

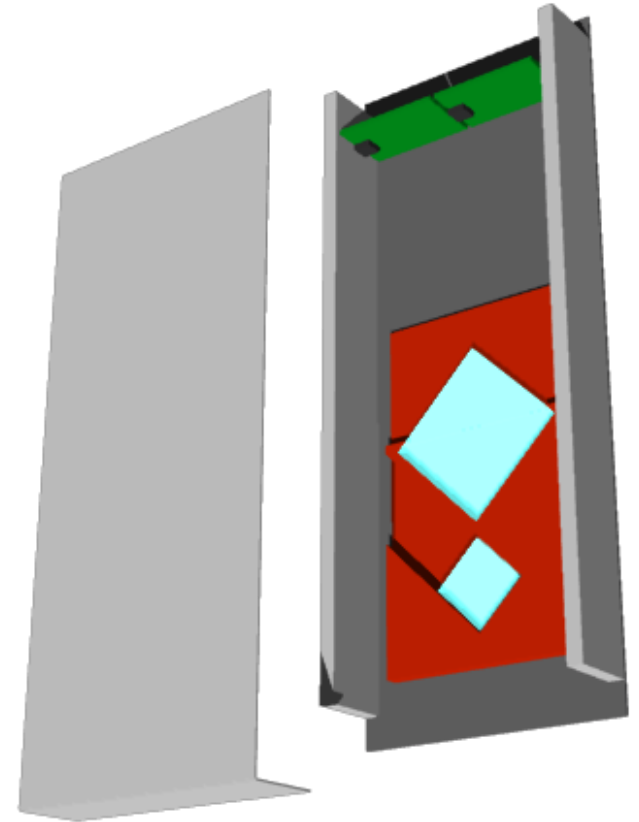
Front Counter

Takashi Sako

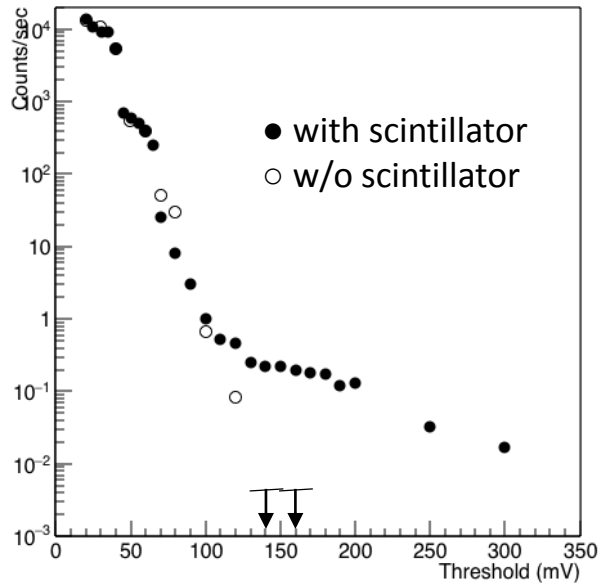
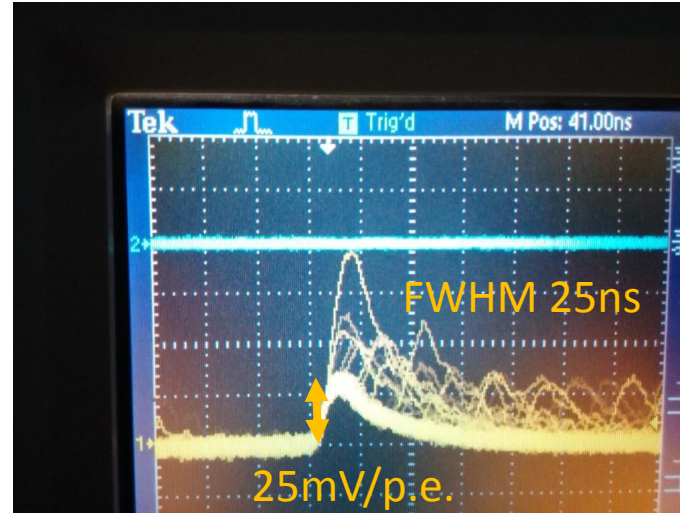
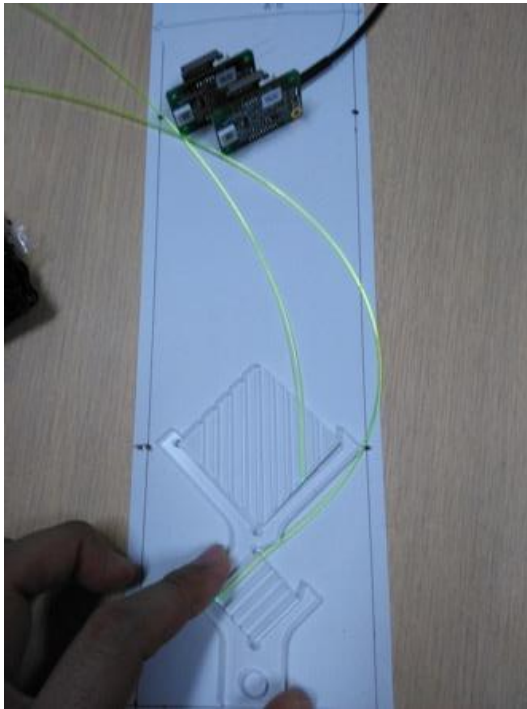
(ISEE/KMI, Nagoya University)

