# Chamber structure proposal

- Use the SAME gap size for Top & Bottom
- Simplify the strip exit on both sides for 2 partitions

(to be confirmed by physics requirements)

- Strip plate compatible with PCB option
- Amount of strips compatible with 1 LB/chamber= 96 ch
- FEBs compatible with RE options
- Position of FEBs driven by cable length optimisation
- FEB Cooling and Chamber Thermalisation in pipeline with present RE3 and RE4 services
- Same concept for trapezoidal or rectangular prototypes

Trapezoid: Gap size -> HPL piece size

- Assuming gap size 3 mm smaller on each side

- AGAIN: Watch this is

BOTTOM gap only

20°

1 275

1207 gap
1201 HPL piece

1 370

1330 HPL piece
1336 gap

724 gap
718 HPL piece

792
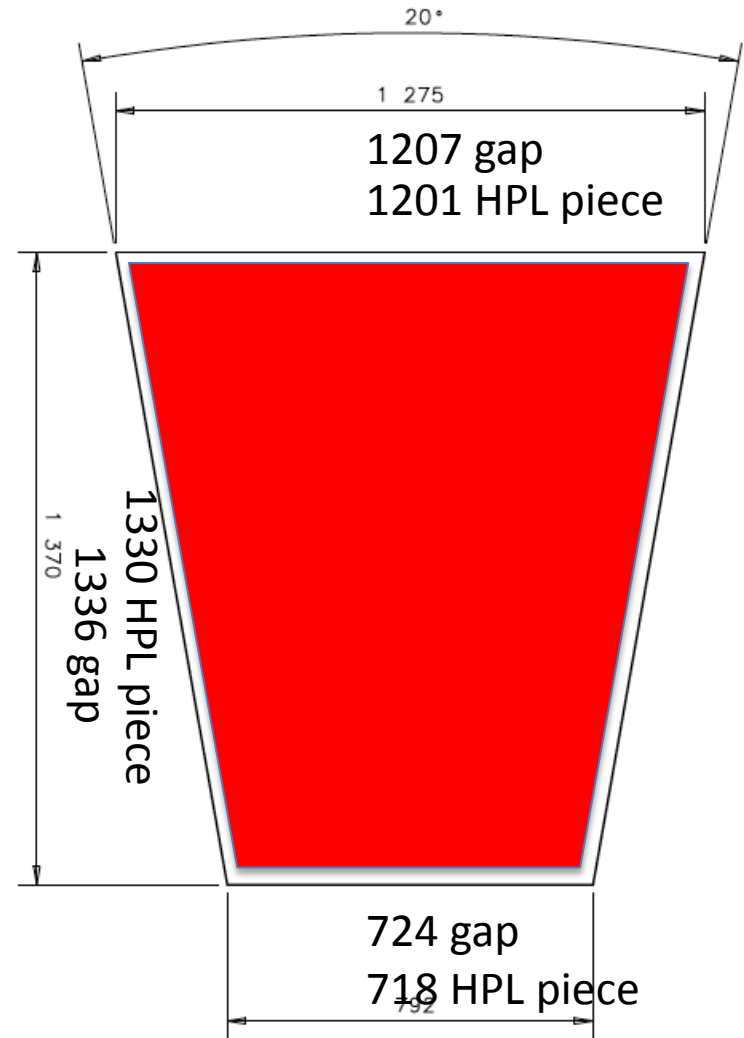
Trapezoid: Panel cut

- 2 trapezoid pieces + 1 rectangular big + 1 rectangular small + 1 small piece for glue tests : 1 panel = 3 gaps

