

# NEMENIX

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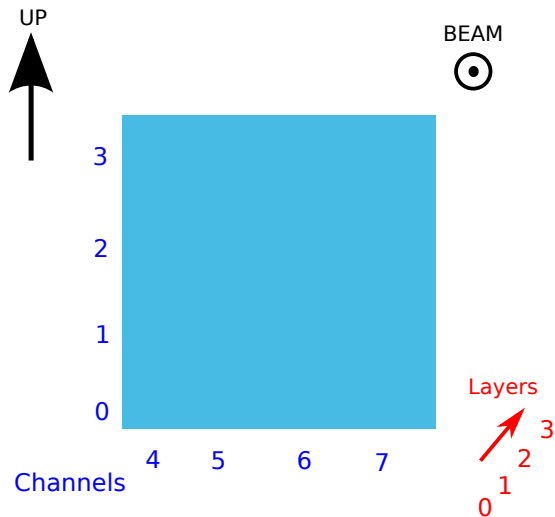
04 Mar 2014

SoLiD



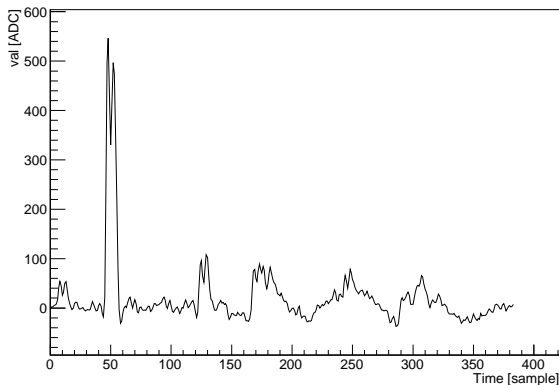
MERTON COLLEGE  
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# NEMENIX channel map

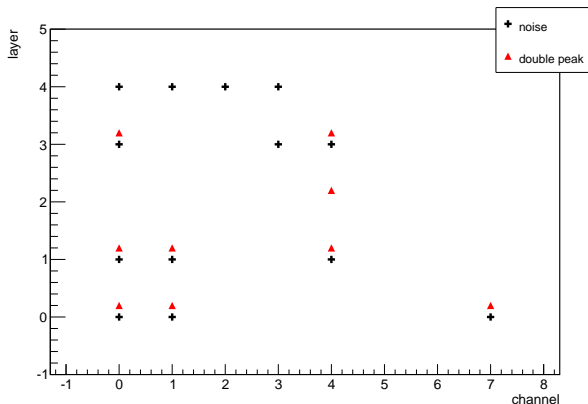


# Noisy channels and double peaks

board 0, channel 0

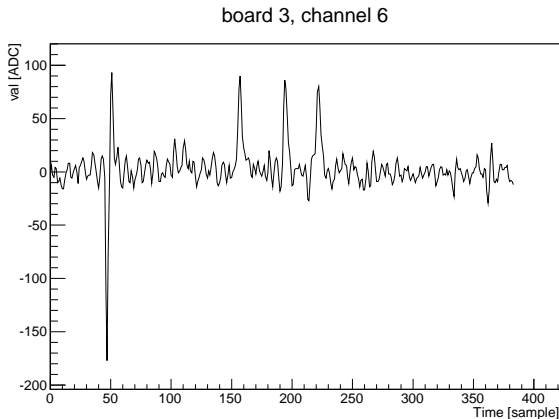


# Noisy channels and double peaks



- Noisy channel mostly double peak channels
- ribbon cable 1, 3, 9, 11, 16, 25, 30, 31
- Compared to old: -1 (0) +2 (30, 31)

