

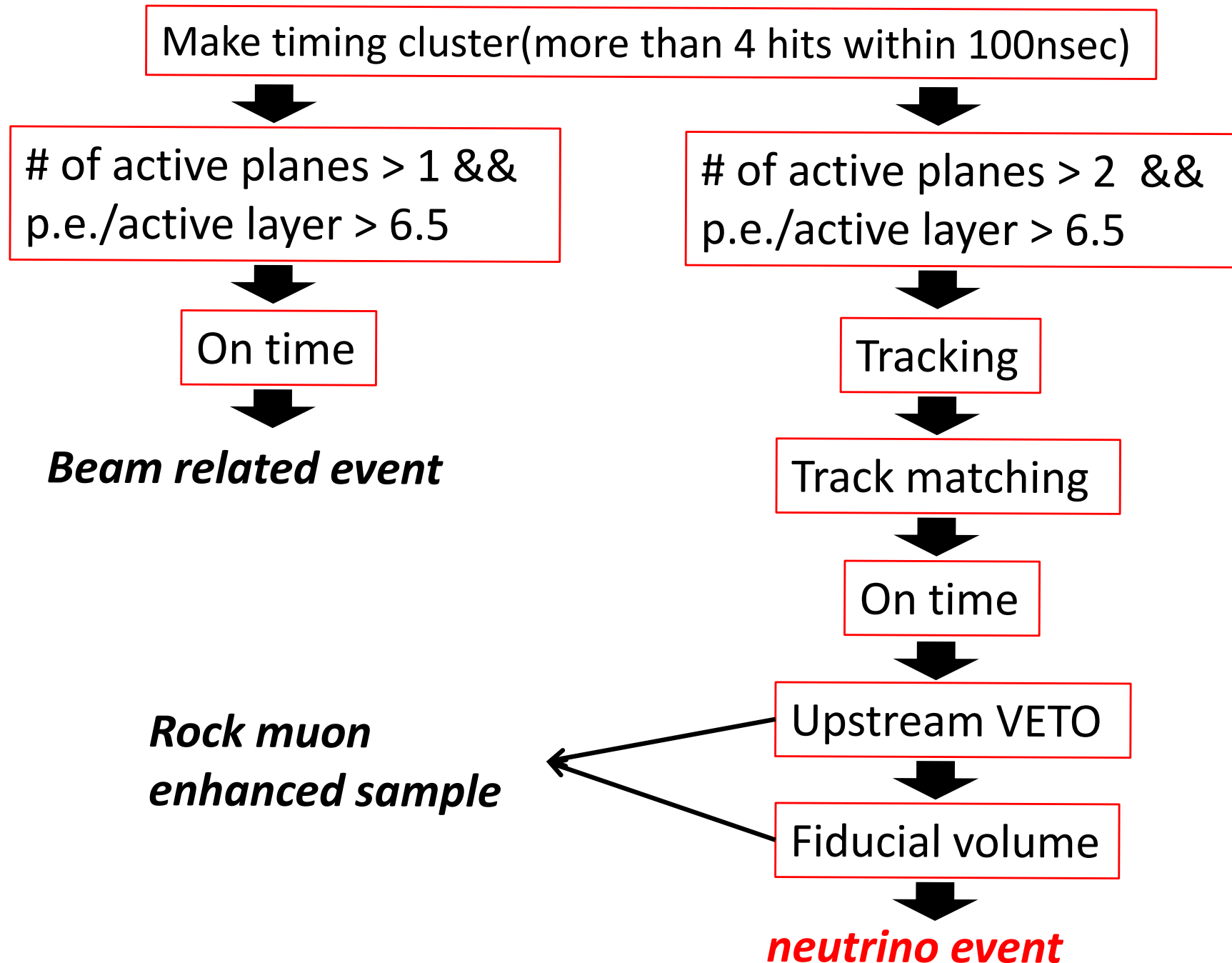
# Run34 quick beam analysis report

A.Murakami  
2010.6.10

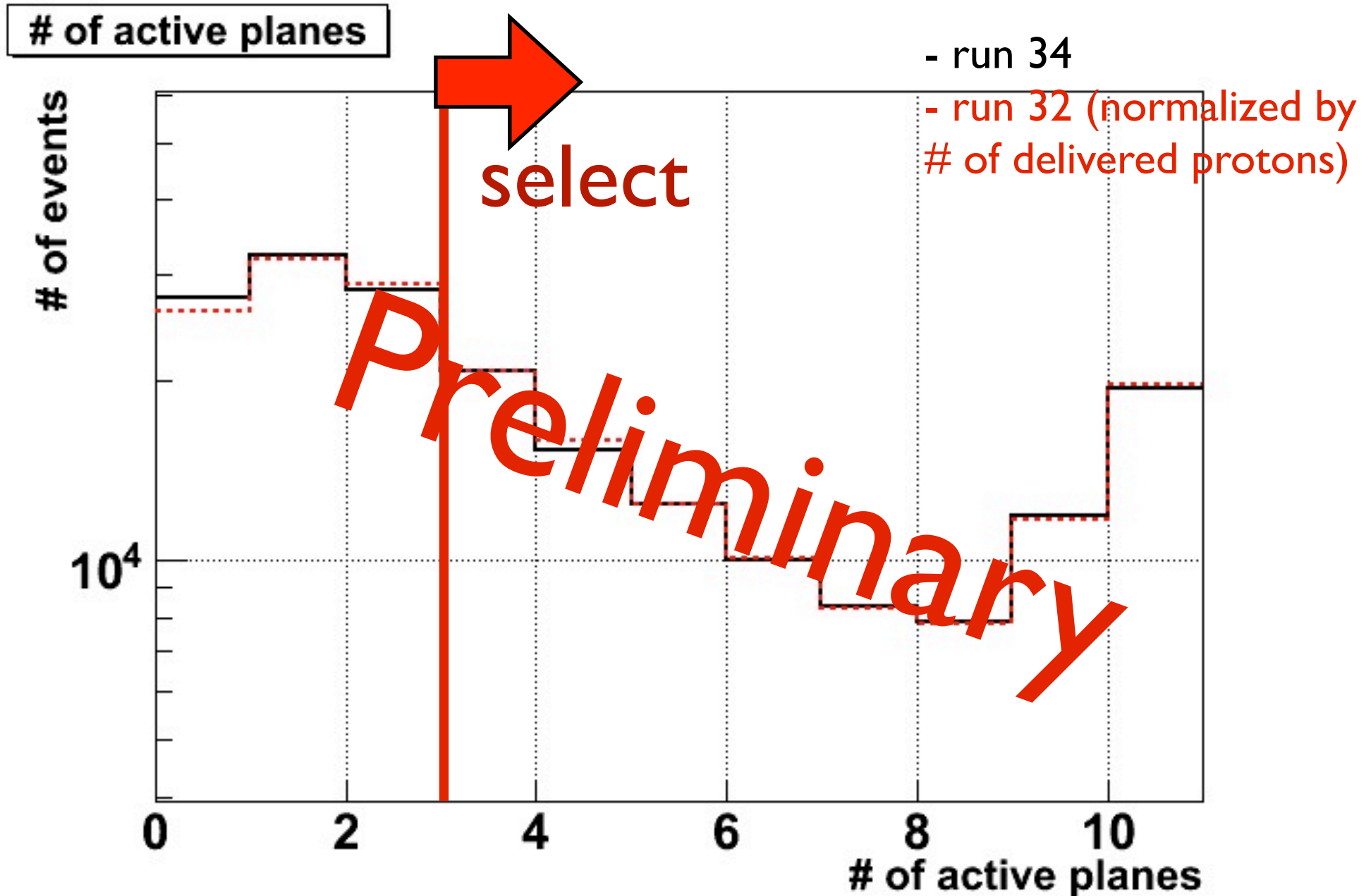
# Data set

- Run 34 start from June. 8th
- Update analyzed the data set.
  - June.8th night ~ June. 14th. data is analyzed with quick beam summary (ver p02).
  - Add data from June. 10th on the previous report.
- Total # of good spills  $\sim 4.5 \times 10^4$ , total delivered protons  $\sim 1.82 \times 10^{18}$

