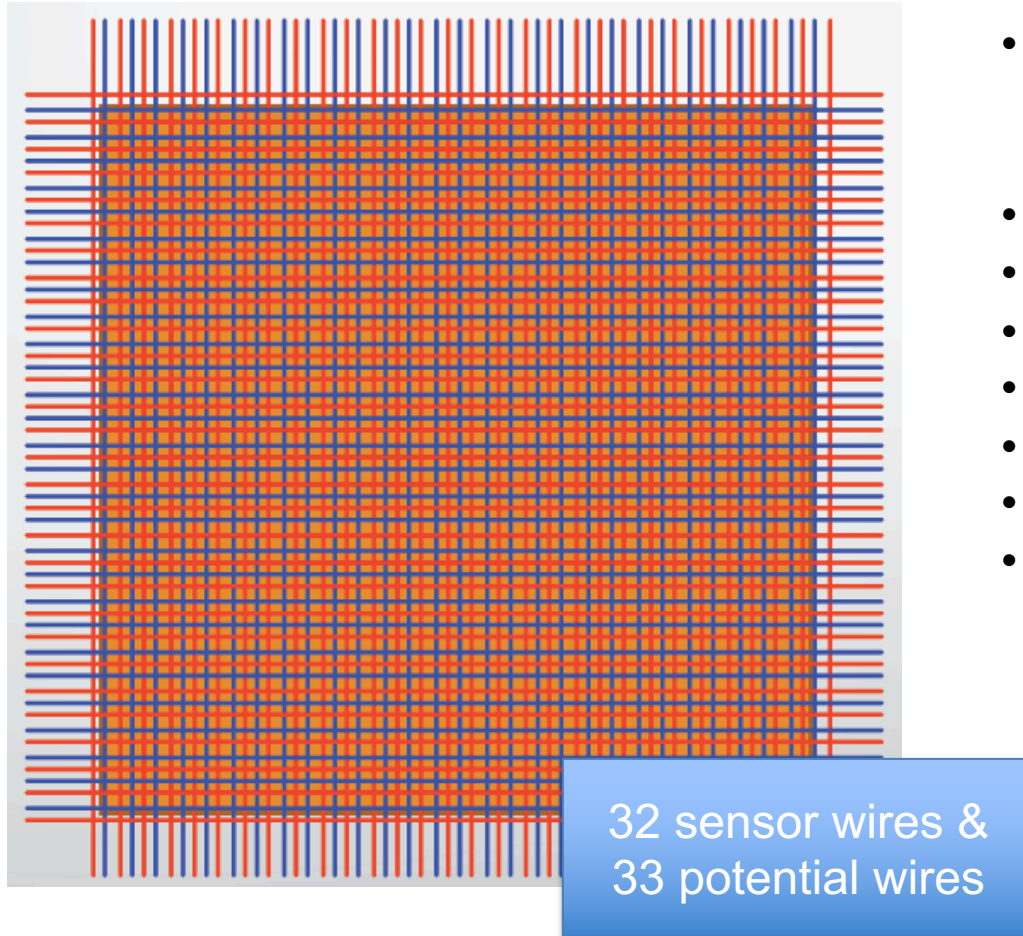




Status report of prototype BDC for LAMPS

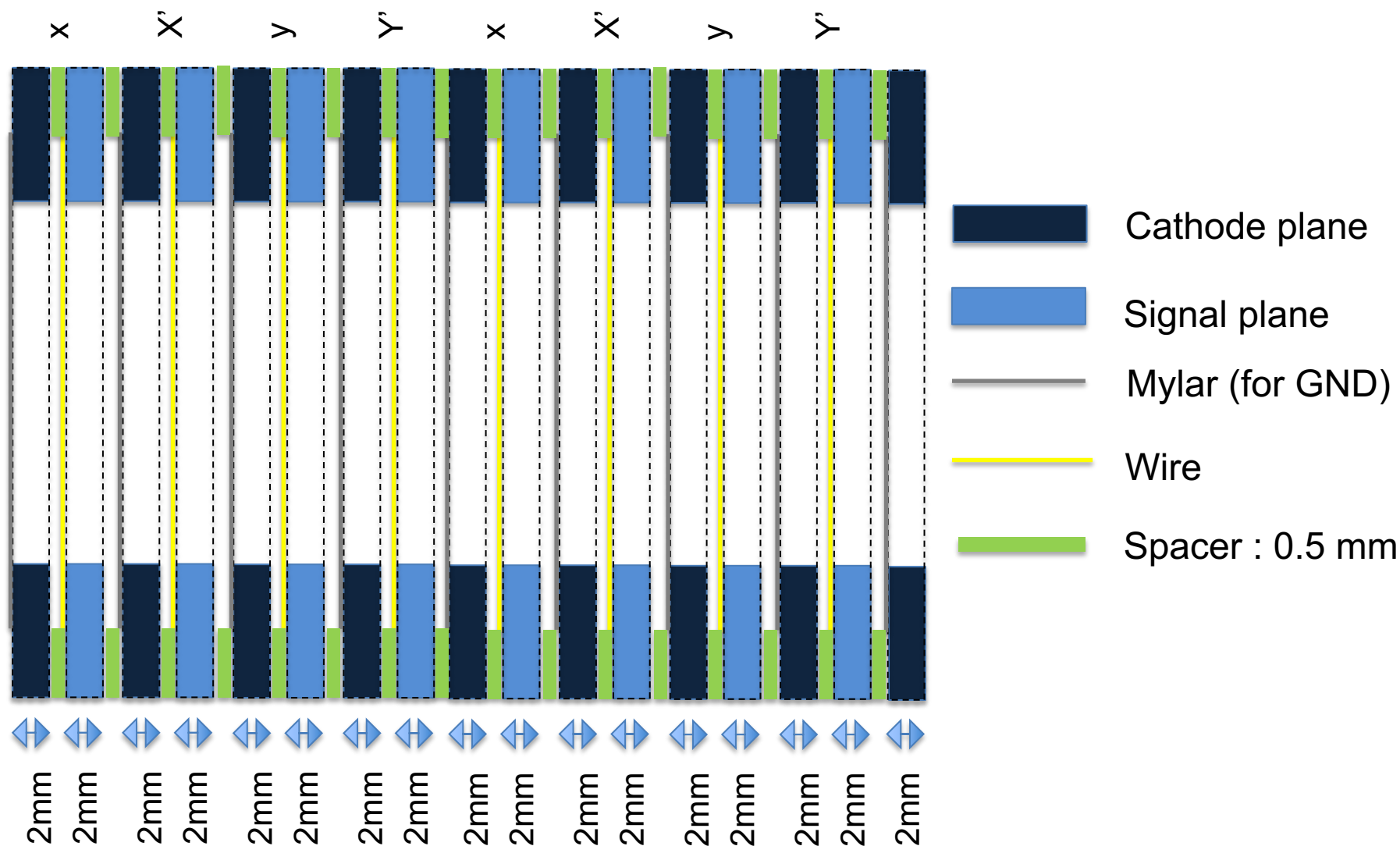
Hyunchul Kim, Dong Ho Moon, Seonghak Lee, Jaein Hwang
(Chonnam National University)
Sanghoon Hwang
(KRISS)