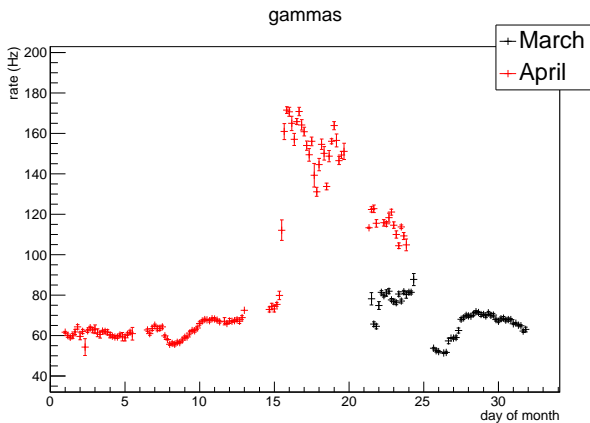
# Negative peaks



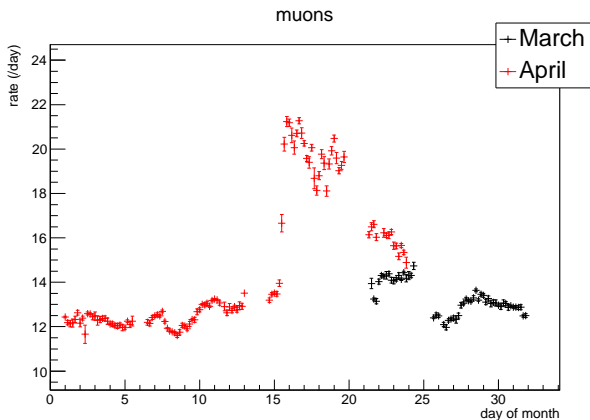
- Some events have a negative peak before a positive one
- Seen in all channels
- I don't know cause or how to handle them

# Preliminary rates

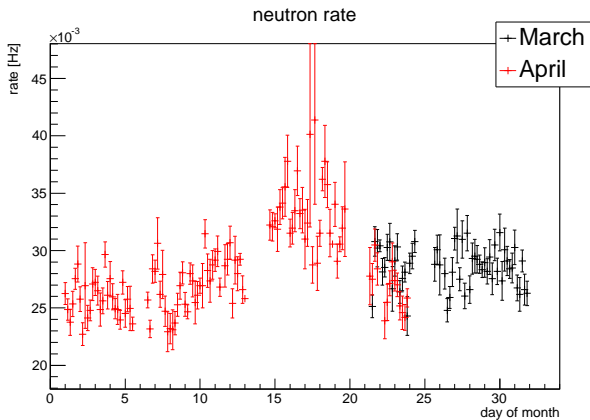
- Identify neutrons with integral charge vs max ampl.
- Identify EM pulses as other signals above threshold in NEMENIX
- Identify  $e/\gamma$  as 2 EM matched in time
- Identify NEMENIX  $\mu$  as  $> 2$  EM matched in time
- Identify MVS  $\mu$  as 2 muon system pulses matched in time
- Using online calibration
- Using 3.5 PA threshold
- Offline calibration expected to improve stability
- Have more data that needs transfer + raw  $\rightarrow$  ROOT conversion



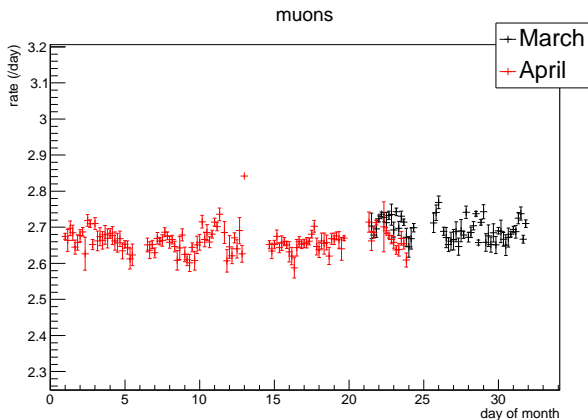
# NEMENIX $\mu$ (Petra)







# Muon system $\mu$ (Céline)



- Understanding weird signals
- Offline calibrations
- Time matching between boards
- $\mu$ /neutron coincidence
- $e^+$ /neutron (IBD) coincidence
- Energy calibration with muons