- In rectangular pieces ALL 4 Corners cut as usual 4cm diagonal
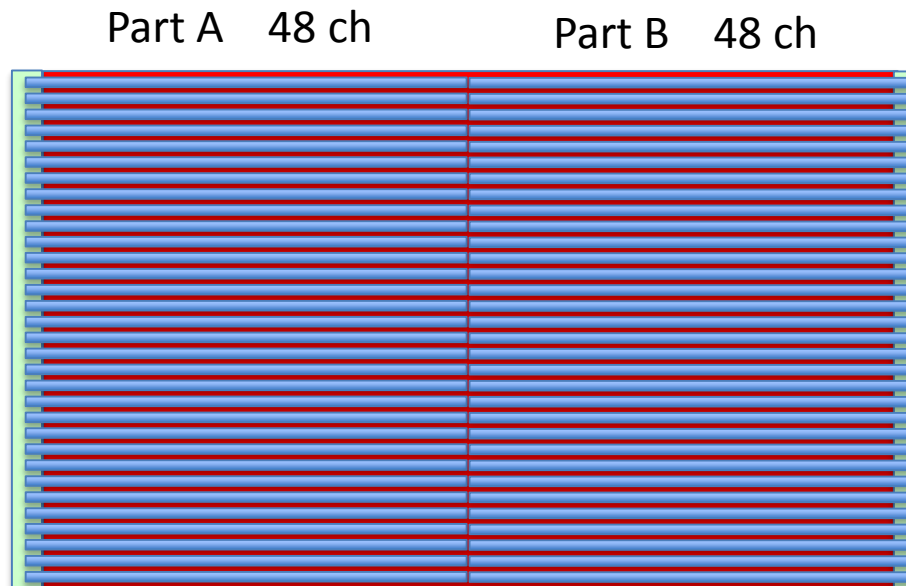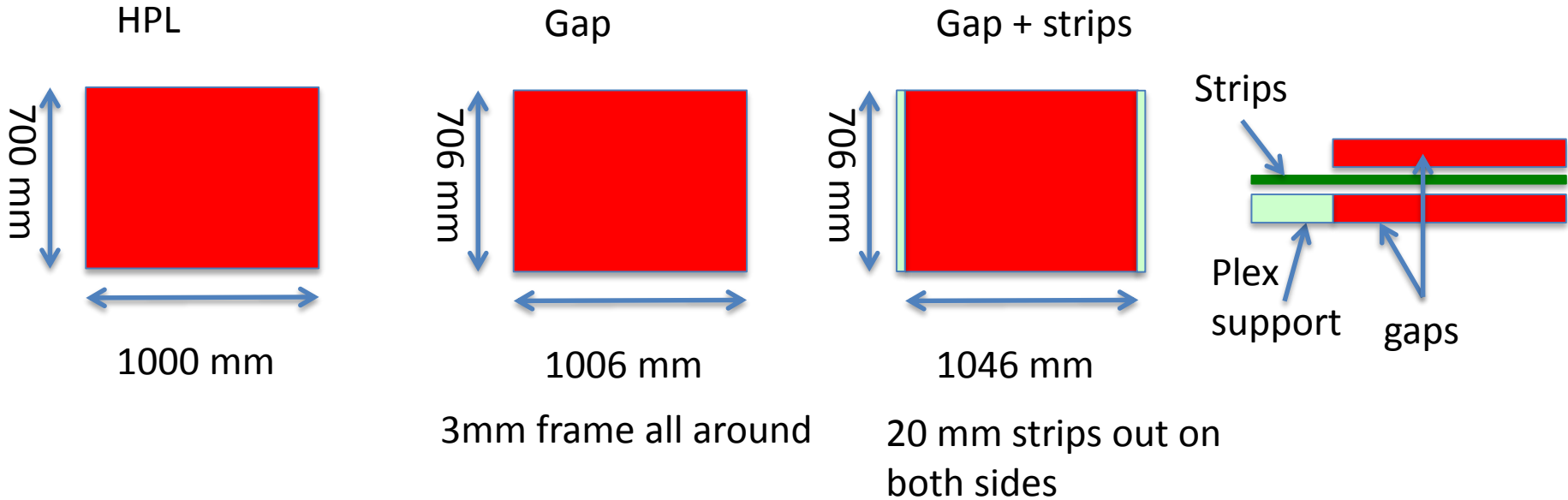
Useful panel size 3000x1400 mm2

