

TRD online processing

-current status-

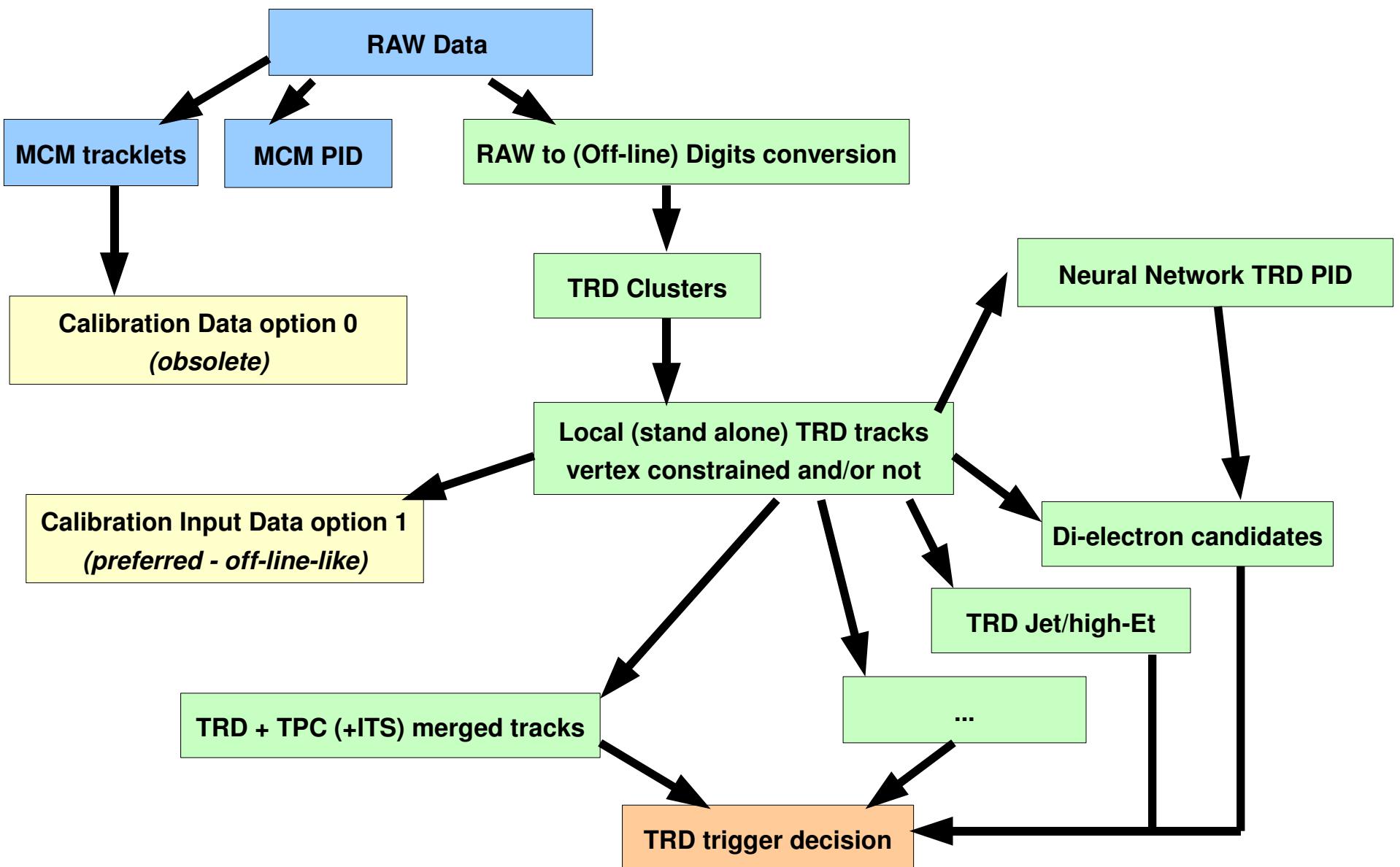
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Henner Büsching

and

Mateusz Ploskon

Processing flow

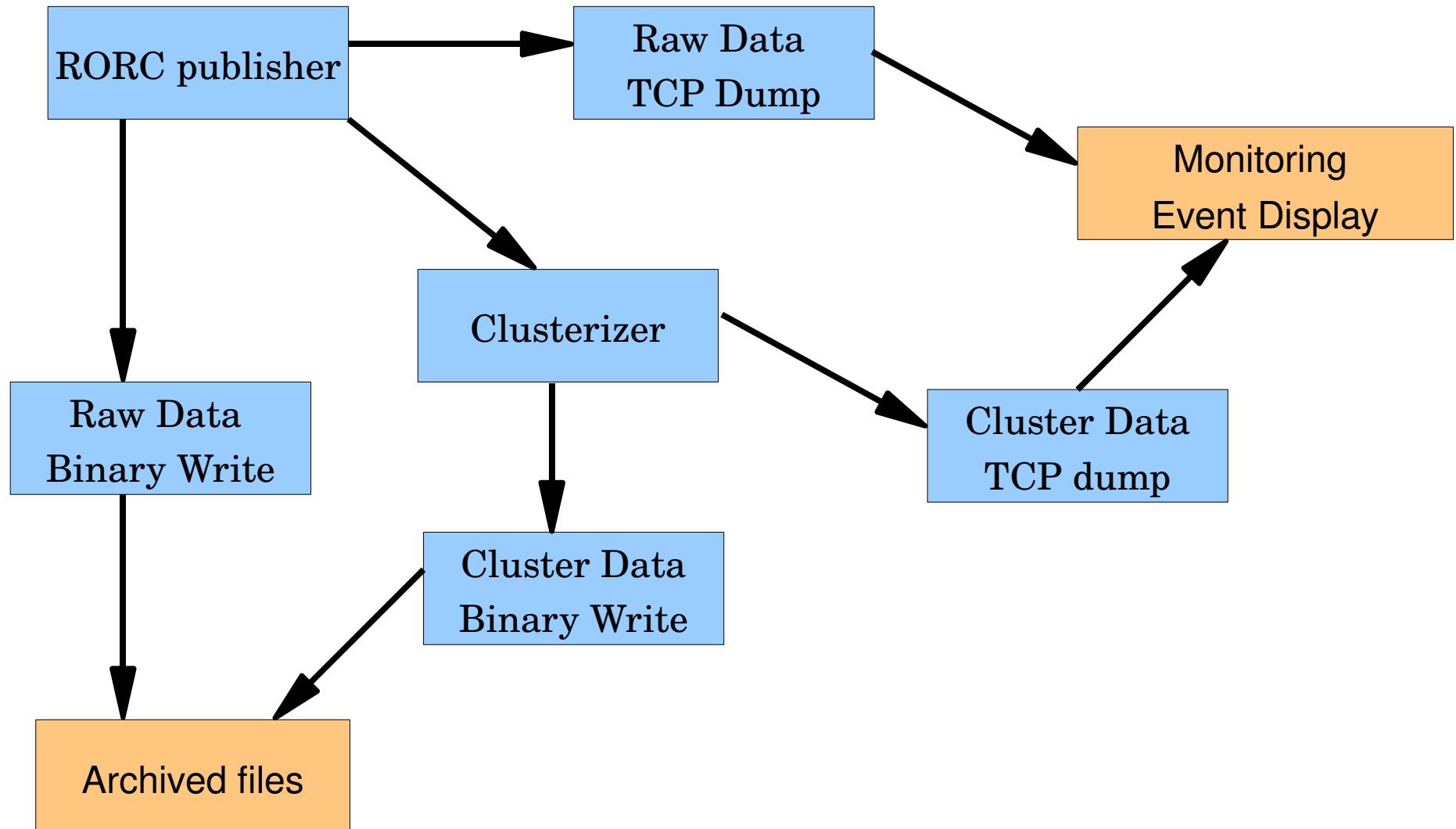


HLT components

BLACK = default (color) GREEN = done & ready BLUE = on going / testing RED = starting / foreseen

