DAQ study for LAMPS

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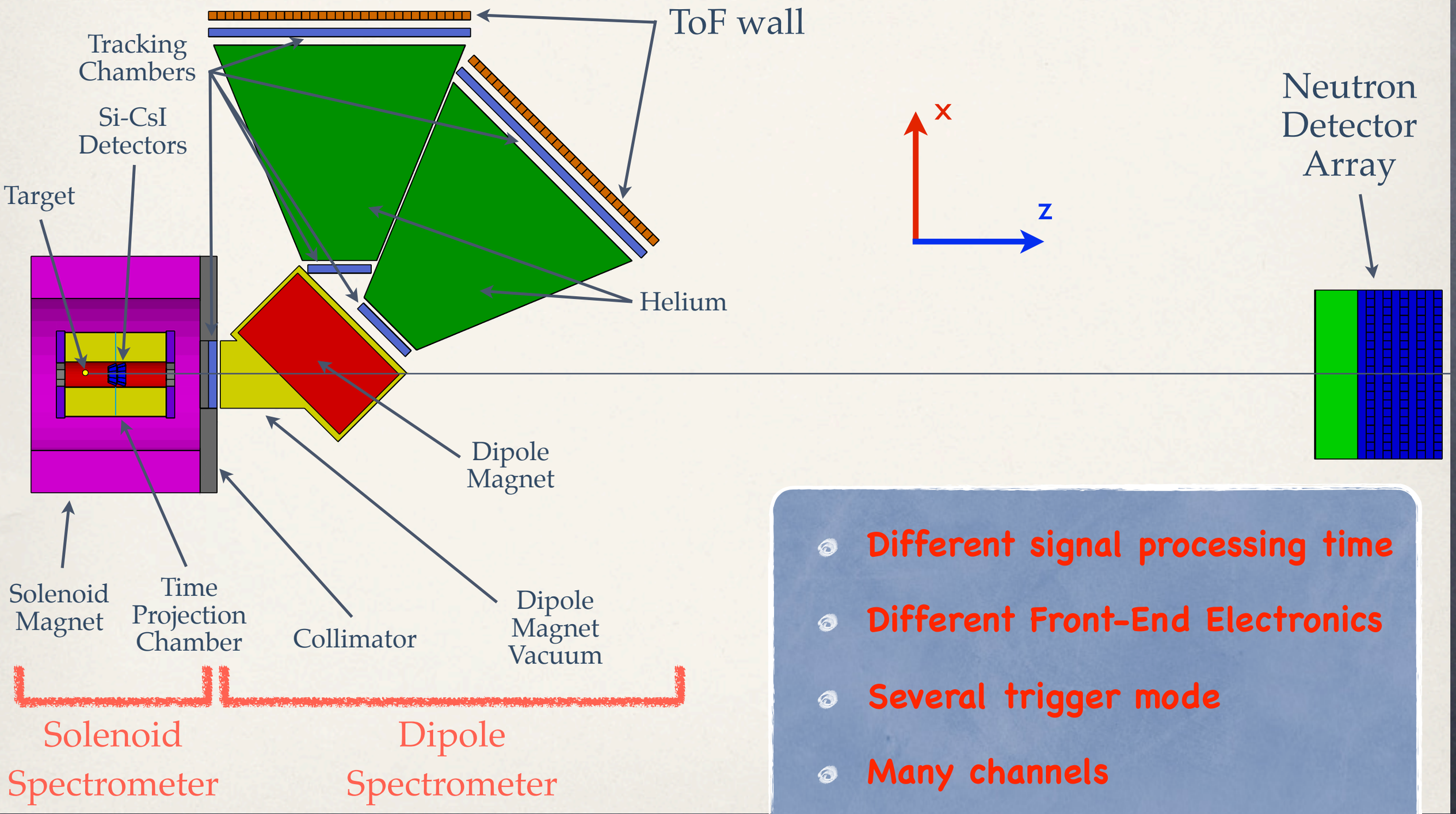
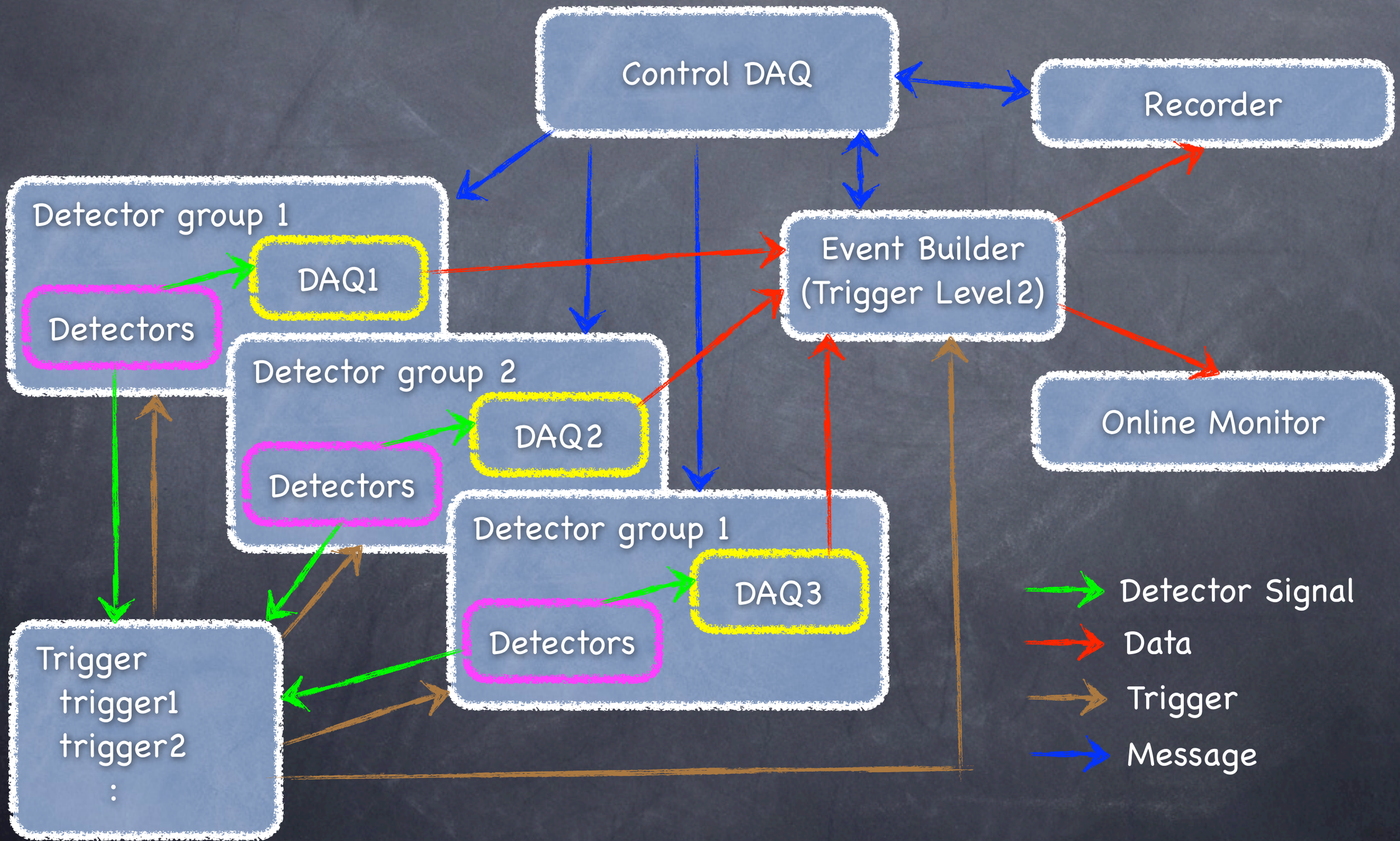
Motivation