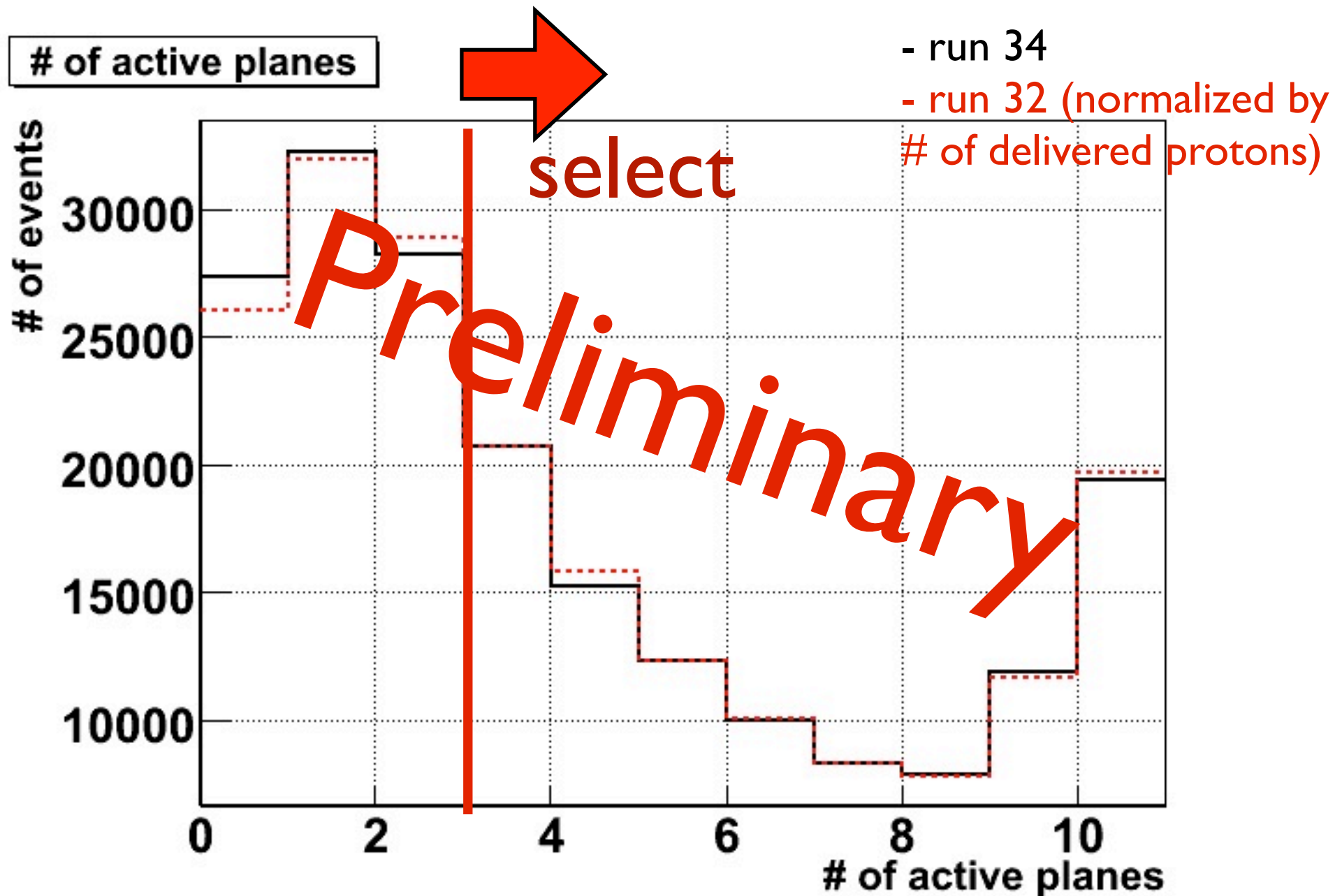
# Analysis flow chart



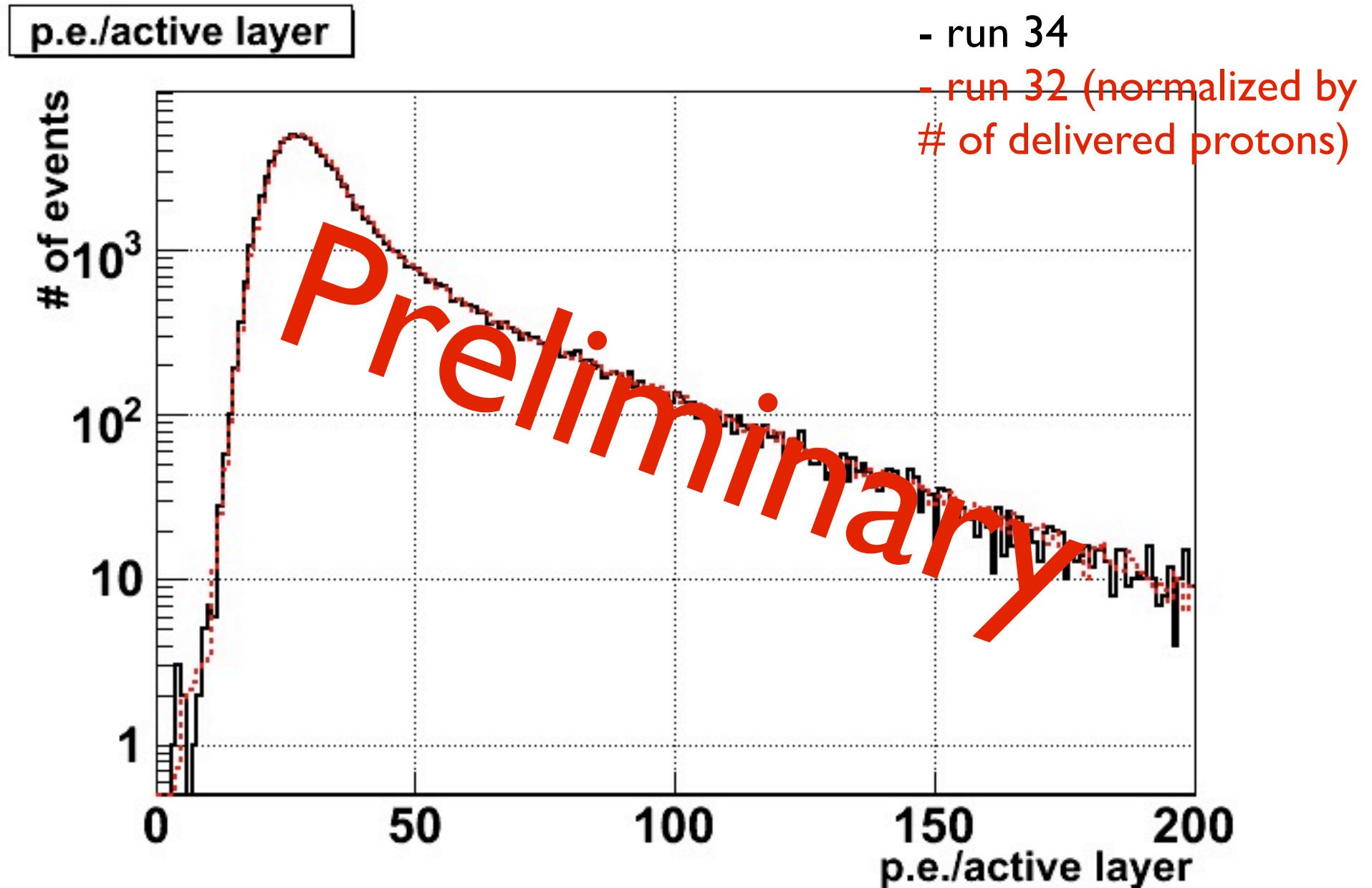
# # of active plane (log)



