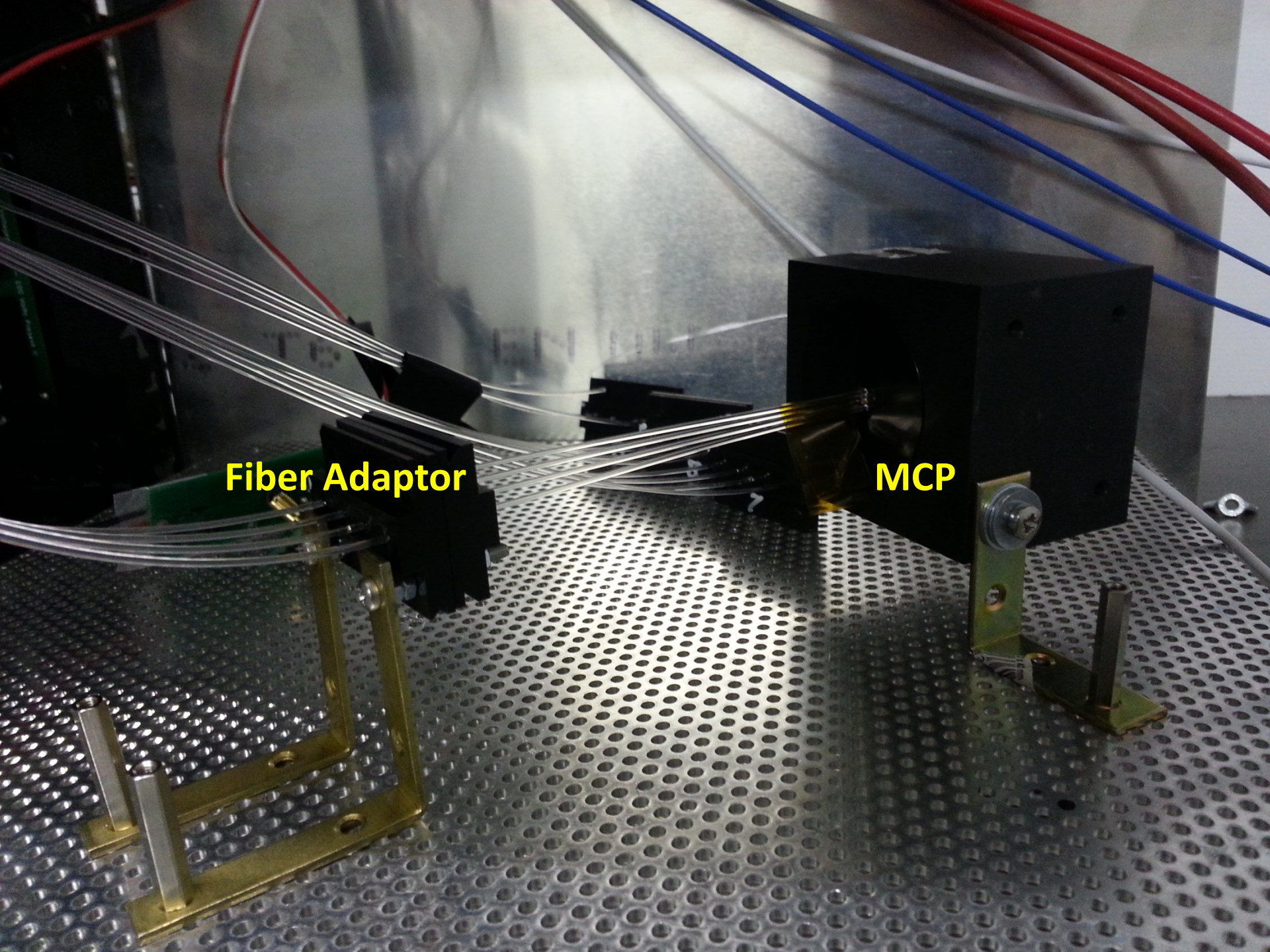
