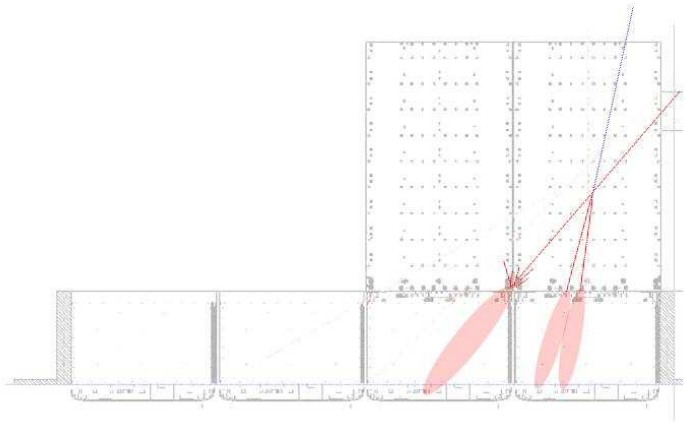
GLAST CERN 2006 Beamtest

Transverse Profile
CAL LACs

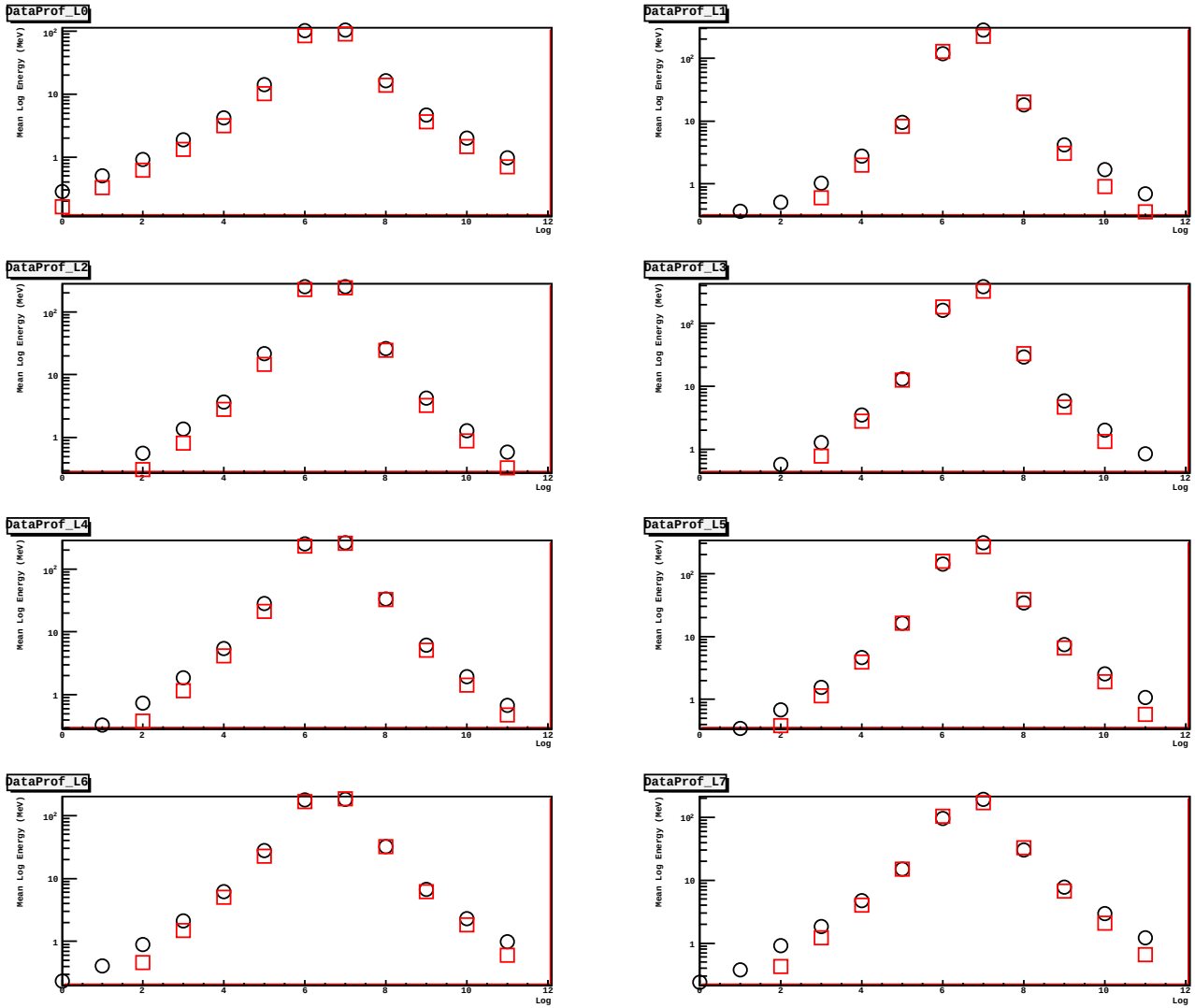


Johan Bregeon