- **AliHLTTRDRawDataMonitorComponent**
- **AliHLTTRDClusterizerComponent** [AliTRDclusterizerHLT]
- **AliHLTTRDTrackerComponent** [AliTRDtracker]
- **AliHLTTRDCalibrationComponent** [AliTRDCalibraFillHisto]
- **AliHLTTRDPIDComponent**
 - [TRD PID (Offline with AliTRDtracks) + PID with Neural Nets]
- **AliHLTTRDEsdWriterComponent**
- **AliHLTCombinedTrackerComponent** [TPC +TRD merger/matching]
- **AliHLTTRDPhysicsComponent(s)** [physics analysis (J/psi, Y, general high-pT...)]
- **AliHLTTRDTriggerComponent** [Trigger output]

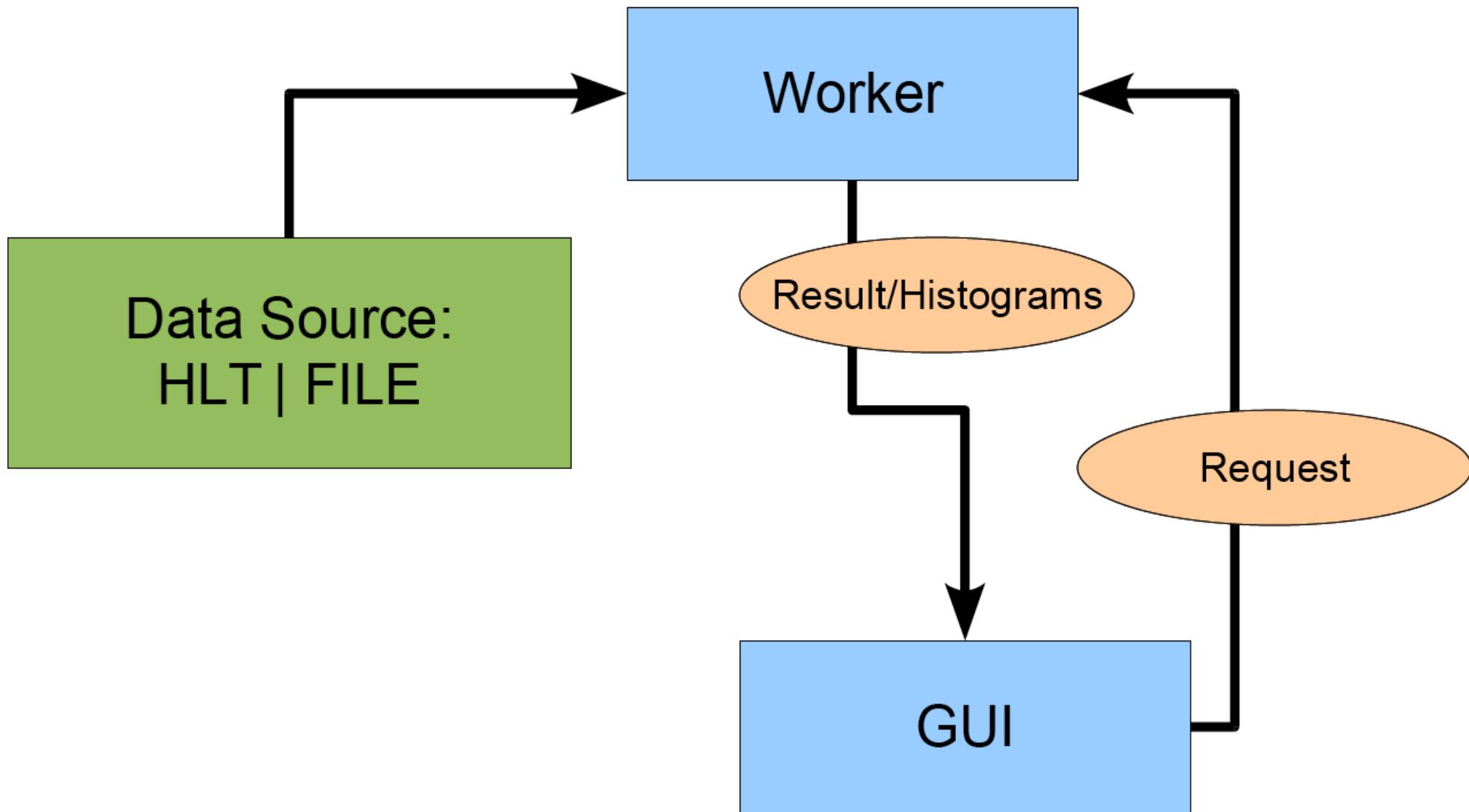
HLT TRD Test Beam 2007



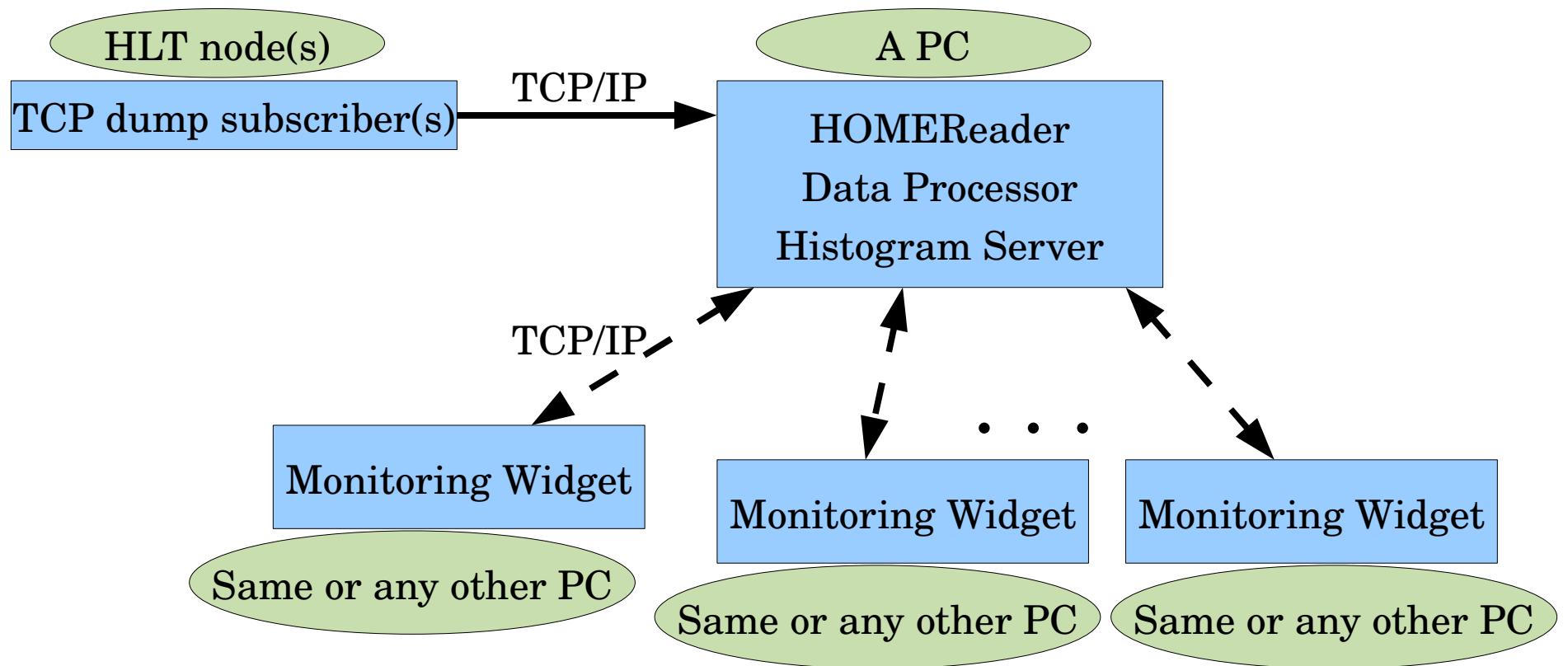
HLT-TRD

- Monitoring with HLT
 - What to monitor?
 - Fixed and flexible monitoring menus possible
 - How to monitor?
 - Request processing (receive & analyze worker process)
 - TH1/TH2/TProfile output production
 - Graphical User Interface (display & manipulate process)
- Feature++
 - Generic data (both raw and reconstructed) visualization for off-line produced files