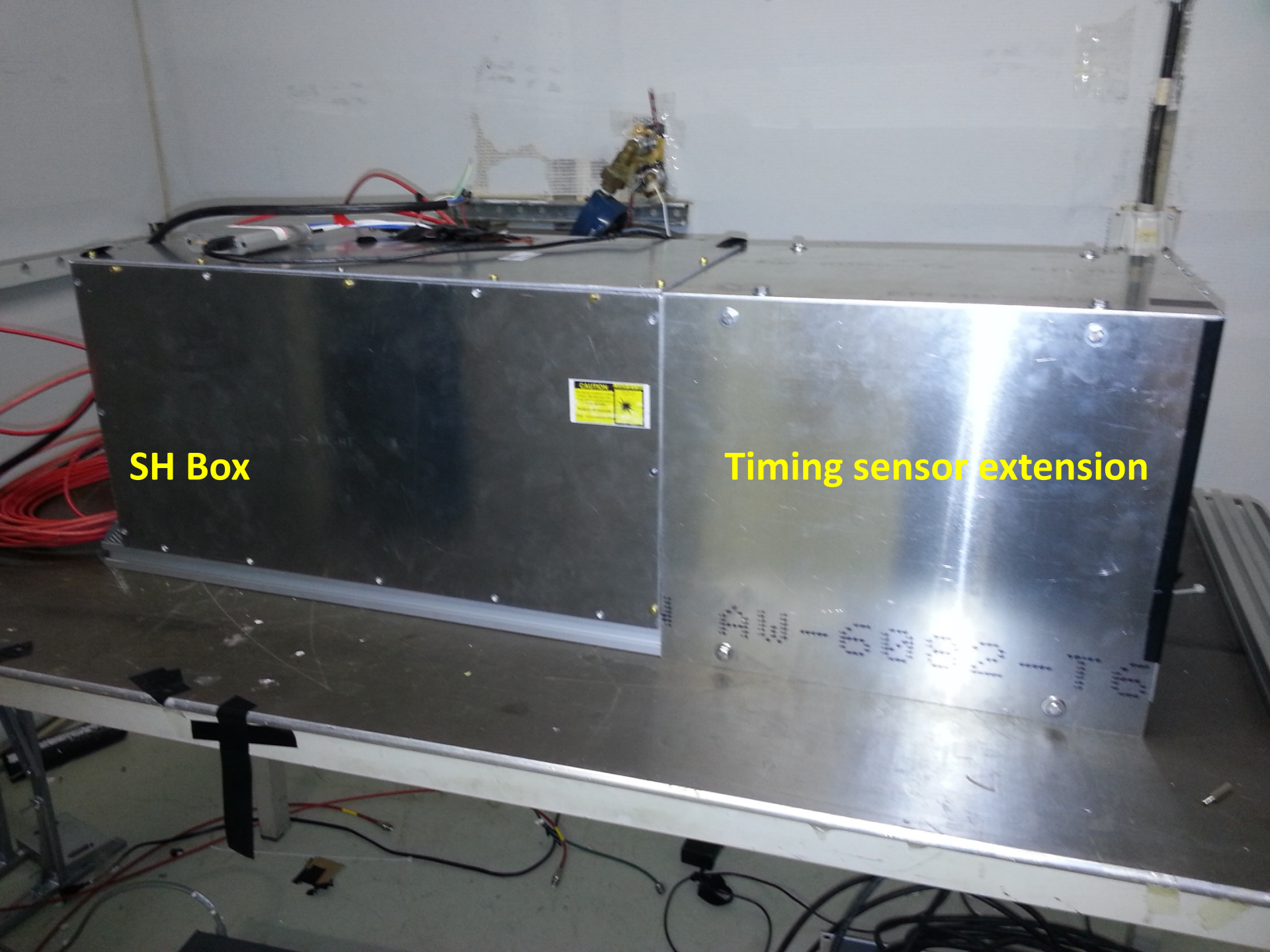