- Different signal processing time
- Different Front-End Electronics
- Several trigger mode
- Many channels
- Experimental area

Idea of DAQ system

- Network Based DAQ System

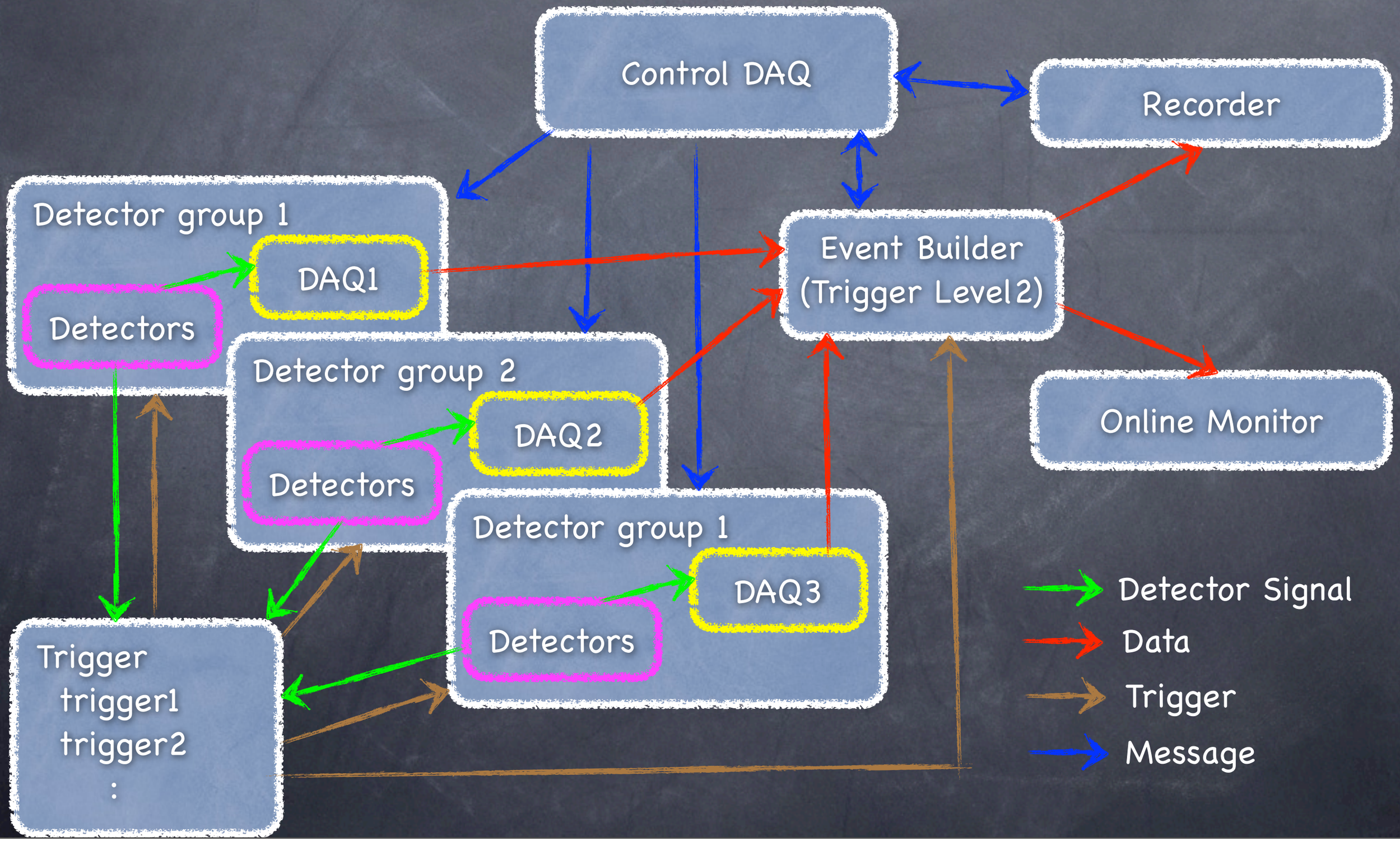


Study List

- TCP/IP network interfaces
- Event Build
- DAQ Program
- Online monitor
- Development of Trigger module