Front Counter

- Thin scintillators with the same dimensions to the calorimeters
- Will be useful to identify incident of charged particles
- To be attached on the front side of the detector
- Passive detector (not used for trigger)
- Readout by MPPC (compactness, simple power supply)

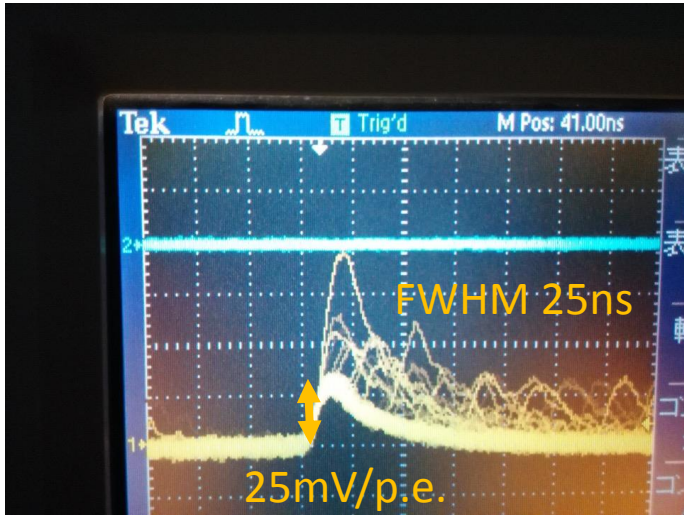


Scintillator + frame + WLSF + MPPC
 9x1mm ϕ WLSFs for 40mm scintillator
 5x1mm ϕ WLSFs for 20mm scintillator