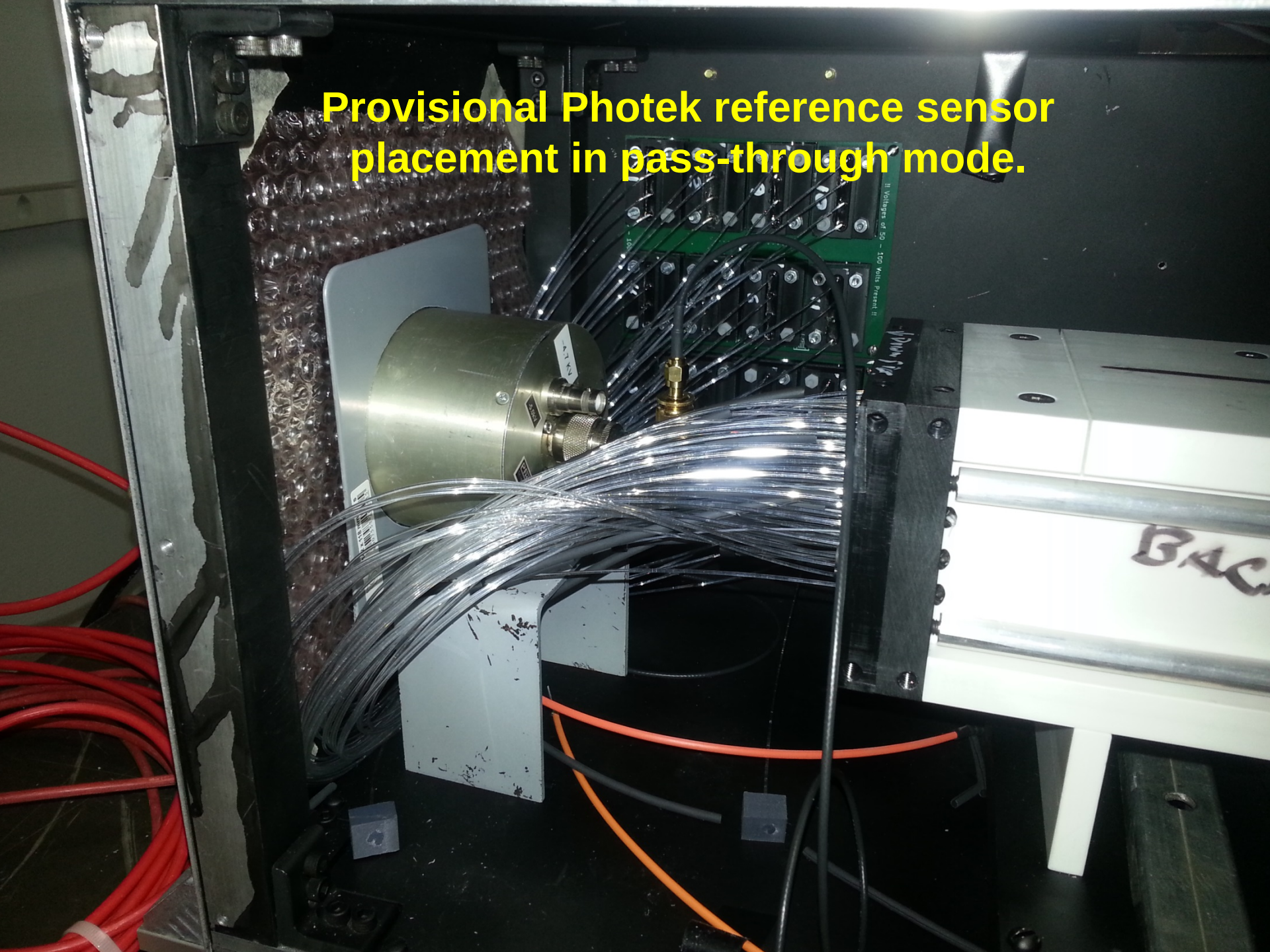
