UPPSALA UNIVERSITET

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HISPEC/DESPEC
Electronics and Data Acquisition

- NUSTAR DAQ architecture
- Estimates of data rates, etc.
- AGATA EDAQ and rates
- AGATA ancillary detector interface

NUSTAR DAQ architecture

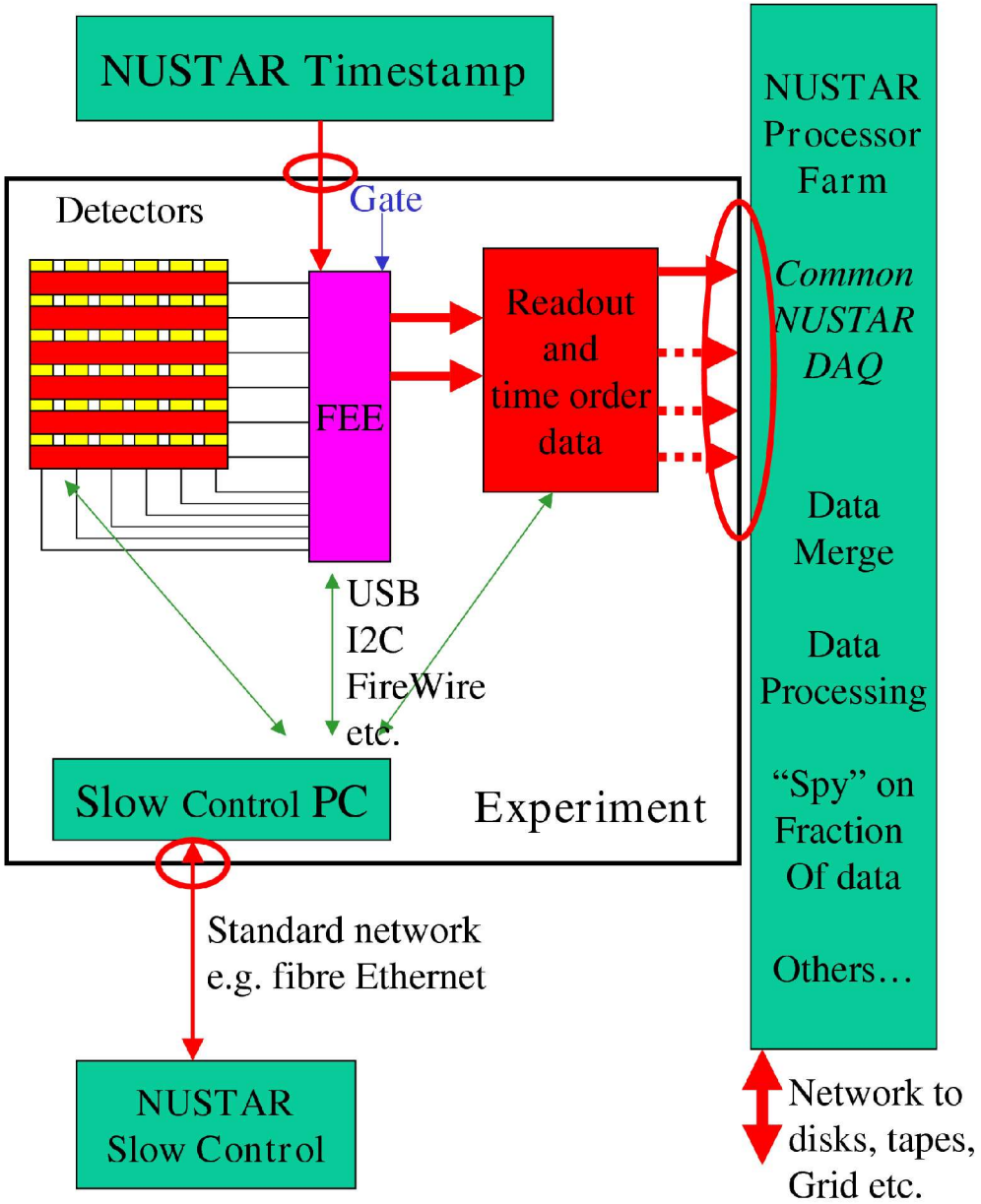

Fig 1- One experiment showing 3 standard interfaces to the NUSTAR Slow Control, Timestamp and DAQ

