

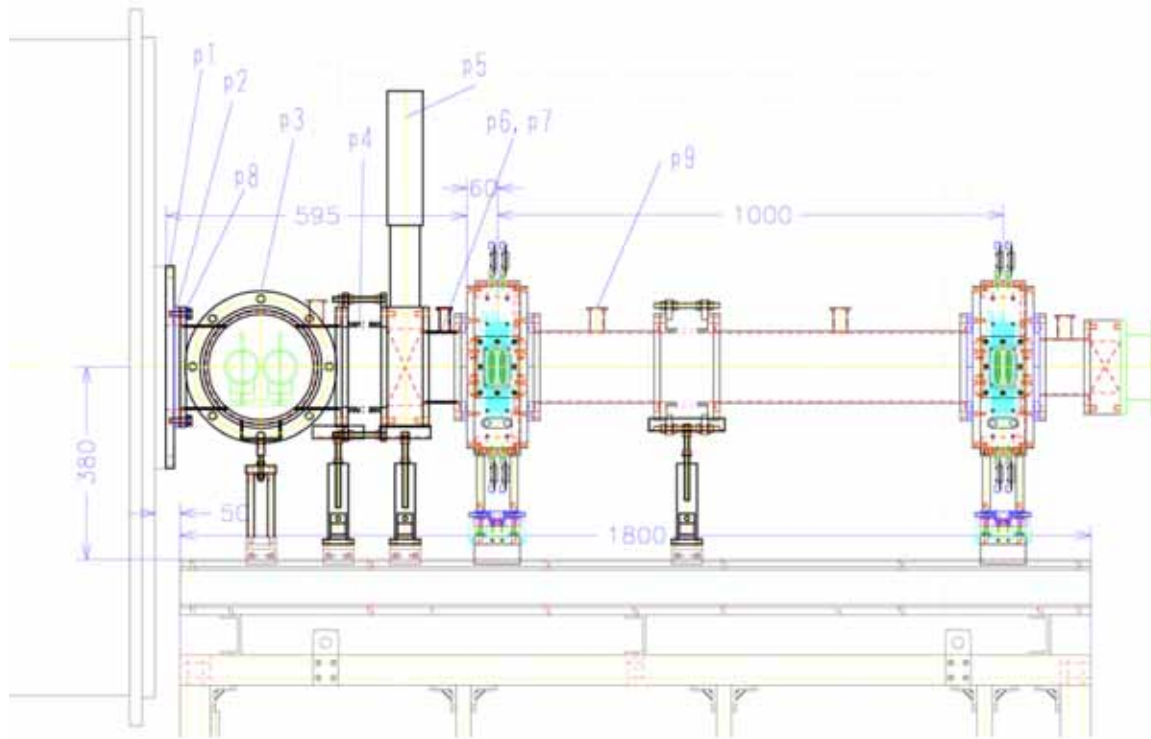
Memo on (personal) update plans for SAMURAI

- SBT in vacuum
- FDC0
- cathode chamber @F5, F7 etc
- HODF24

Memo on γ -arrays

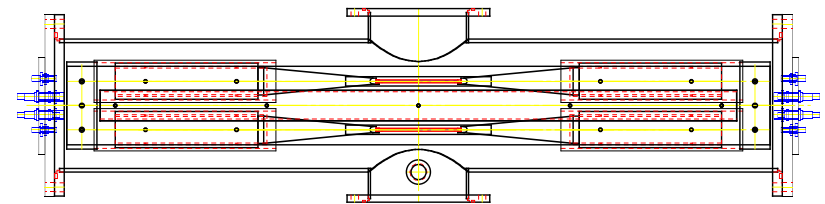
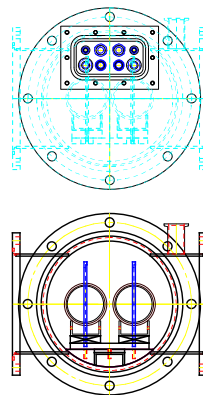
- using existing BaF elements