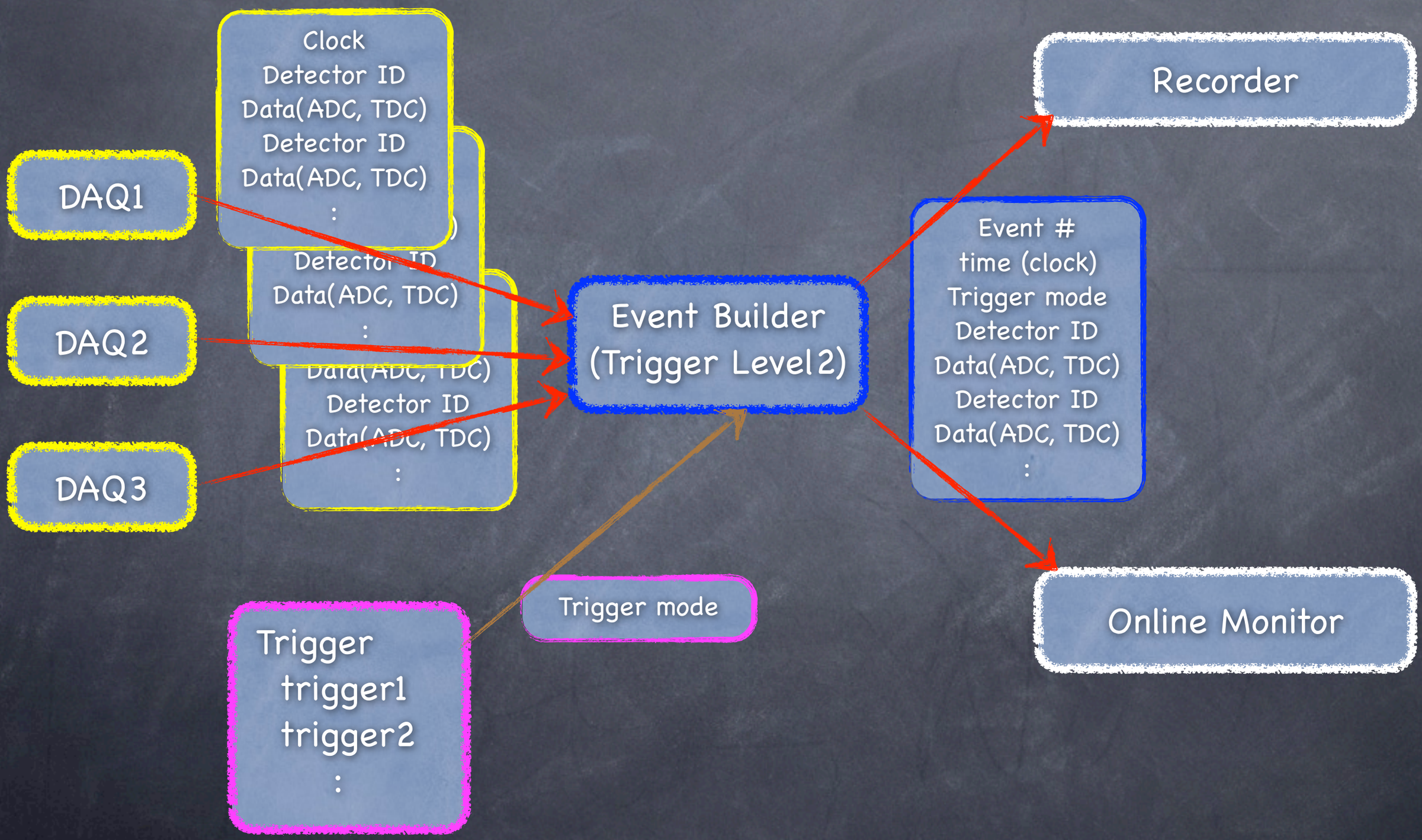
Study List

- TCP/IP network interfaces
  - : Communication between "Control DAQ" and "sub DAQ"



