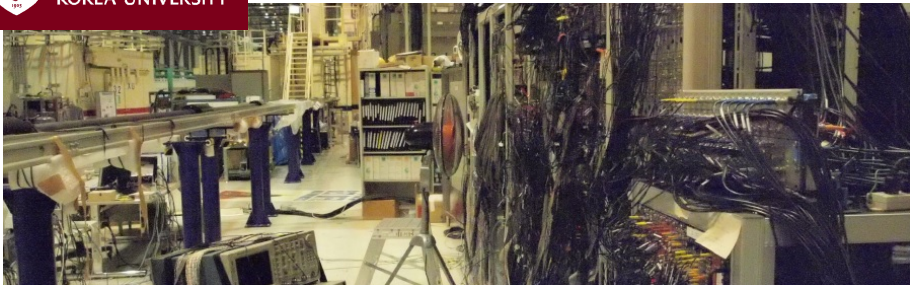




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LAMPS Meeting

September 25, 2020 Kang, Byungmin

Cosmic Test Setup Plan



- Optical grease will couple MPPCs during R&D.
- Cosmic test will be done with other scintillators.(Different lightguide size)
- MPPC board will be optimized.
- Setup Geometry will be kept same(detector position, ...)

List of MPPC types

MPPC Model Name	Area	Sensitive Area	Sensitive Area Ratio
S13360-3050PE	3.85X4.35	3X3	0.54(Current)
S13360-6050PE	6.85X7.35	6X6	0.72
S14160-3050HS	3.4X3.4	3X3	0.78
S14160-4050HS	4.4X4.4	4X4	0.83(Best Candidate)

Table: HS series operates on lowre HV.

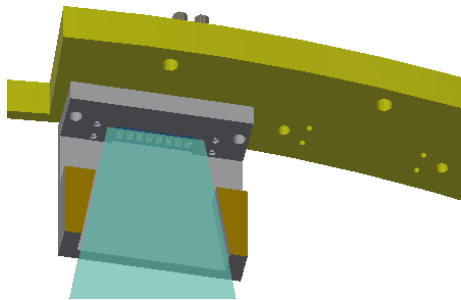
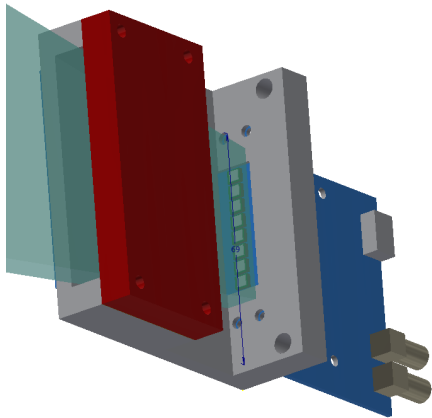
- By chainging MPPCs, collection eff. can be increased.
- HS series shows better PDE.
- Board and Holding structure needs to be designed. (Requires OrCAD)

List of MPPC boards to produce

MPPC	Detector	MPPCReq.	QTY
3050PE	FTOF	3	2
	BTOF	8	4
6050PE	BTOF	5	2
3050HS	FTOF	3	2
	BTOF	8	4
4050HS	FTOF	3	2
	BTOF	8	4

- FTOF requires two type of board. (FTOF A/FTOF B)
- FTOF A will use same readout circuit as BTOF.

BTOF Frame&Board Holder



BoardHolder



- Needs to be penetrated through red arrow

Summary&Future plan

- BTOF performance study for 4 types of MPPCs is on plan.
- FTOF will be tested with simultaneously