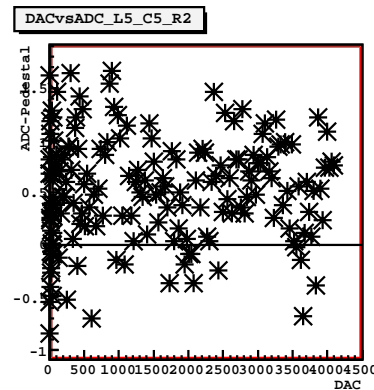
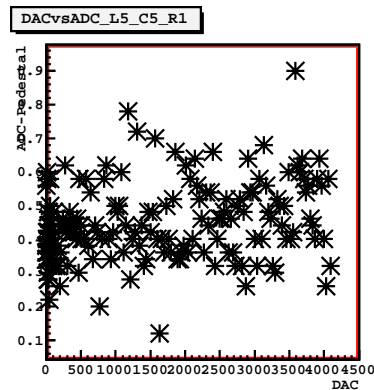
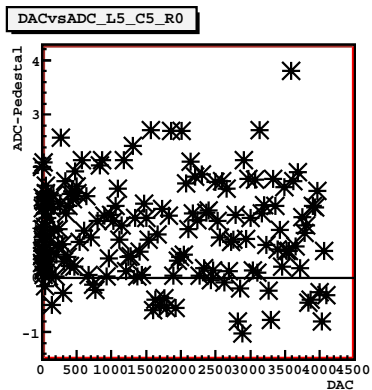
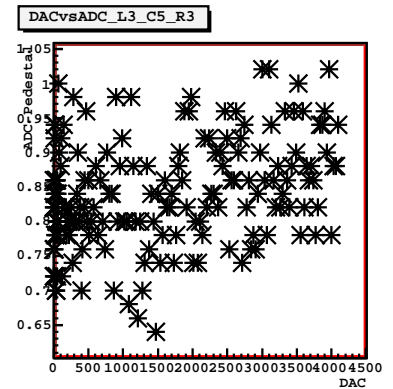
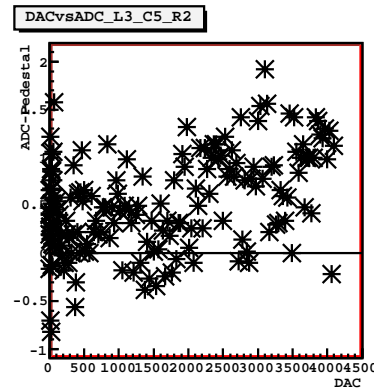
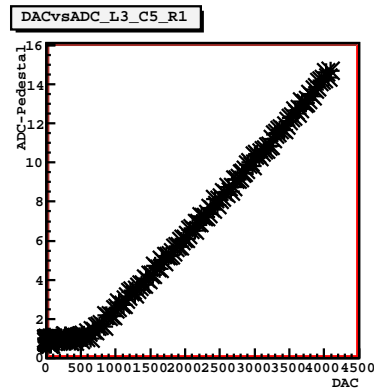
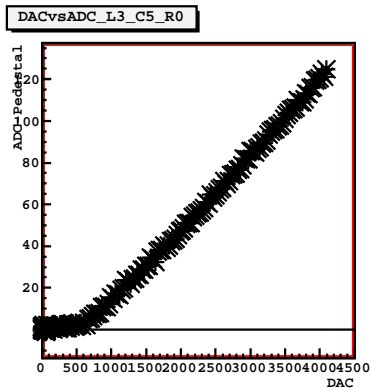
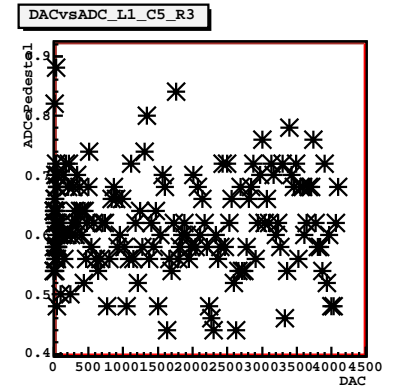
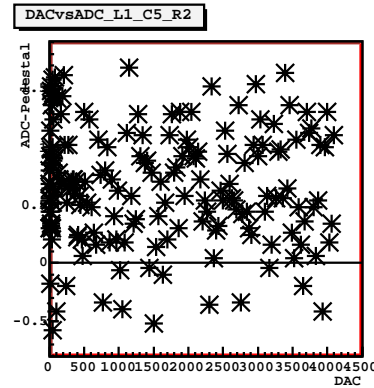
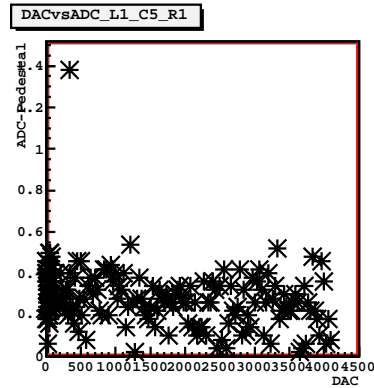
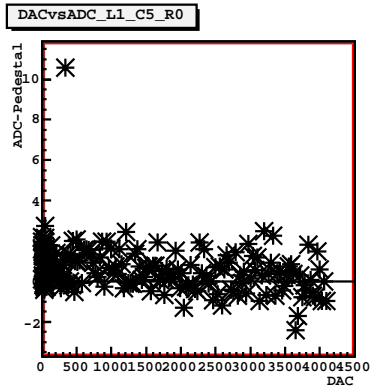
DACvsADC\_L5\_C1\_R3