Slide by I. Lazarus

NUSTAR EDAQ

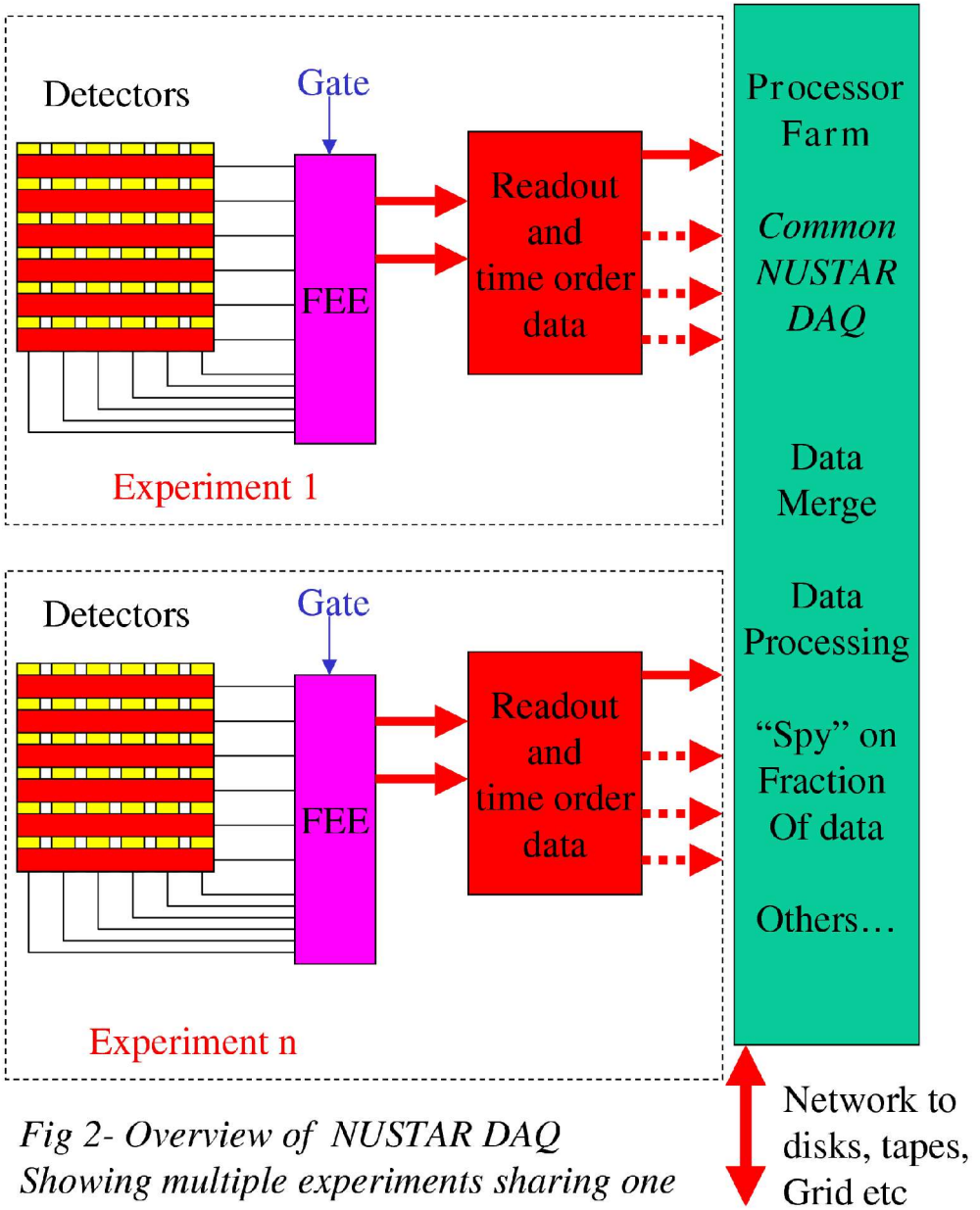

Fig 2- Overview of NUSTAR DAQ Showing multiple experiments sharing one Processor farm with resources allocated between experiments as required from pool