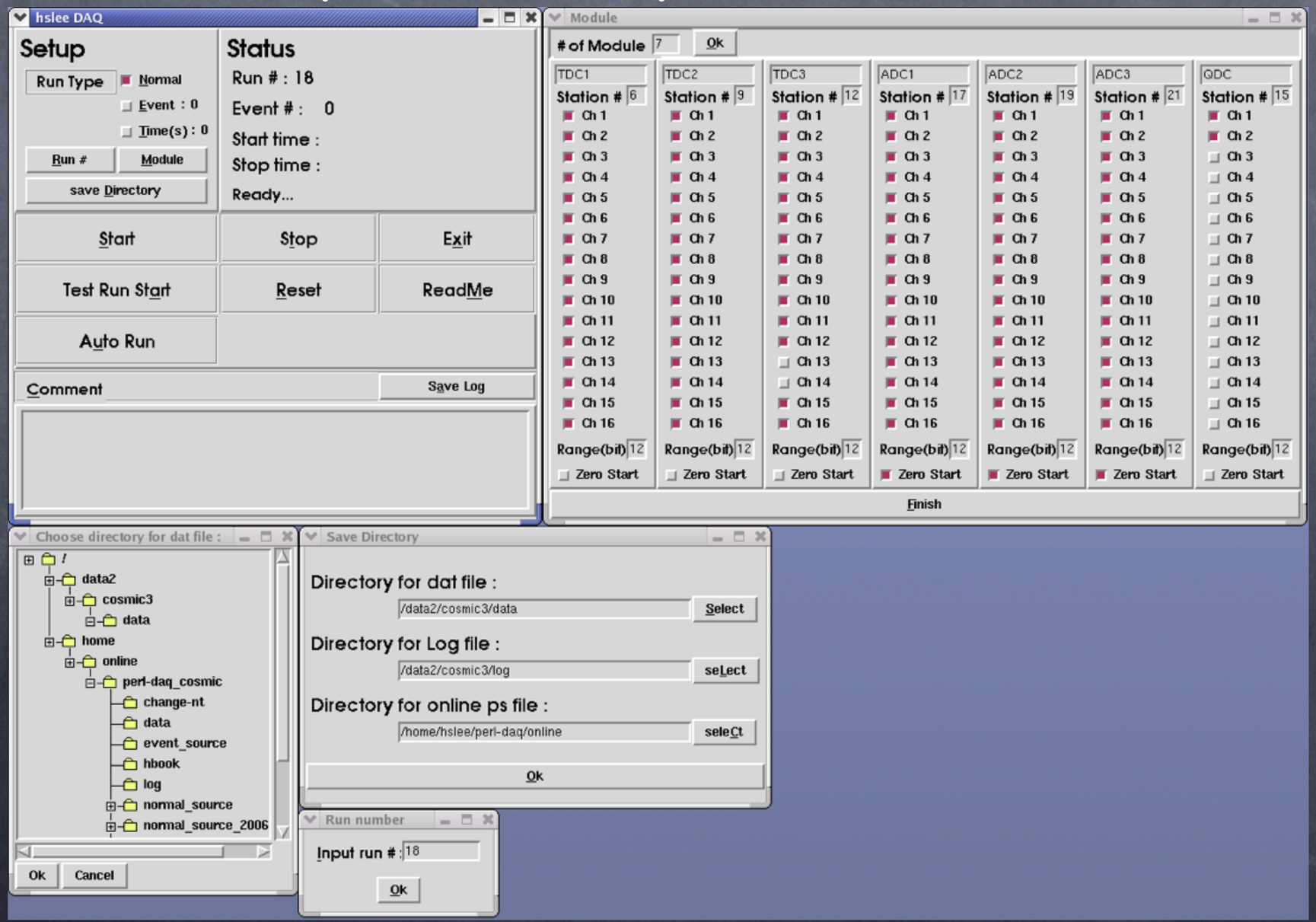
Study List

- Event Build



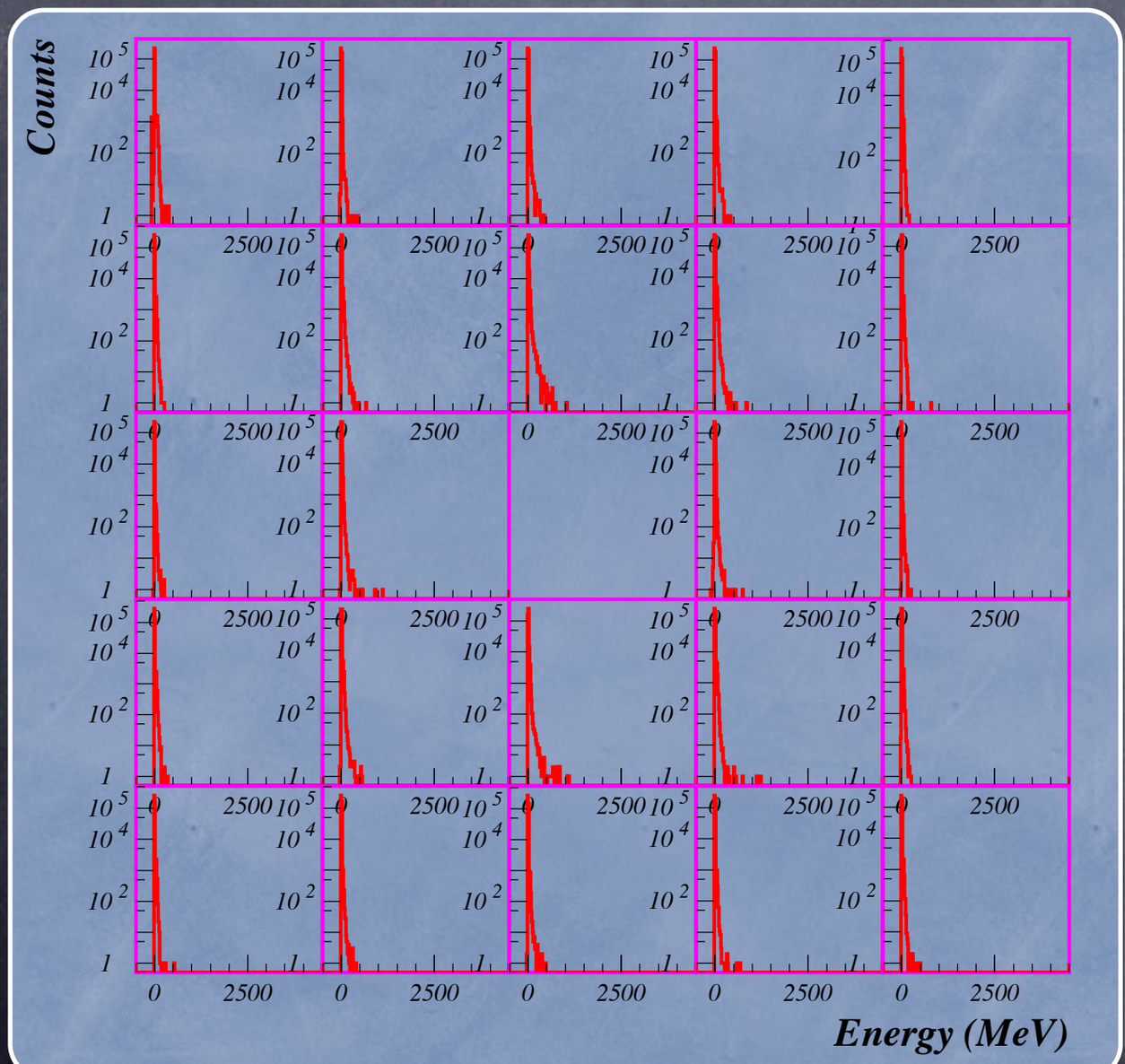
Study List

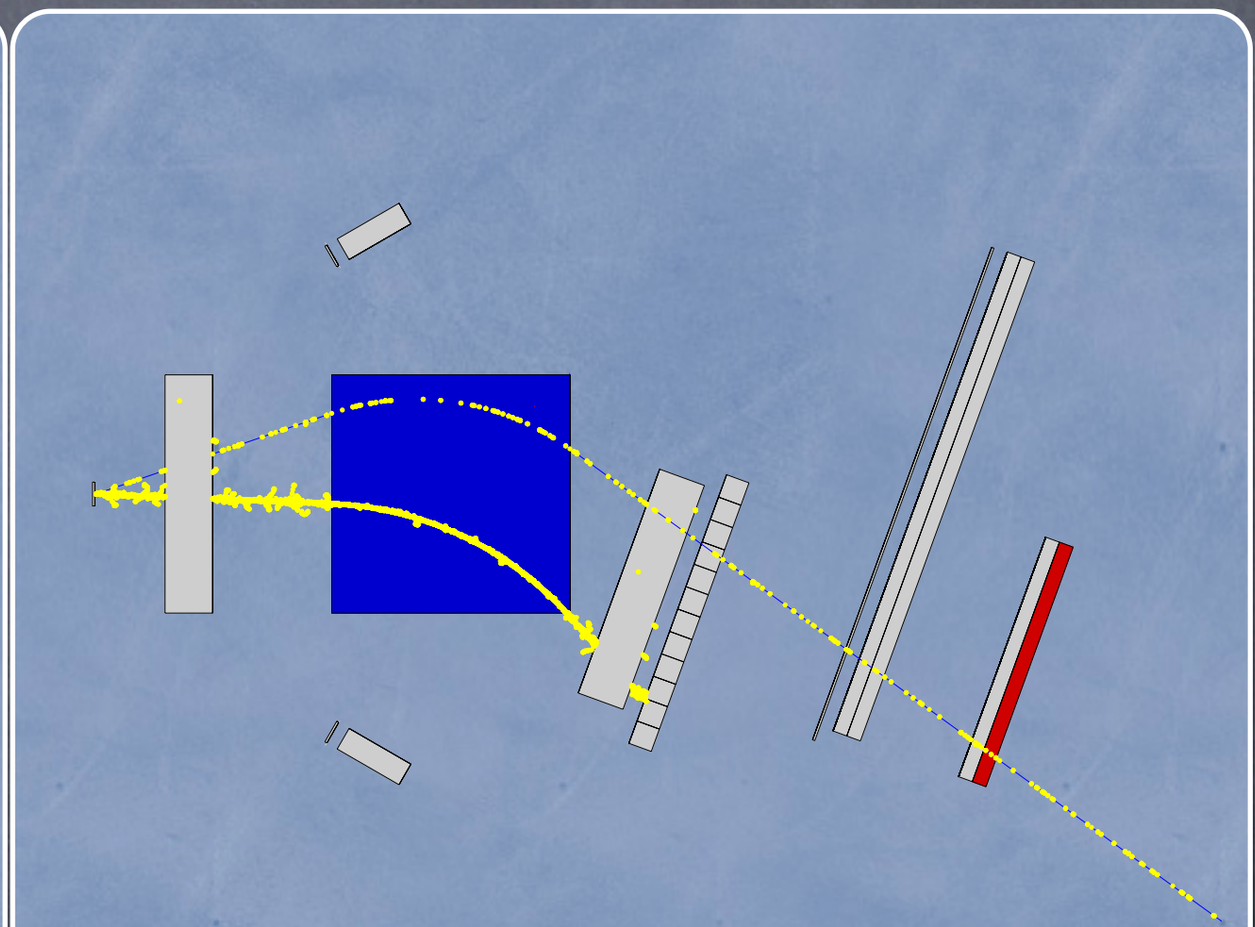
- DAQ Program
  - OS : Linux
  - Language : C++
  - GUI : ROOT (or Perl/Tk)



Study List