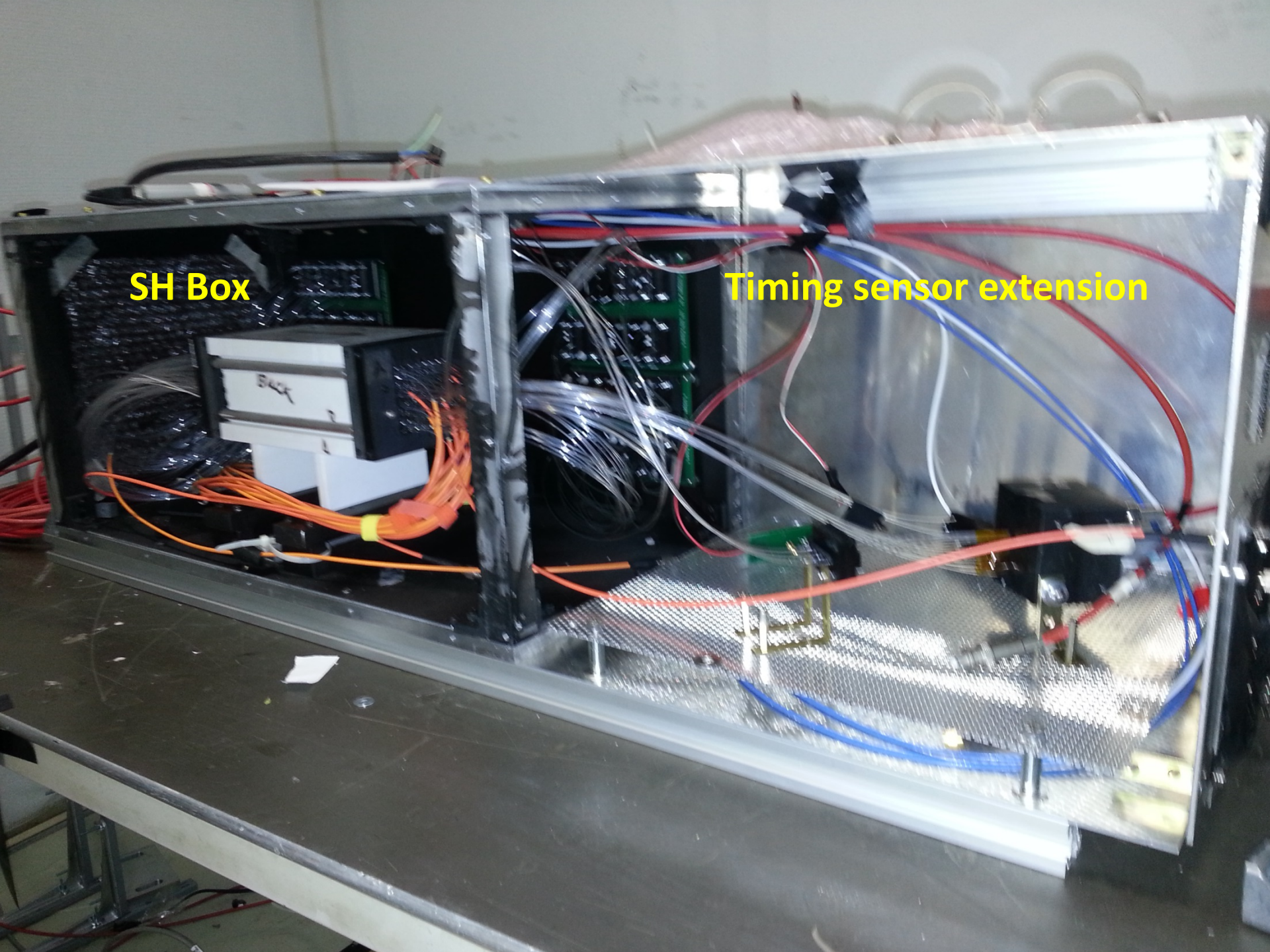
July SH Timing TB CERN