Slide by I. Lazarus

NUSTAR EDAQ

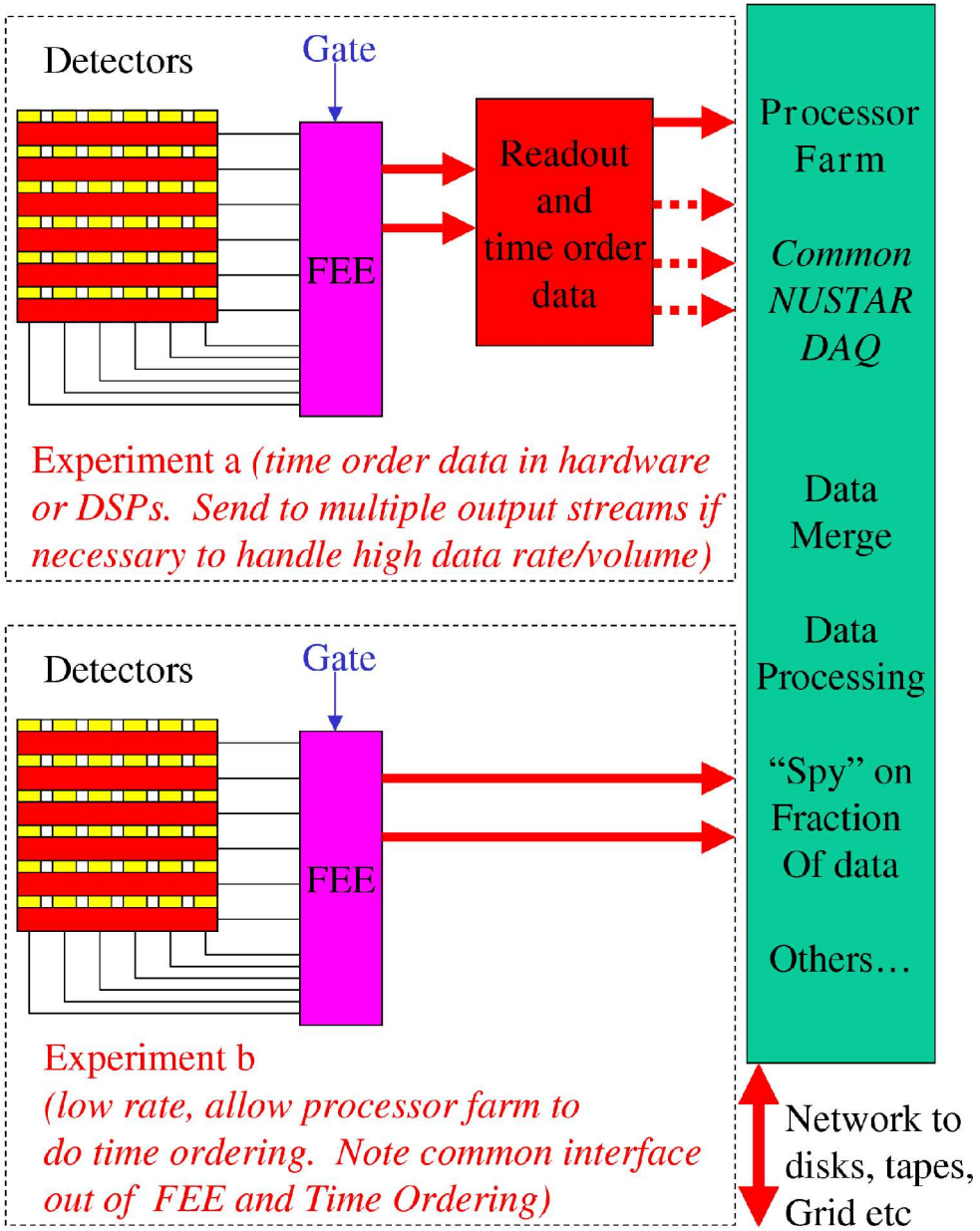

Fig 3- Showing optional bypassing of time ordering stage