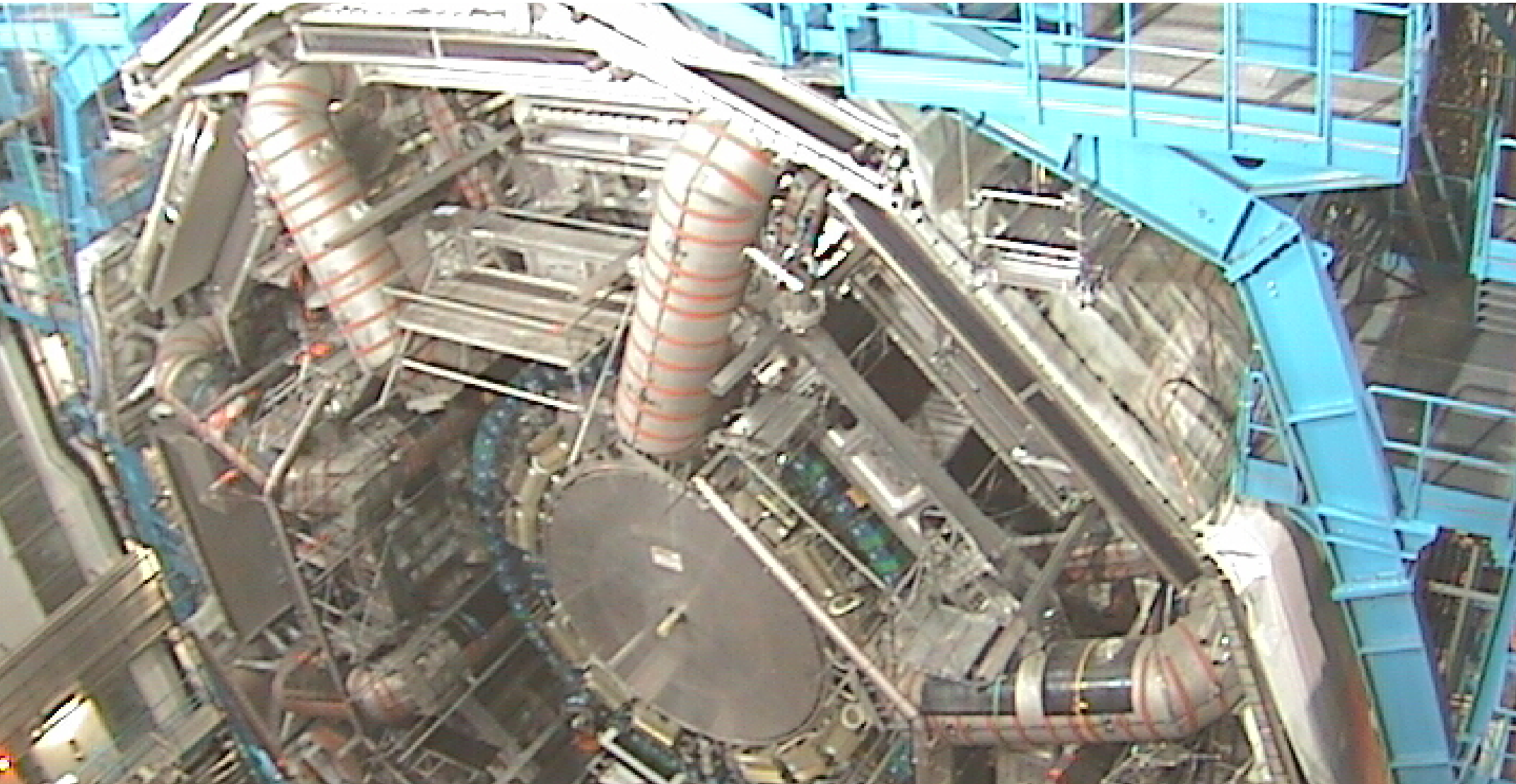


HLT Prezenter

- Proposal for GUI-



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DESY Zeuthen
13. 10. 2006.