Preliminary design of LAMPS BDC



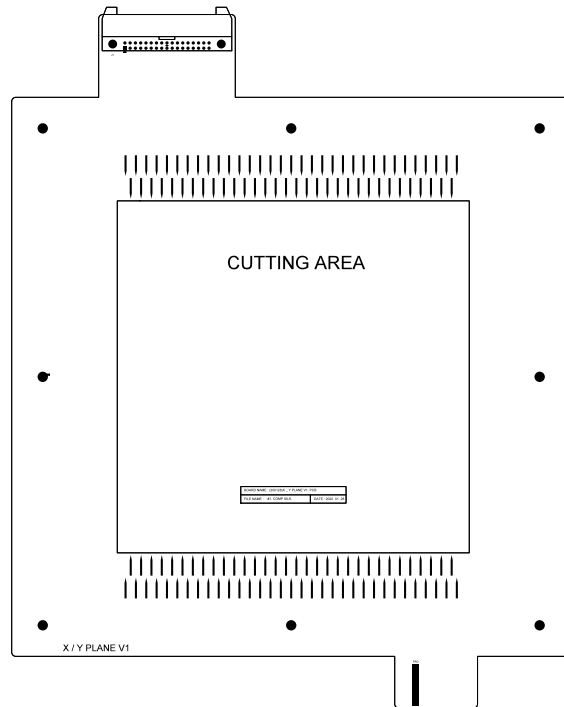
- Active area : $160 * 160 \text{ mm}^2$
 - Cutting area : $170 * 170 \text{ mm}^2$
- Drift length : 2.5 mm
- Configuration: $xx'yy'xx'yy'$
- Anode wire : $20 \mu\text{m}$
- Potential wire : $80 \mu\text{m}$
- # of CH of x/x' plane : 32 ch
- # of CH of y/y' plane : 32 ch
- # of ASD module : 4 ASD
 - 2 planes / 1 ASD