for low rate experiments.

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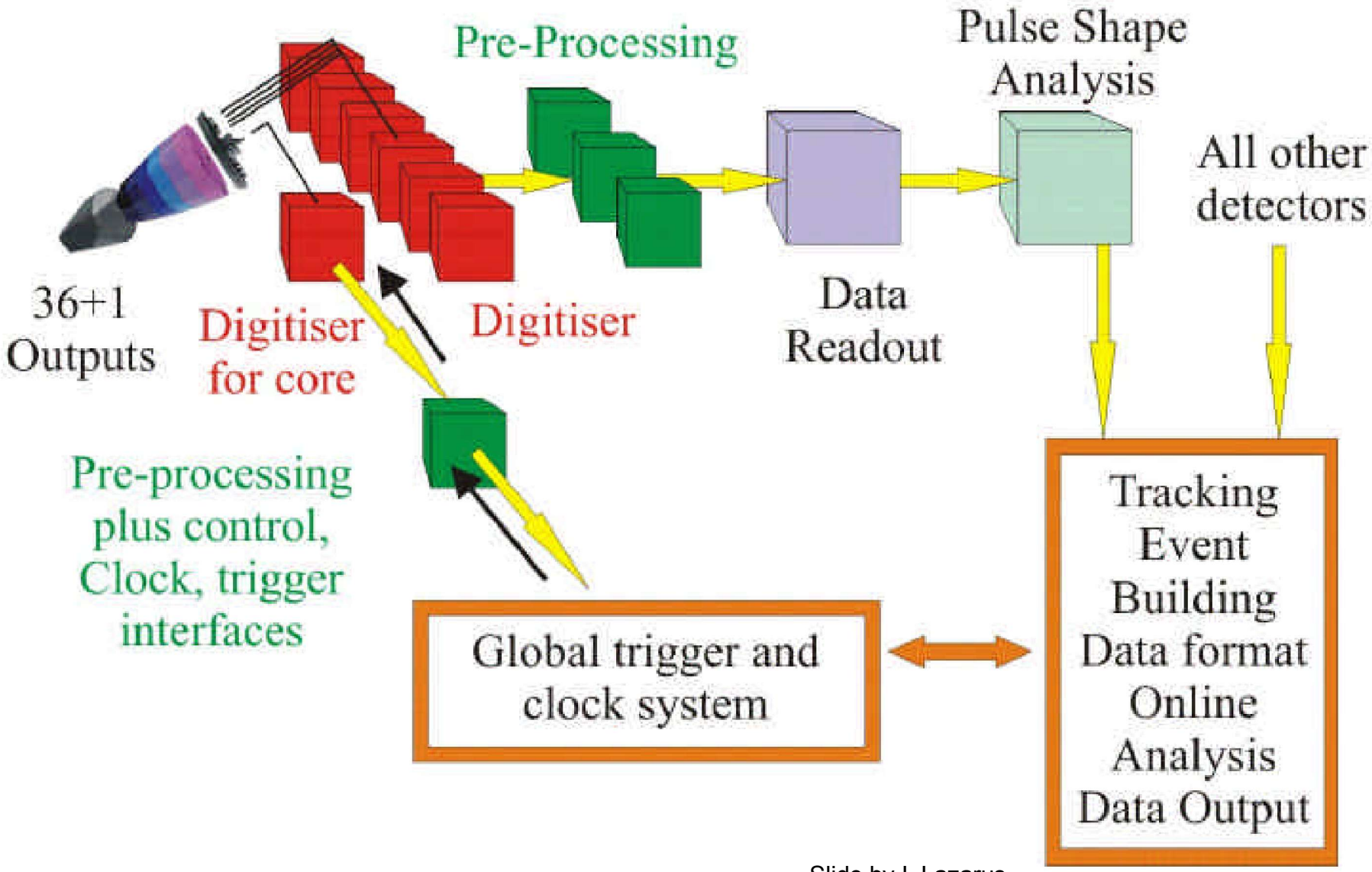
AGATA EDAQ