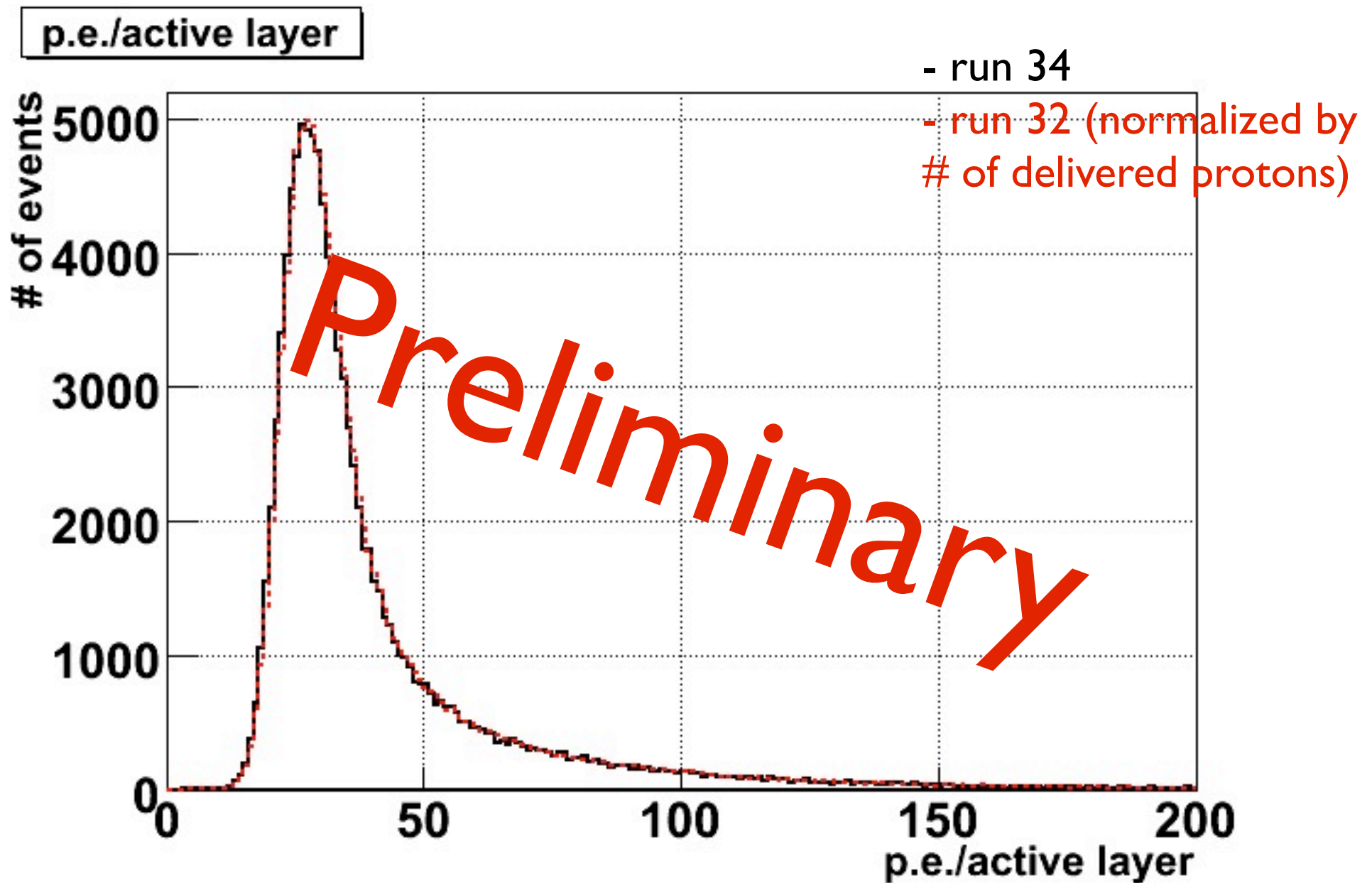
# # of active plane (linear)