OVERVIEW

- INTRODUCTION
 - ATLAS software
 - Trigger
- ATHENA
 - TrigSteer
 - Aspects of Monitoring
- TDAQ
 - Monitoring software
 - OHP
- HLT Presenter
 - OHP and HLTpresenter
 - GUI
- Conclusion

1.1 INTRODUCTION - ATLAS SOFTWARE

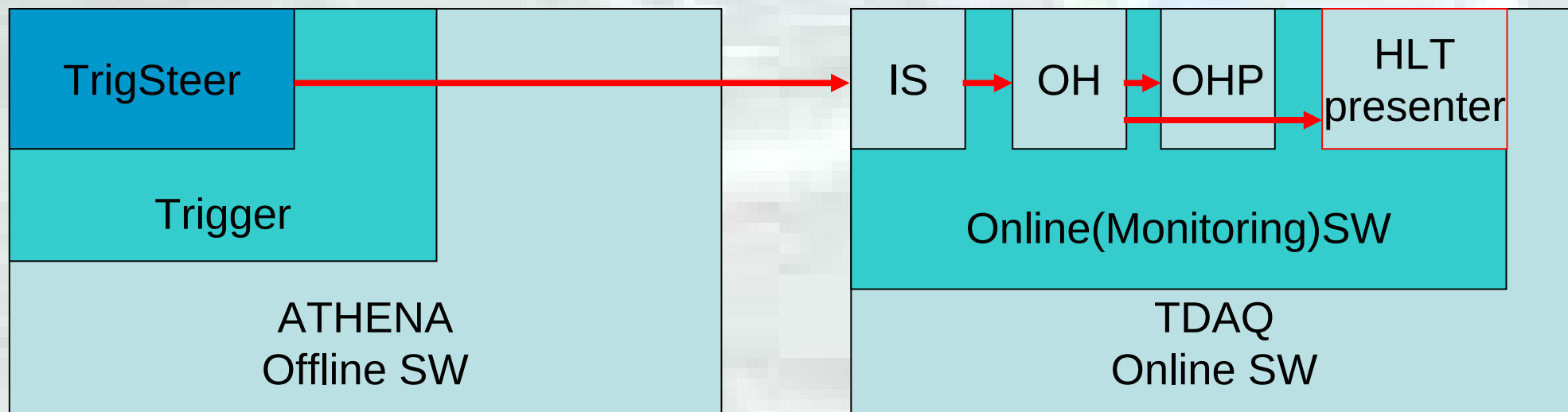
ATHENA

ATHENA framework
OFFLINE software
"quasi online"
Athena 12.0.3

TDAQ

TDAQ framework
ONLINE software

TDAQ-01-06-01



1.2 TRIGGER

LVL1(**hardware** based system):

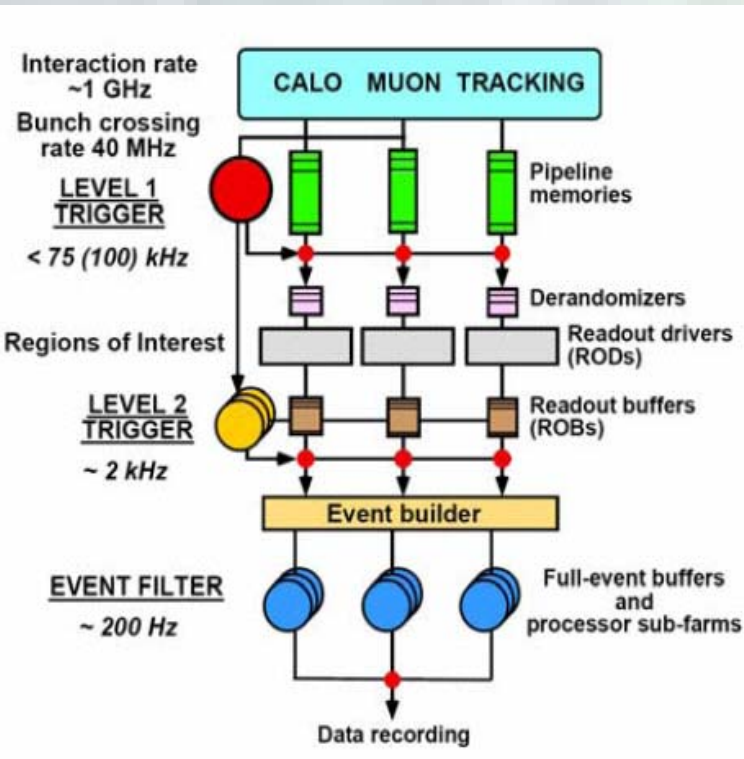
- receives info from calo and muon
- identifies RoI
- keep rate 75 kHz -> **MONITOR**