# Looking at C5 when Injection in C5



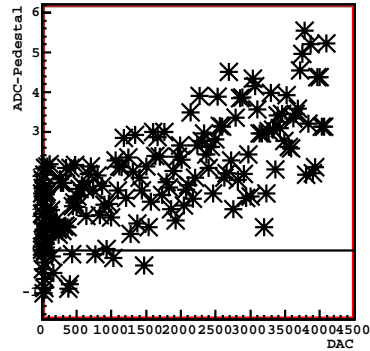
# Looking at C5 when Injection in C4



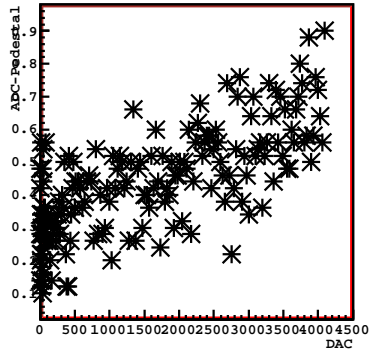


# Looking at C5 when Injection in C6

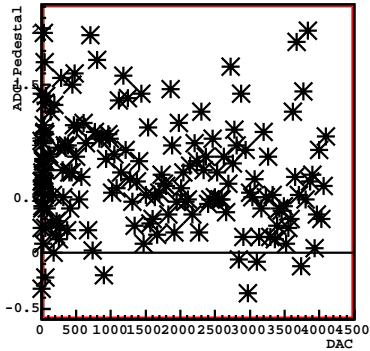
DACvsADC\_L1\_C5\_R0



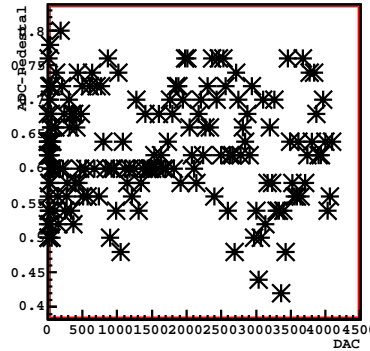
DACvsADC\_L1\_C5\_R1



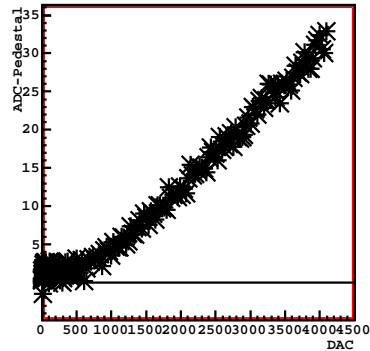
DACvsADC\_L1\_C5\_R2



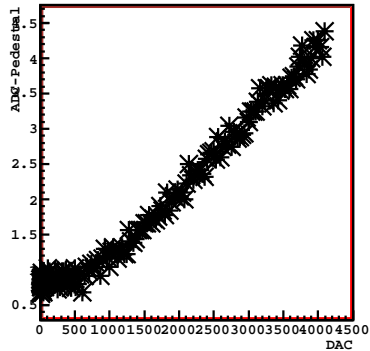
DACvsADC\_L1\_C5\_R3



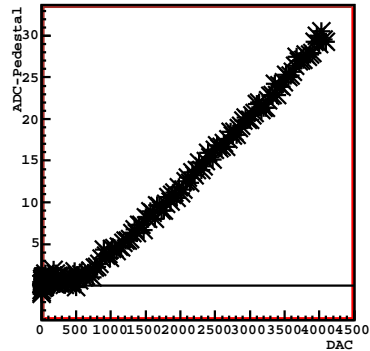
DACvsADC\_L3\_C5\_R0



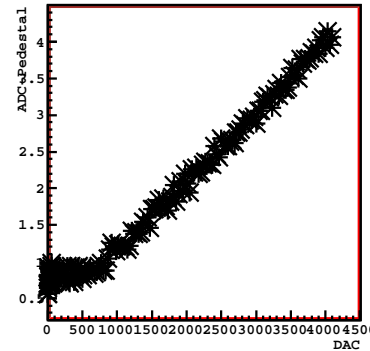
DACvsADC\_L3\_C5\_R1



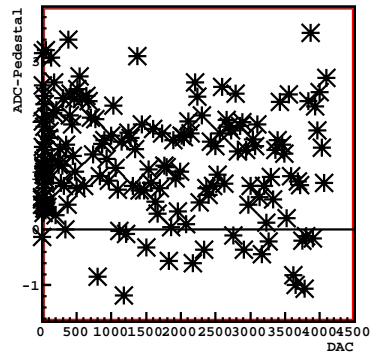
DACvsADC\_L3\_C5\_R2



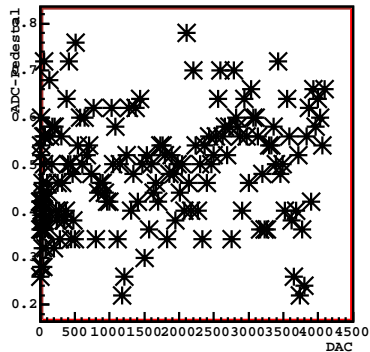
DACvsADC\_L3\_C5\_R3



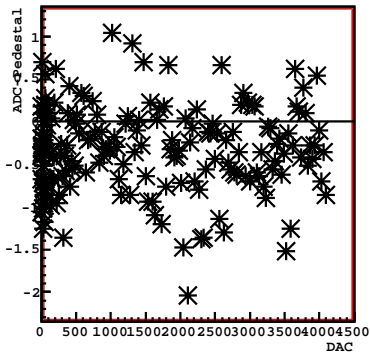
DACvsADC\_L5\_C5\_R0



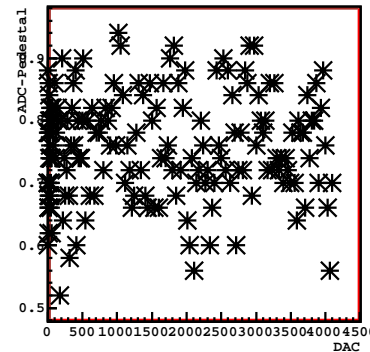