[1] SBT in vacuum

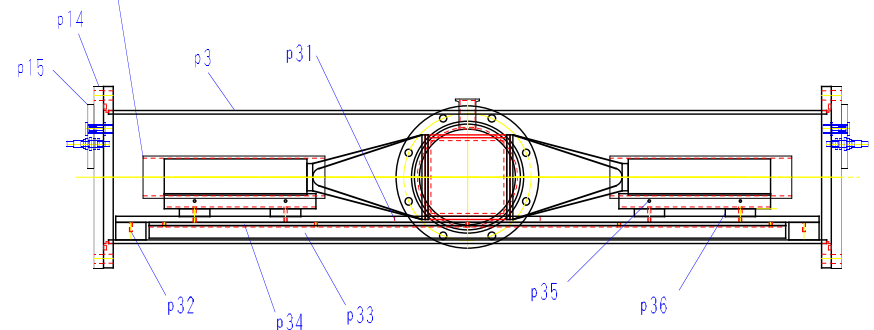


- * STQ出口フランジ
- * p1: VF300-VG150変換フランジ (16mm)
- * p2: VF150-VF150絶縁フランジ (12mm)
- * p3: VG150-VG150 SBT box (320mm)
- * p4: VF150-VG150 bellows (90mm)
- * p5: DN160(VF150-VF150) GV (70mm)