Schematic of the Digital Electronics and Data Acquisition System for AGATA



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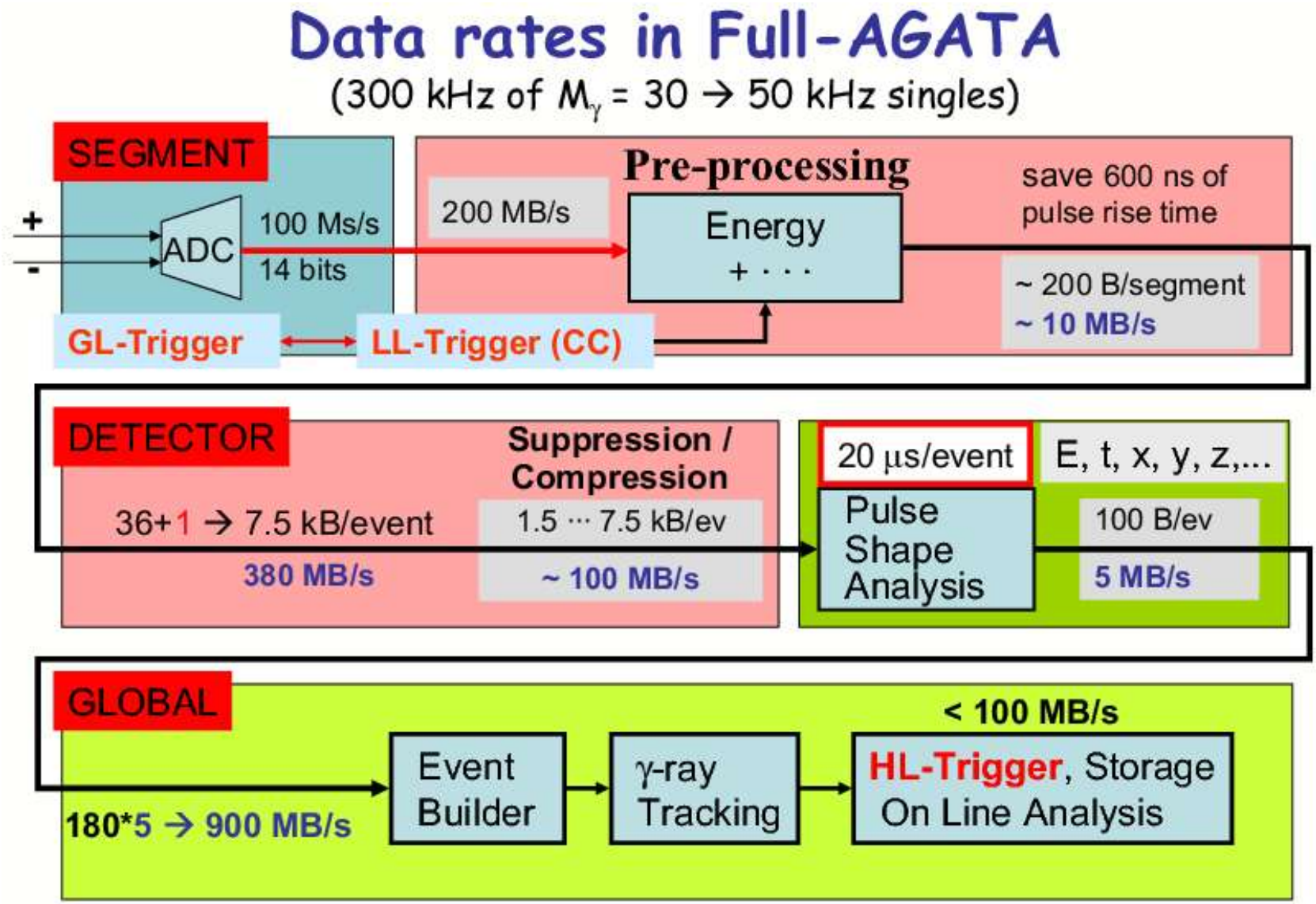
AGATA Data rates

