HLTP

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1.1 Introduction HLTP

- HLT specific rate information
- GUI
- By clicking reach information
- Color signaling
- Receive information from OH
- Present different numbers and types of signatures
- Produce history graphs for parameters

- HLTP is a plug-in of OHP

1.2 Introduction Systems

HLT monitoring produces

No. of signatures used, histogram for each PT

Sums over all PTs

No. of signatures used

Performs algorithms:

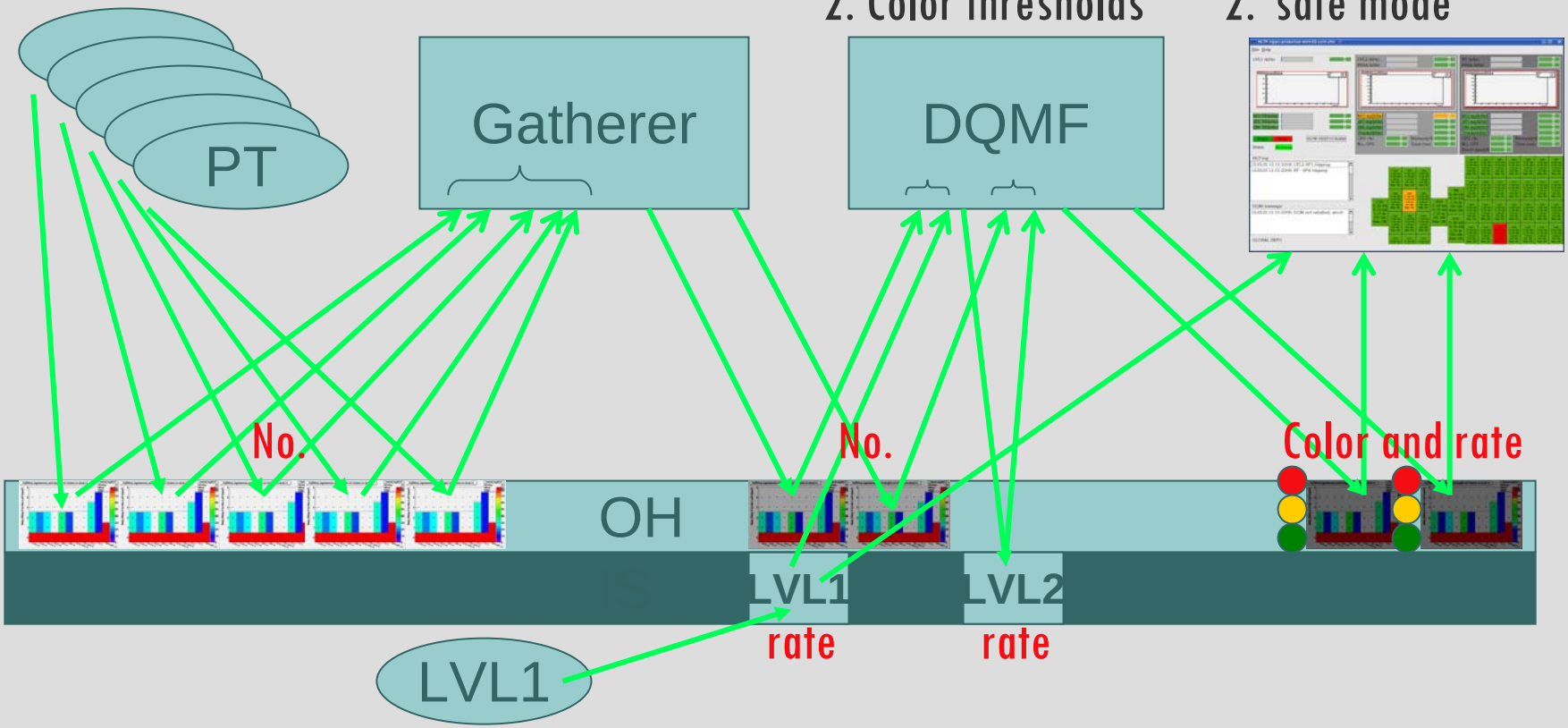
1. LVL2 and EF rates

2. Color thresholds

Presents:

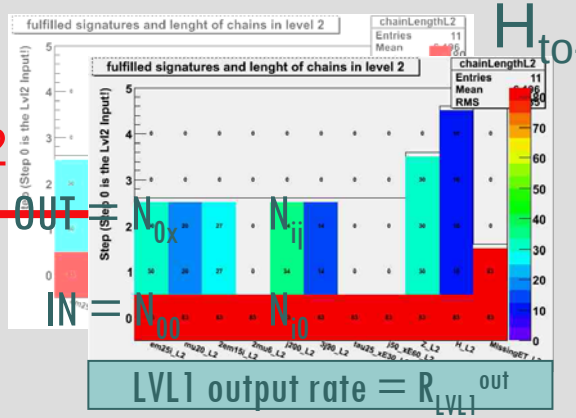
1. Rates from ROOT file

2. "safe mode"



1.3 Introduction DQMF Algorithm

HLT after Gatherer on OH, LVL1 on IS



H_{to-1}

H_{to}

LVL2 OUT = N_{0x} N_{ij}

IN = N_{00} N_{i0}

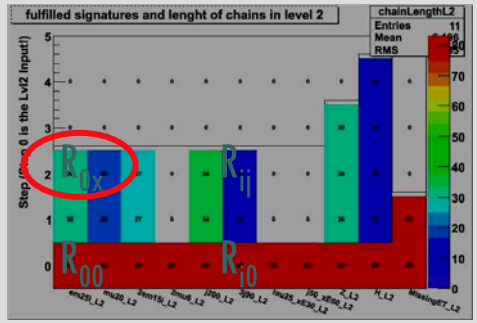
1)$\Delta(H_{to}-H_{to-1})$

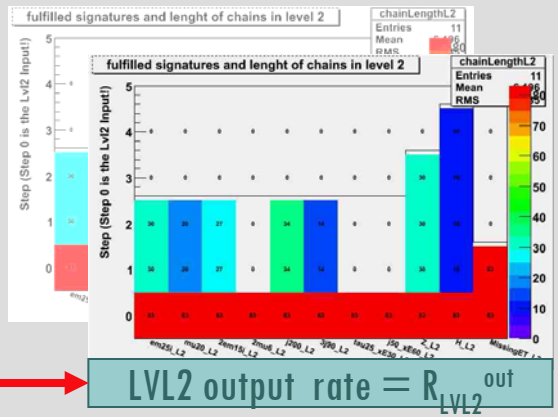