DACvsADC\_L5\_C5\_R1



DACvsADC\_L5\_C5\_R2

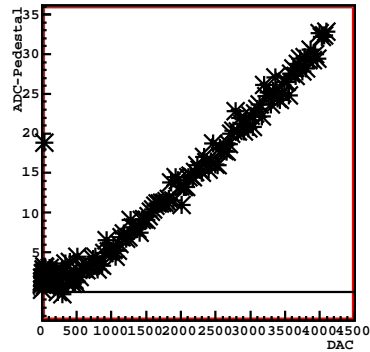


DACvsADC\_L5\_C5\_R3

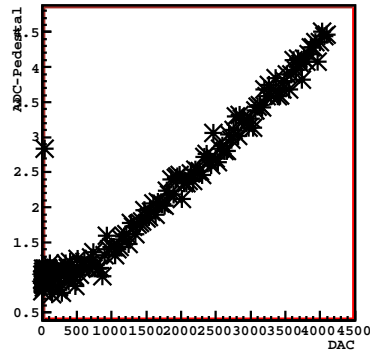


# Looking at C8 when Injection in C8

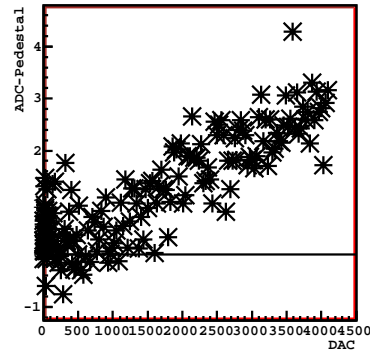
DACvsADC\_L1\_C8\_R0



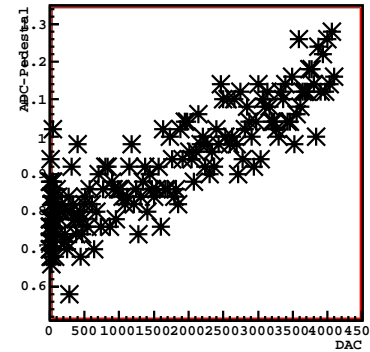
DACvsADC\_L1\_C8\_R1



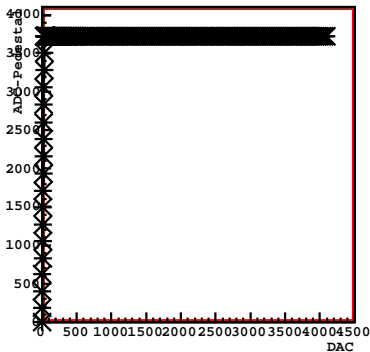
DACvsADC\_L1\_C8\_R2



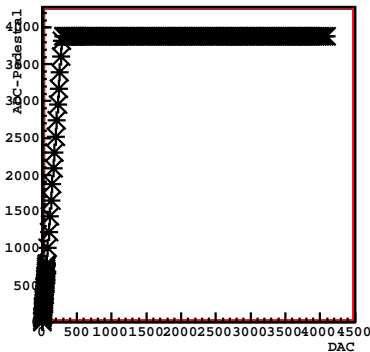
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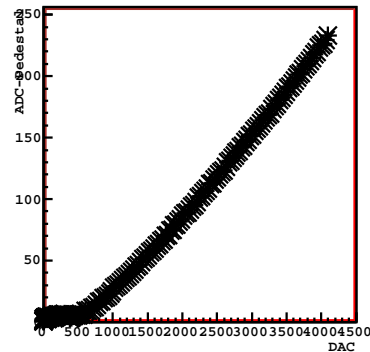
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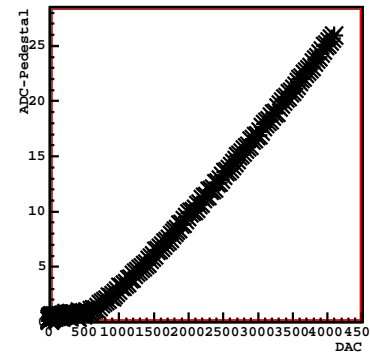
DACvsADC\_L3\_C8\_R1



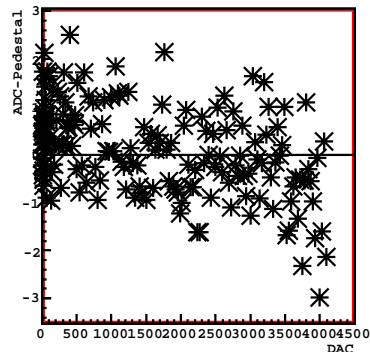
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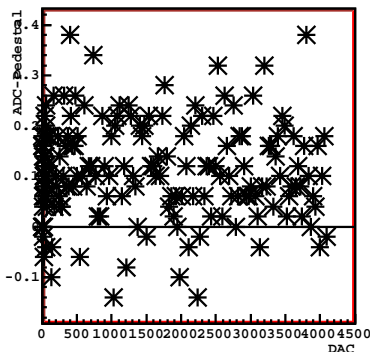
DACvsADC\_L3\_C8\_R3



