

Status Report Monitoring

Gordon Fischer
Hamburg 4.12.2006

job: monitoring the steering

- the steering controls the data flow
the monitoring controls the steering
-
-
- problem: the main code has to be independent of the monitoring code
-
-
- the monitoring should switch off easily

Realisation

- Using the package:
Trigger/TrigMonitoring/TrigSteerMonitor
containing the class TrigSteerMoni.cxx
-
- the monitoring code is implemented there
-
- to loop over the vector <activechains>
- -> Number of accepted chains
- (after prescale and pass through)
- or the number of signatures
-
-

shift and expert

-
- For the shift crew in the control room:
- Lvl2 and EF input and output rate
- 1D Histograms with efficiency of chains
-
-
- For the expert crew:
- 2D Histograms with Signatures or TE
- Number of activated chains
- Event size
-
-

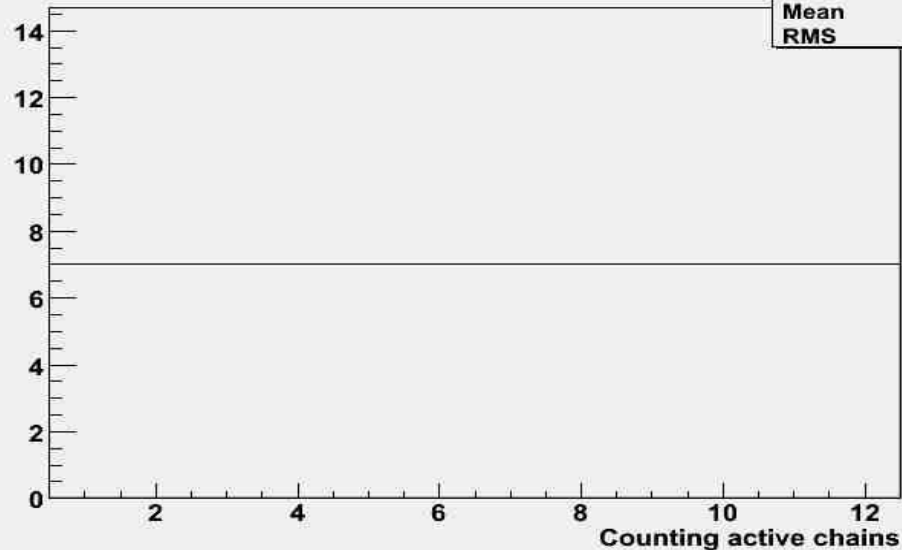
Realisation

-
- For counting the relative number of events we count the number of events accepted from a
- certain chain and detect how often was this chain activated
-
- That implies: the input and output rate for every chain
-
- The Efficiency is $\text{input} / \text{output}$
-
-
-