2)$N_{ij}/N_{oo}*R_{LVL1}^{out}$ ← IS

3)Perform algorithm for color

4)Fill a 2D histogram

to OH





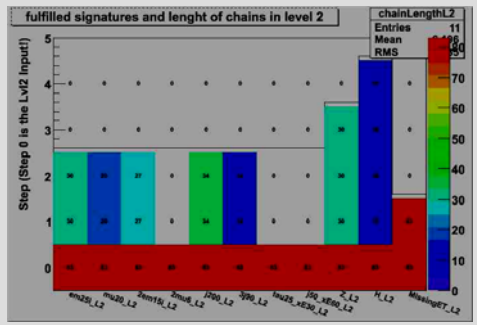
EF

1)$\Delta(H_{to}-H_{to-1})$

2)$N_{ij}/N_{oo}*R_{LVL2}^{out}$ ← IS

3)Perform algorithm for color

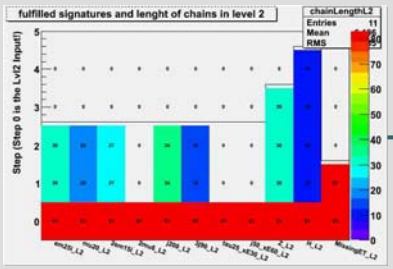
4)Fill a 2D histogram



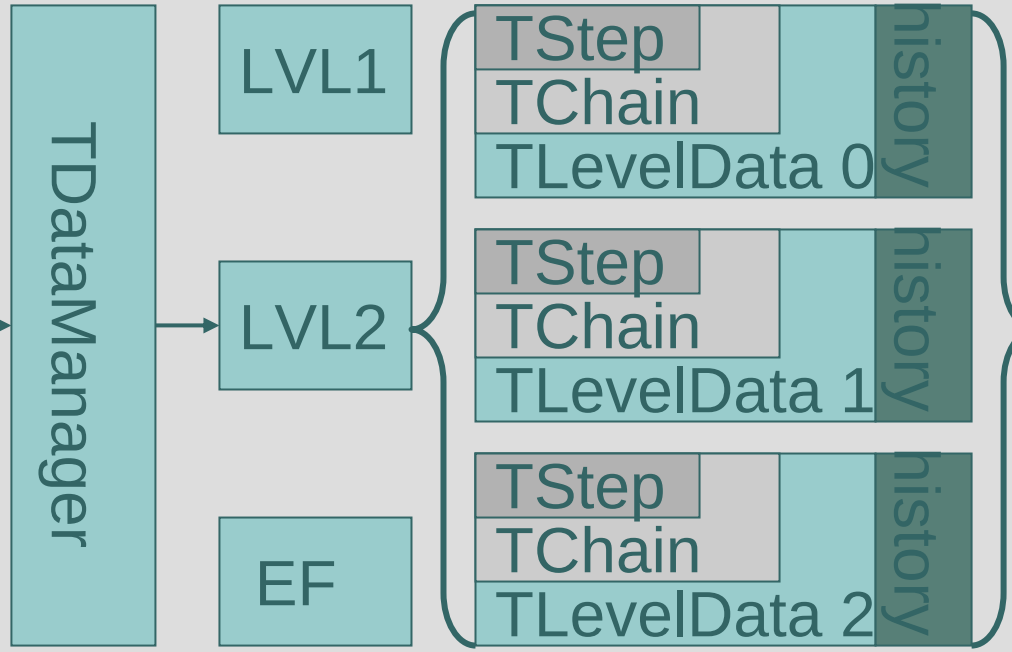