Monitoring Scheme

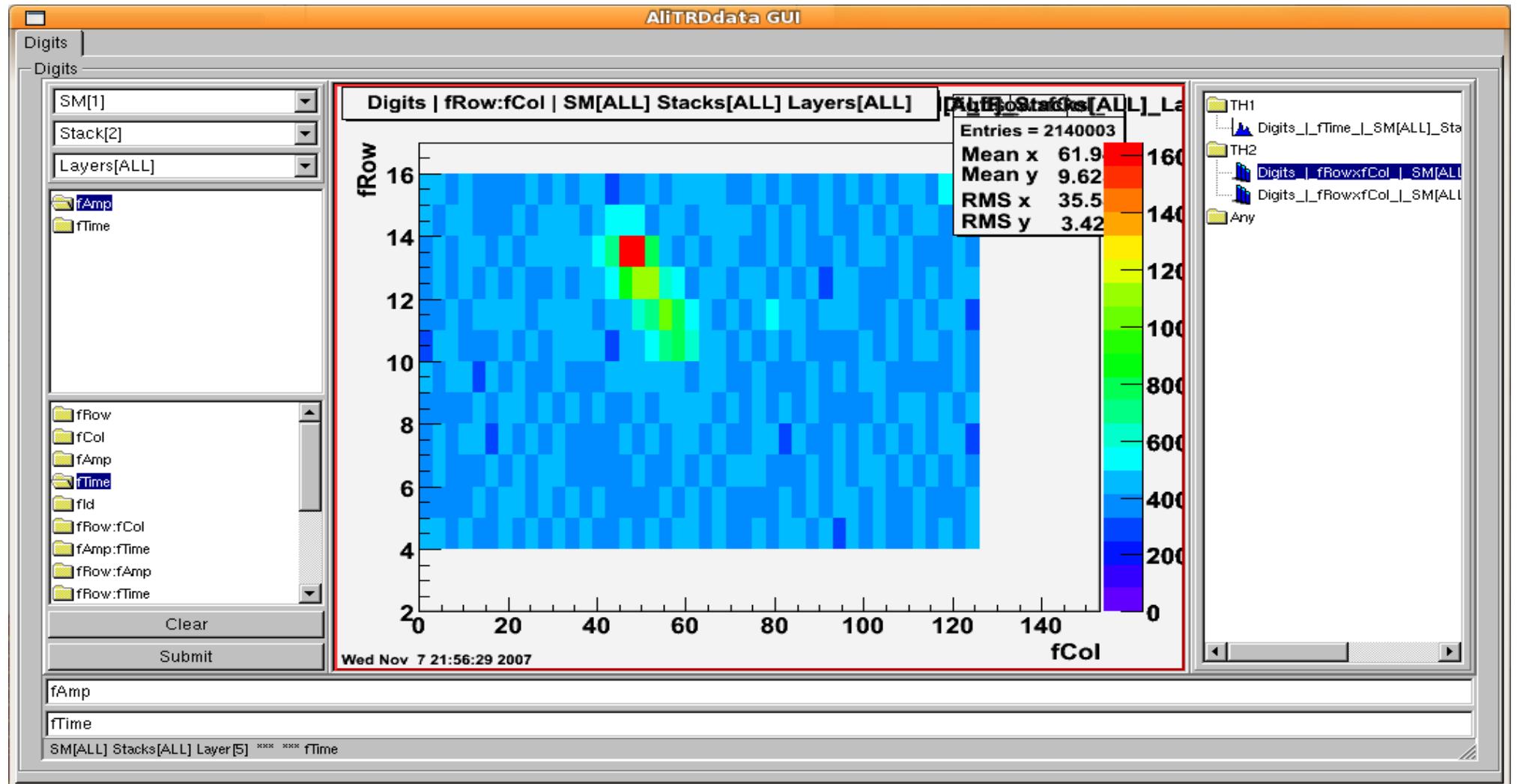


Monitoring

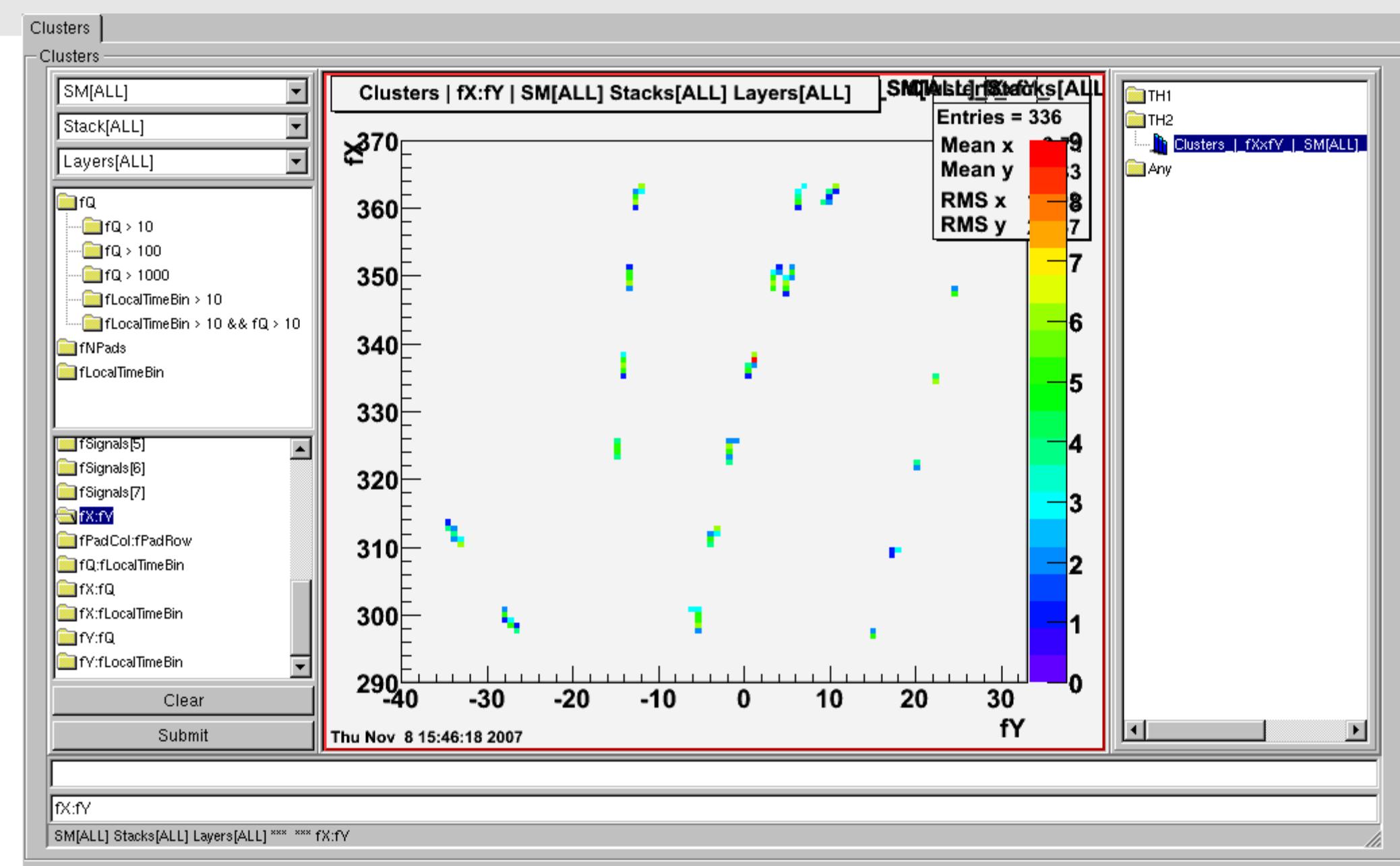


- Widget requests a histogram (pre-defined or via TTree::Draw selection)
- Utilizing a dedicated request structure/class
- Server(worker) processes the data from TCP dump subscriber(s)
- While processing the connection is closed – no wait/blocking on the widget side
- The worker sends the histogram back to the widget

Screen shots from TB



Screen shots from TB



Status Summary I

- Various monitors in place
 - Digits, clusters, tracks, calibration
 - Currently updated for May cosmic time