- Online monitor
  - Language : ROOT (or paw)
  - histogram of raw data
  - Event display

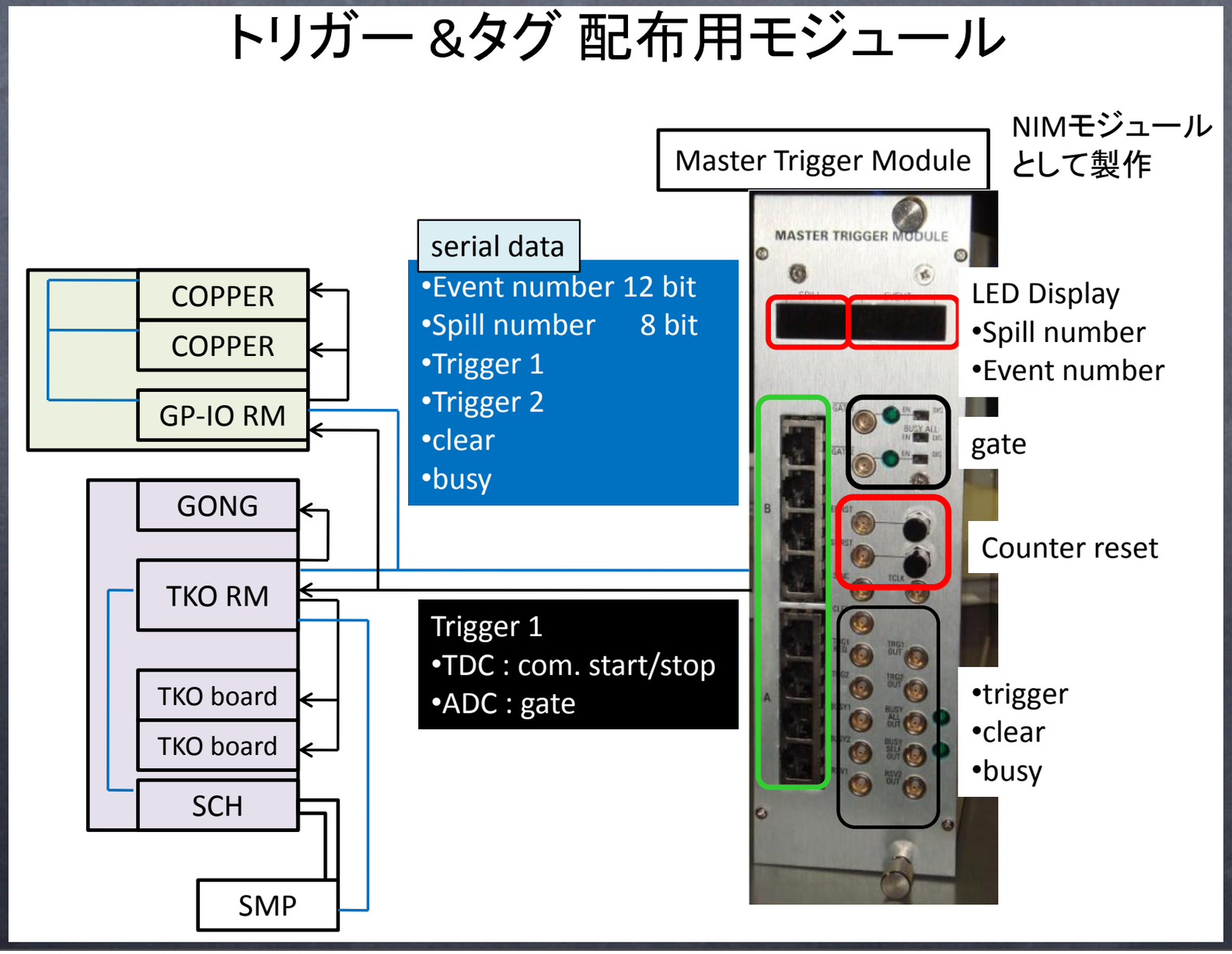




Study List

- Development of Trigger module
  - to manage trigger signal
  - transmission of trigger & tag information