LVL2 (**software** based system):

- high rejection rate(early rejection)
- fast algorithm (10 ms processing)
- keep rate 1 kHz -> **MONITOR**

EF (**software** based system):

- high precision algorithm (slow -1s)
- keep rate 100 Hz -> **MONITOR**



H
L
T

2.1 ATHENA and TrigSteer

TE = Hypothesis that has to be confirmed or rejected

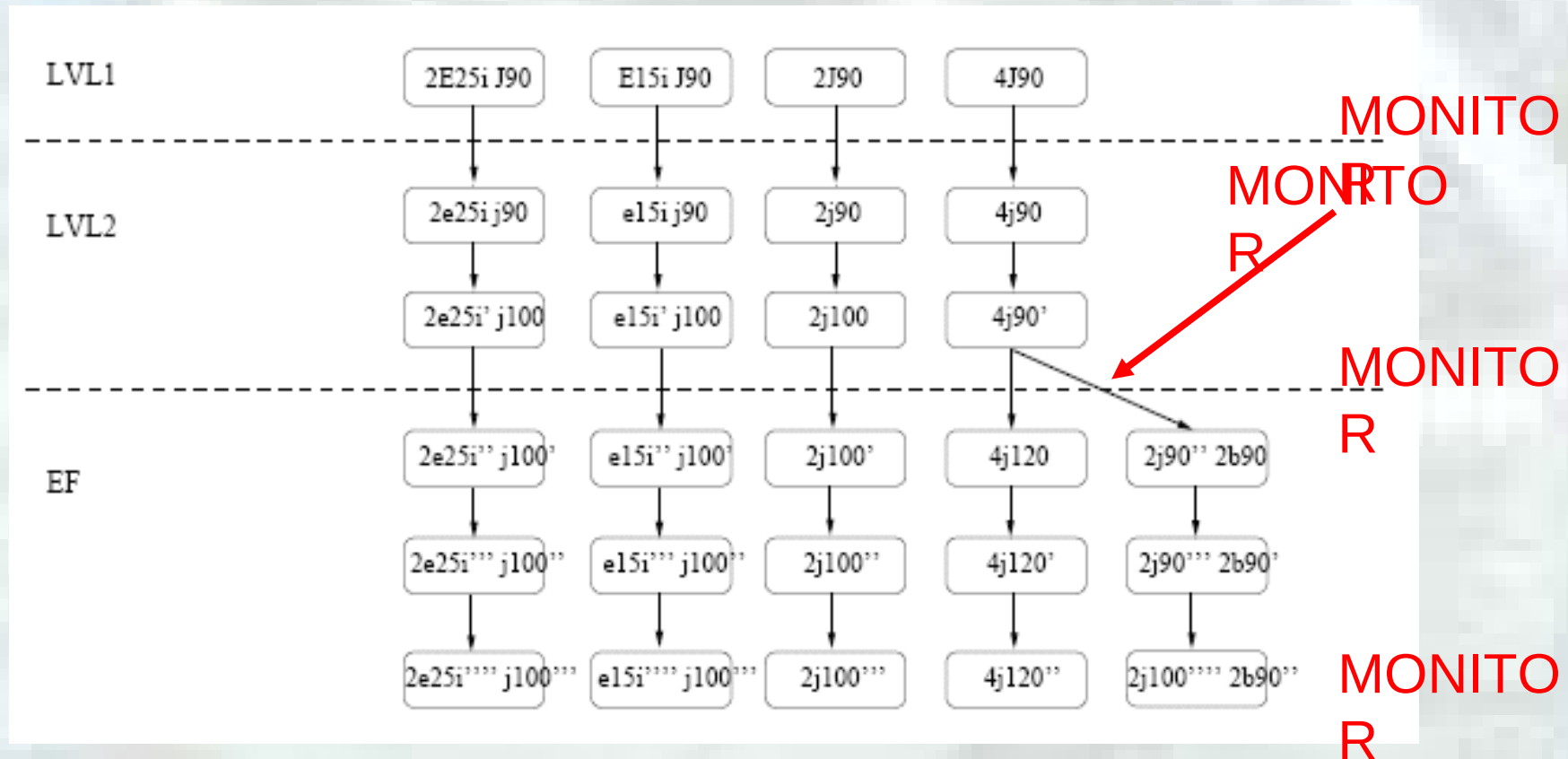