# p.e. / active layer(log)

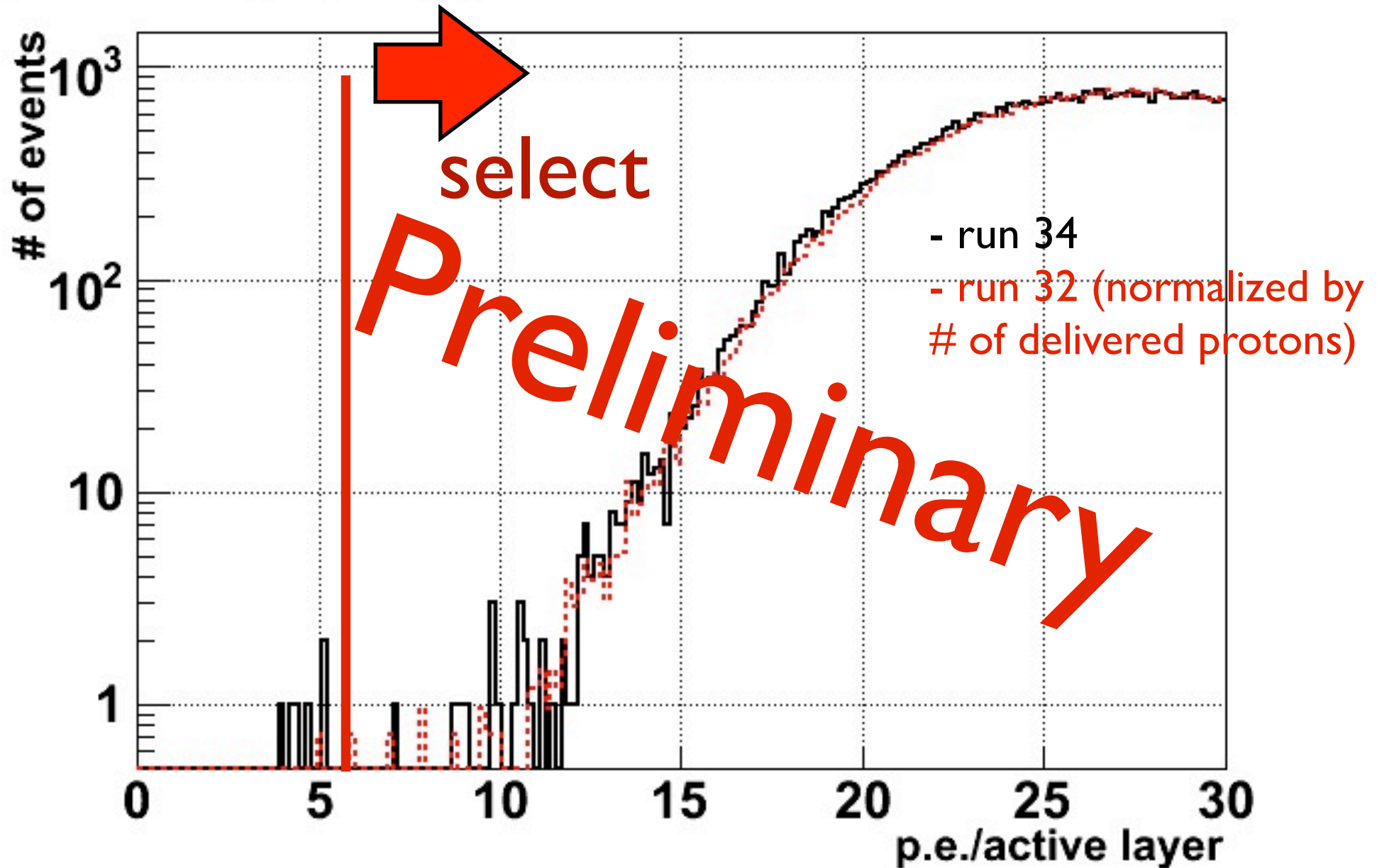


# p.e. / active layer(linear)



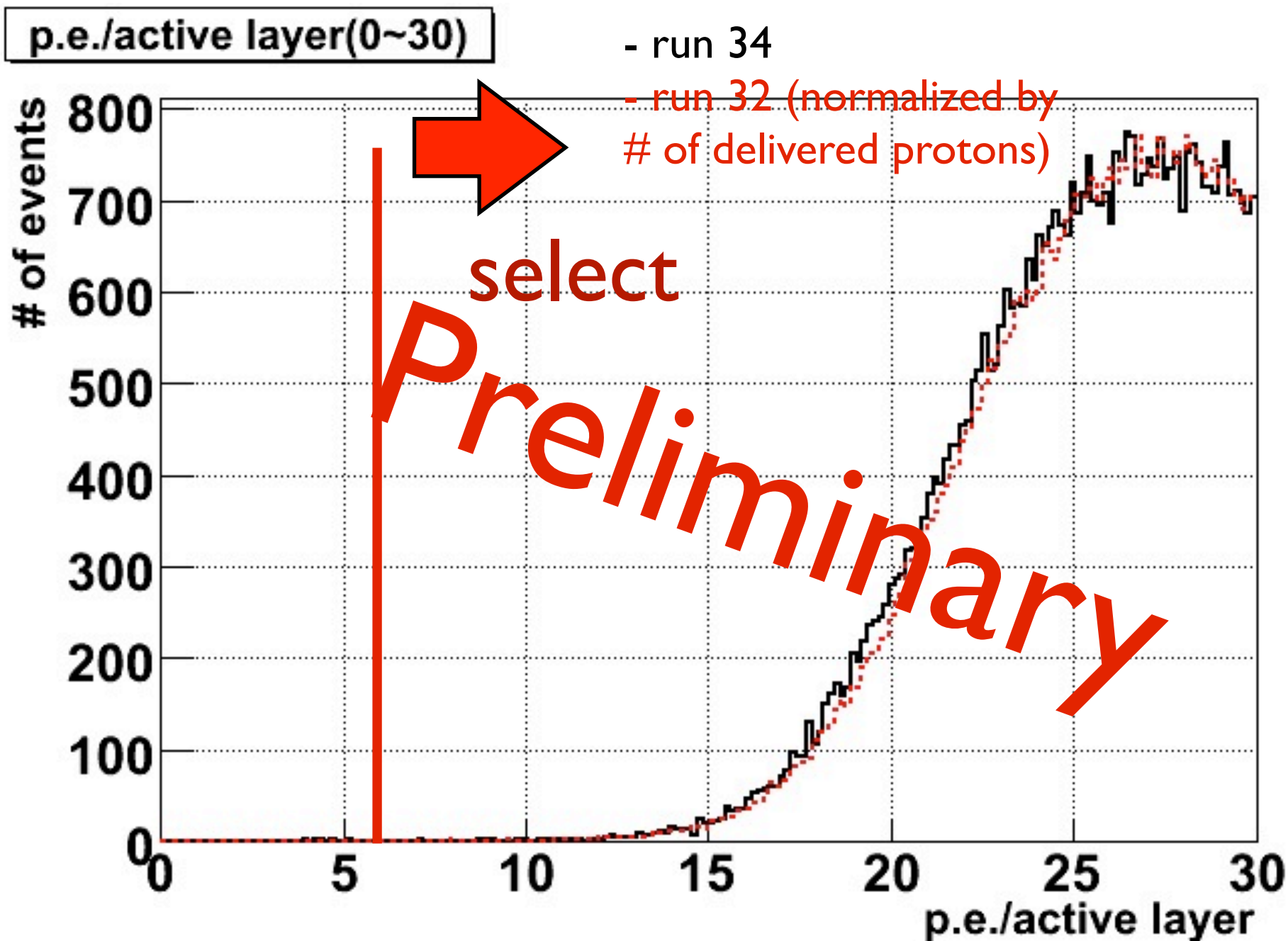
# p.e. / active layer (log, zoom)

p.e./active layer(0~30)





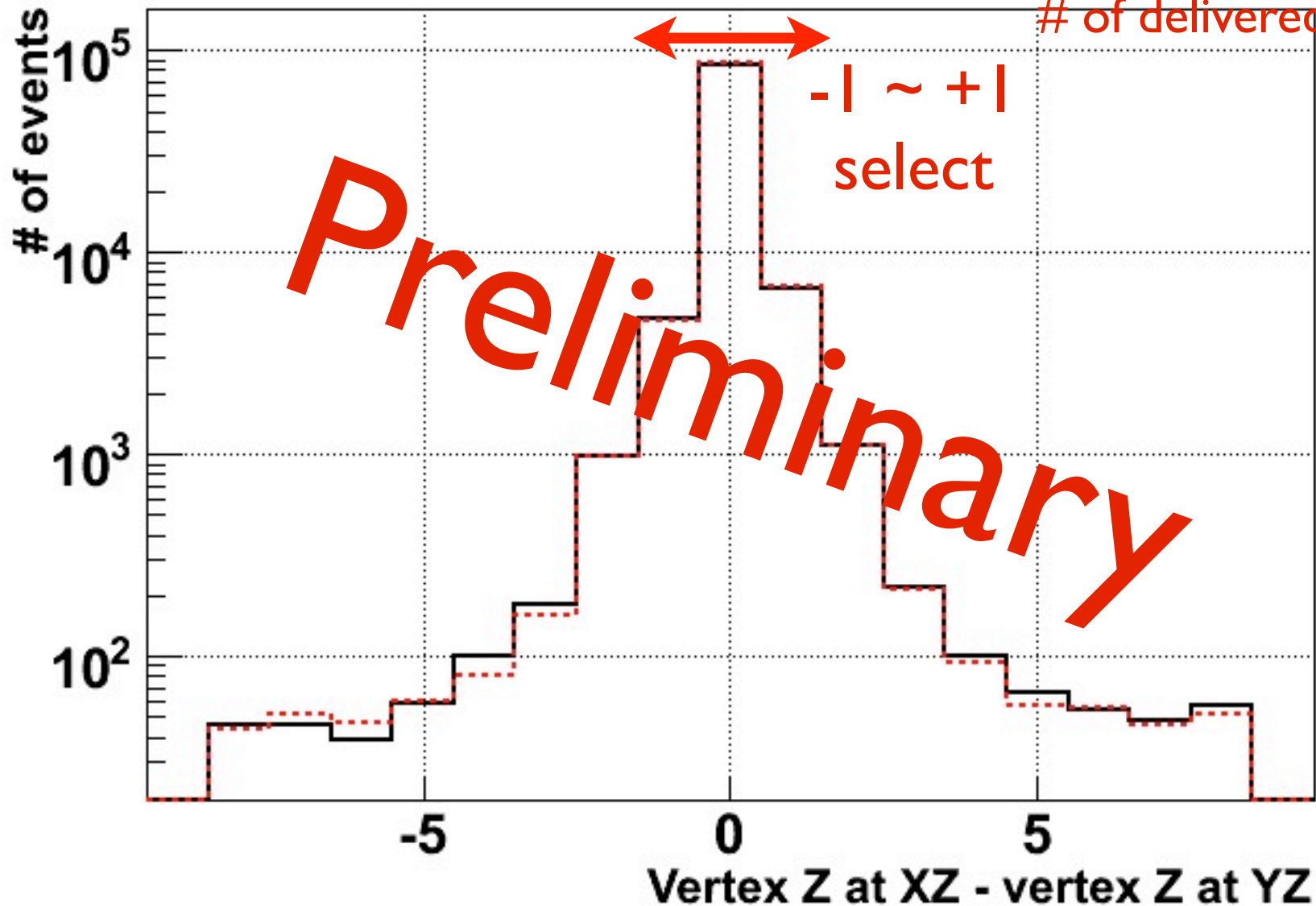
# p.e. / active layer (linear, zoom)