Master Trigger Module of K1.8 @ J-PARC

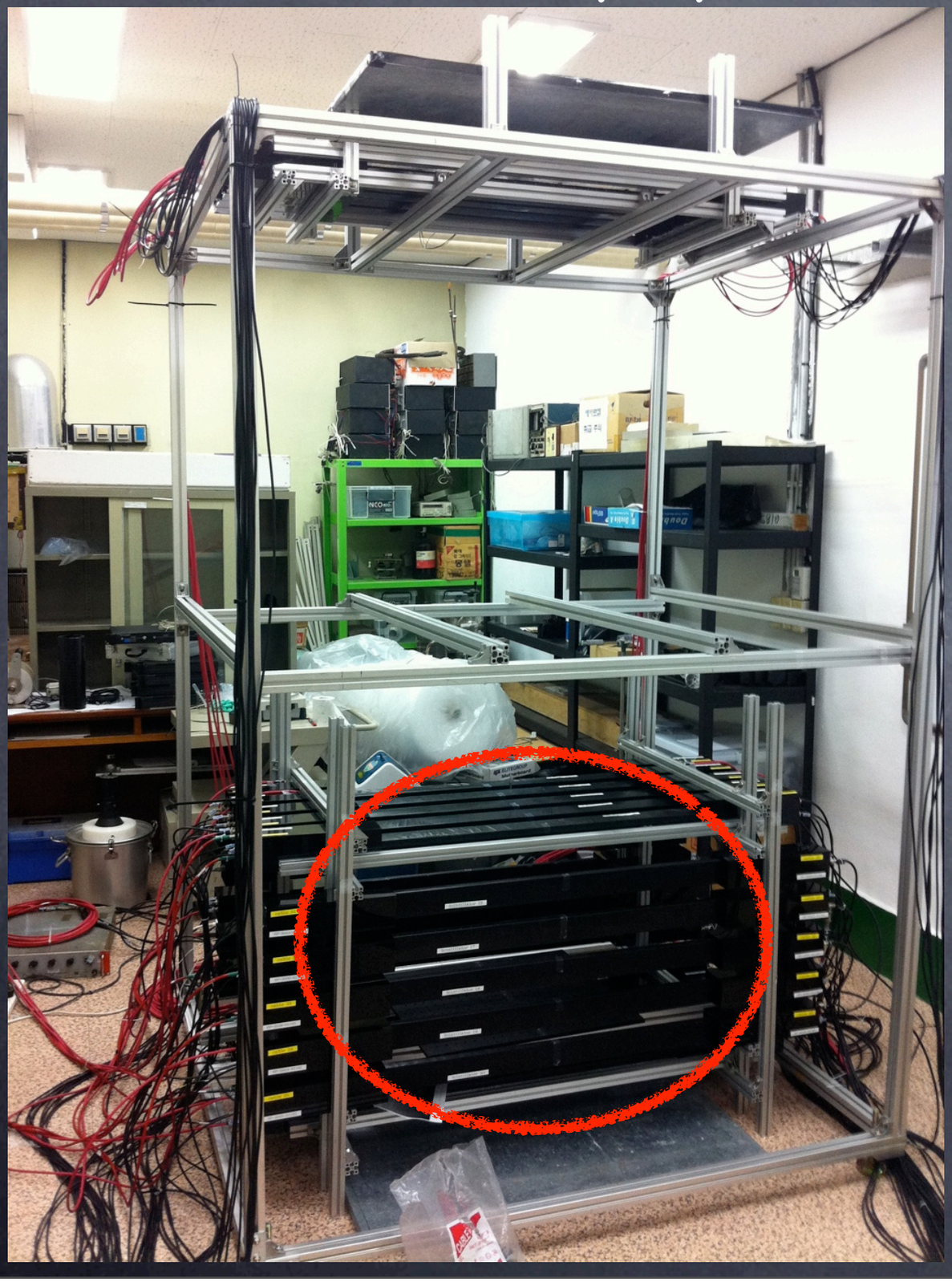


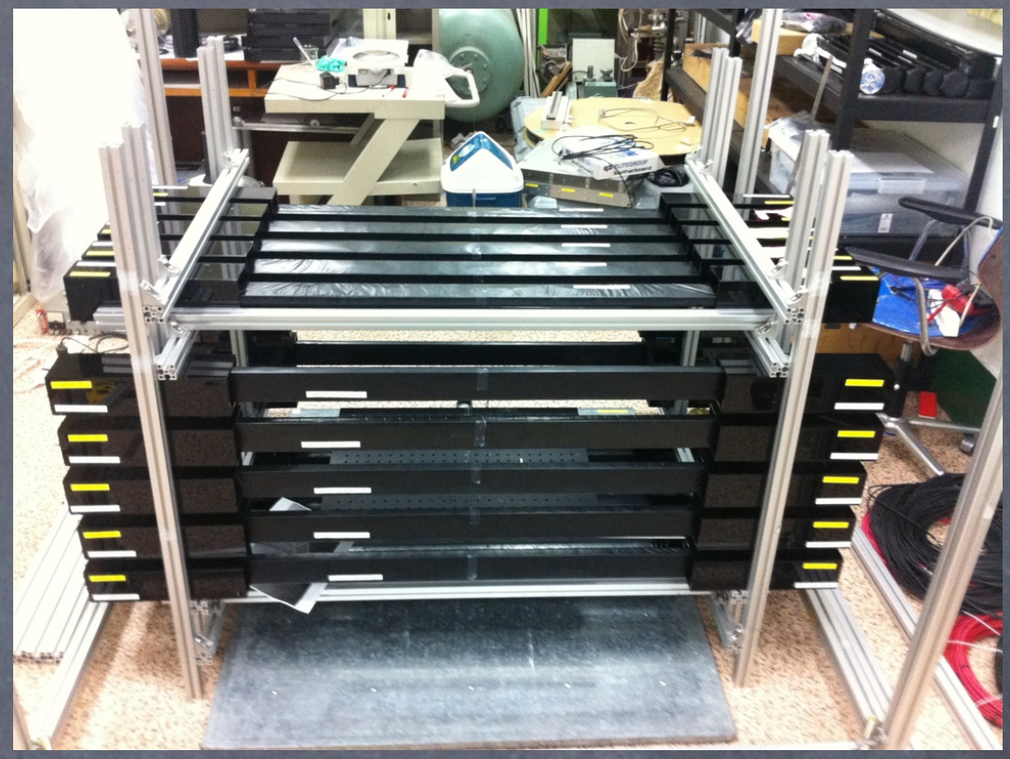
Plan

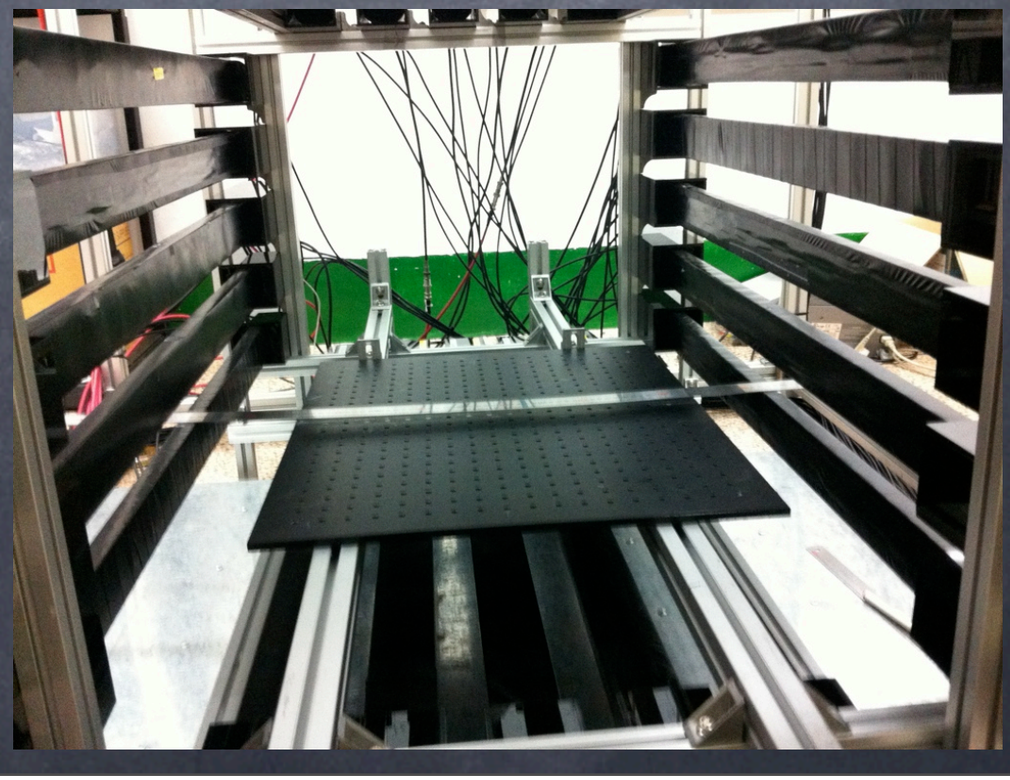
- Development of DAQ system
  with PNU Cosmic-ray system
- Collaboration with K1.8 DAQ group @ J-PARC