SIGNATURE = Logical combination of TE

SEQUENCE = Performs an action for the next step

Athena 12.0.3

Trigger 2.0.3

TrigSteer-00-00-15

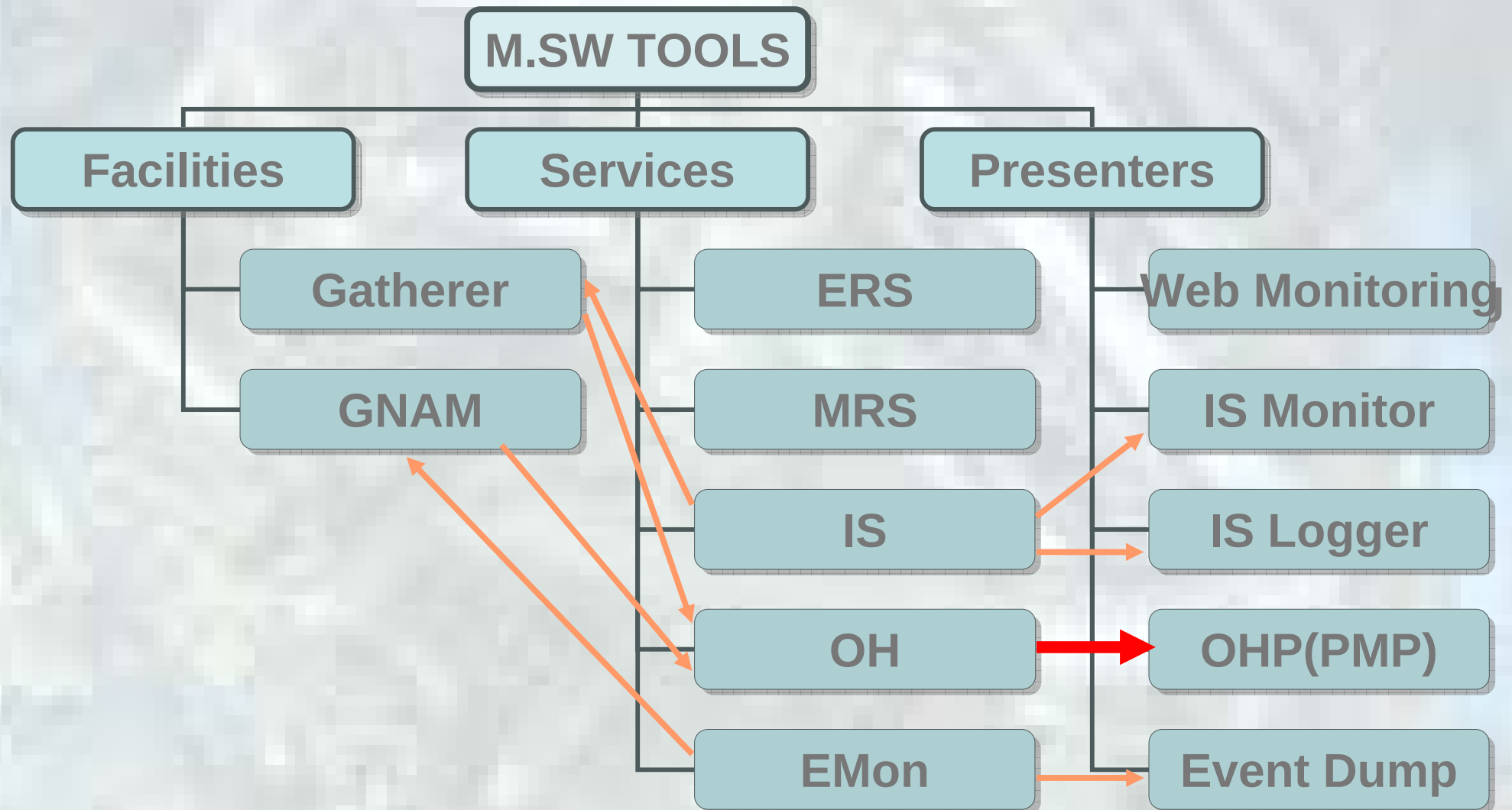


2.2 WHAT TO MONITOR

- LVL1 trigger item rates (sum and mu, jet, em)
 - LVL2 signature rates (sum and mu, jet, em)
 - EF signature rates (sum and mu, jet, em) !