Preliminary design of LAMPS BDC

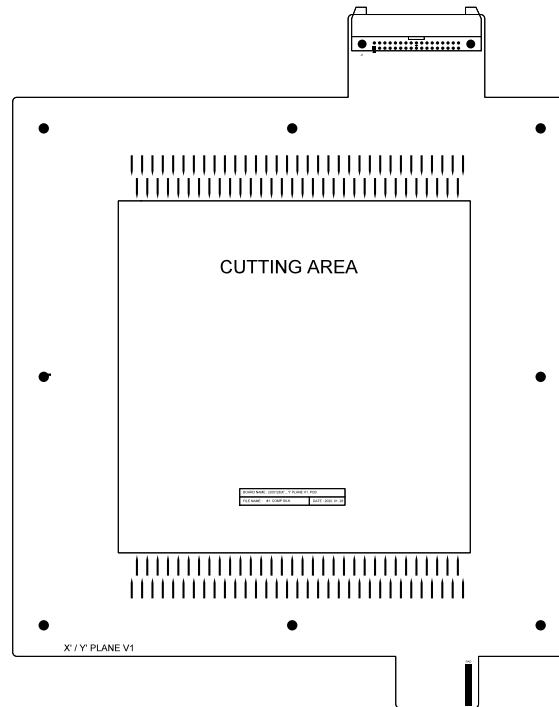


Design of prototype BDC

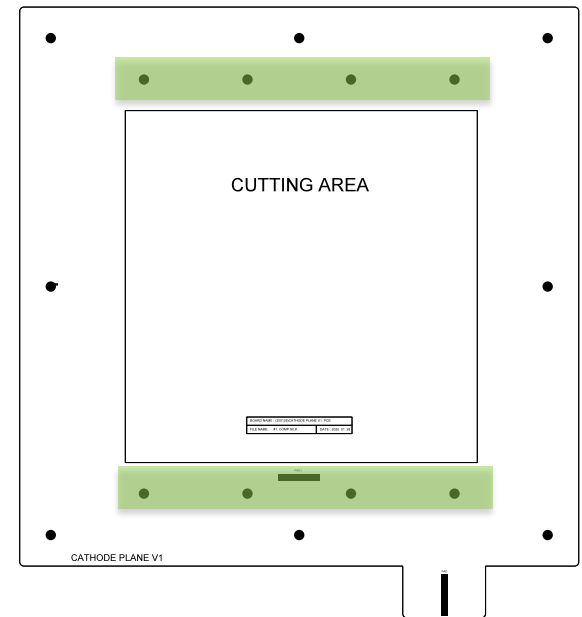
xy plane



x'y' plane



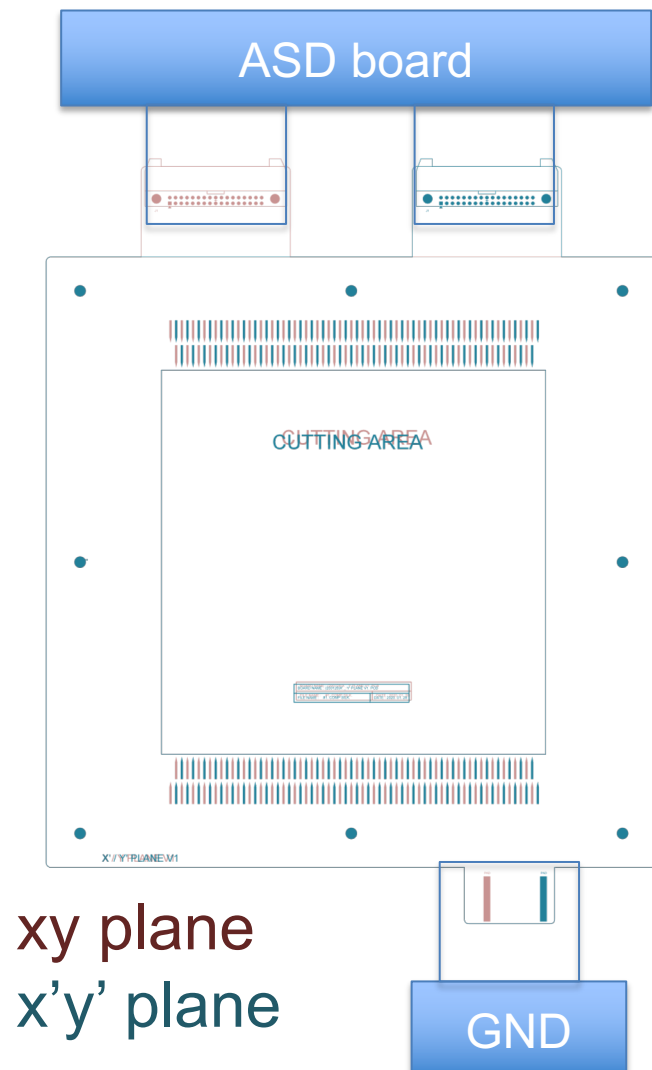
cathode plane



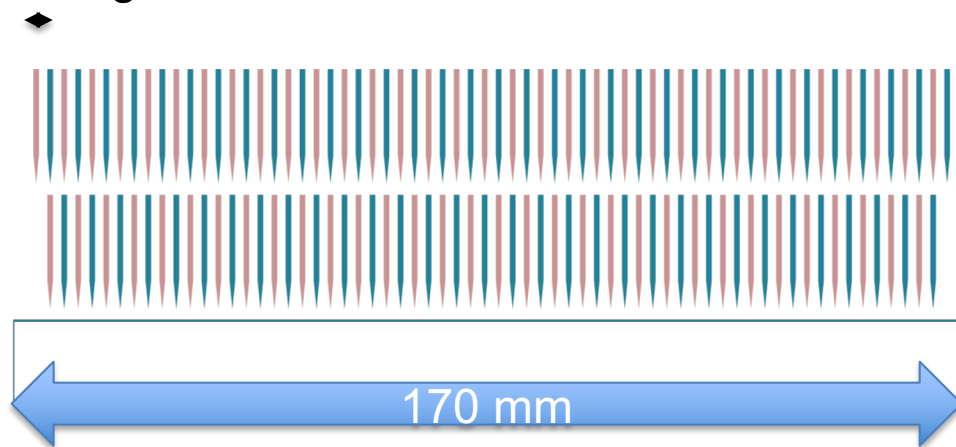
Holes for gas circulation