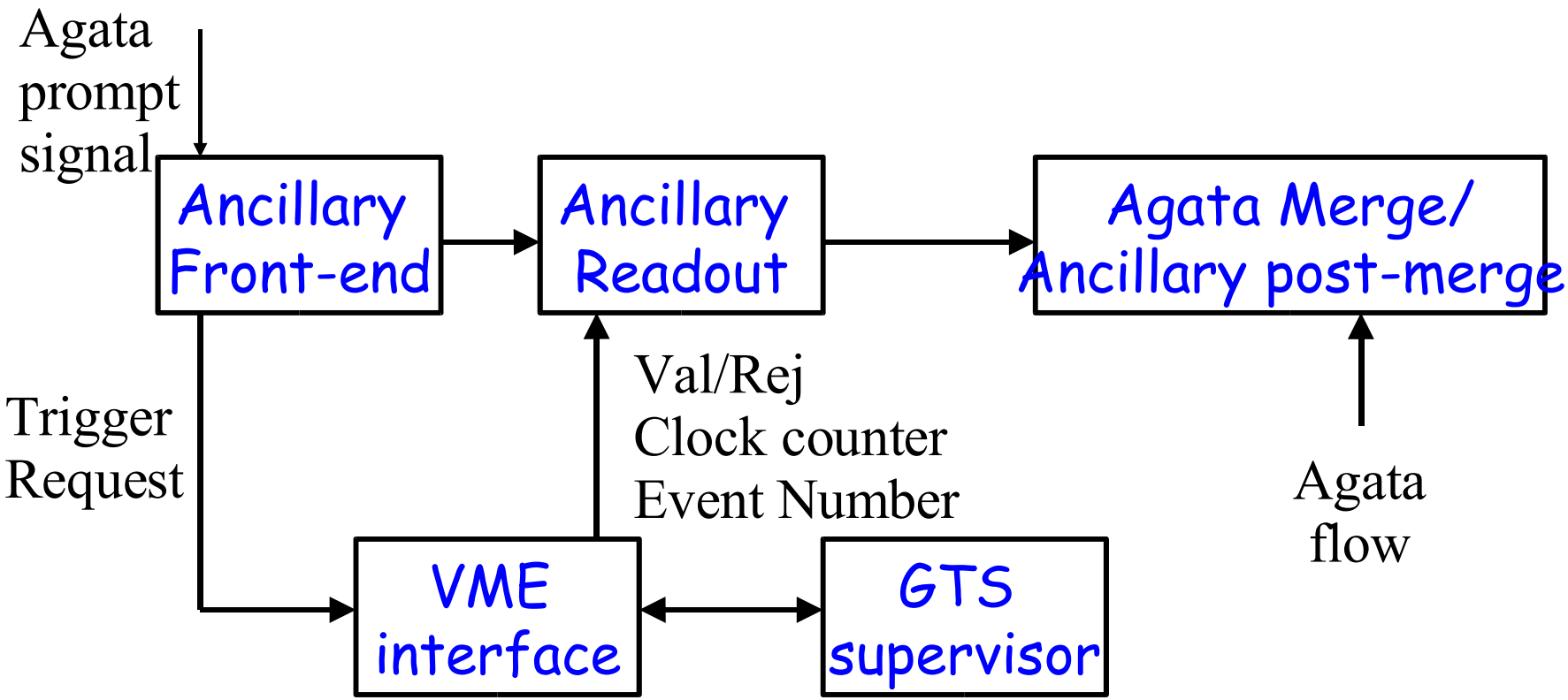


GL-Trigger to reduce event rate to whatever value PSA will be able to manage

Slide by D.Bazzacco

AGATA + ancillary detectors

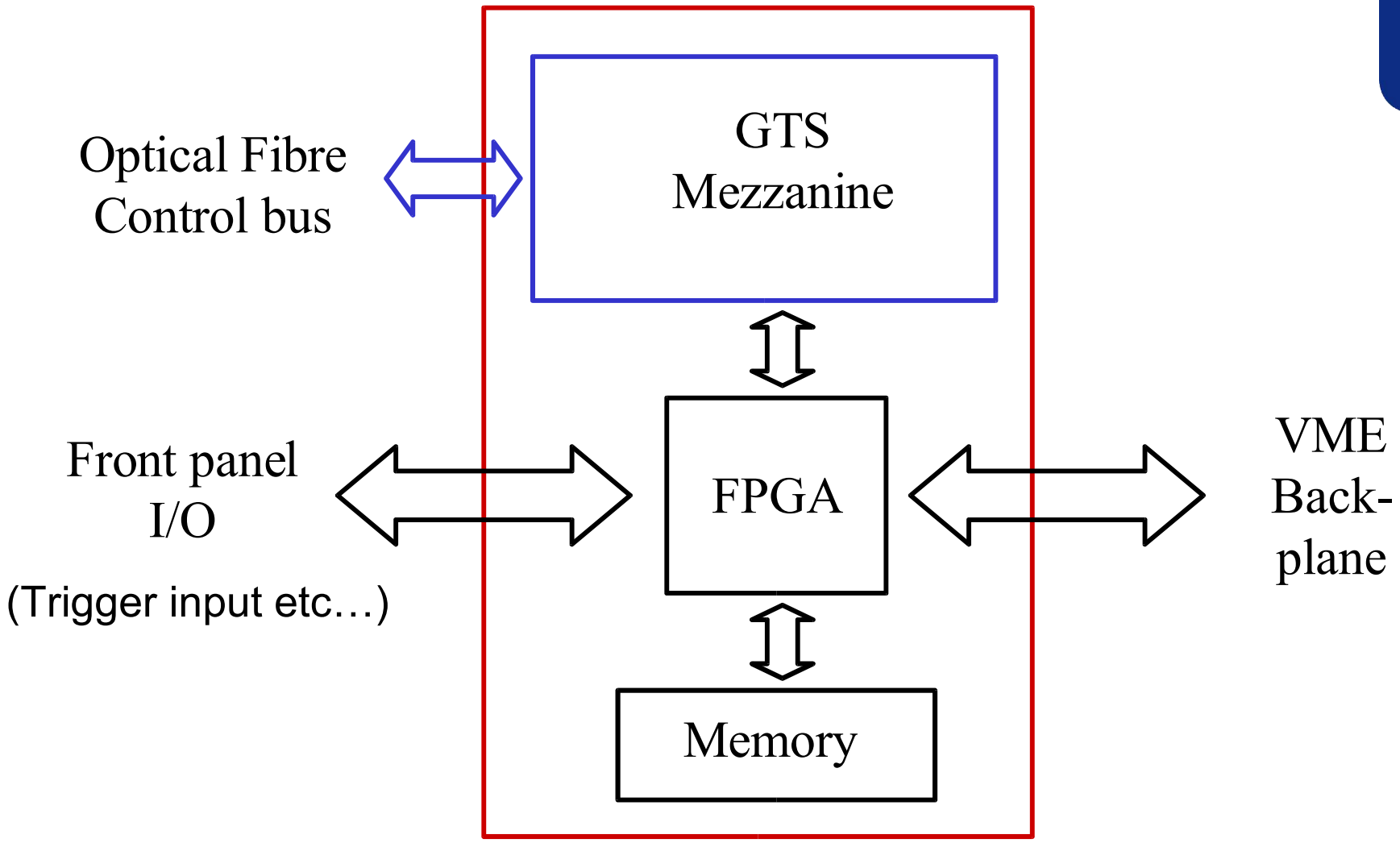
Global scheme



Slide by Ch. Theisen

AGATA + ancillary detectors

VME GTS Interface: schematic block diagram

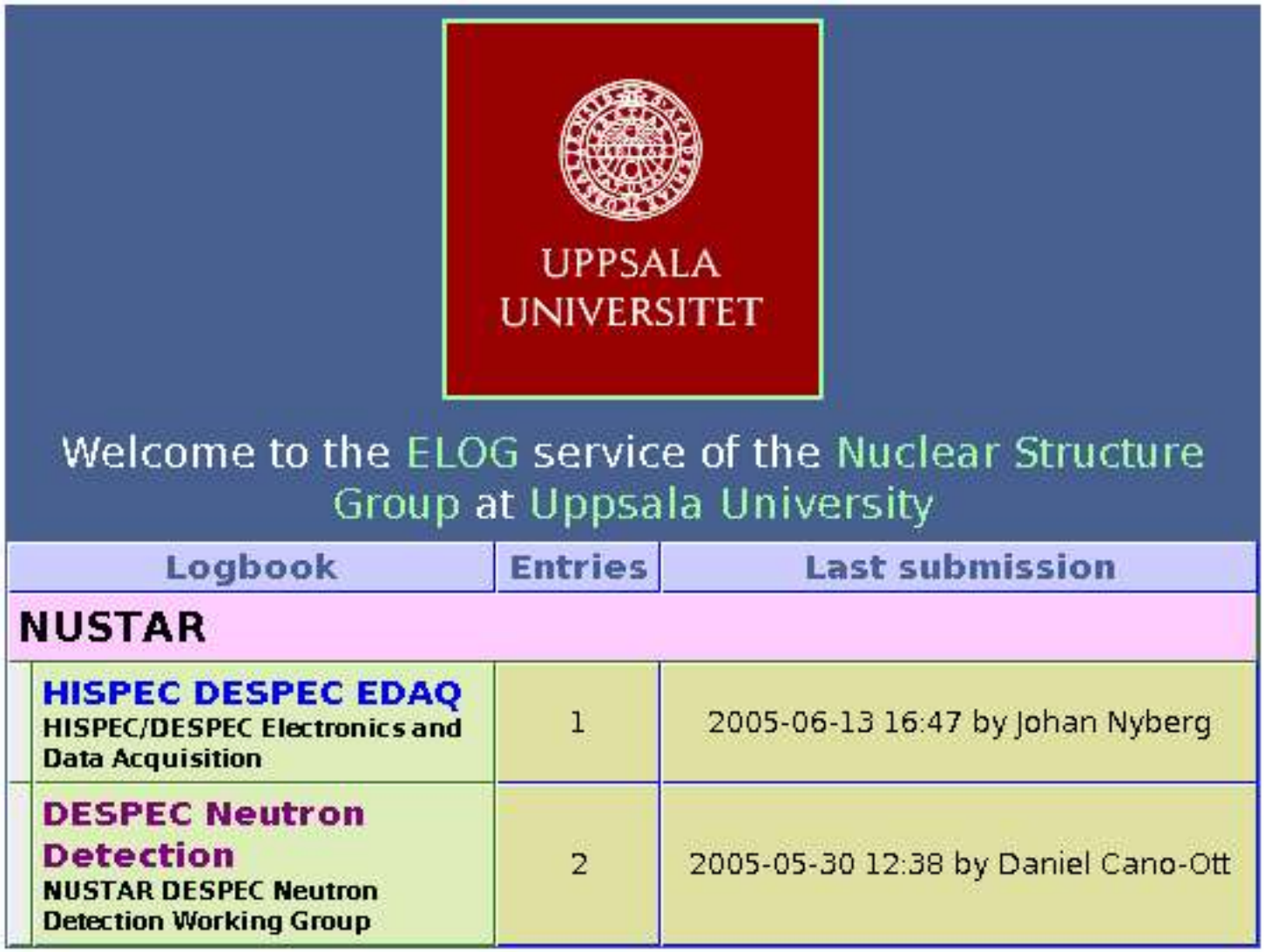


"standard" + TDR interfacing

Slide by A. Gadea

HISPEC/DESPEC Electronic LOGbook

http://www.agata.org/elog/nustar/



Logbook	Entries	Last submission
NUSTAR		
HISPEC DESPEC EDAQ HISPEC/DESPEC Electronics and Data Acquisition	1	2005-06-13 16:47 by Johan Nyberg
DESPEC Neutron Detection NUSTAR DESPEC Neutron Detection Working Group	2	2005-05-30 12:38 by Daniel Cano-Ott