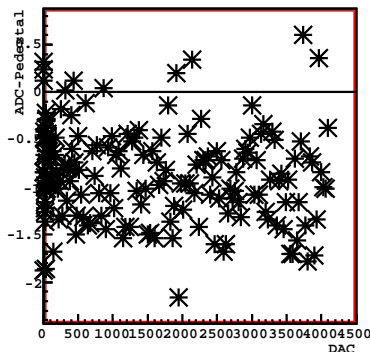
DACvsADC\_L5\_C8\_R0



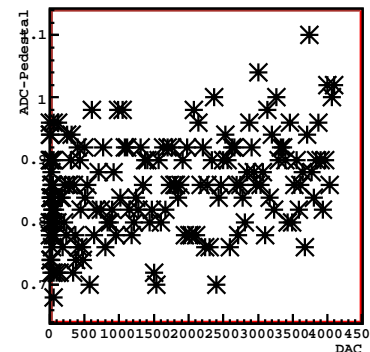
DACvsADC\_L5\_C8\_R1



DACvsADC\_L5\_C8\_R2

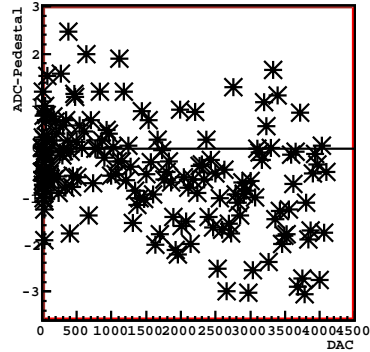


DACvsADC\_L5\_C8\_R3

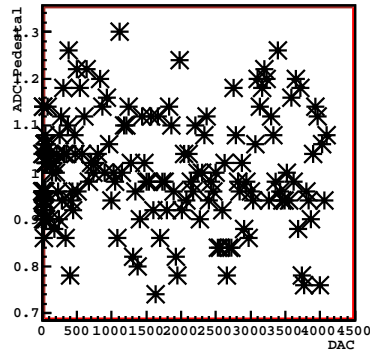


# Looking at C8 when Injection in C7

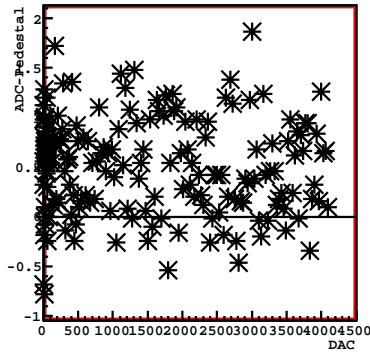
DACvsADC\_L1\_C8\_R0



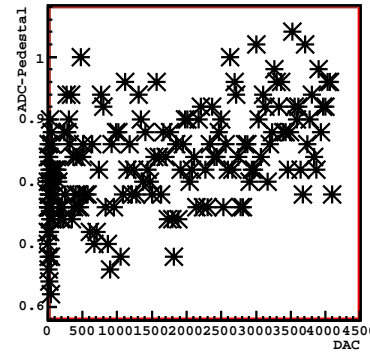
DACvsADC\_L1\_C8\_R1



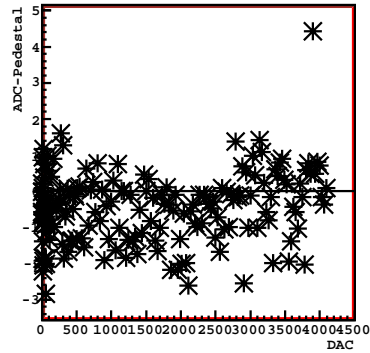
DACvsADC\_L1\_C8\_R2



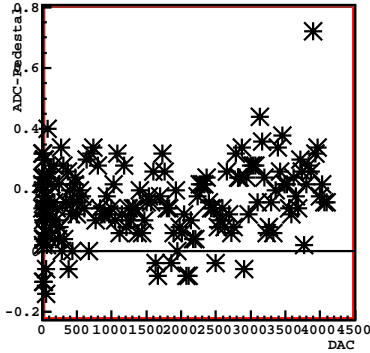
DACvsADC\_L1\_C8\_R3



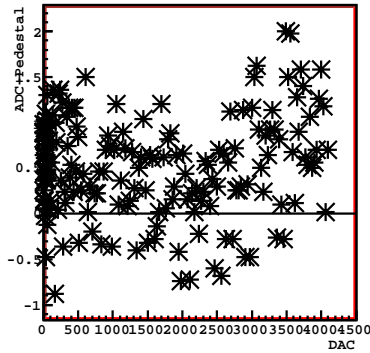
DACvsADC\_L3\_C8\_R0



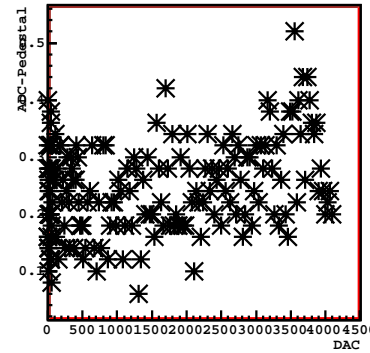
DACvsADC\_L3\_C8\_R1



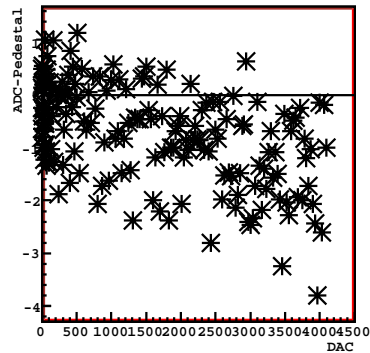
DACvsADC\_L3\_C8\_R2