+ color information in every other bin

C.Risler

2.1 Implementation Structure



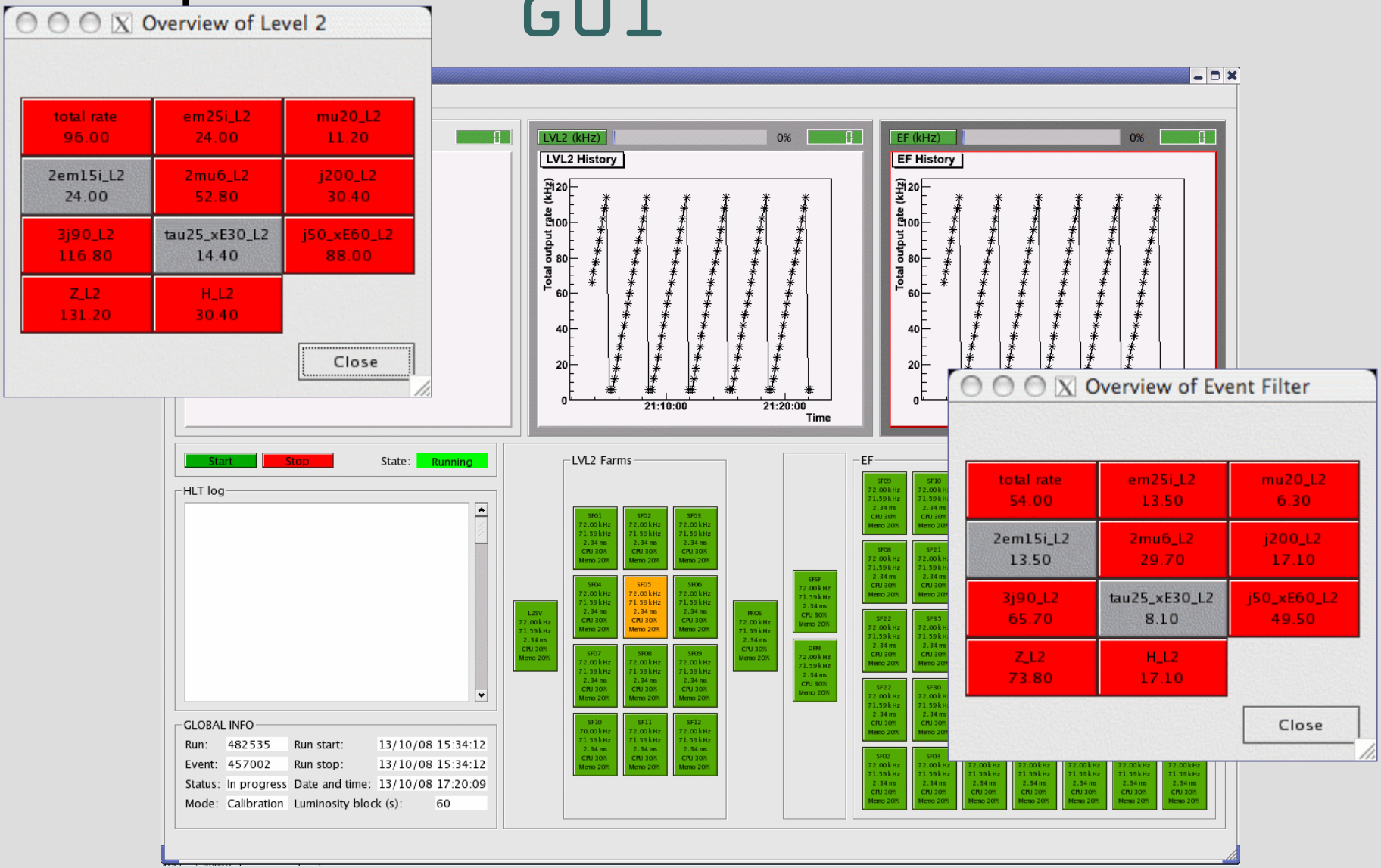
TH2F histogram from DQMF



Special thanks to K.Rosbach

- Configuration file
- Receive histograms at the same time, sort
- Put data into structure
- Create history
- Present flexible lists, tables and graphs