Designed by Sanghoon Hwang

Design of prototype BDC



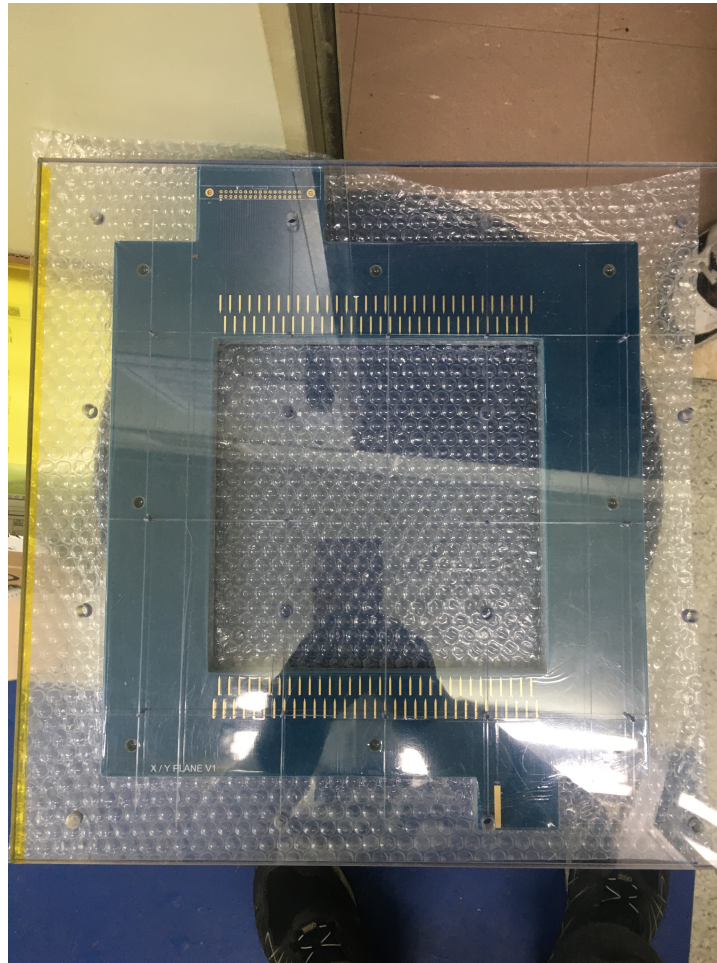
Drift length : 2.5 mm



xy plane is shifted from x'y' plane
with 2.5 mm spacing

Designed by Sanghoon Hwang

Design of prototype BDC



Designed by Sanghoon Hwang

Hyunchul Kim (LAMPS meeting, Mar. 6th. 2020)