Beamtest Analysis - January 23^{th}, 2007

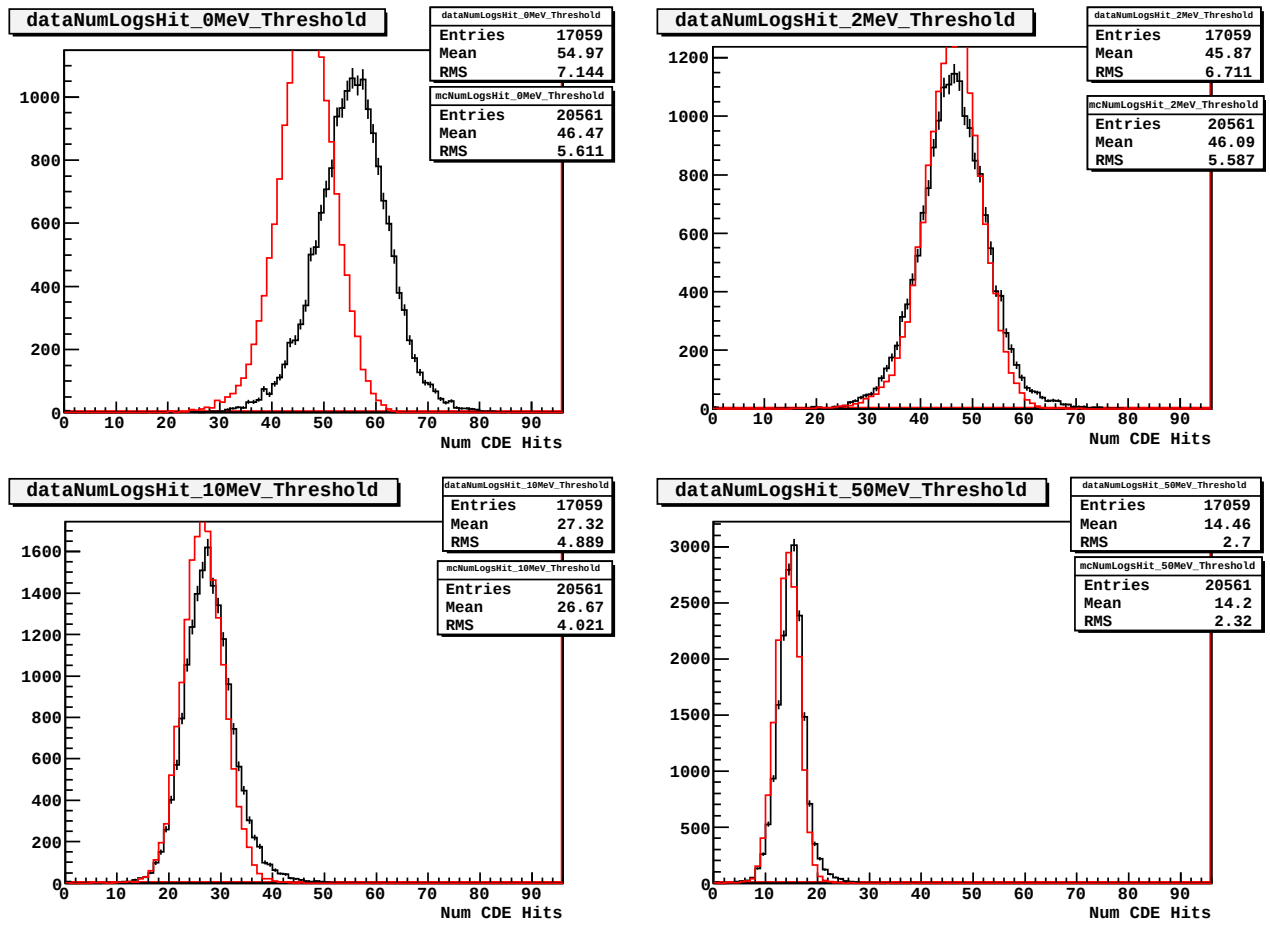
Transverse profile

- Transverse Shower Profile Log Scale - BT-2338 10GeV 0degree



CAL Logs Hit vs Threshold

- Num logs hit discrepancy depends upon threshold
- BT-1460 5GeV 0degree



CAL Logs Hit vs Threshold

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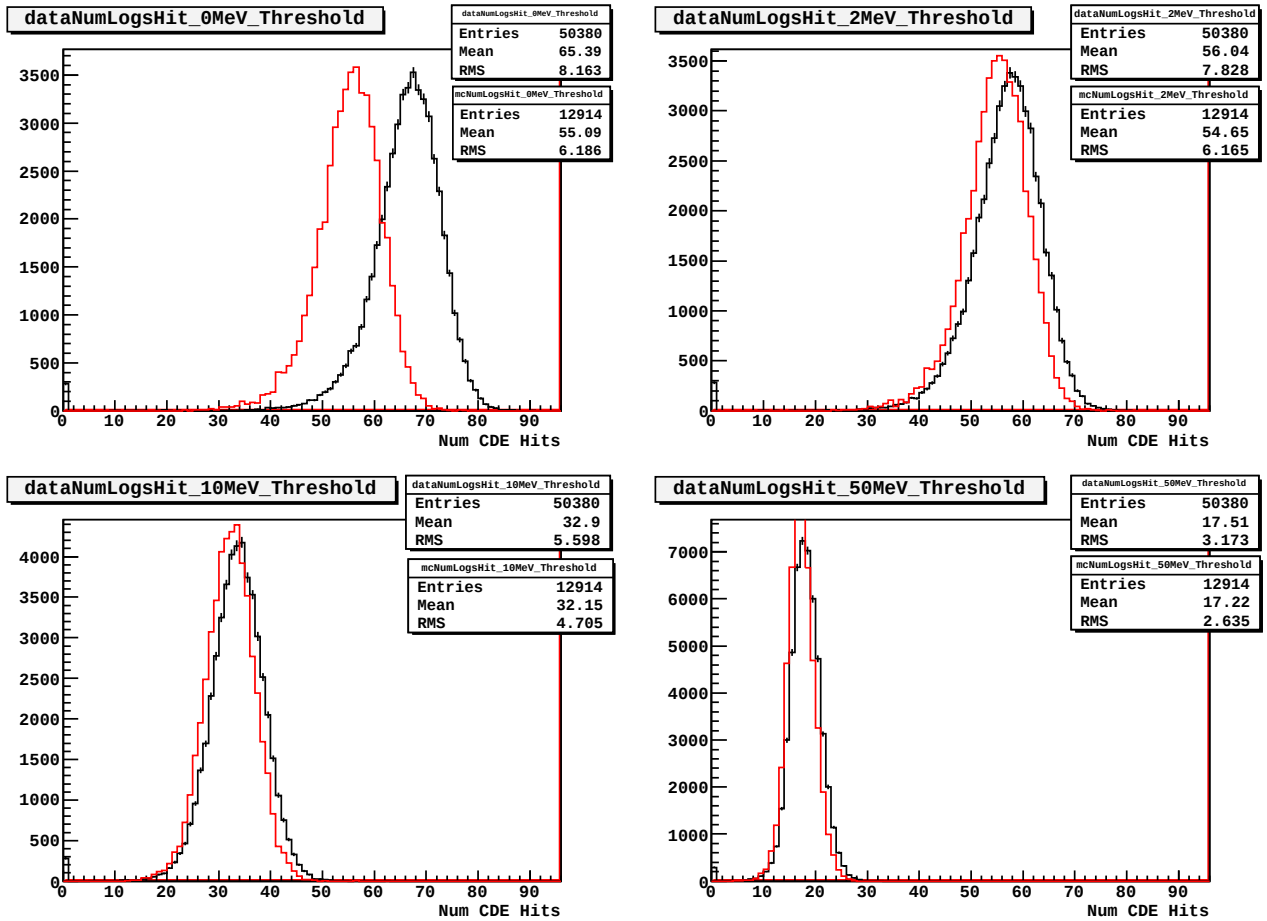
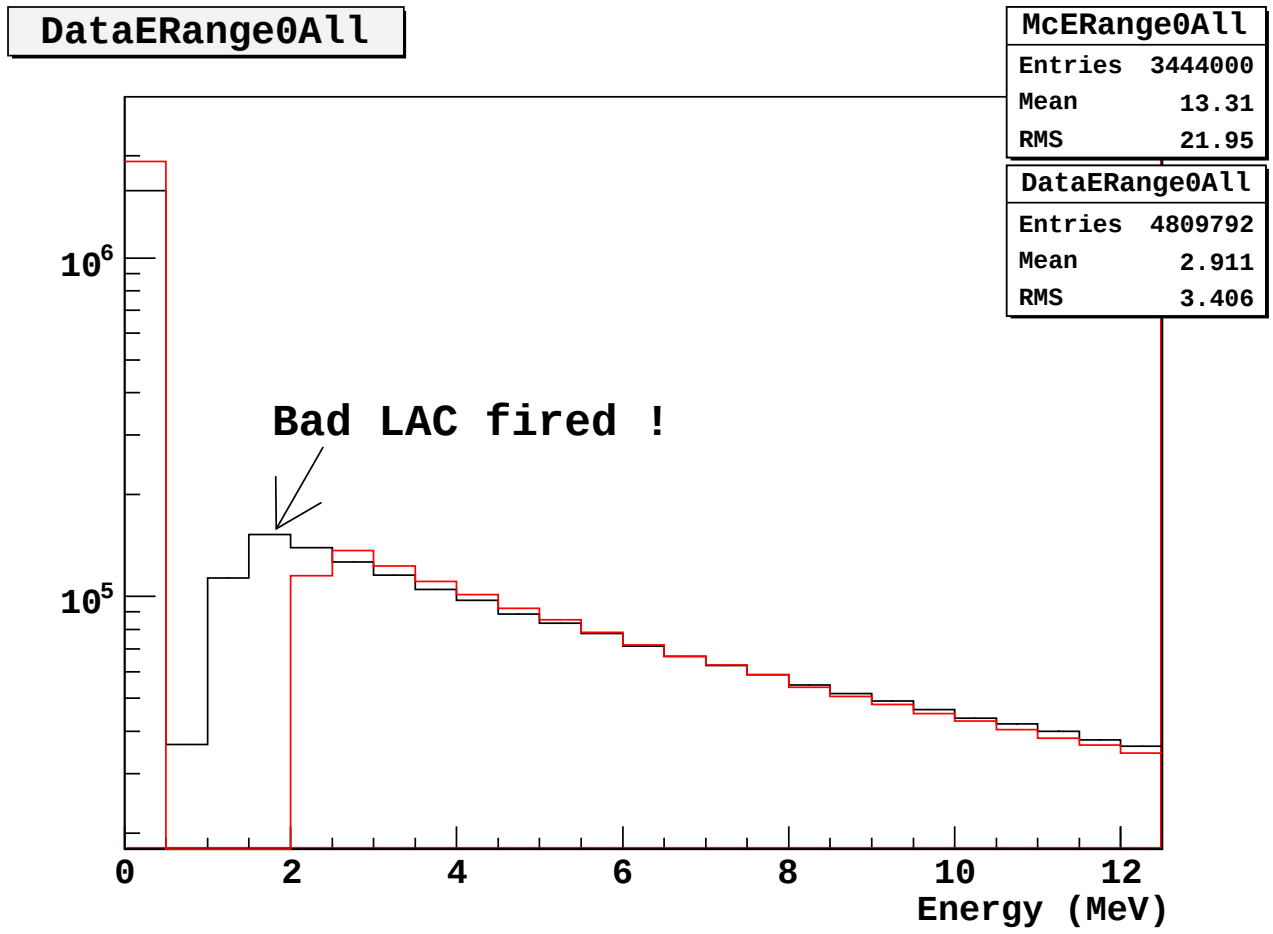