- Worker <-> GUI process pair
 - GUI reads input from HLT - worker
 - Worker can read/process off-line produced files
 - Execution of arbitrary processing function foreseen – plug-in mode for external user analysis
 - Ready for AliEVE

Status summary II

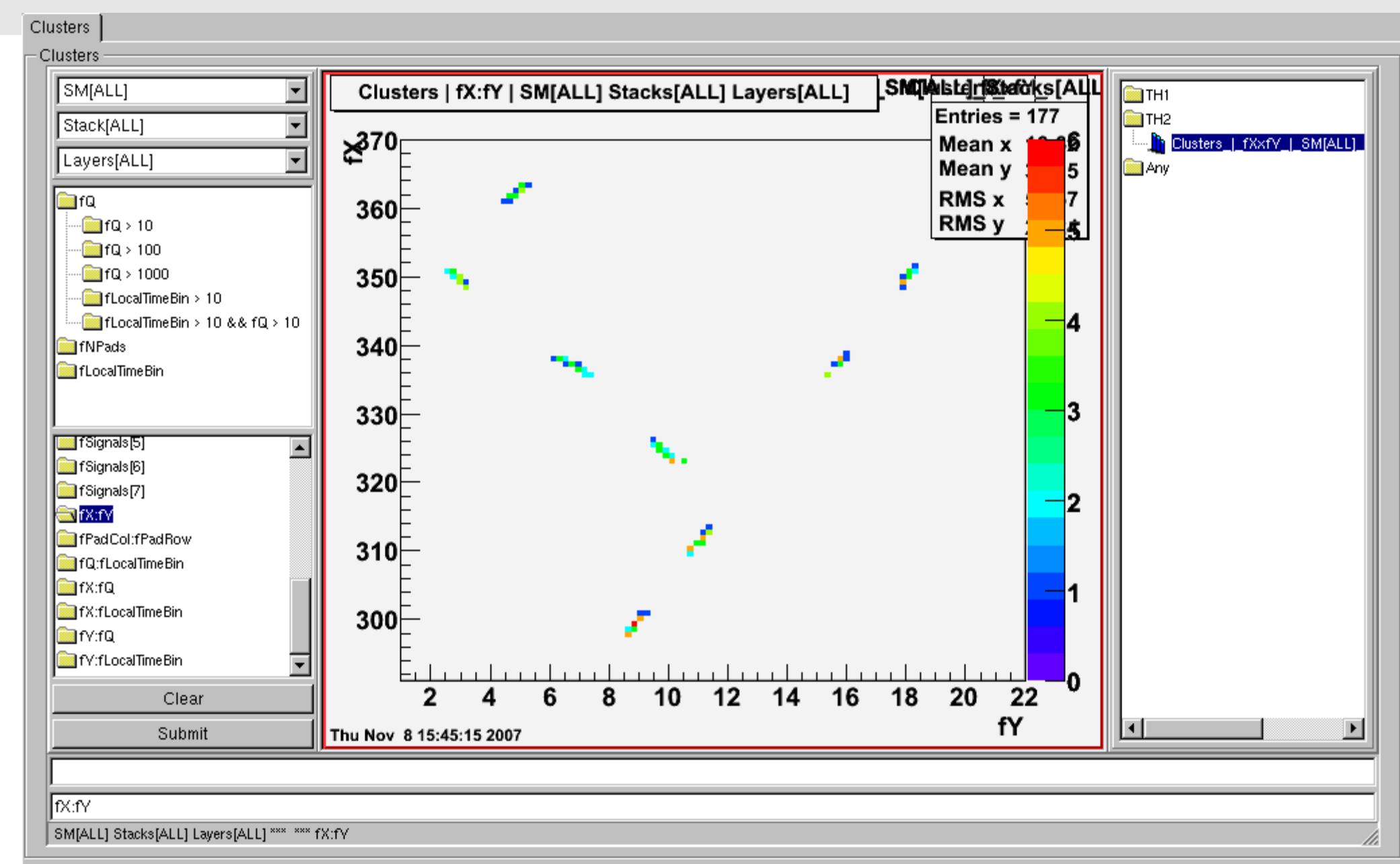
- GUI

- Define variable selection(s), cut(s) and submit a request
- Display & manipulate (+save etc) drawable objects
- Save & Load state
 - Simple config file – easily editable text file
 - Possible to define extra functionality (selections + cuts and more...)
- Different operation modes (EbyE or accumulate ...)