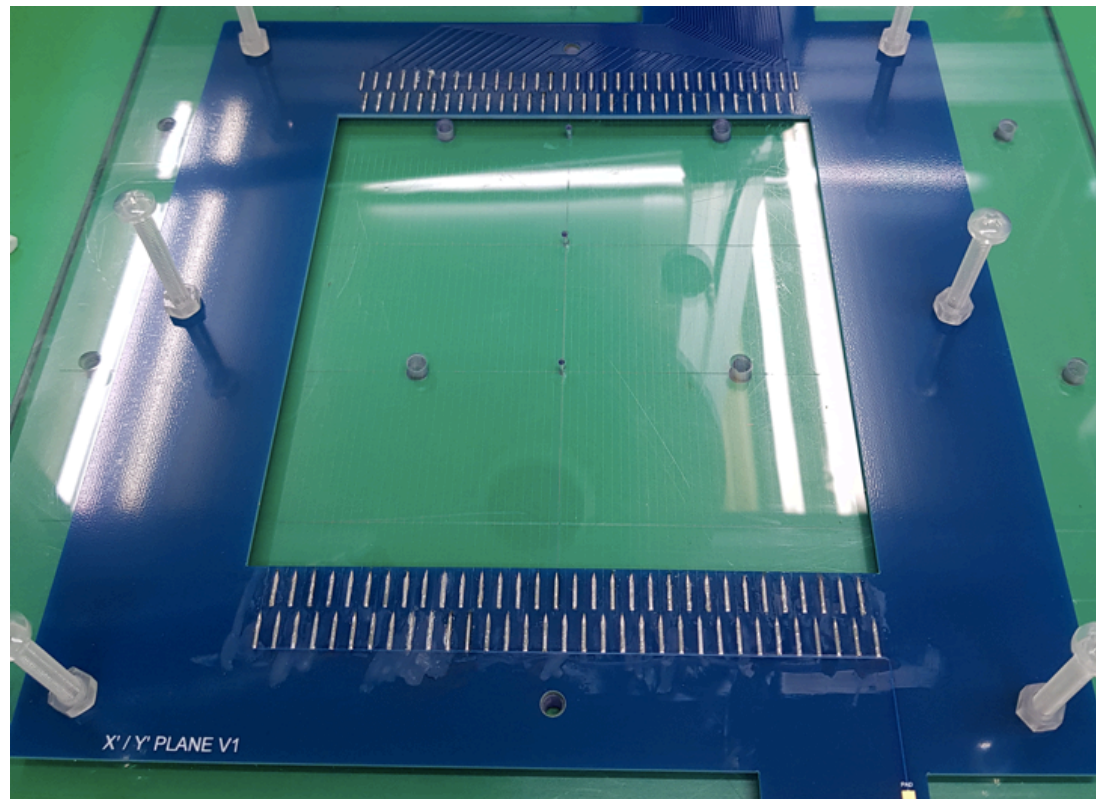
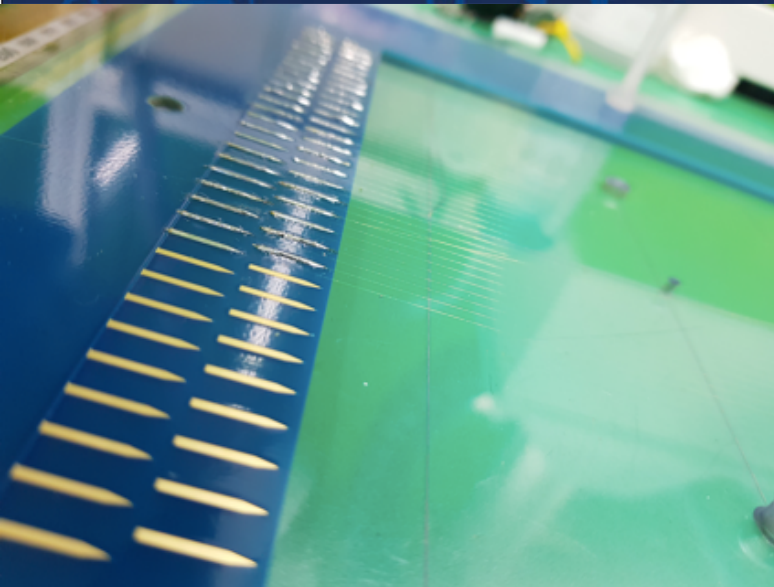
Setup for wiring in clean room, KRISS

- Jaein (undergraduate student) worked at KRISS in Feb. 10-14



Wire thickness : $16\ \mu\text{m}$
Gold coated tungsten wires
for signal and potential wires