# XZ and YZ Track matching

- run 34
- run 32 (normalized by  
# of delivered protons)

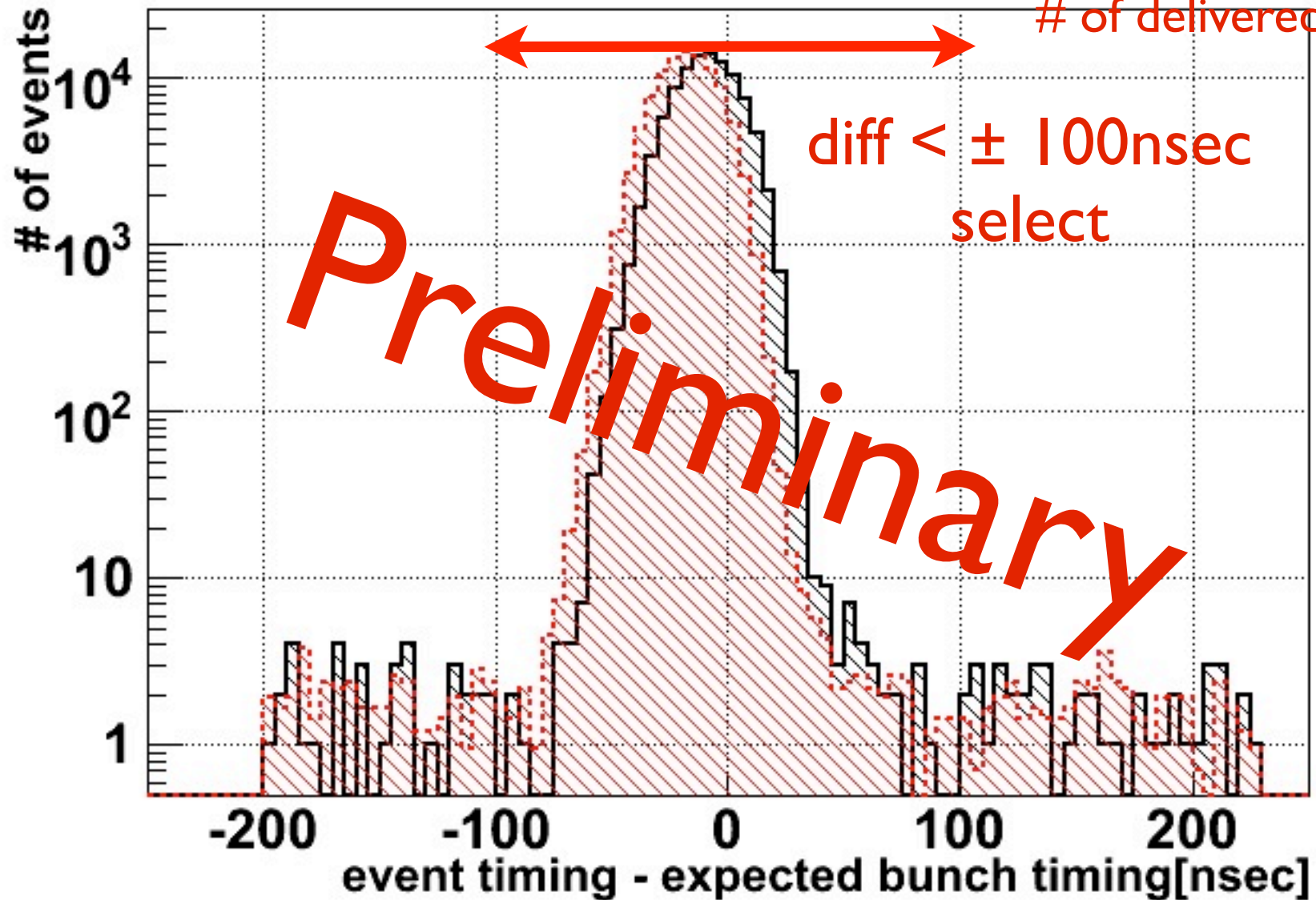
diff. b/w vertex Z at XZ and YZ



# On time

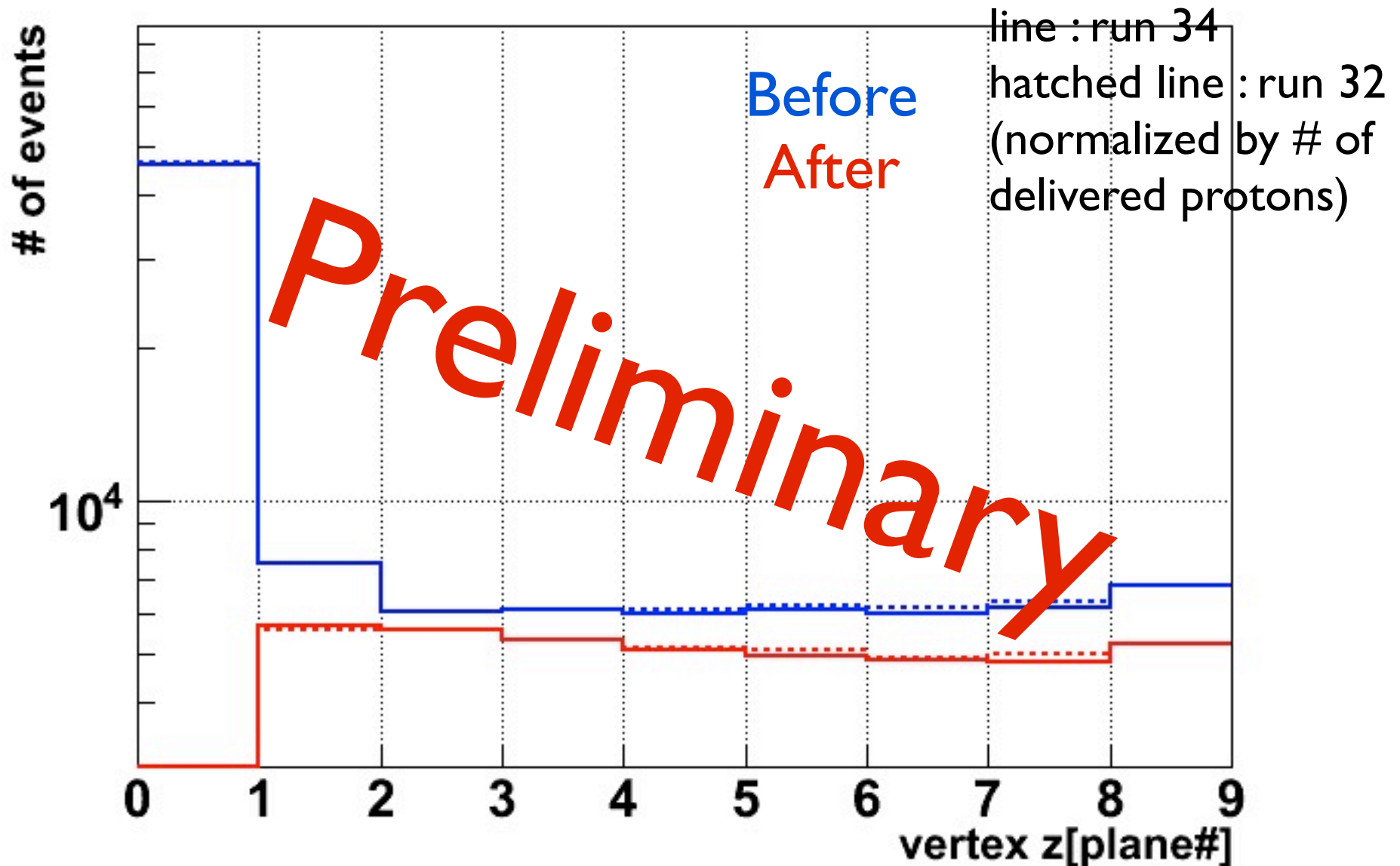
- run 34
- run 32 (normalized by  
# of delivered protons)