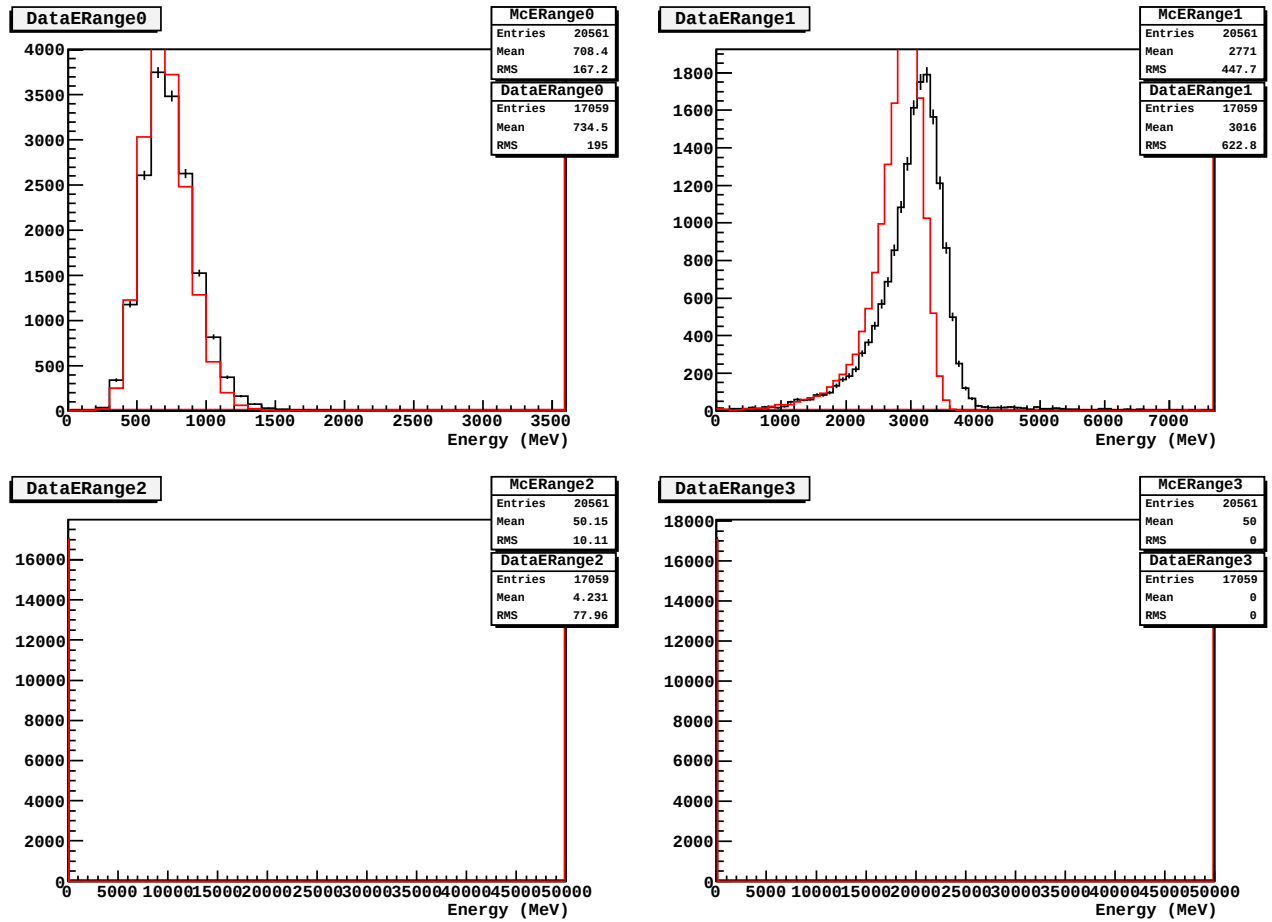
Energy read in Range 0

- Any big diode read in range 0 - BT-1460 5GeV 0degree
- MC LACs are perfect !?