2.2 Implementation GUI

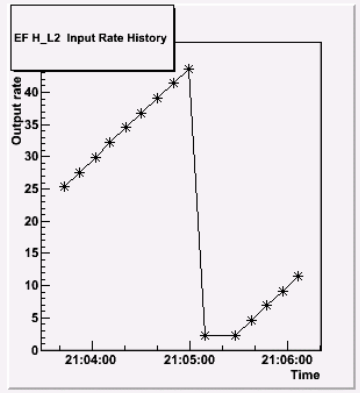


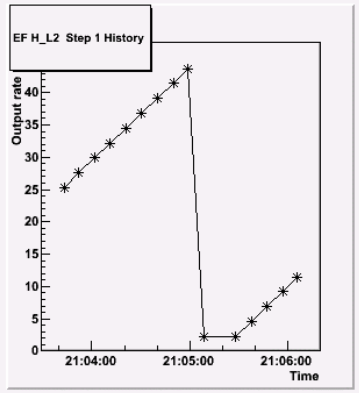
Overview of Event Filter

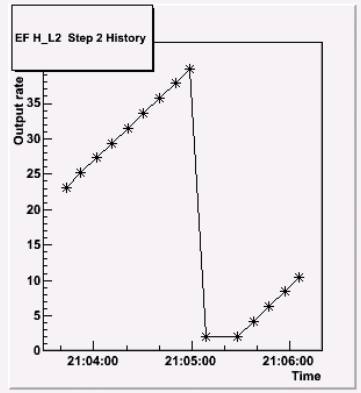
total rate 54.00	em25i_L2 13.50	mu20_L2 6.30
2em15i_L2 13.50	2mu6_L2 29.70	j200_L2 17.10
3j90_L2 65.70	tau25_xE30_L2 8.10	j50_xE60_L2 49.50
Z_L2 73.80	H_L2 17.10	

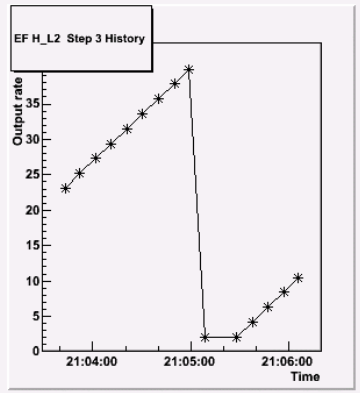
Close

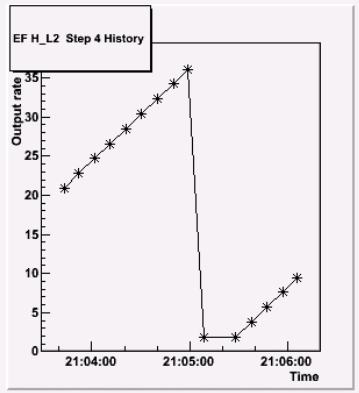
Steps of EF H_L2





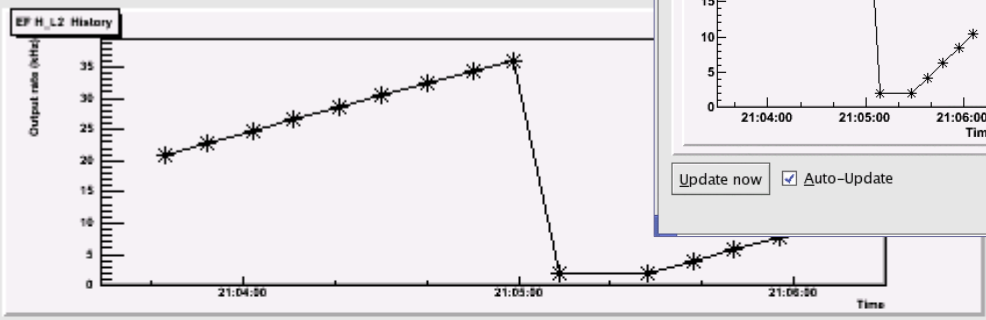






Update now | Auto-Update | Close

Details EF H_L2



	1	2
1	Input Rate	11.500
2	Step 1	11.500
3	Step 2	10.500
4	Step 3	10.500
5	Step 4	9.500

Show Step History | Close

2.3 Implementation

- First time tested in April technical run with HLT 12.0.6

(in DQMF adjustments by C.Risler)