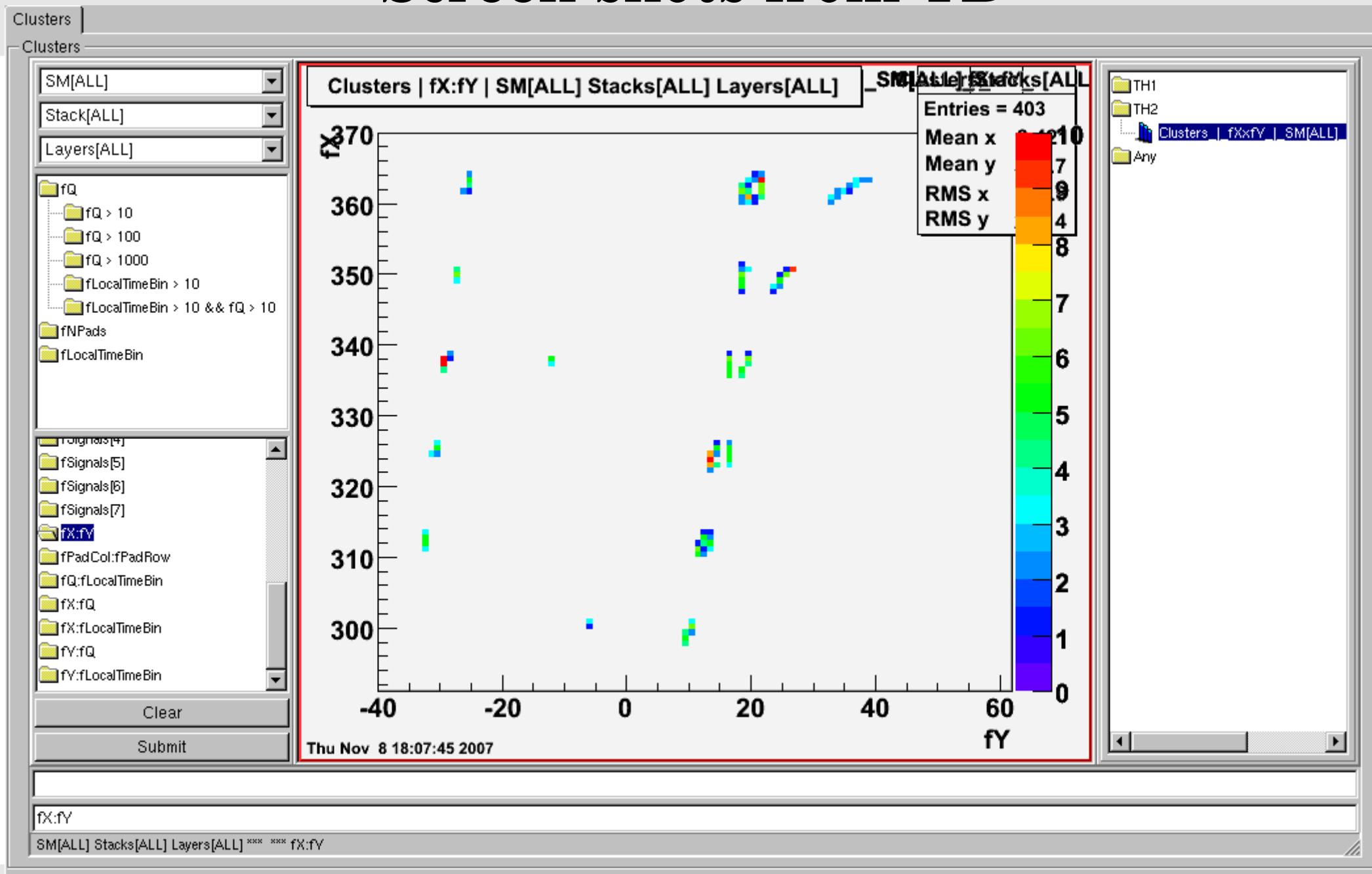
On track for May Cosmic Time....