Plan

- PNU Cosmic-ray system

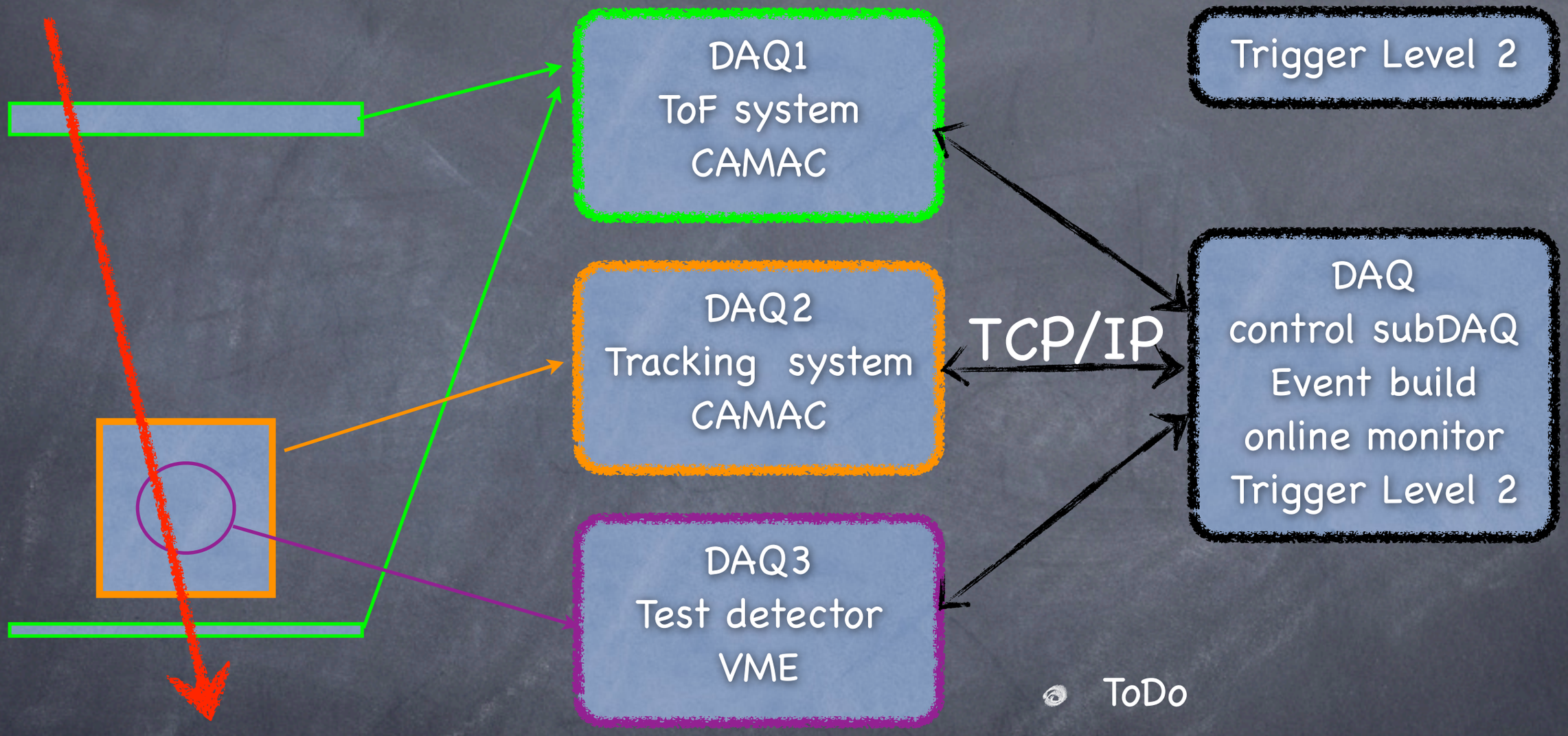


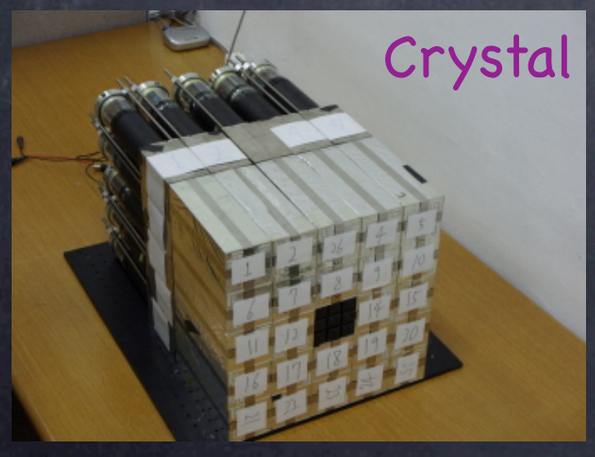


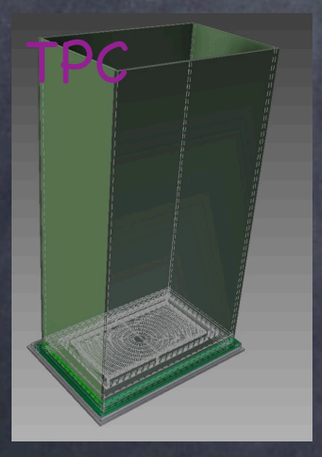


Plan

- DAQ system with Cosmic-ray system @ PNU



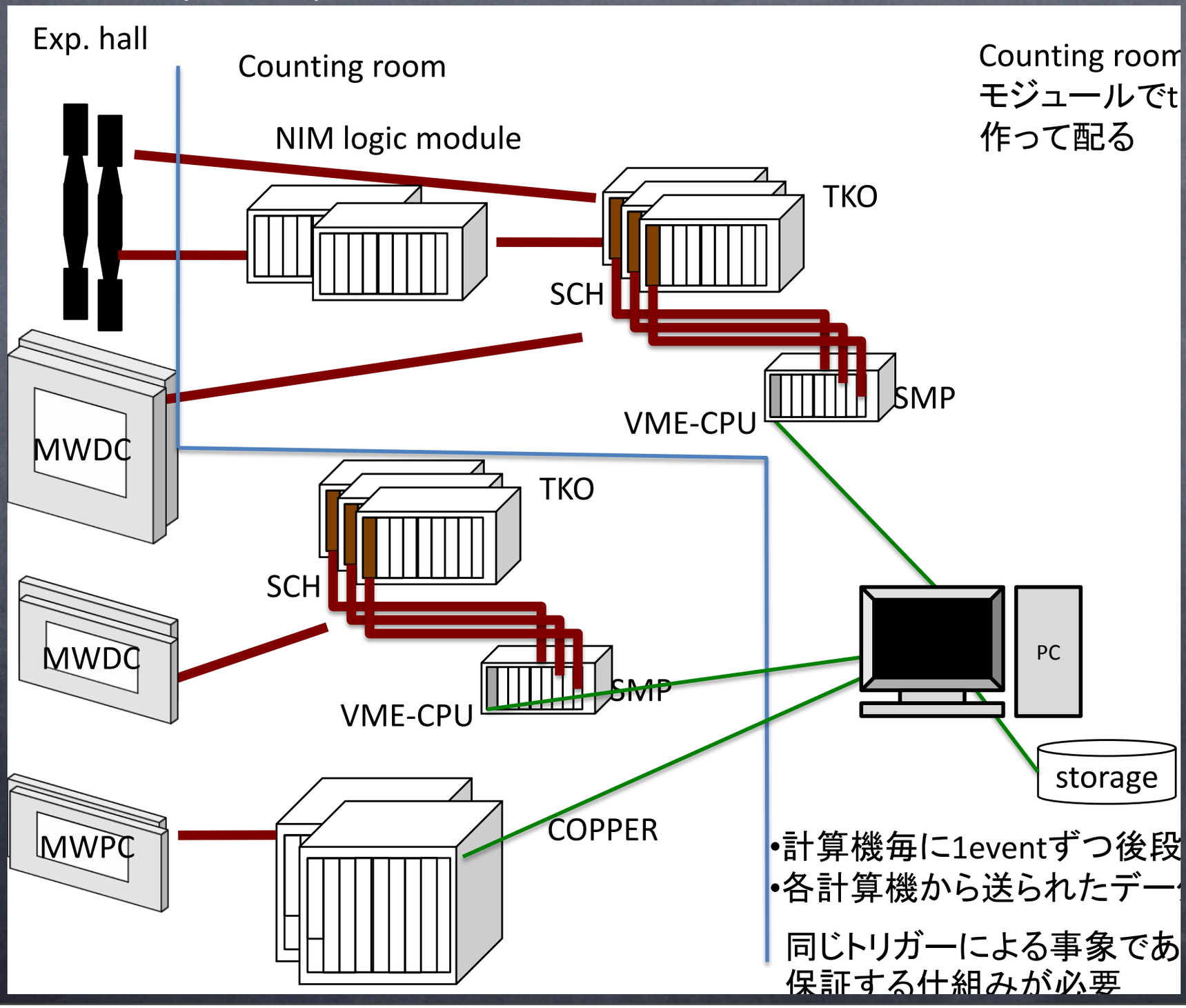




- ToDo
  - DAQ programing
  - Event build
  - Online monitor
  - Trigger Level 2

Plan

- Collaboration with K1.8 DAQ group @ J-PARC
  HANUL (PNU) is collaboration with E42 and E03/E07



Purchase List

- VME system
  - VME crate
  - VME controller
  - Register
  - ADC, TDC, multi-hit TDC...
- DAQ PC
- Trigger Module
  - ex) Master Trigger Module
  - Receiver Module