diff. from expected timing

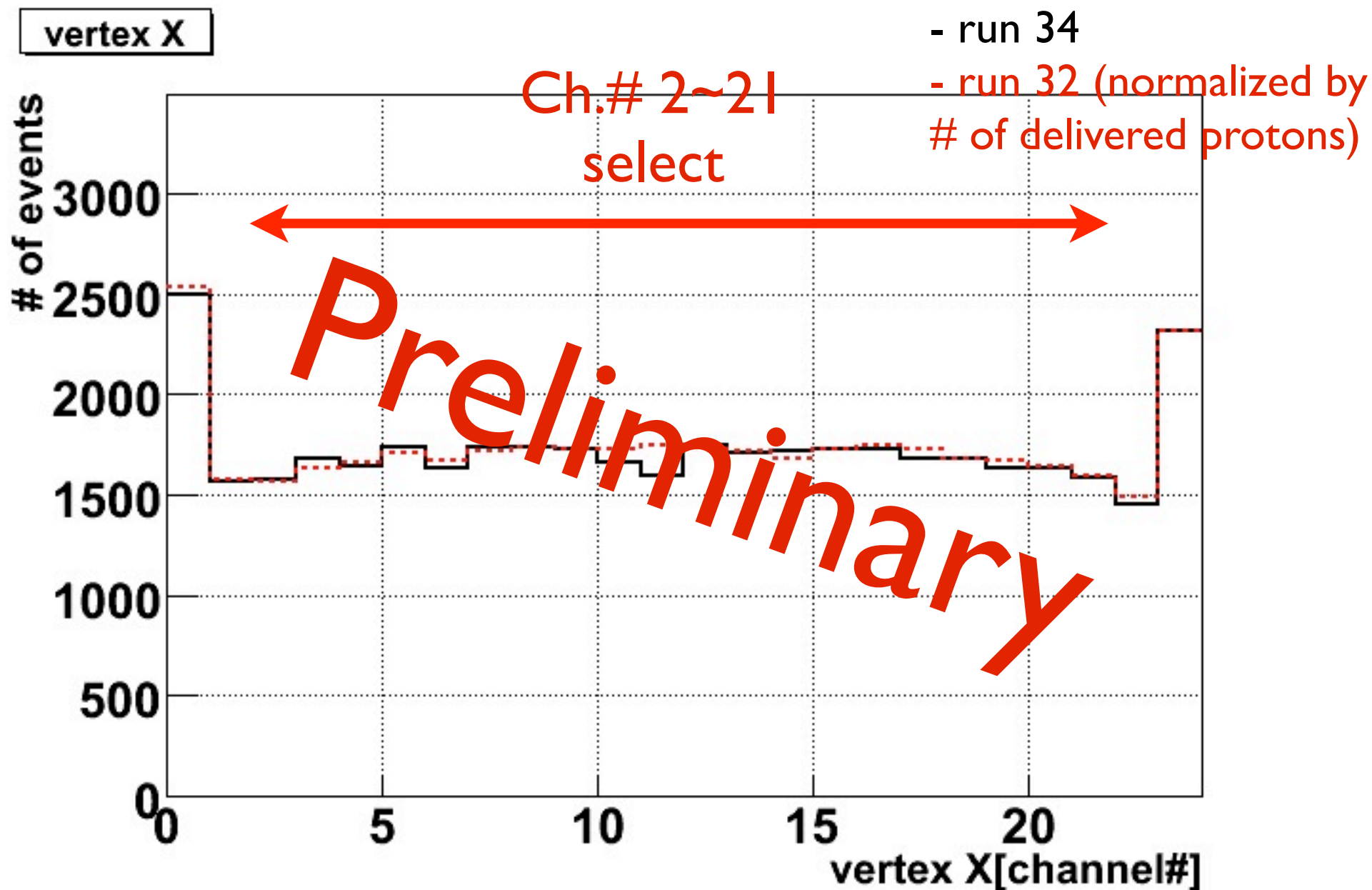


# Upstream VETO

vertex z before/after upstream VETO

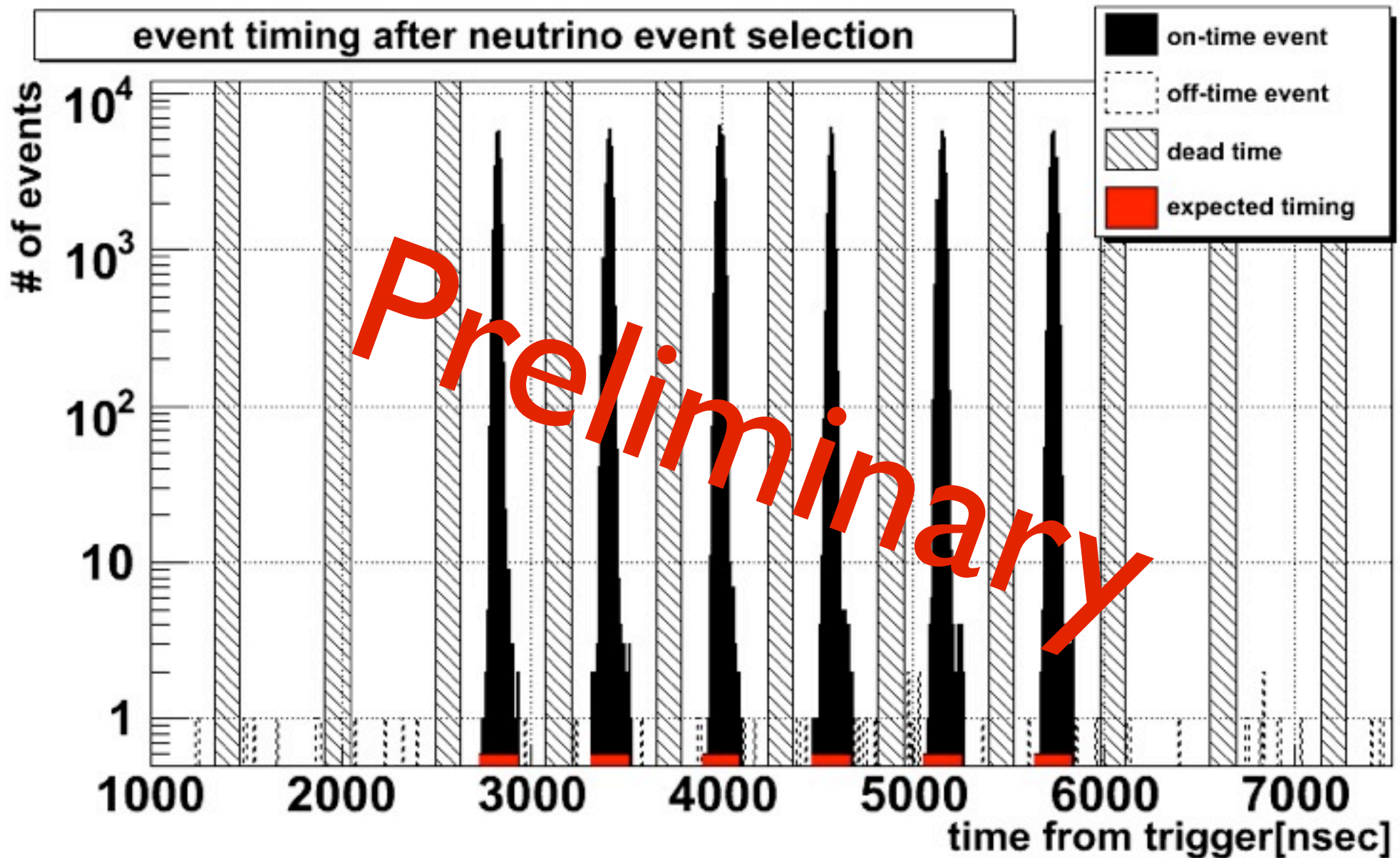


# Fiducial volume cut





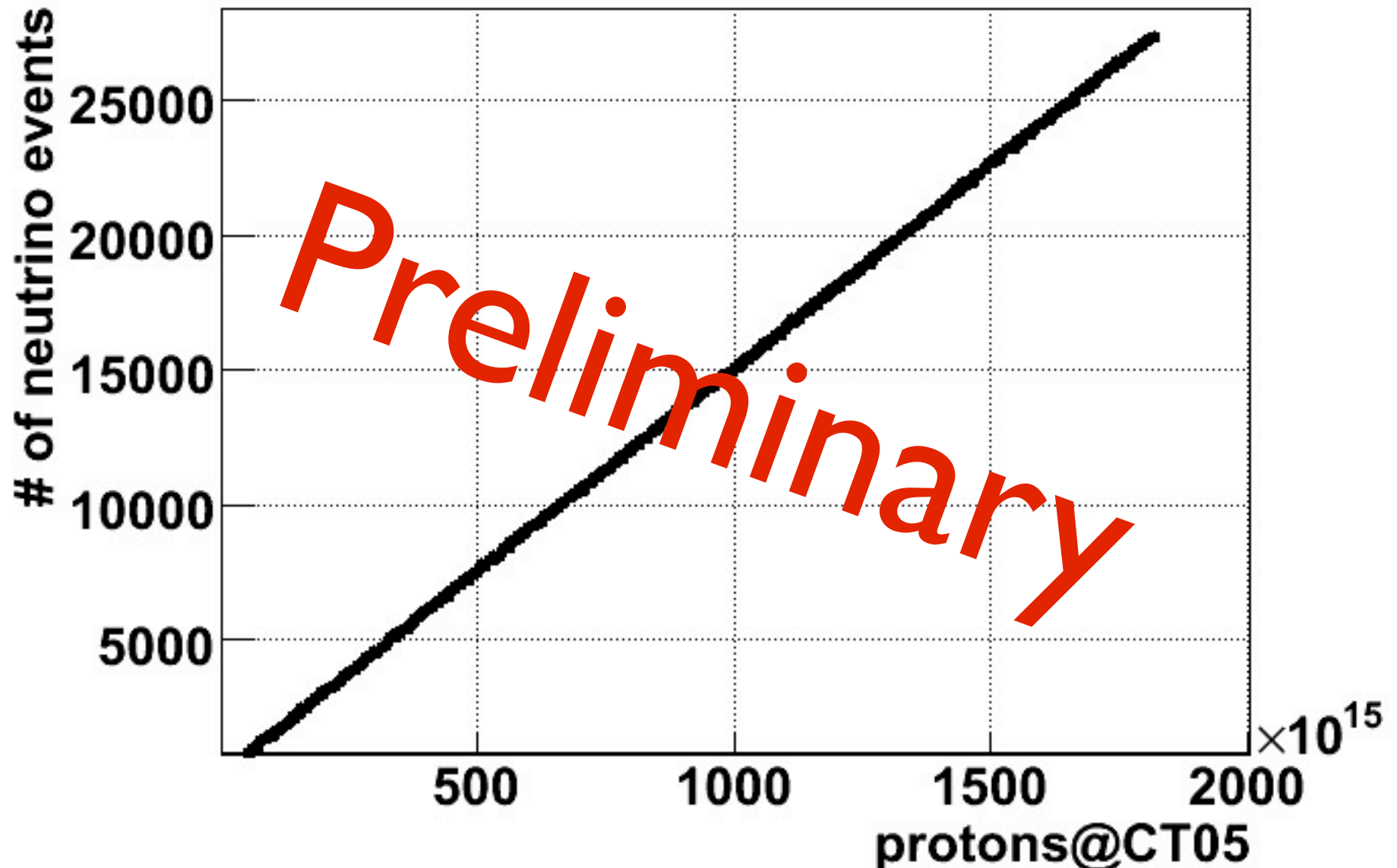
# Event timing



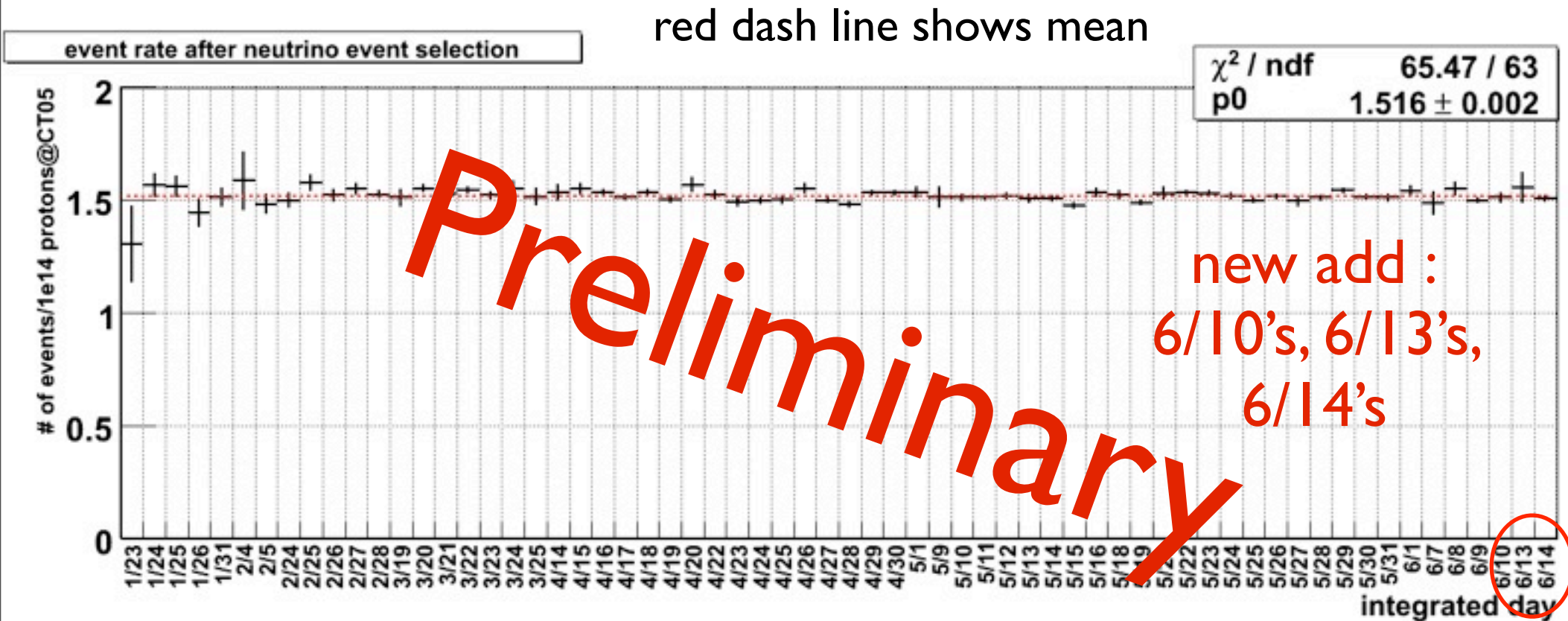