 - algorithm performance – rate and time
 - tracks rate per level
 - CPU usage (sum per level and per sub-farms and nods)
 - event size
- > Should be **FLEXIBLE, TRACEABLE** and **±INTERACTIVE**

3.1 TDAQ & Monitoring Software

tdaq-01-06-01



3.2 Online Histogram Presenter

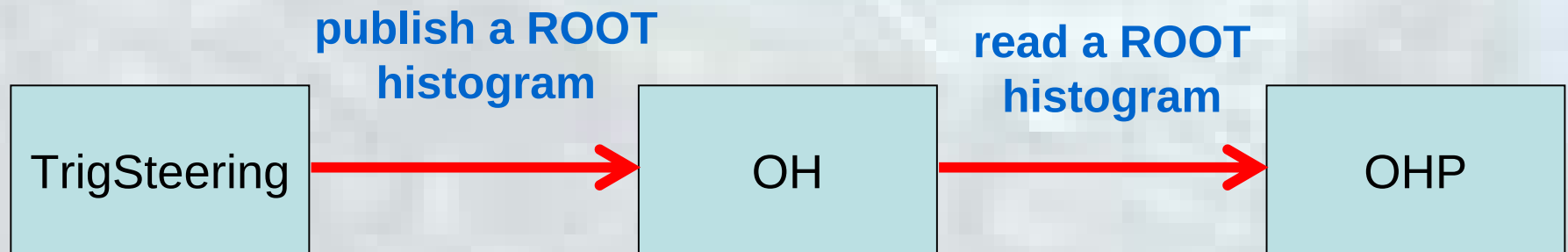
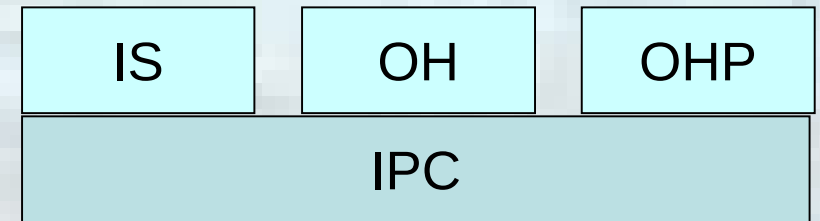
By suggestion of S.Kolos