raw acceptance

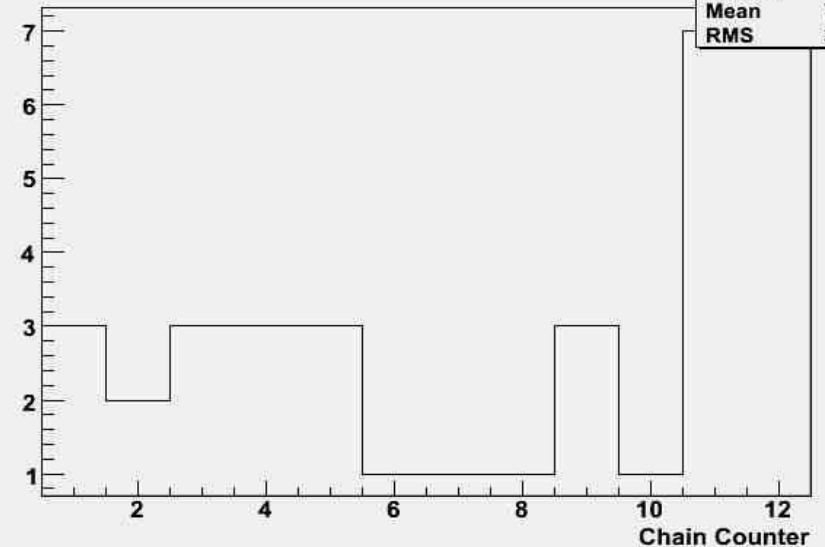
Number of active L2 chains

activeChains	
Entries	84
Mean	6.5
RMS	3.452



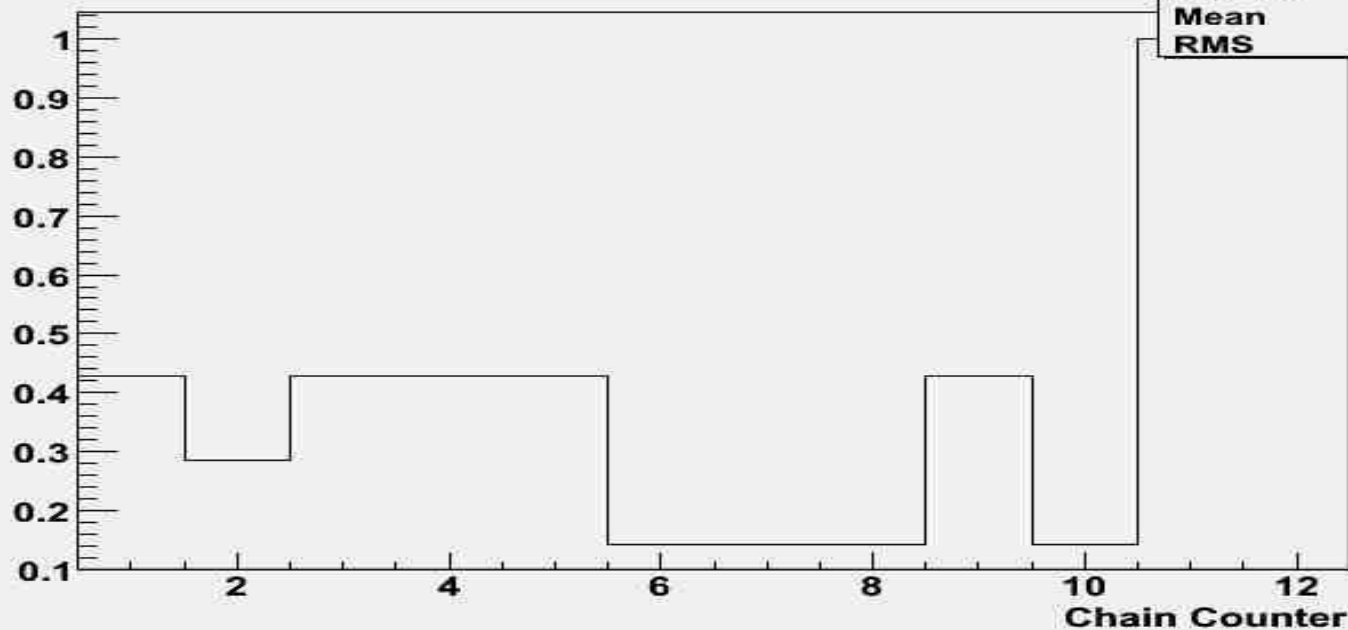
Raw acceptance of L2 chains