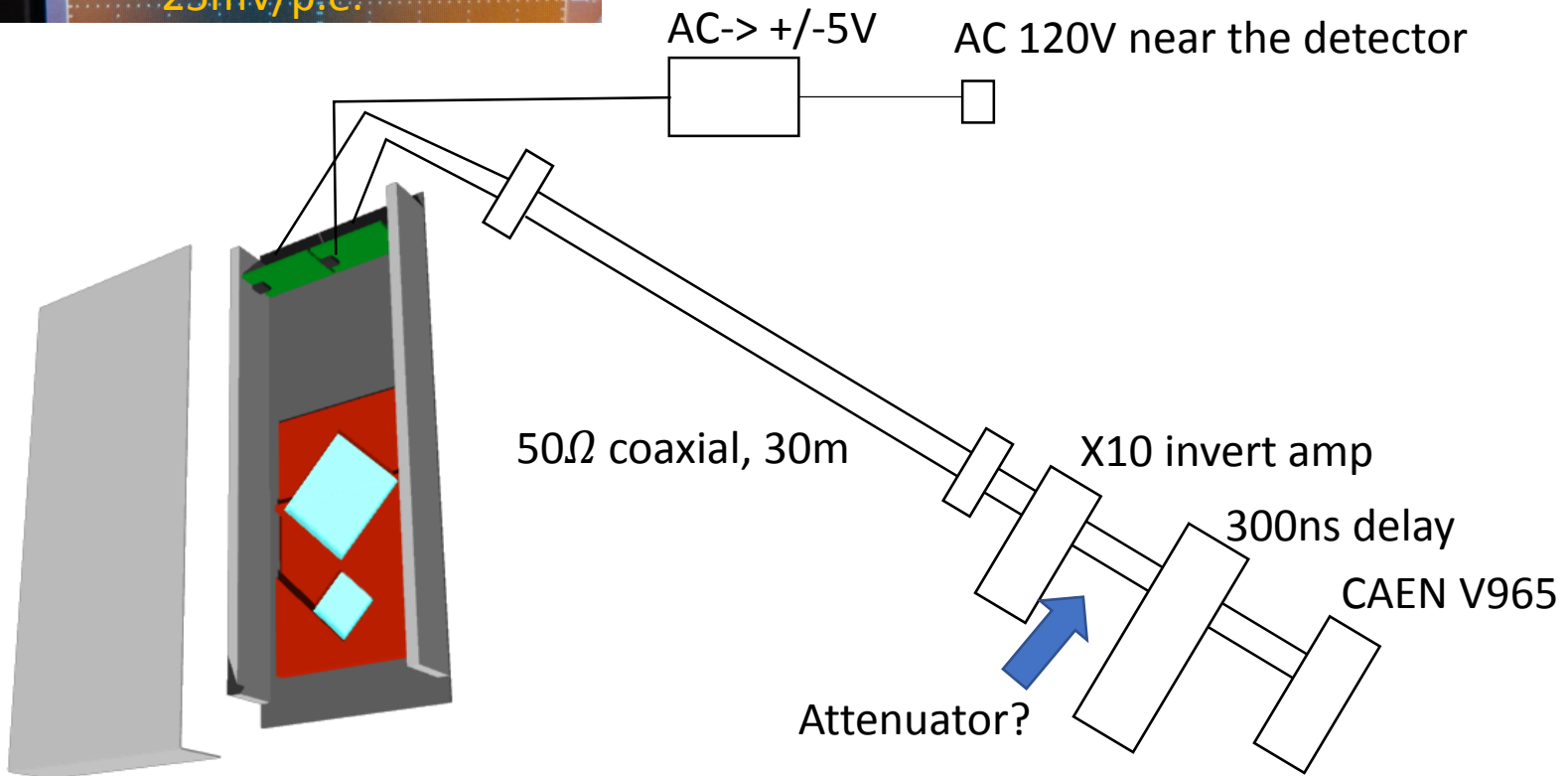


Threshold vs. counting rates with oscilloscope
 ADC measurement will be done soon
 0.4 Hz = 24 counts/min with a 16cm² scintillator
 100mV = 4 p.e.

25mV with 50 Ω termination => I=0.5mA
 0.5mA x 4p.e. x 25ns = 50pC
 50pC/0.2pC = 250 counts with V965 wide range ADC



Positive signal must be inverted to use V965.
X10 2ch invert amp in Nagoya is available



Preparation

- Scintillators; ready
- Scintillator frame; ready
- WLSF; ready => I (we) must fabricate fiber bundles
- MPPC; ready
- AC->5V inverter; ready
- FC case; arrived this morning
=> I (we) must assemble all components
- X10 invert amp; ready