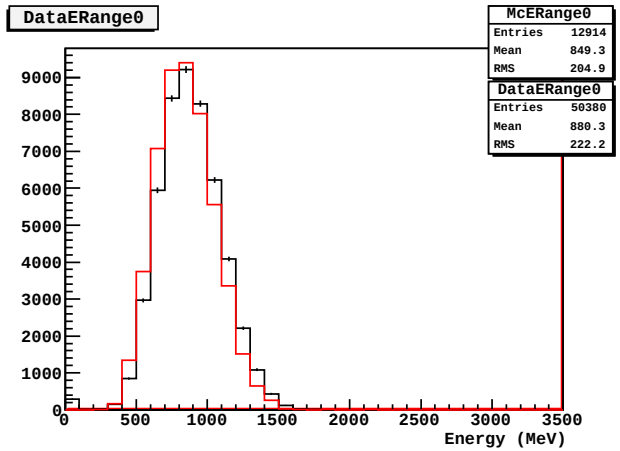
Energy by Range

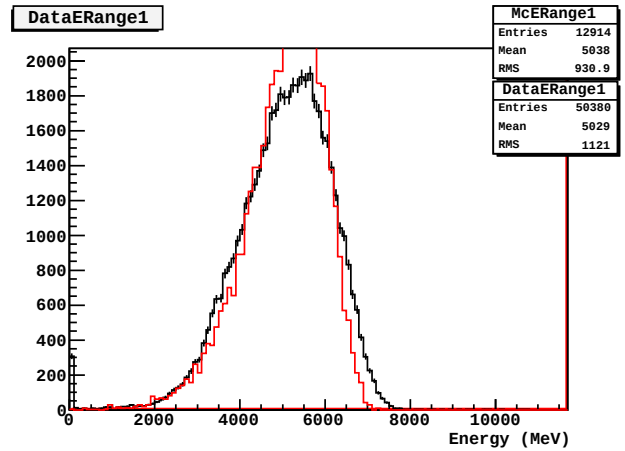
- Energy sum read in range i
- BT-1460 5GeV 0degree