chainAcceptance	
Entries	84
Mean	7.486
RMS	3.952

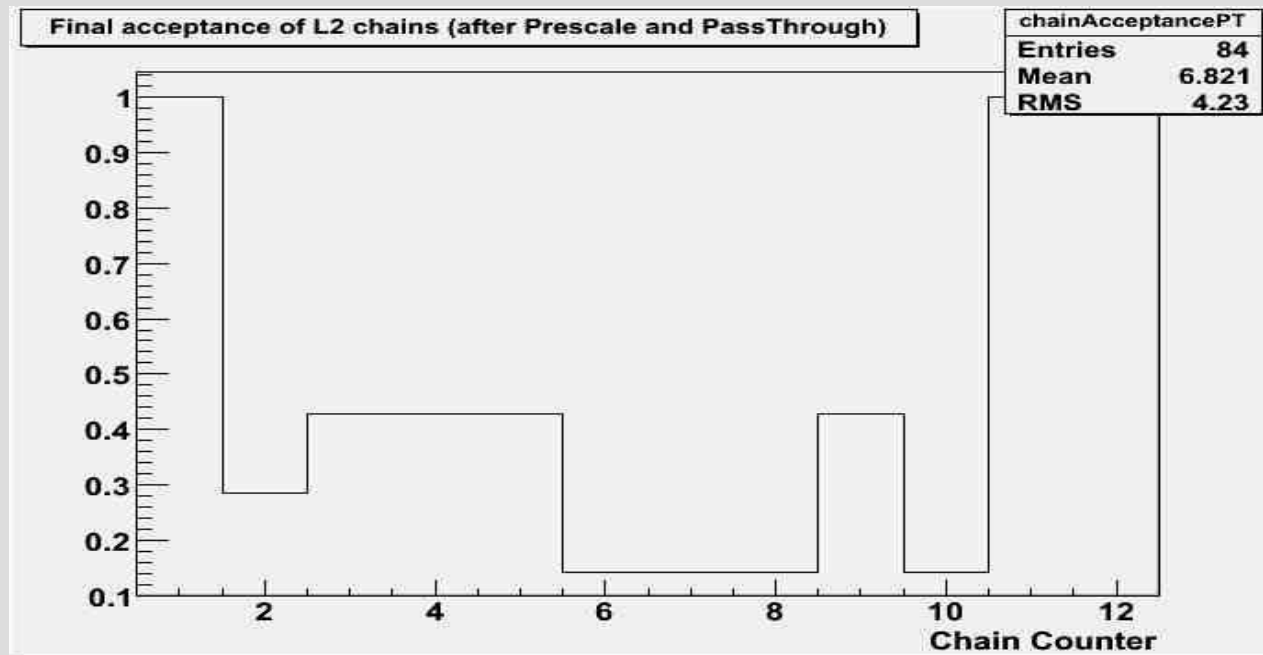
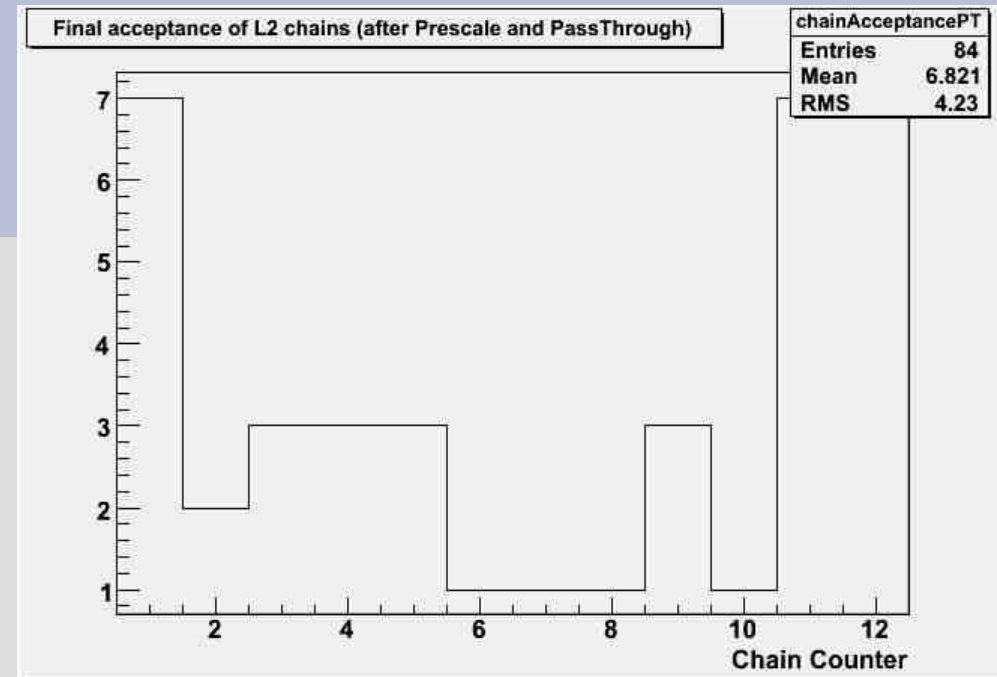
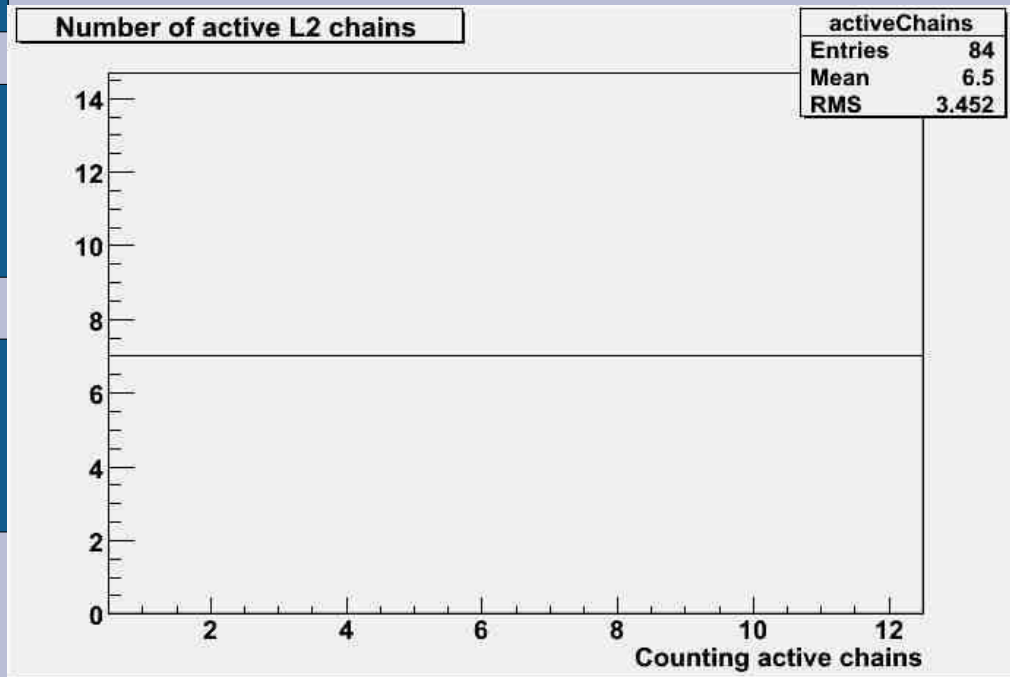