- * p6, p7: VG150-VG125 pipe (75mm)
- * VF125-VG125絶縁フランジ (12mm)
- * BDC1 box (120mm)

- status
 - parts : made
 - need to rearrange SBT

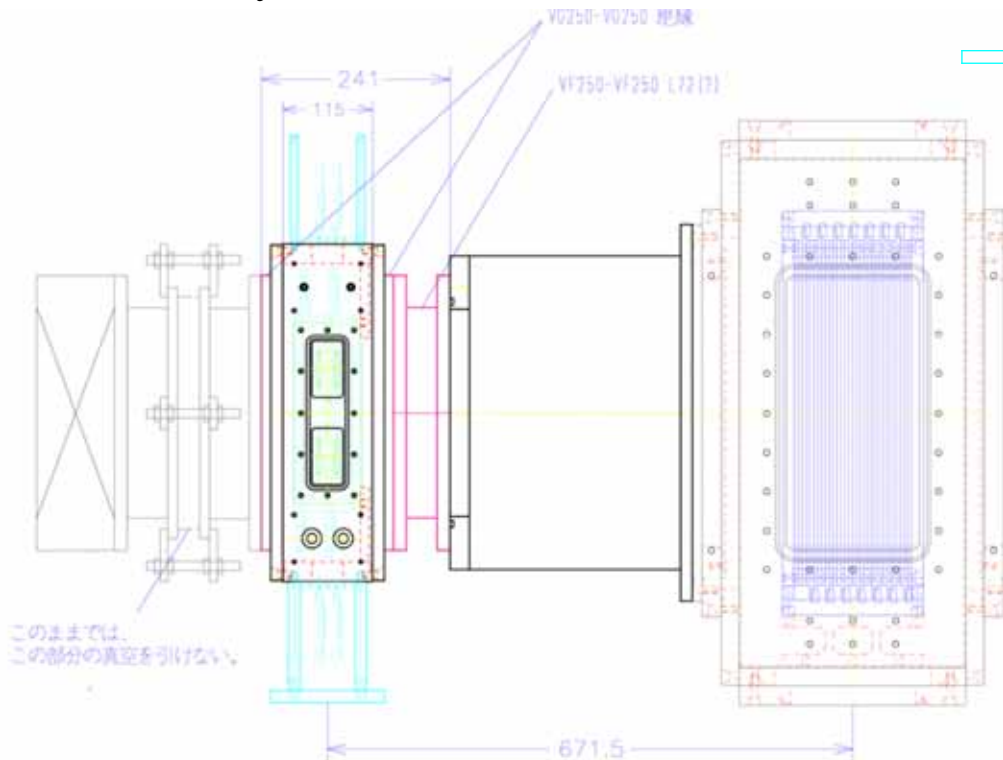
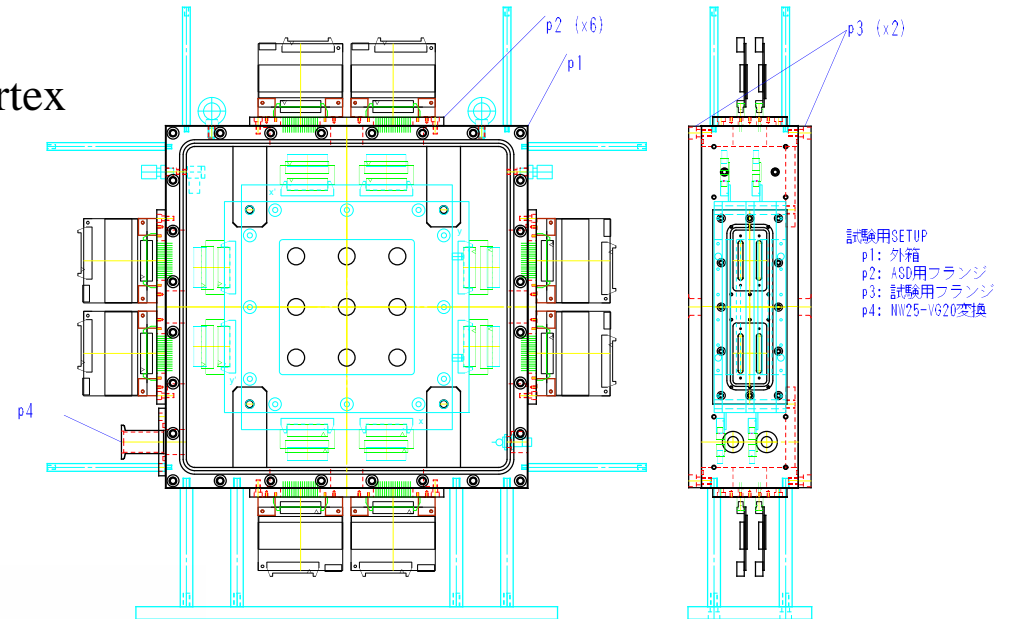