Plane after wiring

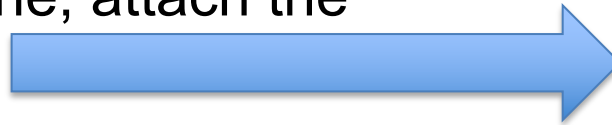


Wiring is done in 1 xy plane and 1 x'y' plane

Next step for prototype BDC

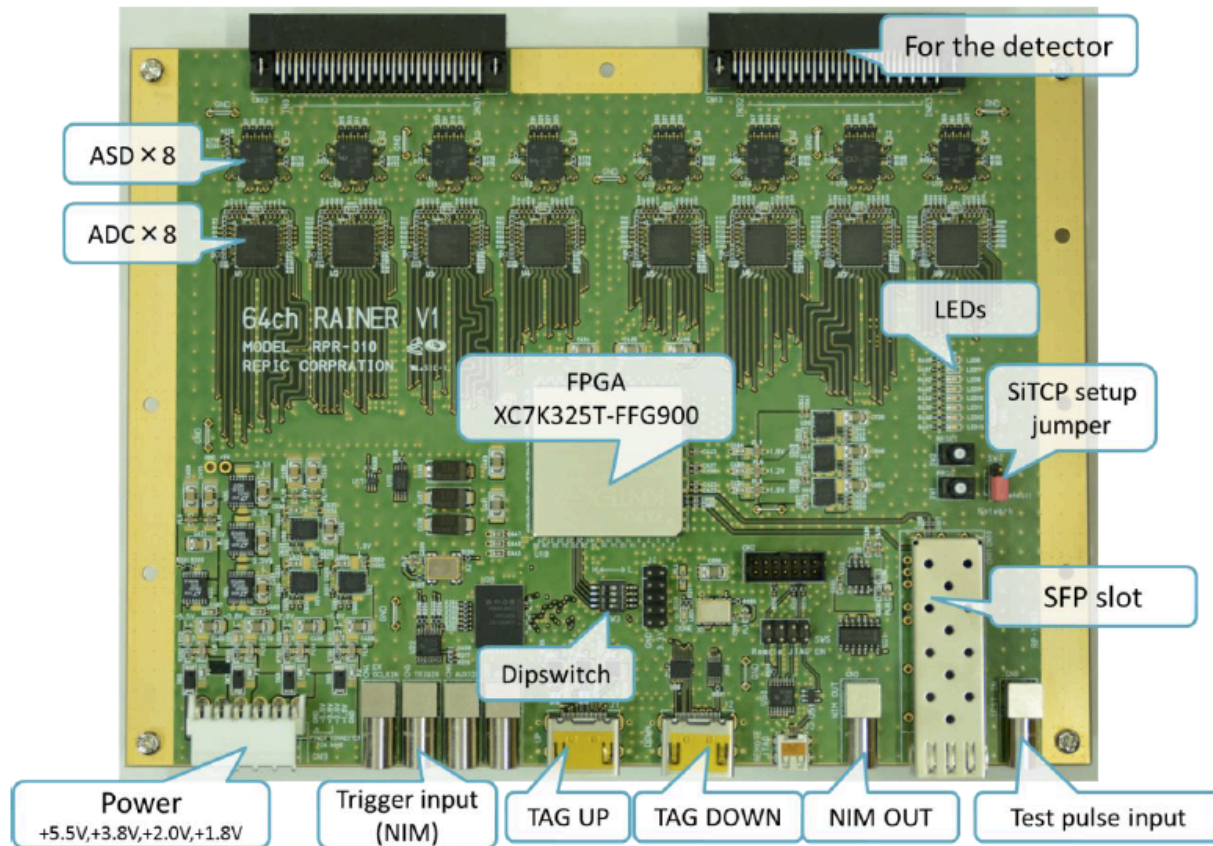
- **Cleaning and assembly chamber**

- Clean wired planes in the machine
- On the cathode plane, attach the metalized mylar
- To keep 2.5 mm spacing between mylar and wires, attach the spacer (0.5 mm thickness)
- And assembly chamber for the test
 - Cathode-xy plane-Cathode-x'y' plane-Cathode