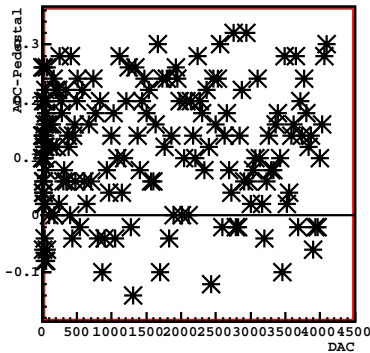
DACvsADC\_L3\_C8\_R3



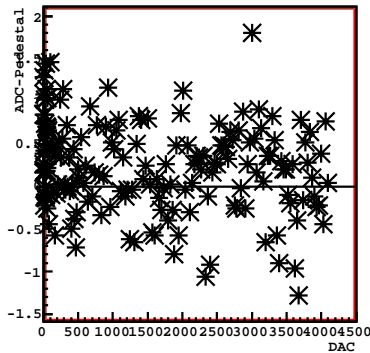
DACvsADC\_L5\_C8\_R0



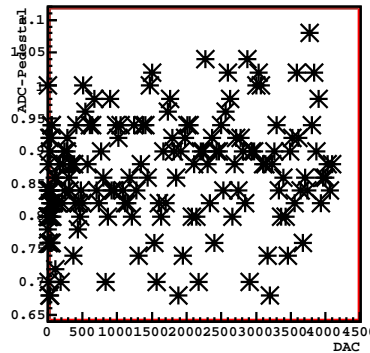
DACvsADC\_L5\_C8\_R1



DACvsADC\_L5\_C8\_R2

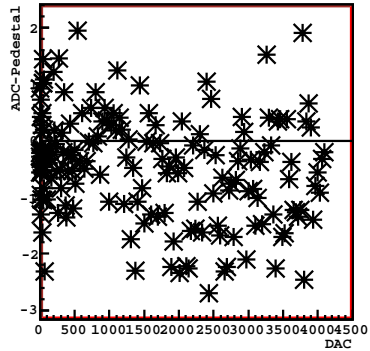


DACvsADC\_L5\_C8\_R3

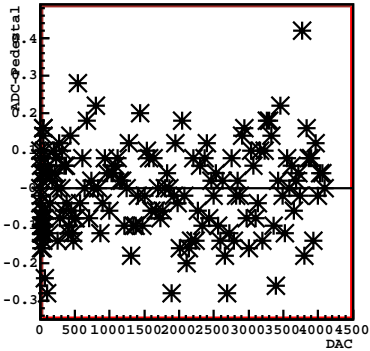


# Looking at C8 when Injection in C9

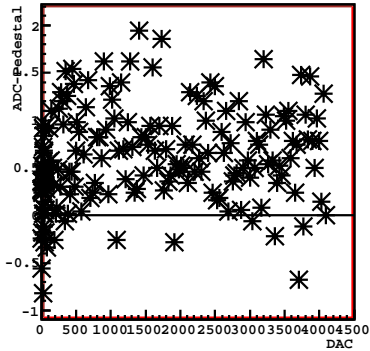
DACvsADC\_L1\_C8\_R0



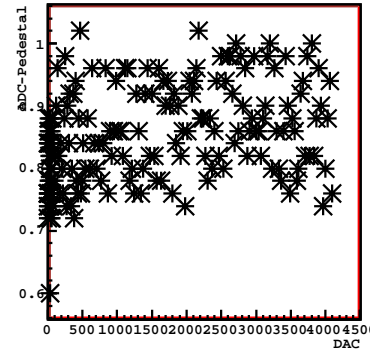
DACvsADC\_L1\_C8\_R1



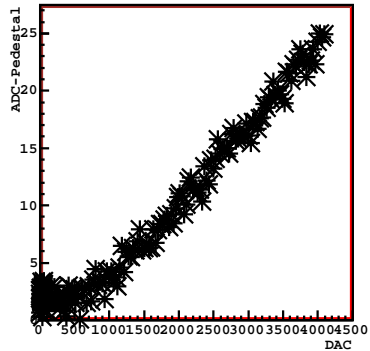
DACvsADC\_L1\_C8\_R2



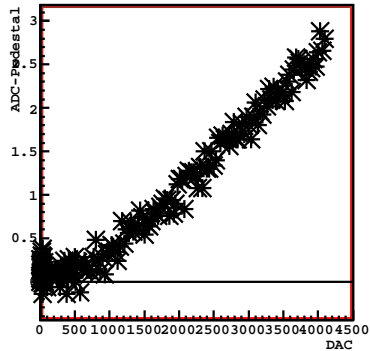
DACvsADC\_L1\_C8\_R3



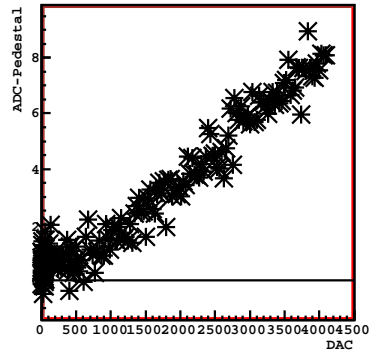
DACvsADC\_L3\_C8\_R0



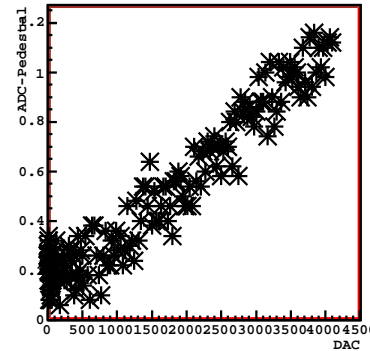
DACvsADC\_L3\_C8\_R1