鉄パイプを短くする可能性有り



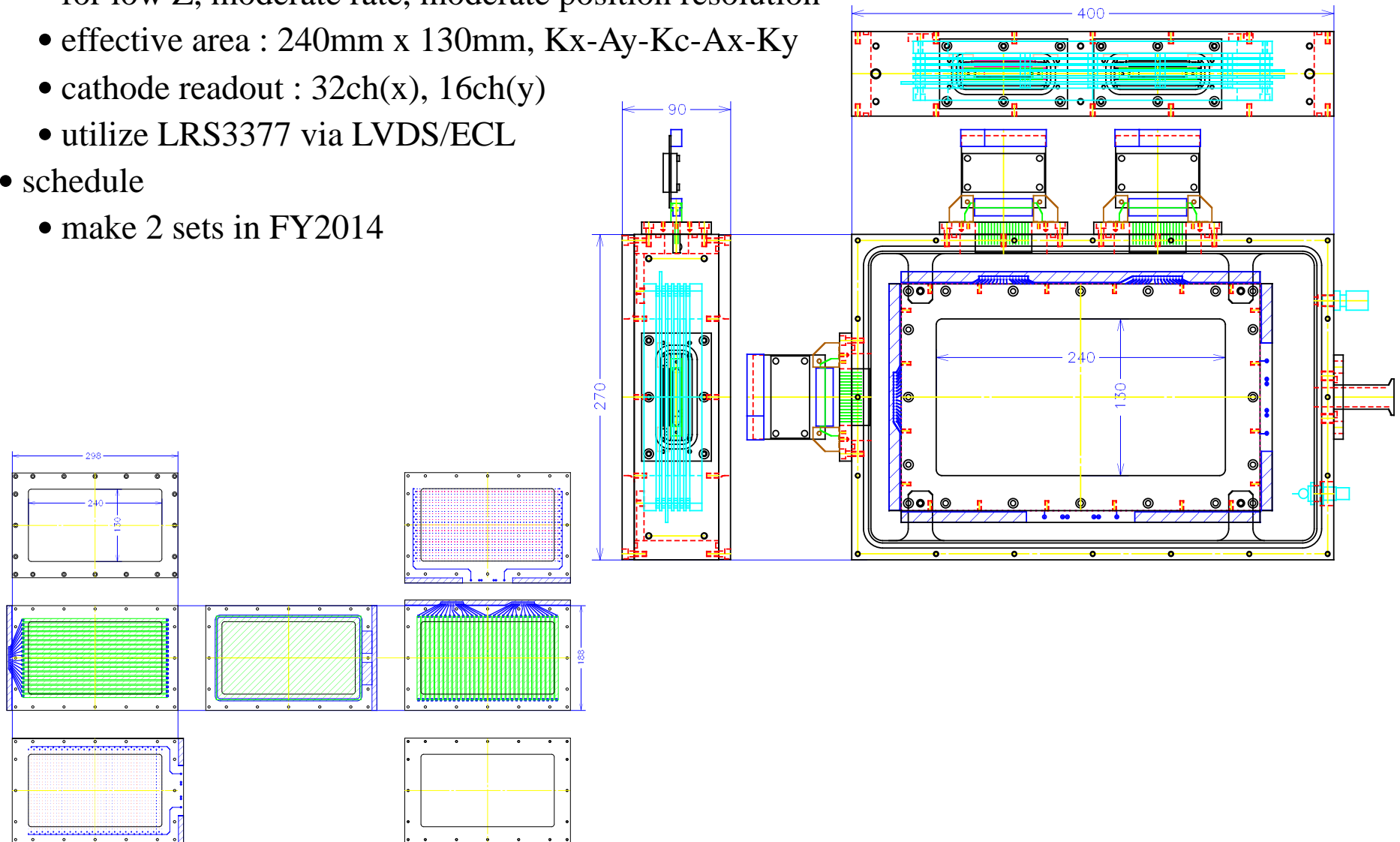
[2] FDC0

- purpose
 - scattering angle w/o assuming reaction vertex
 - info on reaction vertex (limited)
- high-rate drift chamber (existing)
 - effective area : 160x160mm
 - configuration : xx'yy'xx'yy'
 - drift length= 2.5 mm
- status
 - almost ready for bench test