Adi


Fiber Adaptor
MCP


SH Box
Timing sensor extension


Provisional Photek reference sensor
placement in pass-through mode.


SH Box
Timing sensor extension

Test Beam Setup

Right CAEN HV Unit :

- **HV (red tape mark) : Photek MCP , 4.7 kV, right CAEN HV unit**

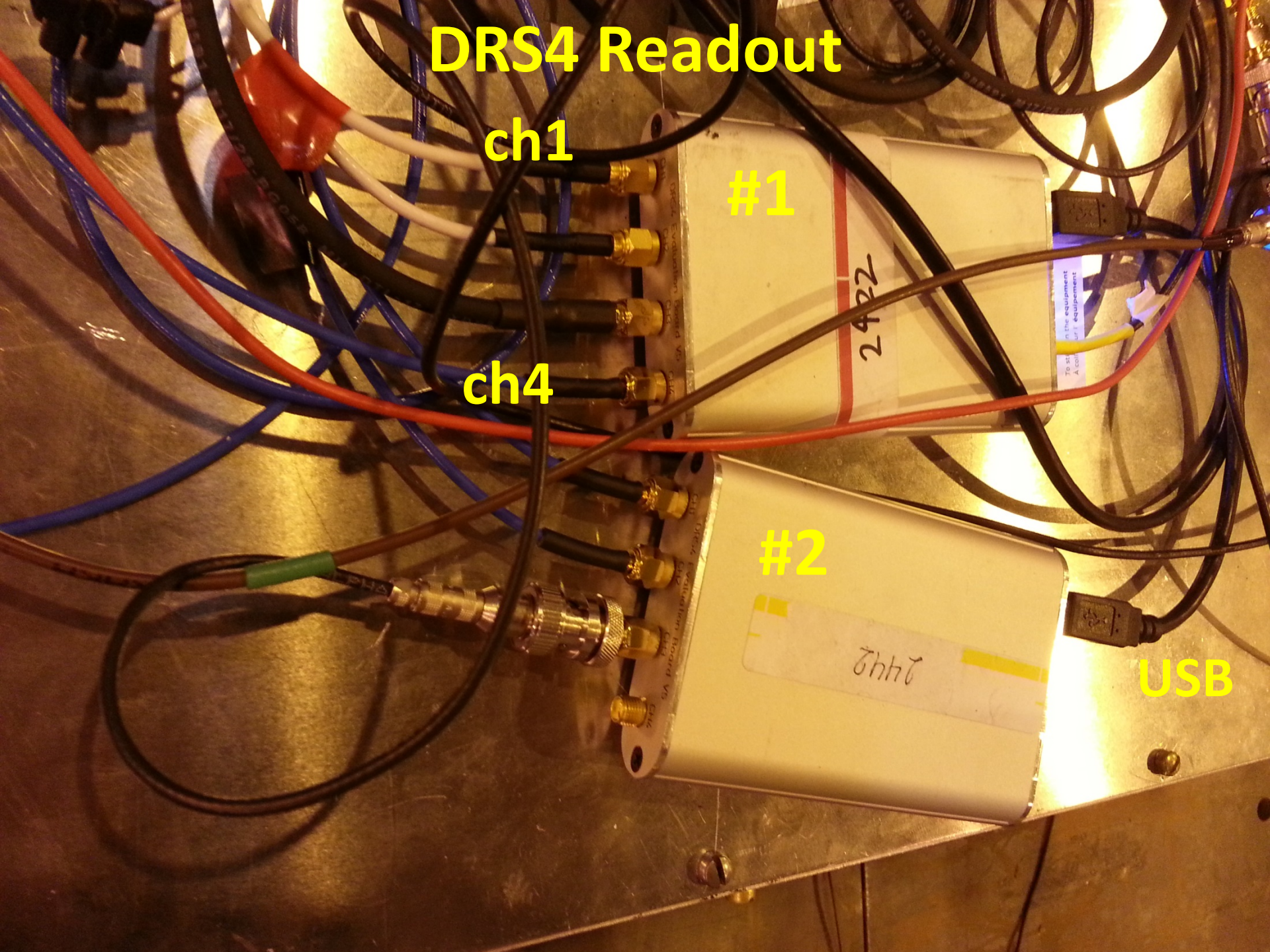
Left CAEN HV Unit :