Bonus slides

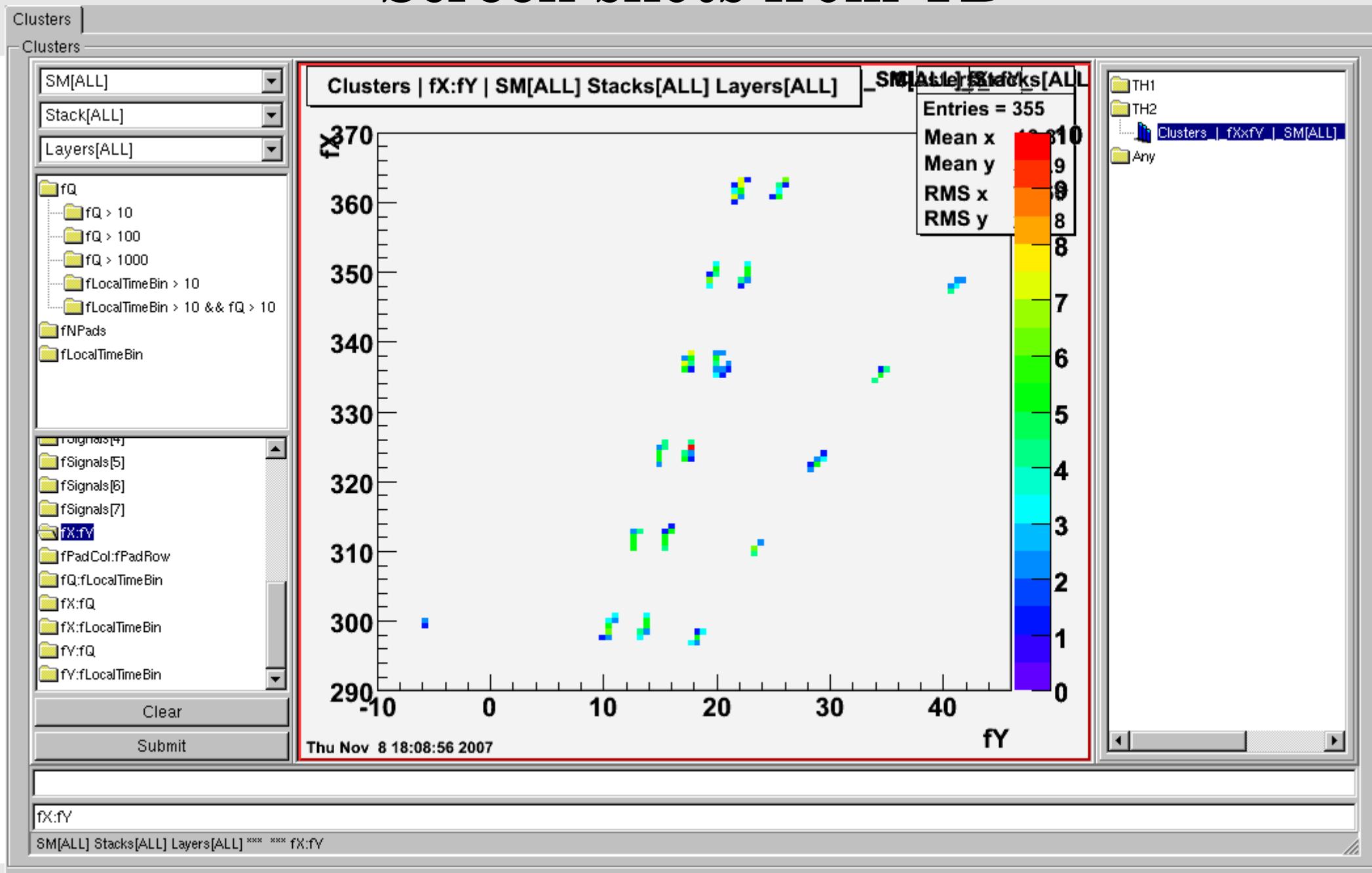
Screen shots from TB



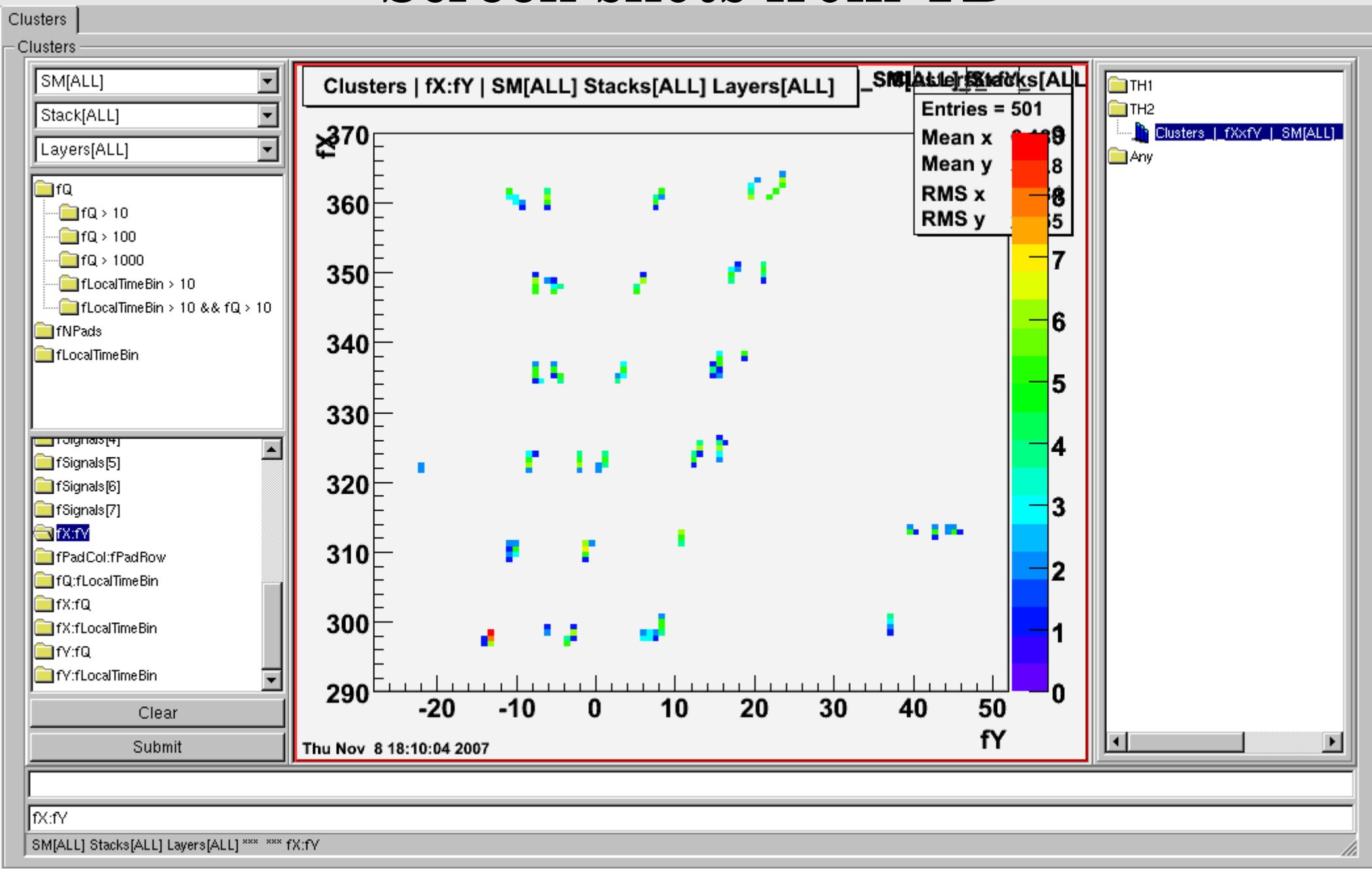
Screen shots from TB