[3] Cathode chamber

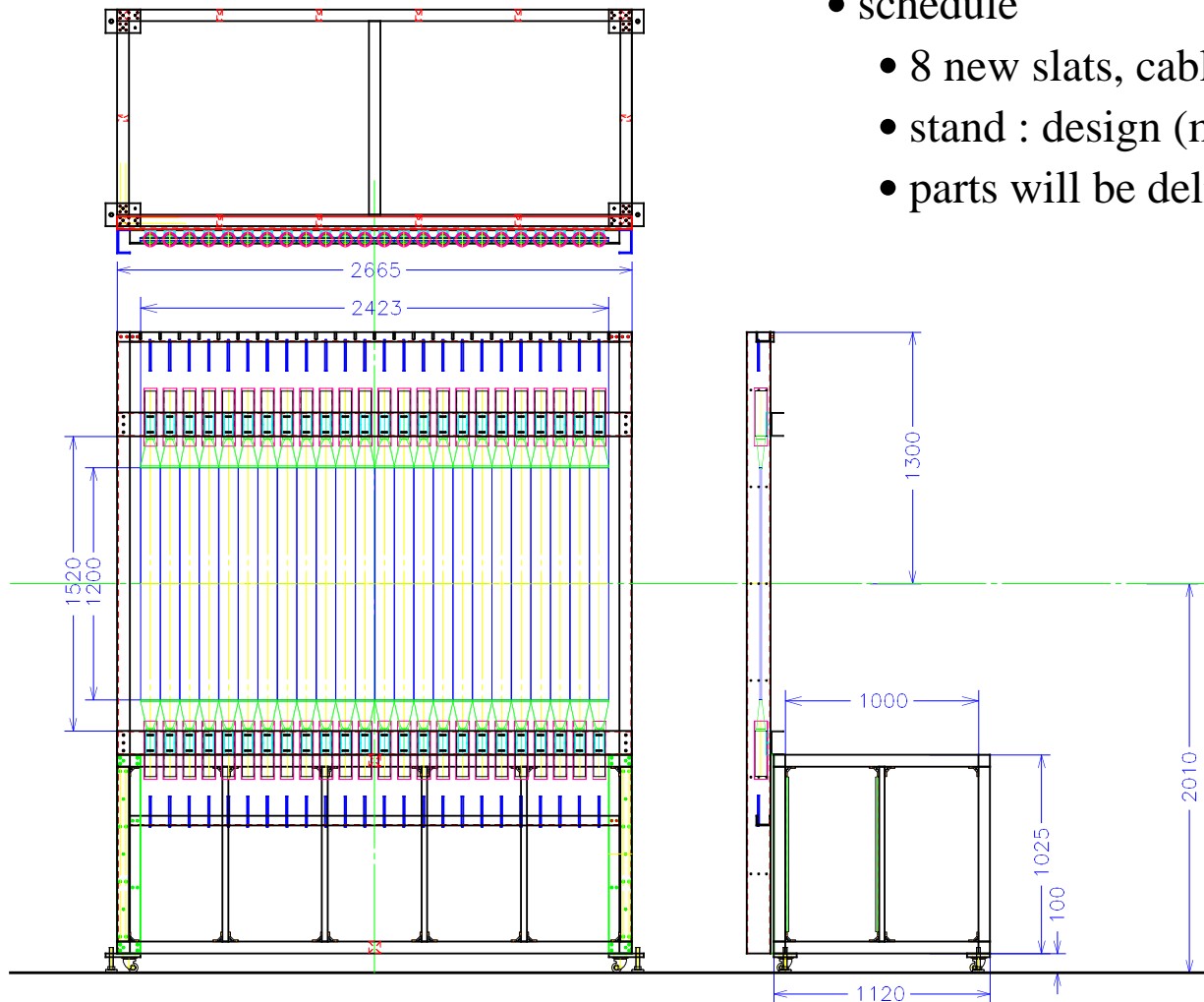
- position detectors at F5 & F7 etc
 - replacement of existing BPC (4mm spacing)
 - for low Z, moderate rate, moderate position resolution
 - effective area : 240mm x 130mm, Kx-Ay-Kc-Ax-Ky
 - cathode readout : 32ch(x), 16ch(y)
 - utilize LRS3377 via LVDS/ECL
- schedule
 - make 2 sets in FY2014



- HODF16 → HODF24 by adding 8 new slats, covering FDC2
- HODP : untouched

- schedule

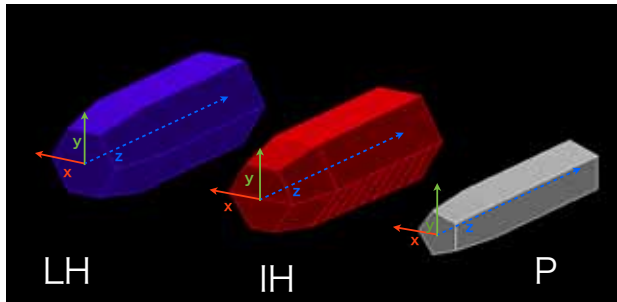
- 8 new slats, cables, delays : ordered
- stand : design (mostly) finished, will be ordered
- parts will be delivered in FY2014



Memo on BaF arrays

- *hearing the rumor that only 50% (80 modules?) will be finished in Dec-2015*
- old plan for γ -arrays utilizing existing BaF detectors @RIKEN & ELPH/Tohoku