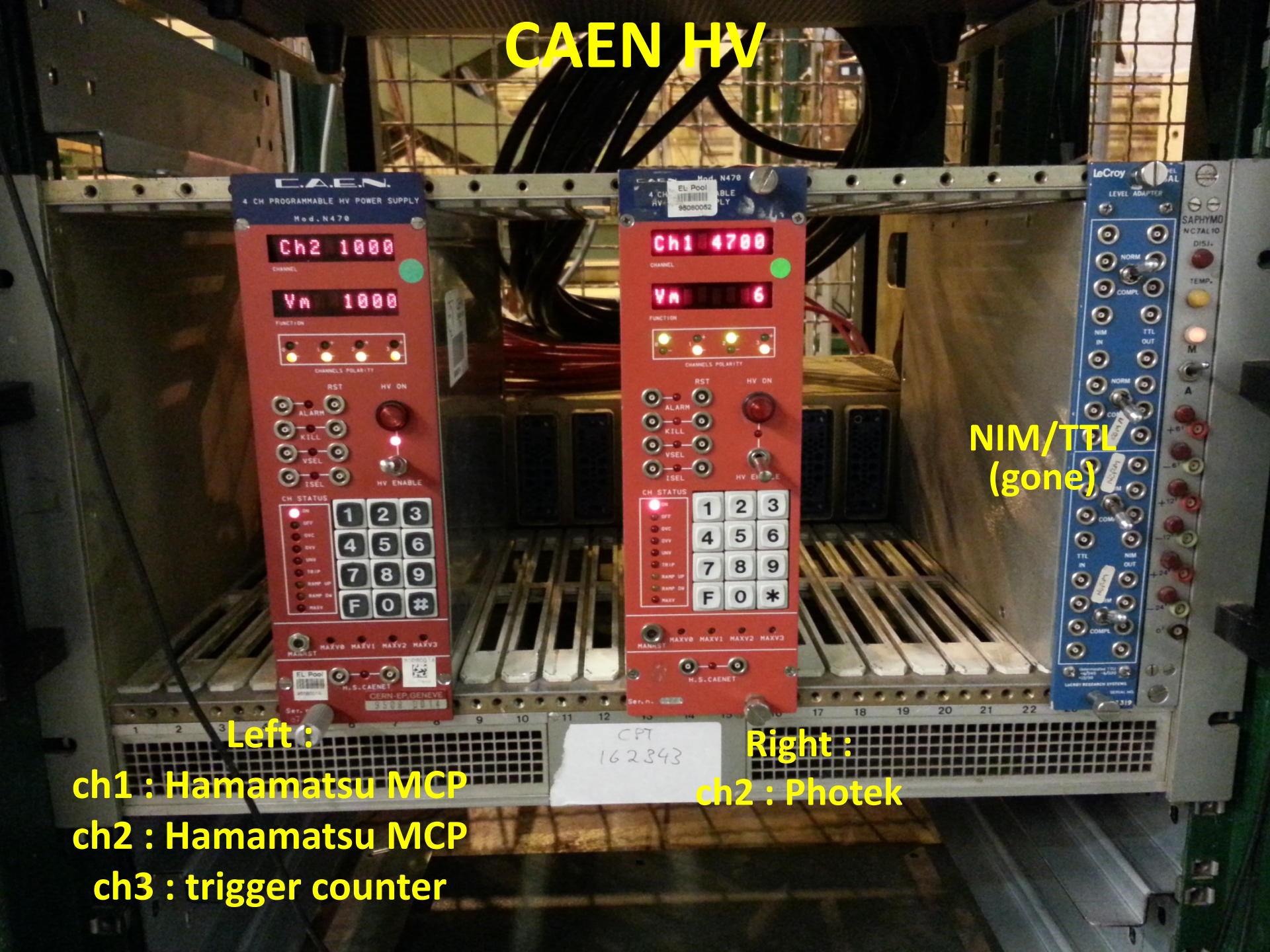
- **CH0 : New HV cable, Hamamatsu MCP, 3 kV max**
- **CH1 : Old HV cable, Hamamatsu MCP, 3 kV max**
- **CH2 : small trigger PMT, 1 kV max**

LV Unit :