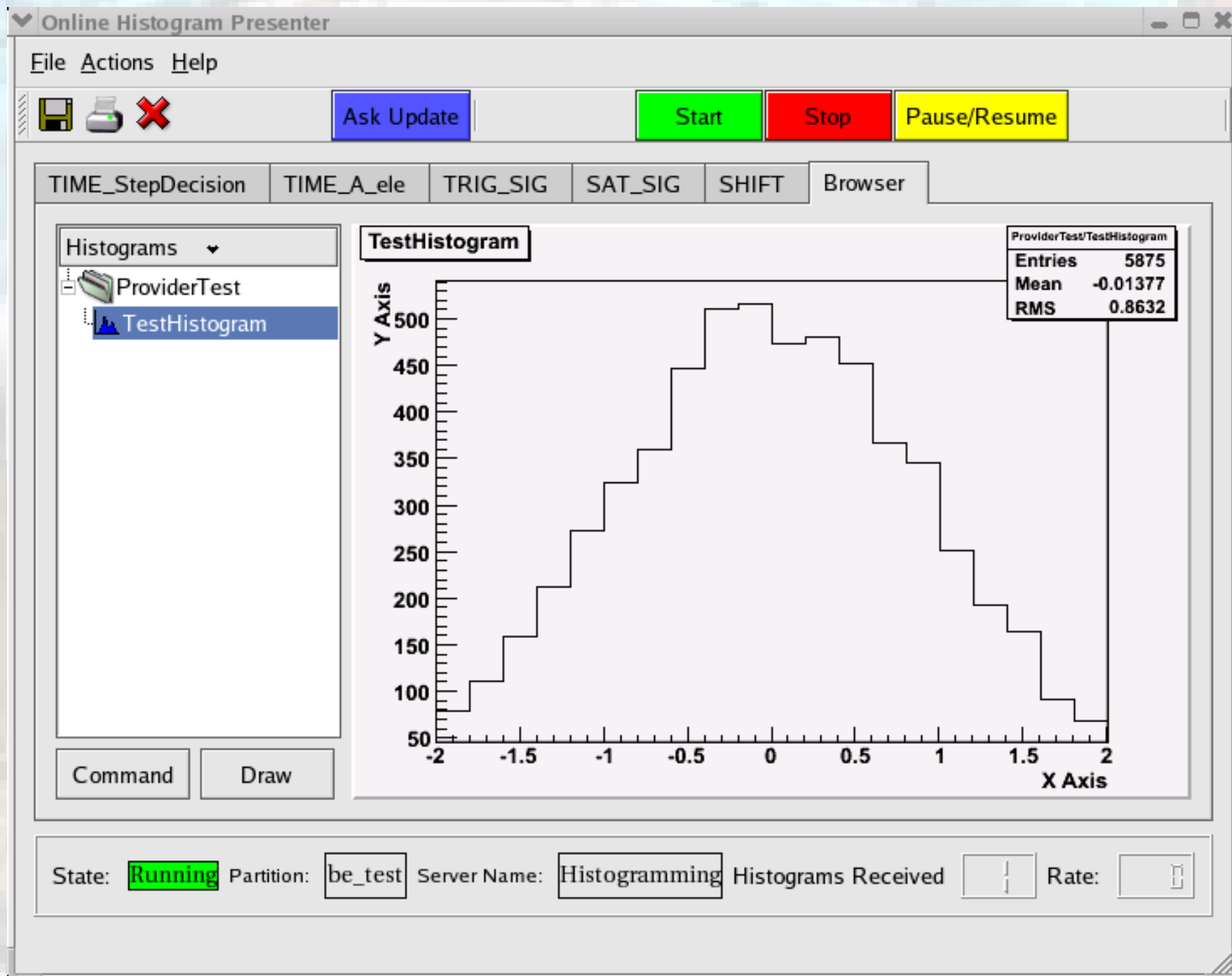
tdaq-01-06-01

Author: A.Dotti

ohp-01-01-06

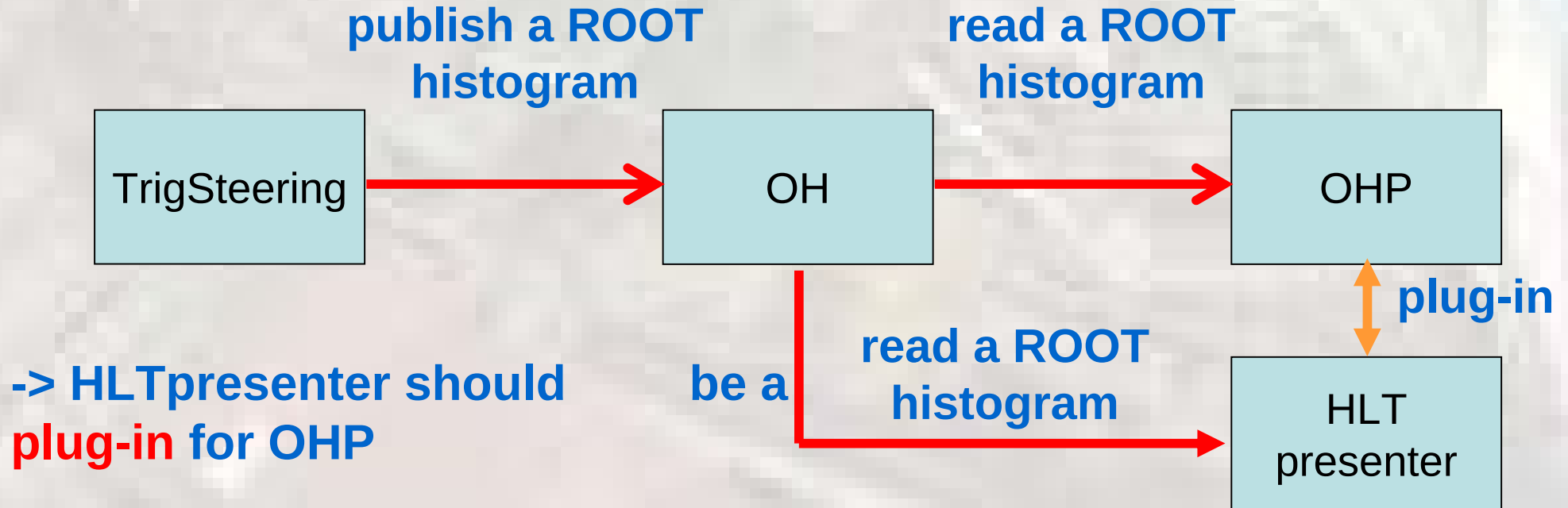
- Edit default.conf
- Create ipc_server partition
- Start is_server
- Start ohp
- Provide histogram on oh





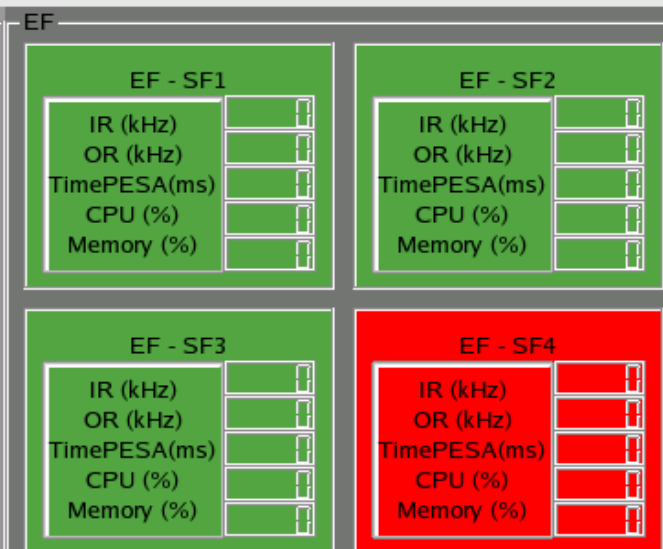
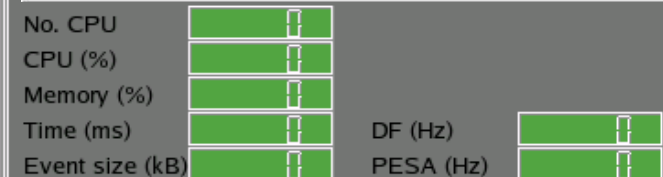
4.1 OHP and HLT presenter

- OHP is flexible
- OHP able to produce online **histograms**
- OHP unable to produce all requirements (**rates**)
- OHP will have plug-in system



4.2 HLTpresenter

- Should be a **plug-in** of OHP
- Should take **all info from OH**
- Monitor (rates, time spent per event and sub-farms for each level)
- Two modes (**SHIFT** and **EXPERT**)
- Easy for locating a problem
- Not to hide too much info from shift
- Use Qt for GUI (compatible with OHP, Qt 3.1)



- MUONS

[illegible]

5. CONCLUSION

- all info from OH (achieved agreement with HLT people)
- GUI of HLTpresenter answers the questions:
 - monitoring rates, time, subfarms
 - SHIFT and EXPERT mode
- HLTpresenter as a plug-in for OHP

-> **Discussion** on HLTpresenter GUI is welcome!