- **Hope to continue in next week..**

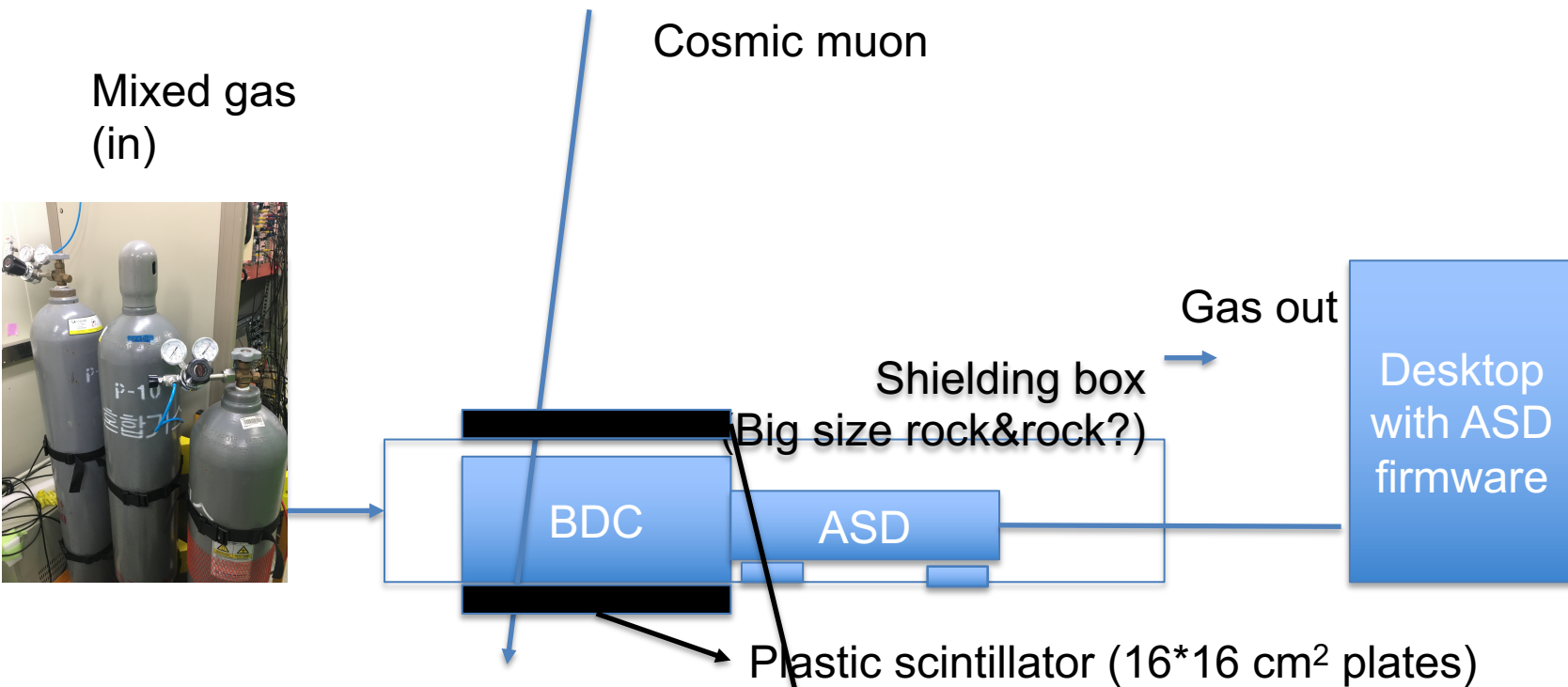
Preparation of ASD board test



- Power input connector : S6P-VH
- 6 wires should be connected (GND, +5.5V, +3.8V, +2.0V, +1.8V, GND), Maximum current : 5A
- 2 * 2 channel power supply are needed
 - 1 from KRISS, 1 will be ordered



(Preliminary) setup of the prototype BDC test



- Continue to discuss about the setup

Summary and plan for March

- **Summary**
 - Finish up to wiring in two planes
- **Plan for March**
 - Finalize making prototype BDC in KRISS
 - Hope to continue in next week, need to discuss with Sanghoon Hwang
 - Prepare the test of the prototype BDC
 - Order needed materials such as connector, wires and power supply
 - 2 ASD boards test
 - Hopefully main test will be in April?