- **Blue LV cable : connected to plus on LV unit, SiPM, 70 V MAX**

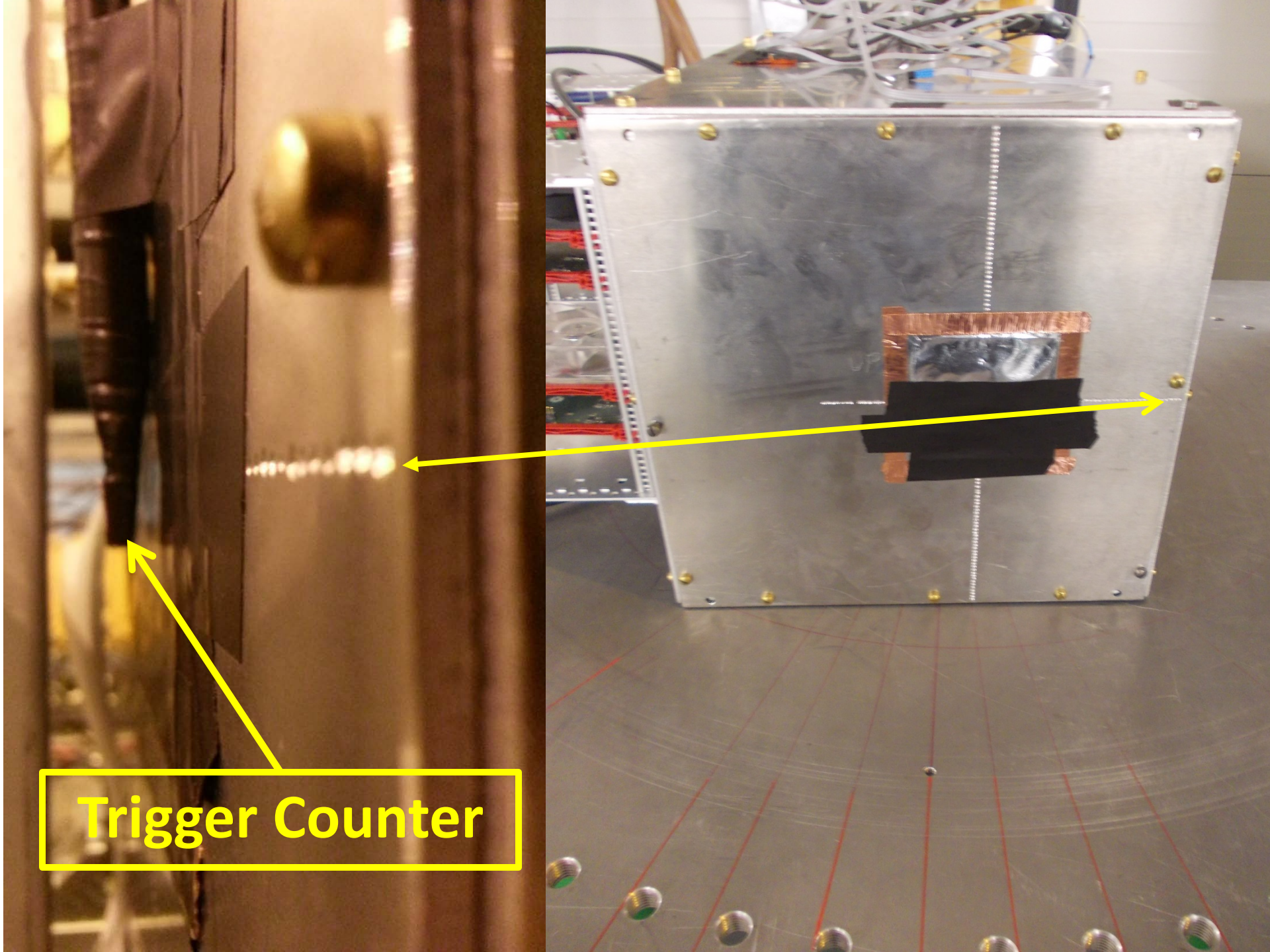
DRS4 readout :