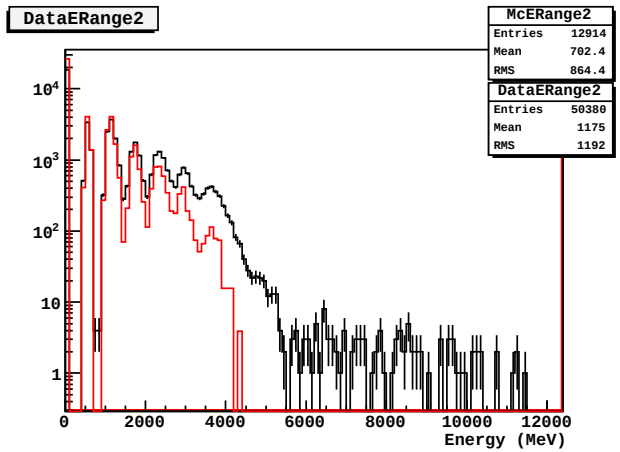


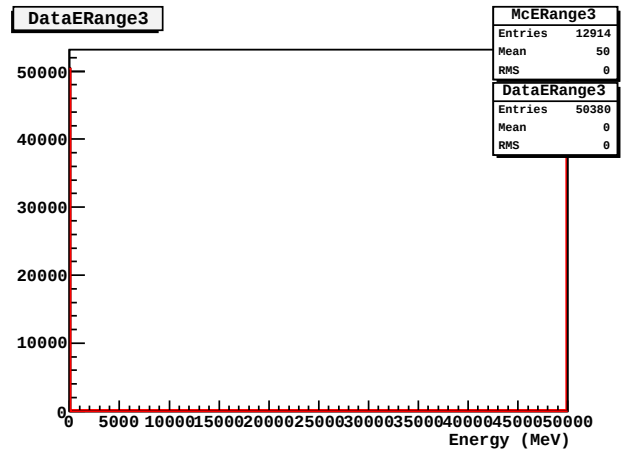
Energy by Range

- Energy sum read in range i
- BT-2338 10GeV 0degree



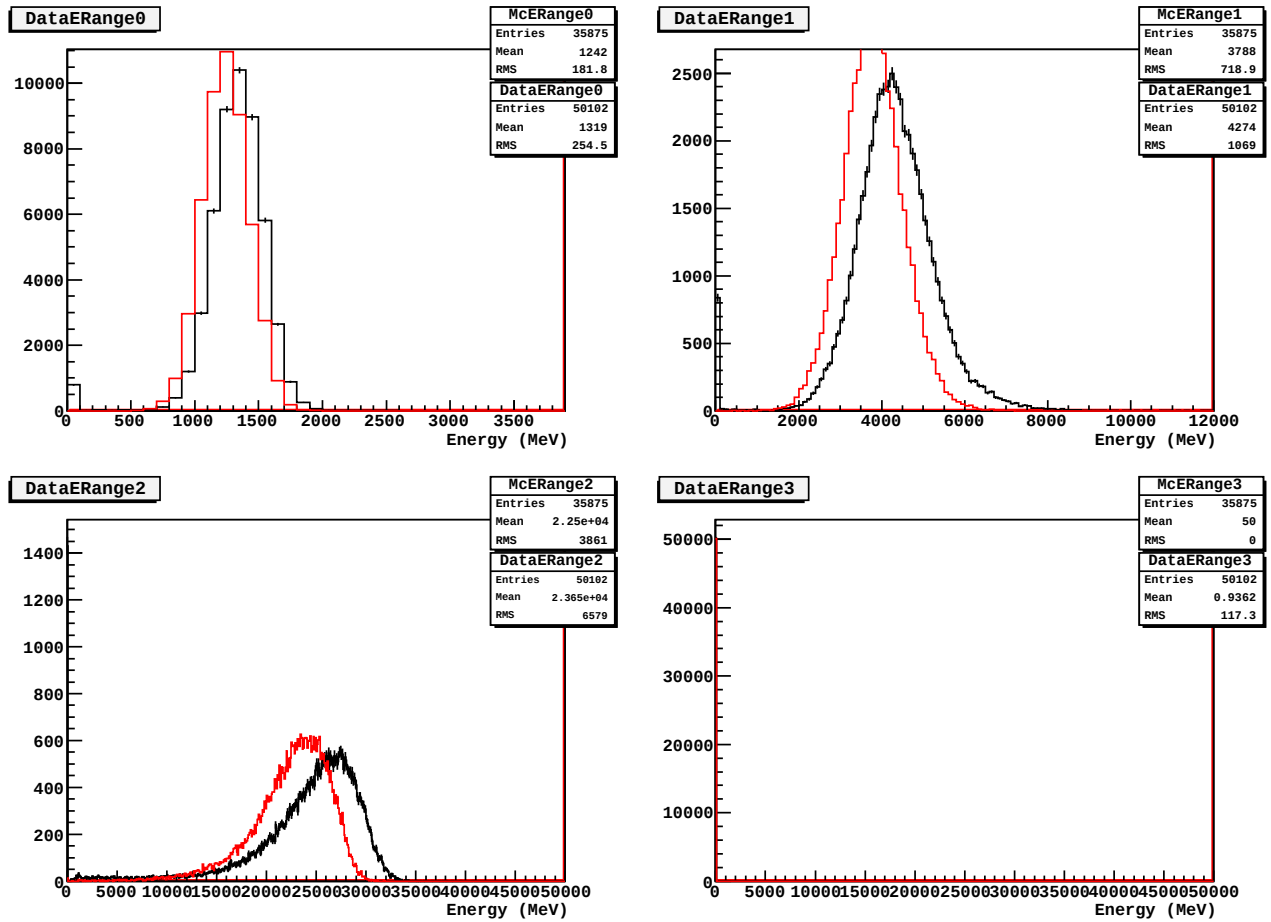






Energy by Range

- Energy sum read in range i
- BT-2039 50GeV 0degree



Conclusion

- LAC thresholds
  - Issue with CAL LAC simulation - add *noise* ?
  - Applying a 2MeV thresholds drastically reduces CalNumHit data/mc discrepancy.
  - Need a variable in SVAC that counts logs with more than 2MeV (or 5MeV...)
- Energy per Range
  - difficult to interpret - all range measure more energy in data
  - range 0 directly calibrated on muons has to be well calibrated
  - difference in shower shape (or missing X0) could cause more energy in range 0
  - some interesting thresholds effect due to ULD