Raw acceptance of L2 chains

chainAcceptance	
Entries	84
Mean	7.486
RMS	3.952

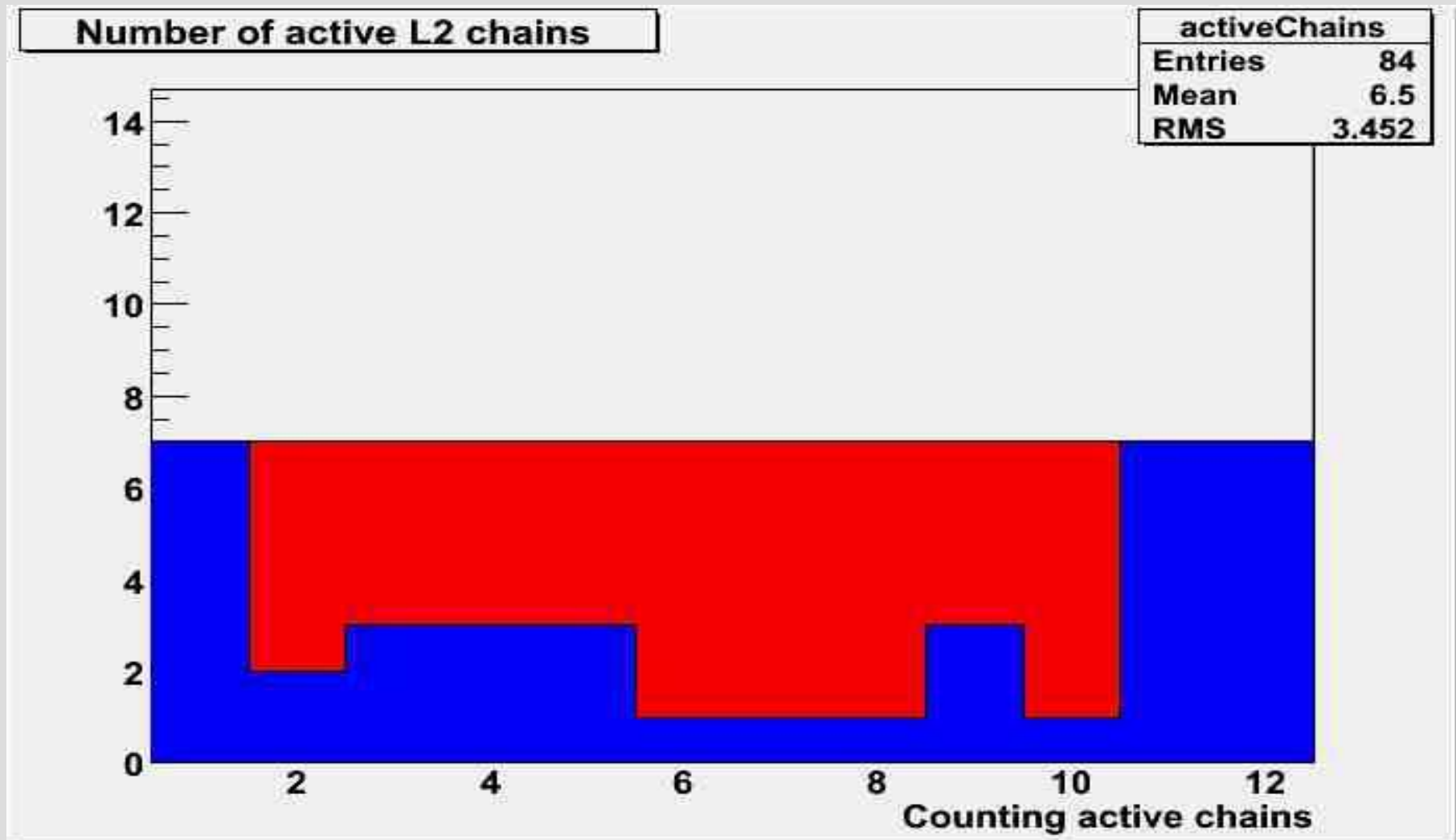


Acceptance after prescale and pass through

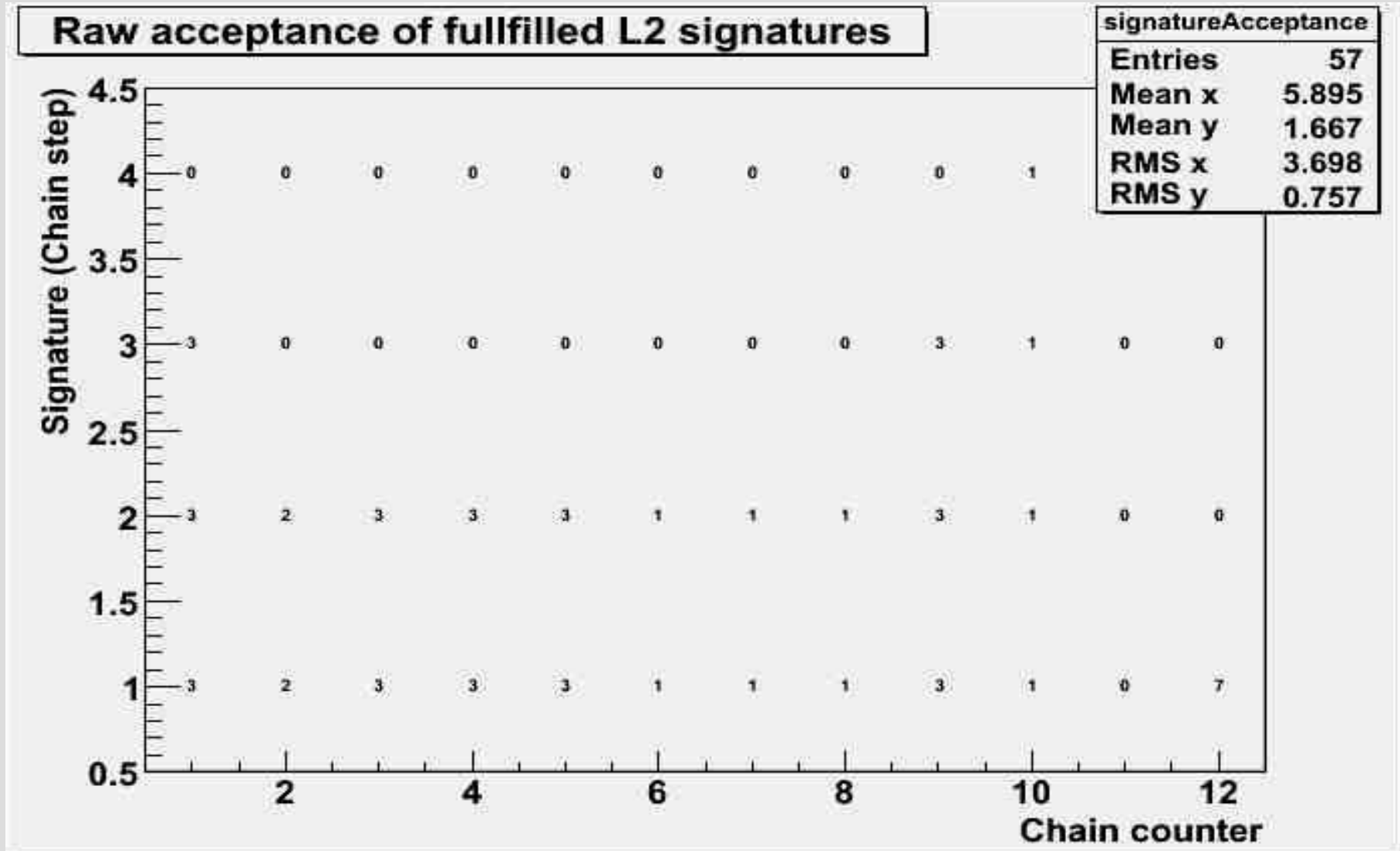


Efficiency after pass through

(red = activation rate and blue # accepted events)



2d Histogram chain vs. step



More detailed

Step	#	Signature	found:
4	1	Higgs	3 TE / Event
3	1	2 Z	6 TE / Event
2	1	4 em25i'	4 TE / Event
1	1	4 em25i	16 TE / 7Events
Name of chain 10 is H_L2			