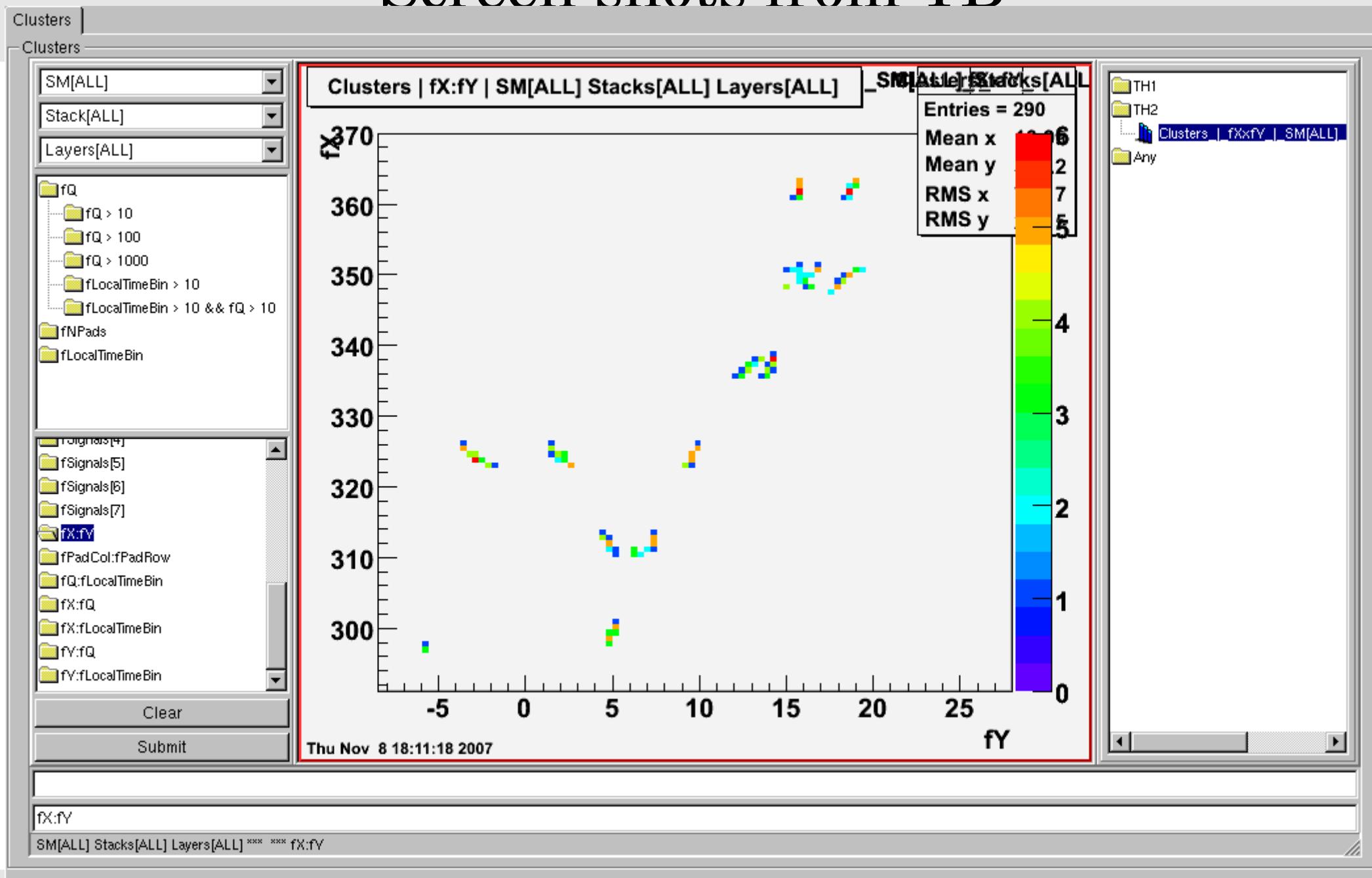
Screen shots from TB



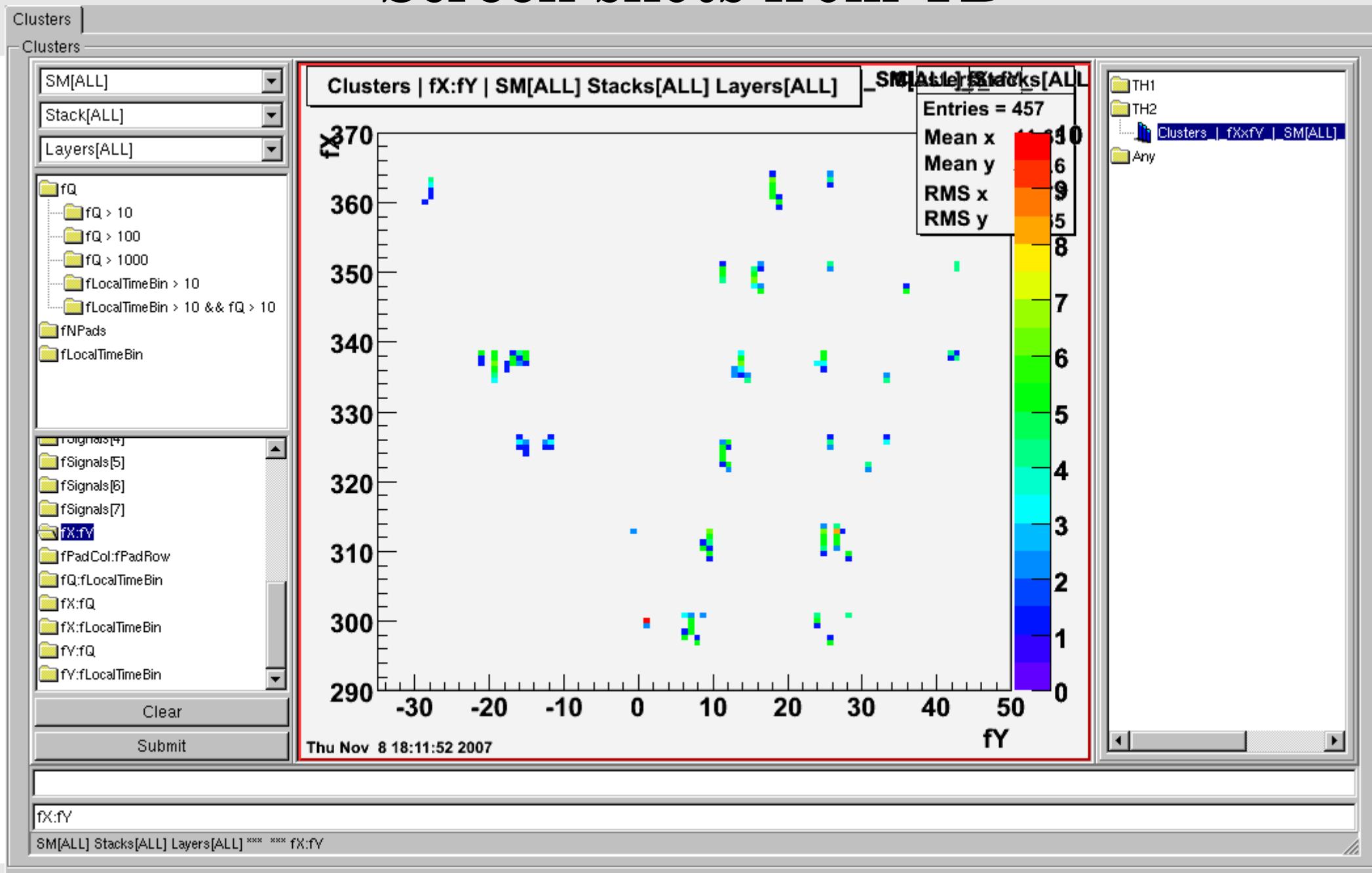
Screen shots from TB