The End

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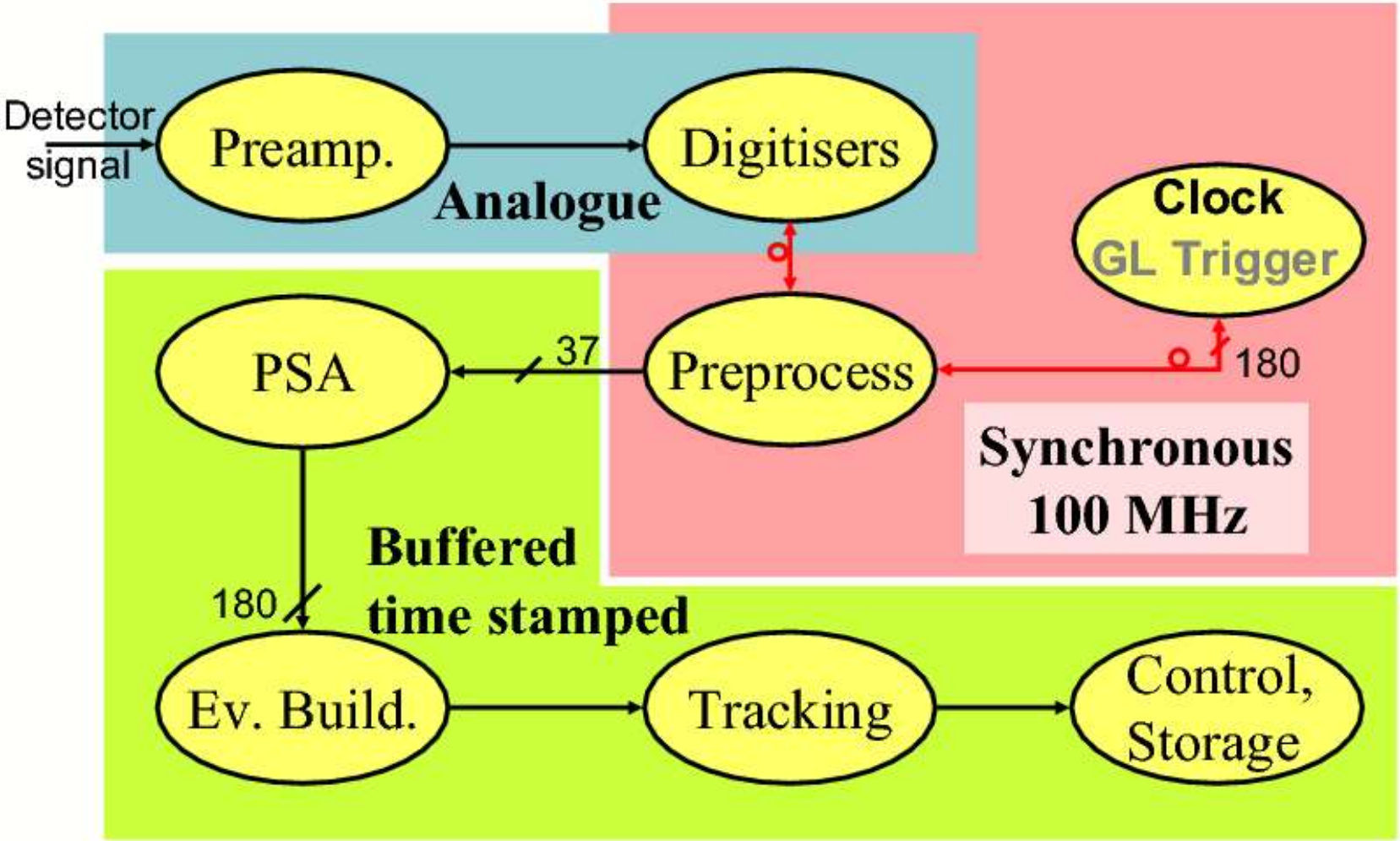
AGATA

Structure of Electronics and DAQ

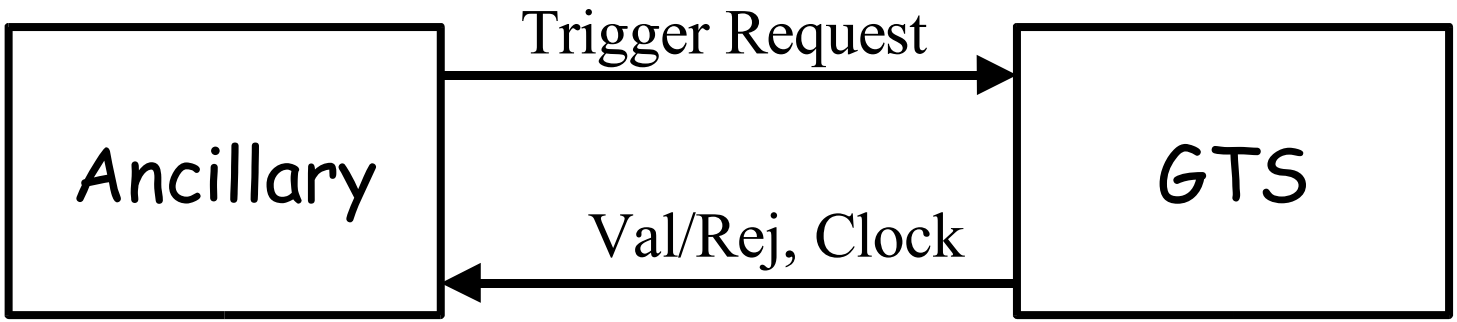


Slide by D.Bazzacco

AGATA + ancillary detectors

Interface with GTS

(Global Trigger and Synchronization system)



Val/Rej : combination of ancillary/Agata :
"master", "slave", "mixed" modes

Latency times → NOT A TRIGGER MODULE !

Slide by Ch. Theisen

Latency times

Val/Rej : latency > 7μs

Too late for most converters

- Dead time !
- Need prompt pre-trigger
- Request to ADP : Agata prompt signal

Slide by Ch. Theisen