3000 mm
1919 mm
700 mm
1400 mm
1330 mm
1000 mm
400 mm
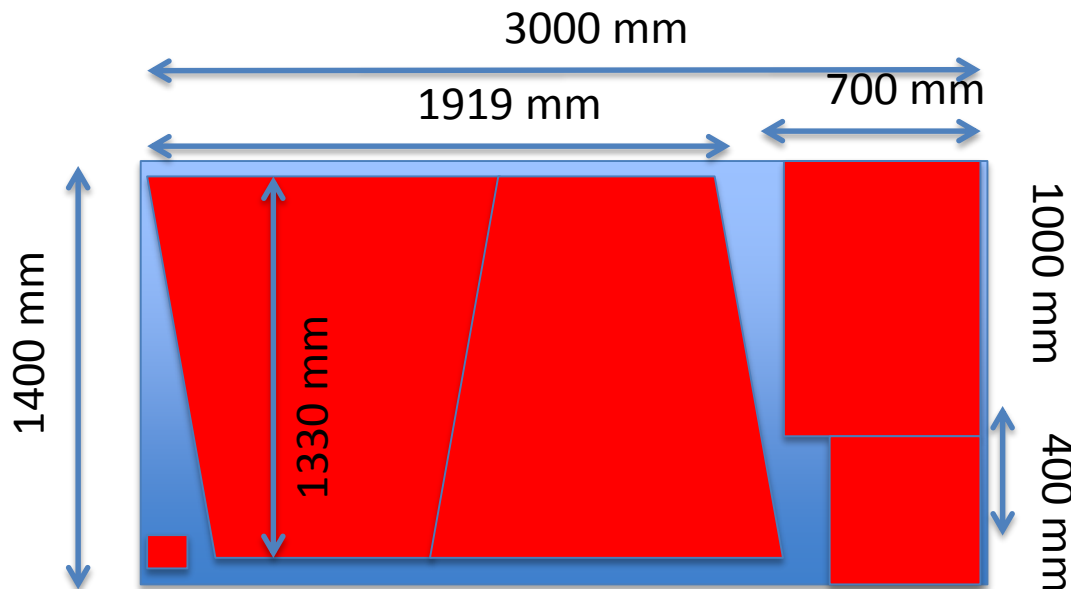
For KODEL:
3 panels 1,6 mm:

#	resistivity
13	2,4
14	2,7
15	2,7

3 panels 2,0 mm

#	resistivity
48	4,3
49	4,1
50	4,0

Chamber Strips

HPL

700 mm

1000 mm

Gap

706 mm

1006 mm

3mm frame all around

Gap + strips

706 mm

1046 mm

20 mm strips out on both sides

Strips

Plex support

gaps

Part A   48 ch   Part B   48 ch

In case of PCB for strips, we could also position connectors and FEBs directly on PCB