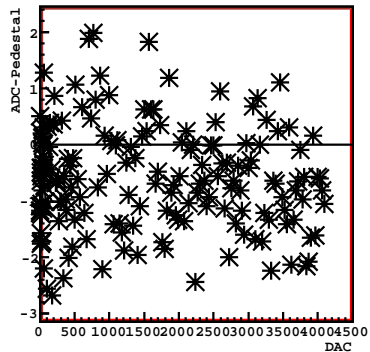
DACvsADC\_L3\_C8\_R2



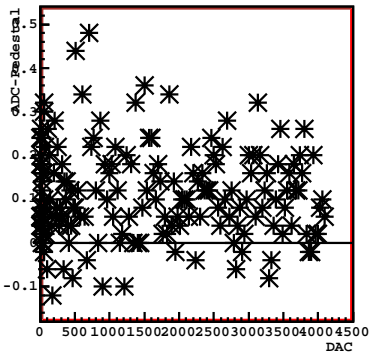
DACvsADC\_L3\_C8\_R3



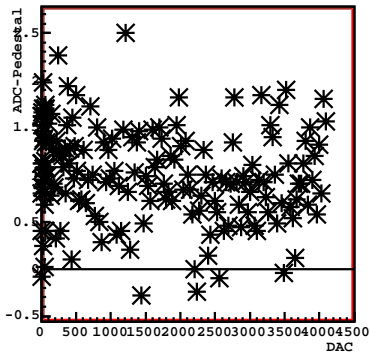
DACvsADC\_L5\_C8\_R0



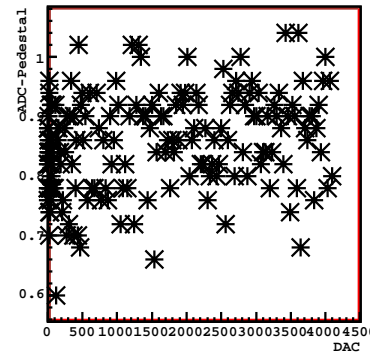
DACvsADC\_L5\_C8\_R1



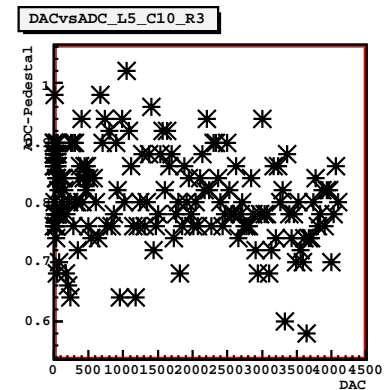
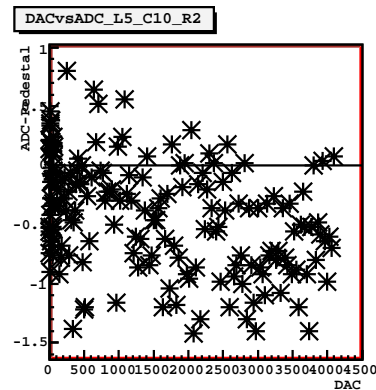
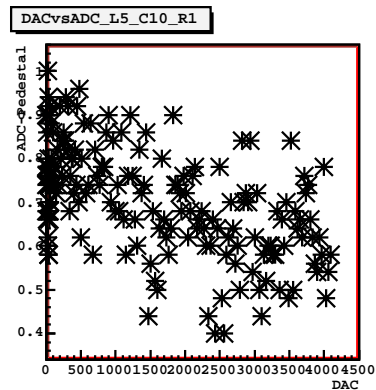
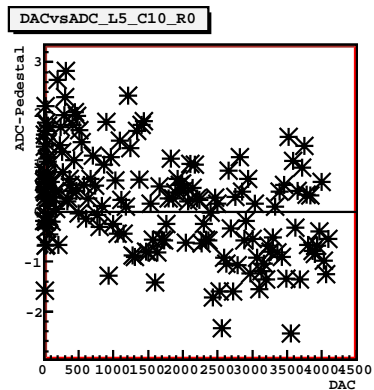
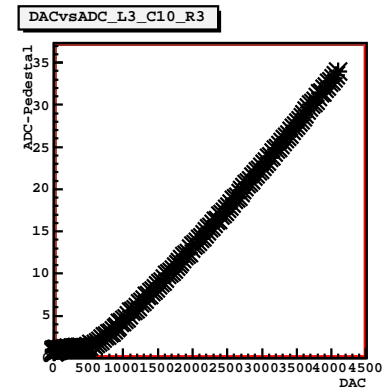
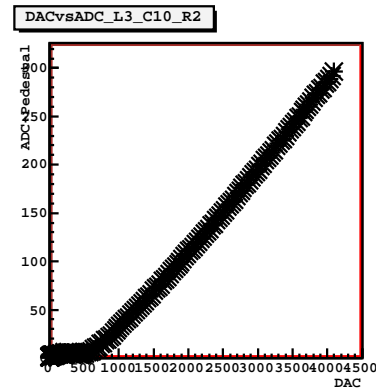
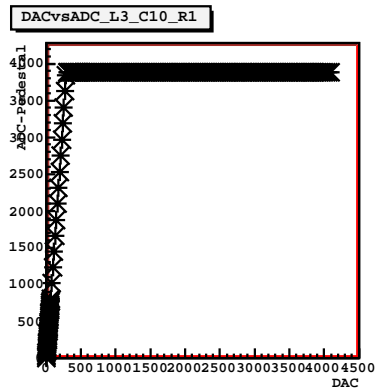
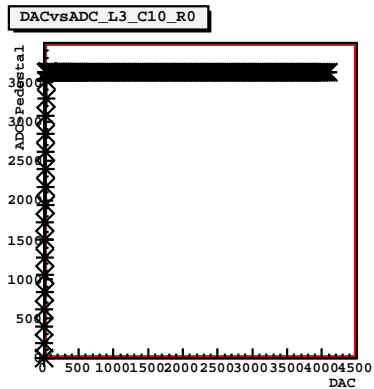
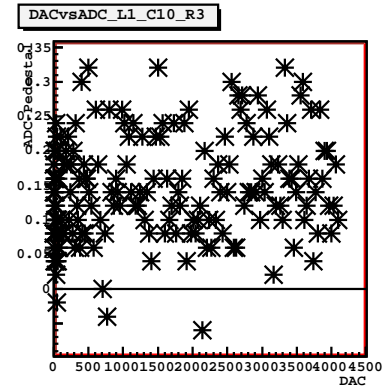
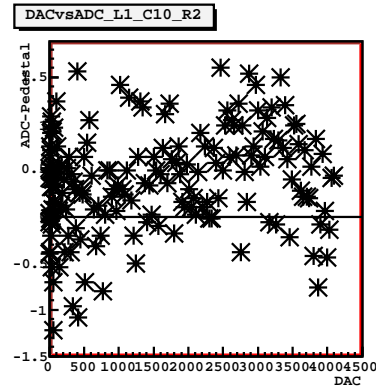
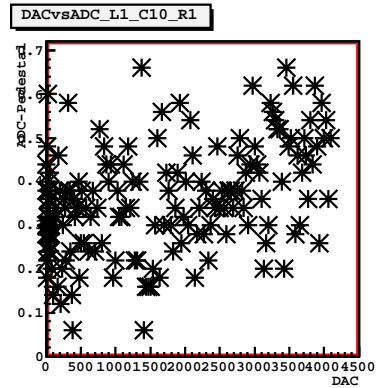
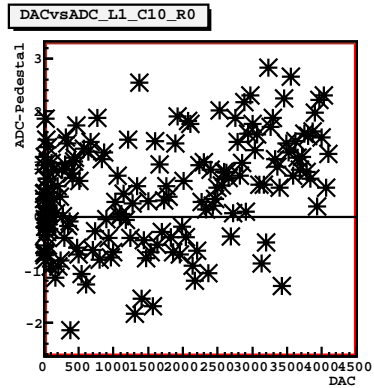
DACvsADC\_L5\_C8\_R2