DRS4 Readout
ch1
ch4
#1
#2
USB


CAEN HV
C.A.E.N.
4 CH PROGRAMMABLE HV POWER SUPPLY
Mod.N470
Ch2 1000
Vm 1000
Ch1 4700
Vm 6
NIM/TTL
(gone)
Left :
ch1 : Hamamatsu MCP
ch2 : Hamamatsu MCP
ch3 : trigger counter
Right :
ch2 : Photek

LV for SiPM

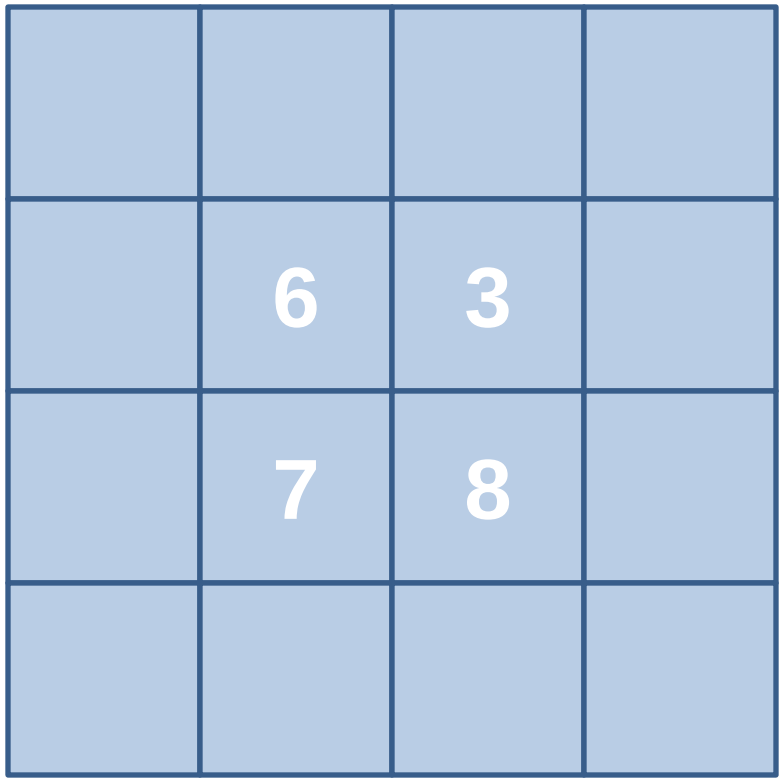

POWER SUPPLY SM 7020 - D
69.0
V
00.0
A
ON
DELTA ELEKTRONIKA
OVP
CV
CC
CAEN
Ch2 1000
Vm 1000
Ch1 4700
Vm 7


Trigger Counter


Beware of the Dragons

Matrix Layout

View from the front



Test 1 :
3 : MCP1, four fibers, low gain, 0.4 V @ 2900 V with laser at H4, run 36
6 : MCP2, three fibers, high gain, 0.25 V @ 2600 V with laser at H4, run 37
8 : small SiPM, one fiber, with cookie, 60 mV, run 38
7 : large SiPM, one fiber, run 40

Photek test : Photek and Hamamatsu with direct laser, run 41

Test 2 :
3: cell6, MCP1, four fibers, run 42, 2nd laser connector, 300 mv @ 2900 V, HV CH0
6 : cell 3, MCP2, four fibers, run 41, top laser connector, @ 2600 V, HV CH1
7: cell 7, large SiPM, CH4, run43, 3rd laser connector, 69.1 V, 75 mv
8 : cell8, small SiPM, CH3, run44, used 1st laser connector, 200 mv, 4 fibers

Test data taking

- Run 46 : test run in H2 with muon beam, misaligned,
- Run 47 : test run in H2 with muon beam, misaligned
- Run 48 : muon run after alignment, muon signals in Photek (ch4) and Hamamasu (ch2)
- Run 49 : Pho ch4, small scint ch3, hama ch1 and ch2, hama 3 kV, scint 1 kV, Pho 4.7, raised to 4.8 kV, then 4.9 at event 930.
- Run 50 : second DRS, ch1 and ch2 are SiPMs, ch3 trigger from H4DAQ

Data Taking