4

Chamber: FEB position & cabling

Part A   48 ch   Signal &LV PP   Part B   48 ch

HV PP

Part A   48 ch   Part B   48 ch
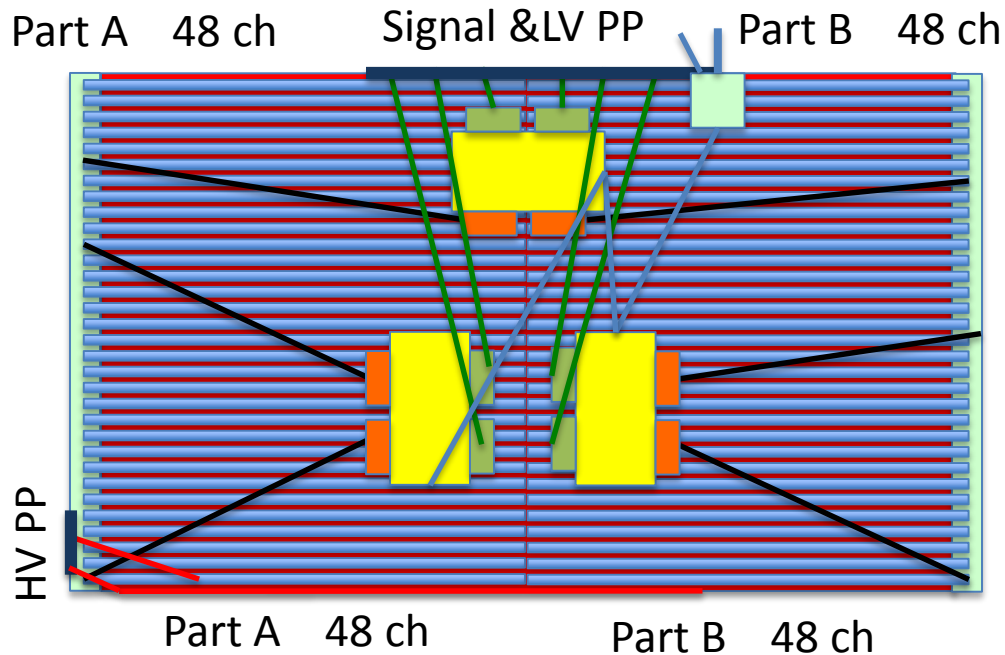
1.5 FEB / partition
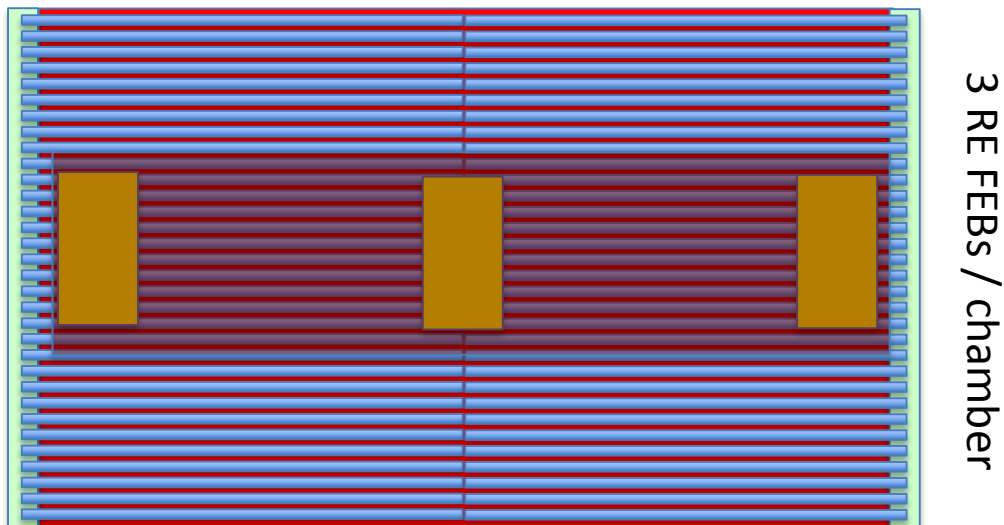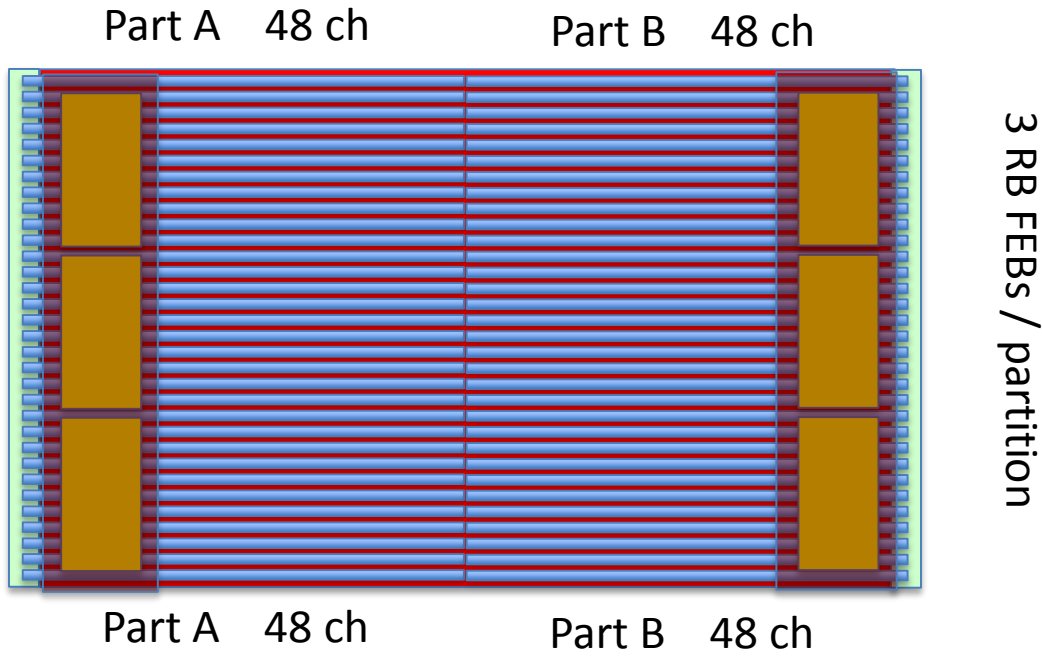
FEBs in central position for same cable length

LV Distribution Board (DB)

Adaptor Board (AB)

FEB Connector (FC)

For 3 chambers we will need:

4 LV DB (3+1 spare)
10 FEBs (9+1)
20 AB (18+2)
20 signal cables 18+2)
40 signal connectors (36+4)
15 LVDB connectors (12+3)
LVDB flat cables 5m (4+1)

Chamber: Cooling

Part A   48 ch   Part B   48 ch

Entire Chamber thermalised

3 RE FEBs / chamber

3 RB FEBs / partition

Part A   48 ch   Part B   48 ch

3 RE FEBs / chamber

Part B   48 ch