# protons@CT05 vs neutrino events

protons@CT05 vs. # of neutrino events

only run 34



# Neutrino event rate



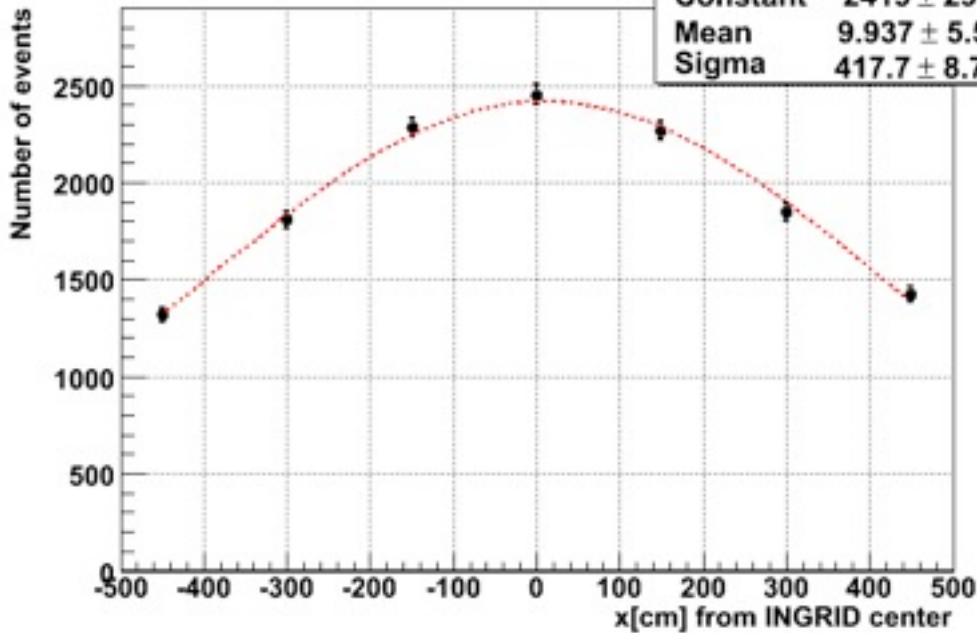
Event rate is as usual



# Beam Profile

horizontal profile

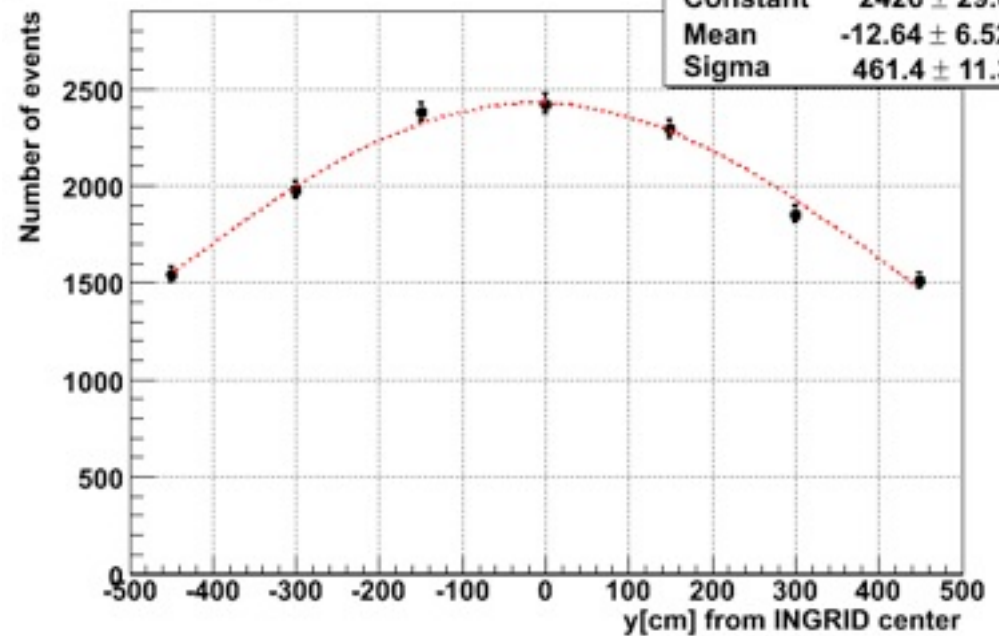
$\chi^2 / \text{ndf}$	4.069 / 4
Constant	$2419 \pm 29.88$
Mean	$9.937 \pm 5.571$
Sigma	$417.7 \pm 8.748$



center:  $9.9 \pm 5.6 \text{ cm}$   
(to south)  
Sigma:  $418 \pm 9 \text{ cm}$

vertical profile

$\chi^2 / \text{ndf}$	6.129 / 4
Constant	$2426 \pm 29.69$
Mean	$-12.64 \pm 6.525$
Sigma	$461.4 \pm 11.37$



center:  $-12.6 \pm 6.5 \text{ cm}$   
(on axis =  $-1.9 \text{ cm}$ )  
Sigma:  $461 \pm 11 \text{ cm}$