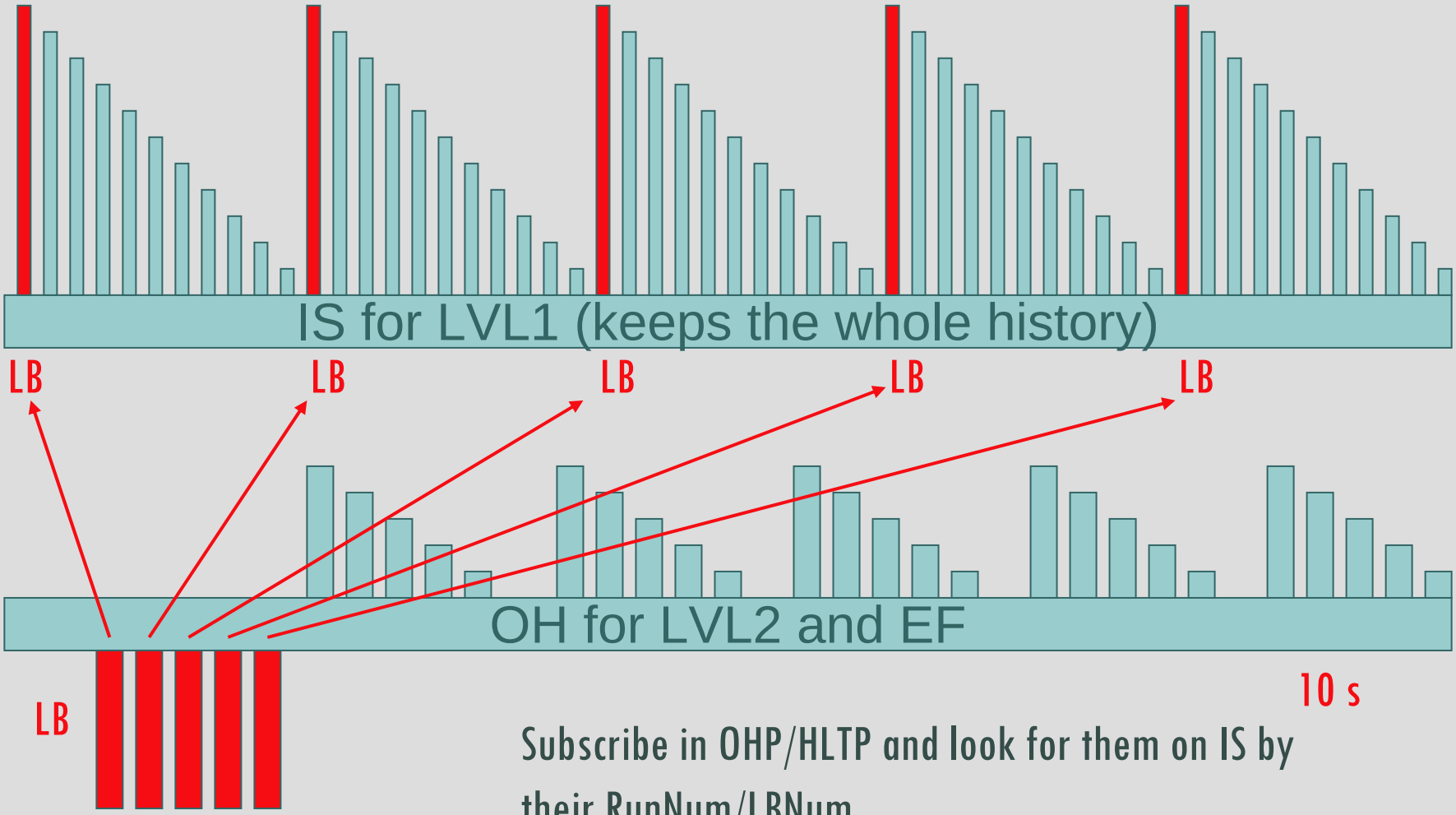
- ROOT/Qt bug-fixes (change graphs)
- Preparing for CVS (detach from OHP)

- Possible reuse of HLTP with DQMF for physics monitoring (slices)

3.1 Next Steps IS and Monitoring

- Monitoring:
  - Raw, Pre-scale, Forced Accept
  - Slices
- IS:
  - LVL1
  - LB synchronization
  - Farm information
  - General information

3.2 Next Steps
Luminosity Block



Subscribe in OHP/HLTP and look for them on IS by their RunNum/LBNum

4. Summary

- Major functionalities implemented (flexible list, history graph)
- Decision about graph (ROOT or Qt)
- HLTP tested and used (mostly in April technical run)
- Ready for further steps (LB, LVL1)
- Possible reuse