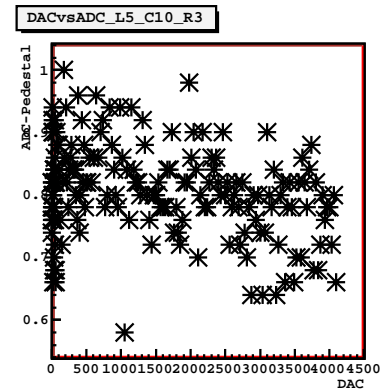
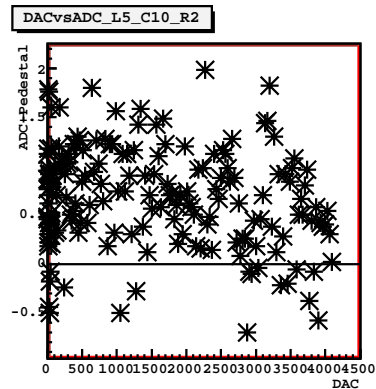
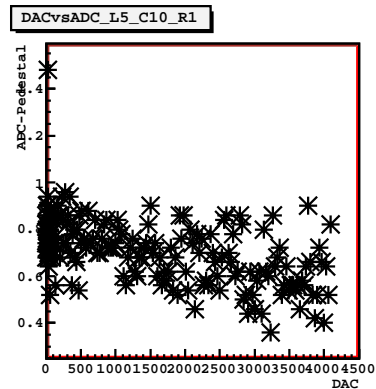
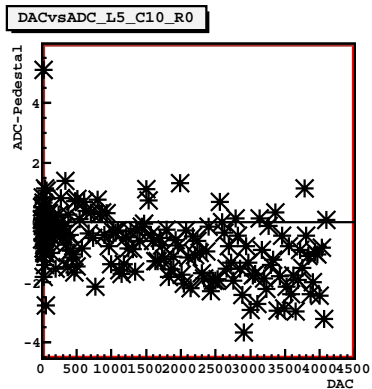
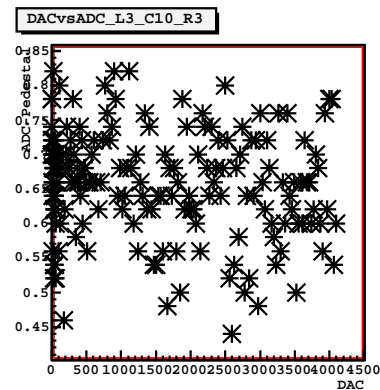
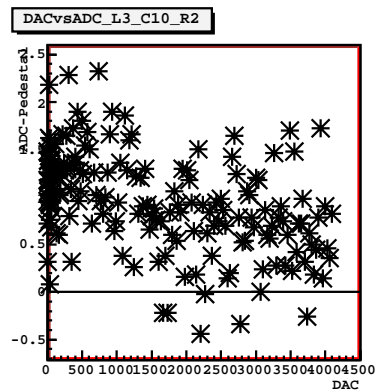
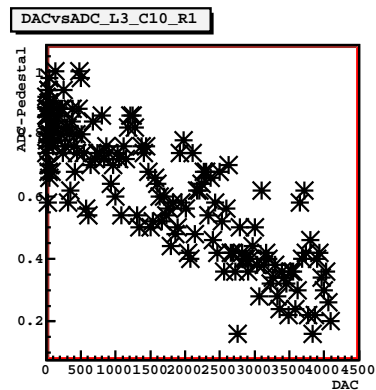
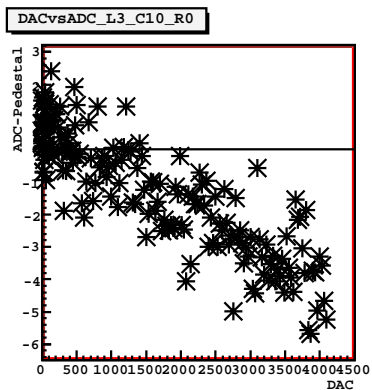
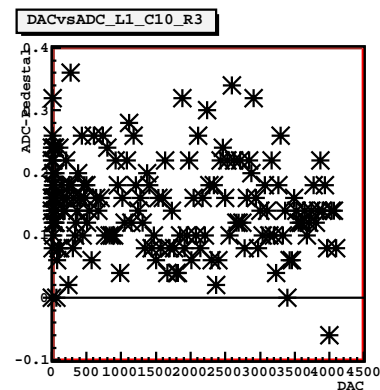
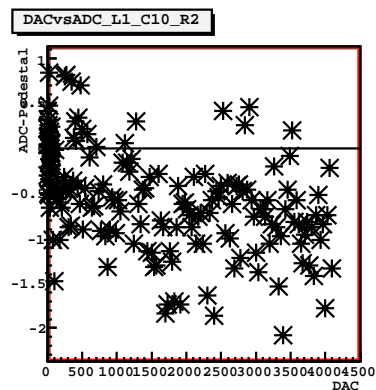
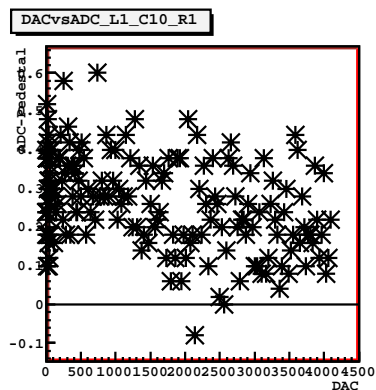
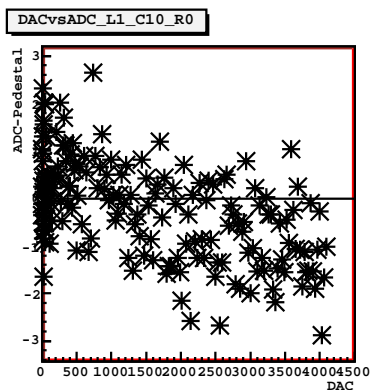
DACvsADC\_L5\_C8\_R3