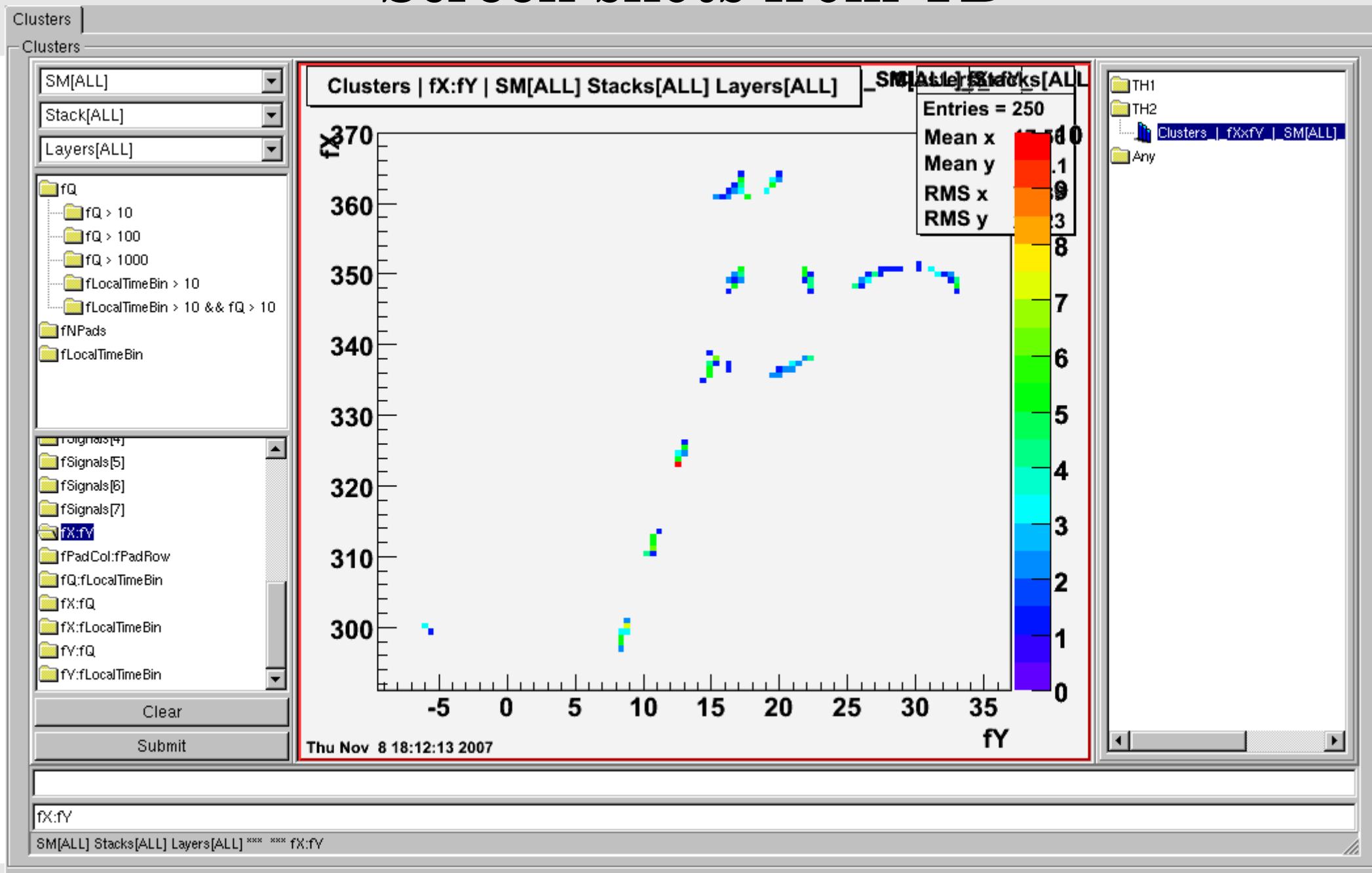
Screen shots from TB



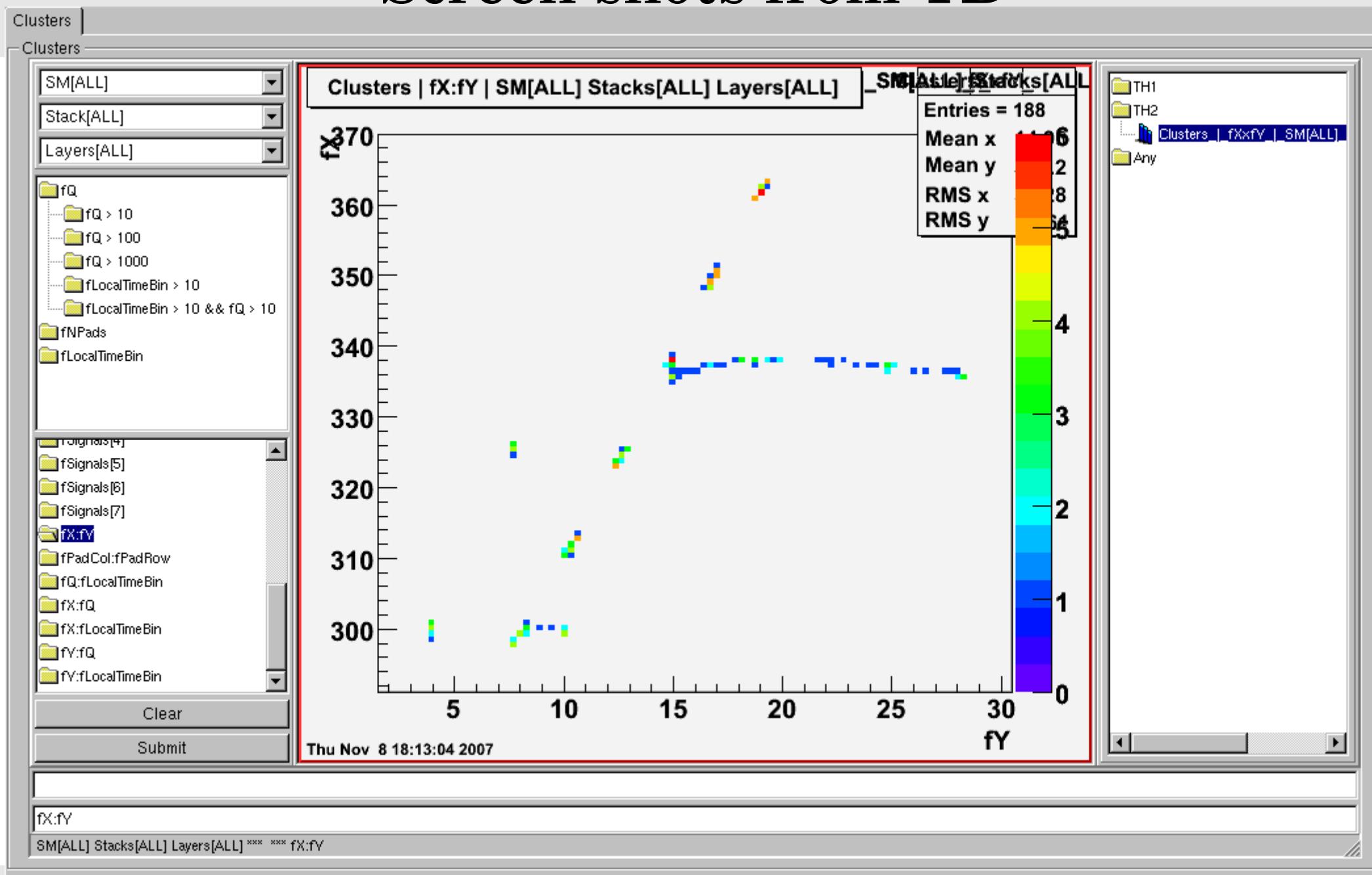
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