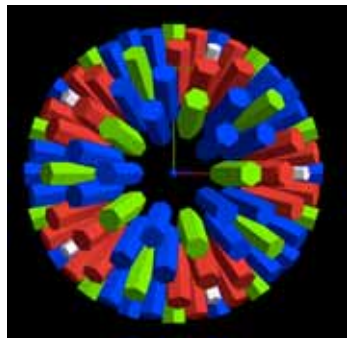
- existing BaF + UVT PMT



- 3 kinds of crystals for close packing @d=15cm
 - L= 180mm (L= 8.9Lr, relatively thick)
 - $\tau_{\text{decay}}= 0.9 / 630$ nsec
 - energy resolution : ~9% @0.5MeV

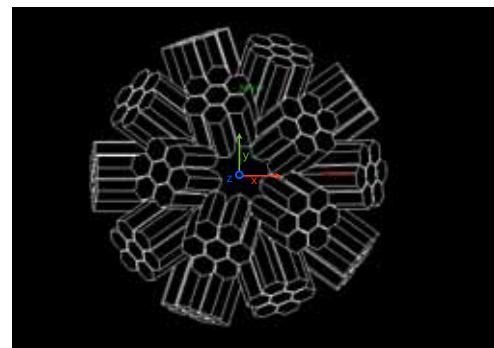
- 2 candidate configurations for simulation (Muto Jan-2014)

- uniform

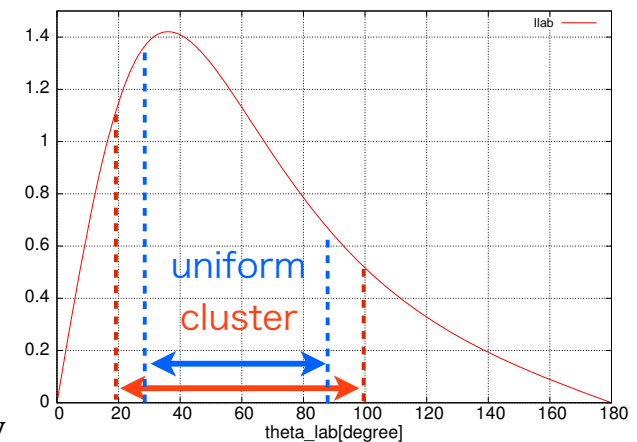


- $\theta=27^\circ\sim90^\circ$
- N=85
- d=17,20,23cm
- + uniform
- - stand : difficult

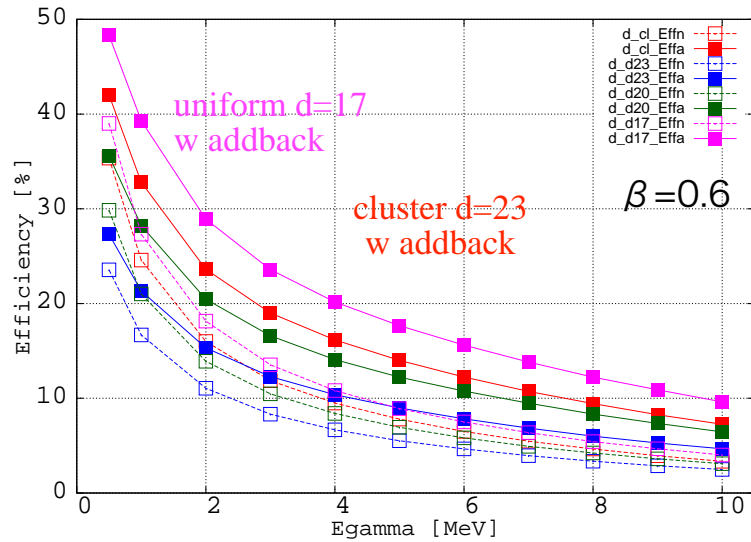
- cluster



- $\theta= 20^\circ\sim100^\circ$
- N=105
- d= 23cm
- 3 rings
- + stand: relatively easy



• Efficiency



closed : w addback
open : w/o addback

- cluster configuration : preferred
 - prototype tested



- readout
 - selfmade CS preamp + STM16 (existing)
 - no additional discri
- stand design by Chiga 2013

• Energy resolution w addback