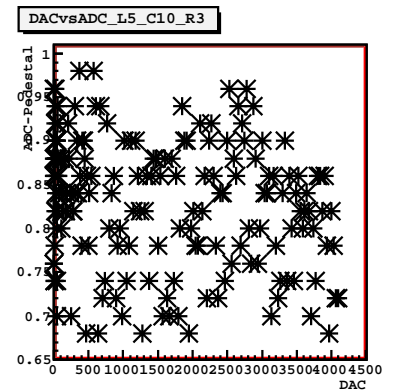
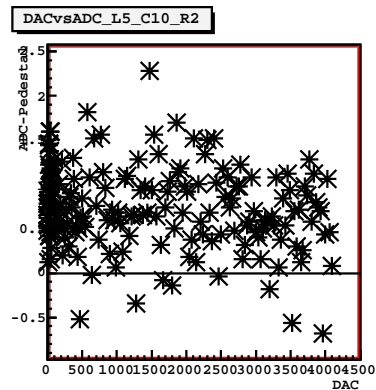
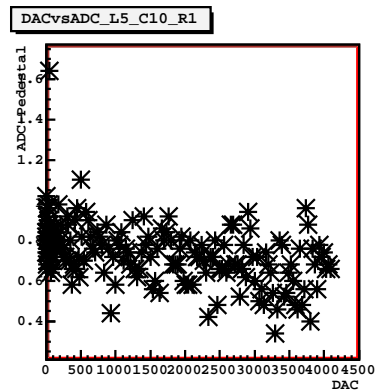
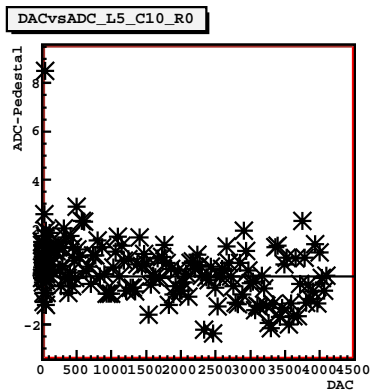
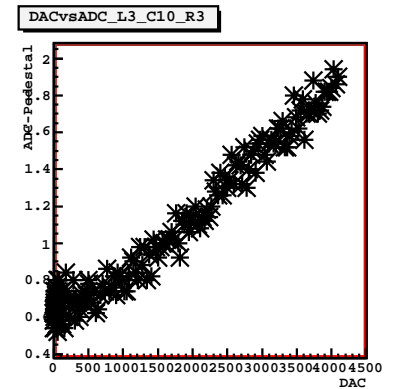
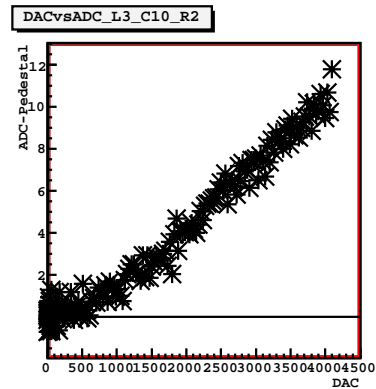
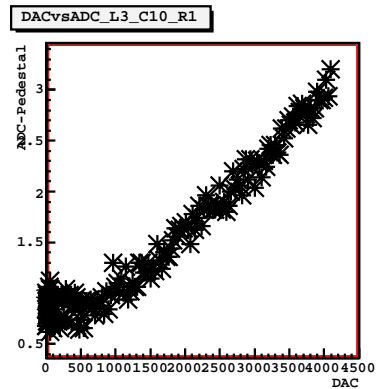
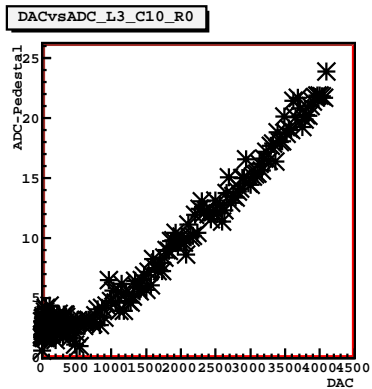
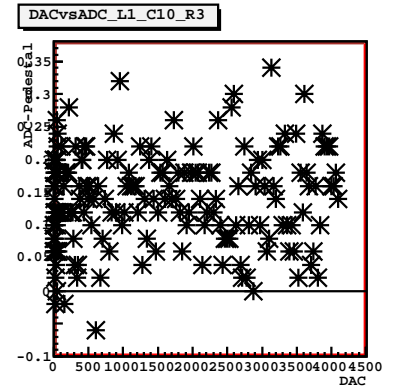
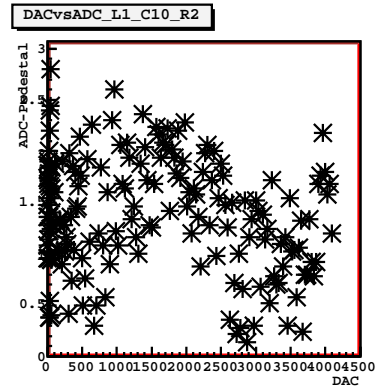
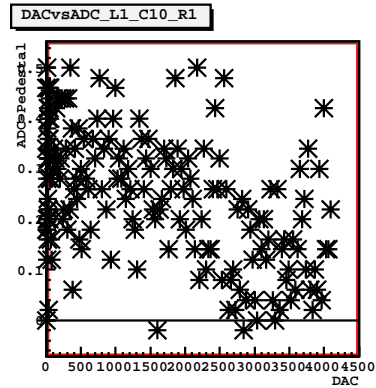
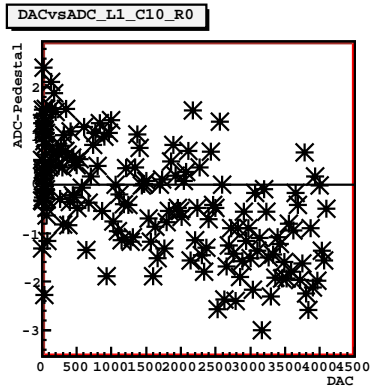
# Looking at C10 when Injection in C10



# Looking at C10 when Injection in C9



# Looking at C10 when Injection in C11



# Observed Xtalk, so far..

1. range 1 to range 2: same layer and column
  2. One column to the side columns: same layer, all ranges
  3. Layer 3 to layers 1 and 5: same column, same range
- ⇒ found nothing new :o(  
→ Sasha corrected already for points 1. and 2.  
→ 3. is negligible