

Beam Test Preparation @ NWU

RIKEN/RBRC

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Readbacker

74 FPHX TestStand DAQ

File

All / D3 | Mod A0 | Mod B0 | Mod C0 | Mod D0 | Mod A1 | Mod B1 | Mod C1 | Mod D1 | Mod A2 | Mod B2 | Mod C2 | Mod D2 | Mod A3 | Mod B3 | Mod C3

Reg	Desc	To Chip	From Chip	Chip Command
*	Wild	0	Read	Write Set255 Reset Default
1	Mask	0	Read	Write Set255 Reset Default
2	Dig Ctrl	5	Read	Write Set255 Reset Default
3	Vref	1	Read	Write Set255 Reset Default
4	DAC0	20	Read	Write Set255 Reset Default
5	DAC1	25	Read	Write Set255 Reset Default
6	DAC2	30	Read	Write Set255 Reset Default
7	DAC3	35	Read	Write Set255 Reset Default
8	DAC4	40	Read	Write Set255 Reset Default
9	DAC5	45	Read	Write Set255 Reset Default
10	DAC6	50	Read	Write Set255 Reset Default
11	DAC7	55	Read	Write Set255 Reset Default
12	N1Sel <3:0>	6	Read	Write Set255 Reset Default
	N2Sel <7:4>	4	Read	Write Set255 Reset Default
13	FB1Sel <3:0>	4	Read	Write Set255 Reset Default
	LeakSel <7:4>	0	Read	Write Set255 Reset Default
14	P3Sel <1:0>	0	Read	Write Set255 Reset Default
	P2Sel <7:4>	4	Read	Write Set255 Reset Default
15	GSel <2:0>	2	Read	Write Set255 Reset Default
	BWSel <7:3>	8	Read	Write Set255 Reset Default
16	P1Sel <2:0>	5	Read	Write Set255 Reset Default
	InjSel <5:3>	0	Read	Write Set255 Reset Default
17	LVDS Current	32	Read	Write Set255 Reset Default
18	Resets	n/a	Read	Write Set255 Reset Default

Chip Control

Display/Modify Configuration for Chip ID 7 Side 0

Channel Mask [Red = Off, Green = On]

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47
48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63
64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79
80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95
96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111
112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127

Mask All Unmask All Toggle All Send

Chip Side Enable

0	15	0	1	8	15	0	1	16	15	0	1	24	15	0	1
1	15	0	1	9	15	0	1	17	15	0	1	25	15	0	1
2	15	0	1	10	15	0	1	18	15	0	1	26	15	0	1
3	15	0	1	11	15	0	1	19	15	0	1	27	15	0	1
4	15	0	1	12	15	0	1	20	15	0	1	28	15	0	1
5	15	0	1	13	15	0	1	21	15	0	1	29	15	0	1
6	15	0	1	14	15	0	1	22	15	0	1	30	15	0	1
7	15	0	1	15	15	0	1	23	15	0	1	31	15	0	1

TestStand

Spartan3 ROC ROC+FEM FEM Addr 6 DB Access On Off

Global Chip/DAQ Operations

FFR Enable RO Latch FPGA Core Reset Start DAQ Check GLINK test

Init Disable RO Calib JTAG Sync Stop DAQ Check FEM

FD Sync Set L1 Delay 3 BCO Start Global Start Self Trng

FPGA RST Er. EEPROM Write Page Read Page Write All Cosmic Start

DAQ Configuration

DAQ Program C:/Users/SPHENIX/Doc Browse

NI DAQ Sample Rate (MHz) 5

Num of events (0=inf) 0

Duration HH:MM:SS (0:00:00=inf) HH:MM:SS

Print Output Print Off

FPHX version (for Print) 2

Run Number 0

Filename C:/Users/SPHENIX/Documents/WINTT_te

Beam Species None

Beam Energy 0

Pulsar Configuration

Pulse amplitude (10 bits max) 255 Config Amp Pulse

Num of Pulses 1 Pulse Train

BCOs between pulses 1023 Wedge 0 Module 0 Set Module

Module Enable

Module 15 On Off Both Side 0 Side 1 Module 7 On On Both Side 0 Side 1

Module 0 On On Both Side 0 Side 1 Module 8 On On Both Side 0 Side 1

Module 1 On On Both Side 0 Side 1 Module 9 On On Both Side 0 Side 1

Module 2 On On Both Side 0 Side 1 Module 10 On On Both Side 0 Side 1

Module 3 On On Both Side 0 Side 1 Module 11 On On Both Side 0 Side 1

Module 4 On On Both Side 0 Side 1 Module 12 On On Both Side 0 Side 1

Module 5 On On Both Side 0 Side 1 Module 13 On On Both Side 0 Side 1

Module 6 On On Both Side 0 Side 1 Module 14 On On Both Side 0 Side 1

Manual Packet Send

Packet file to send Browse Send Read

Communications

USB FTR8K14XA Ethernet IP Addr 192.168.60. Port 9900

Baud Rate 115200

ver7

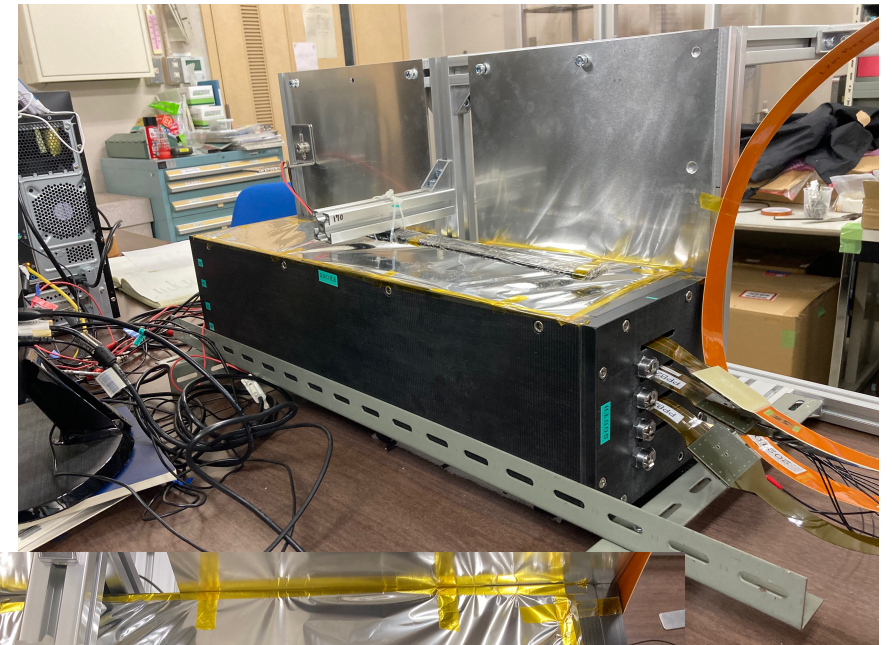
ROOT Module ID 5 Calib External camac ROOT.trg

Working!

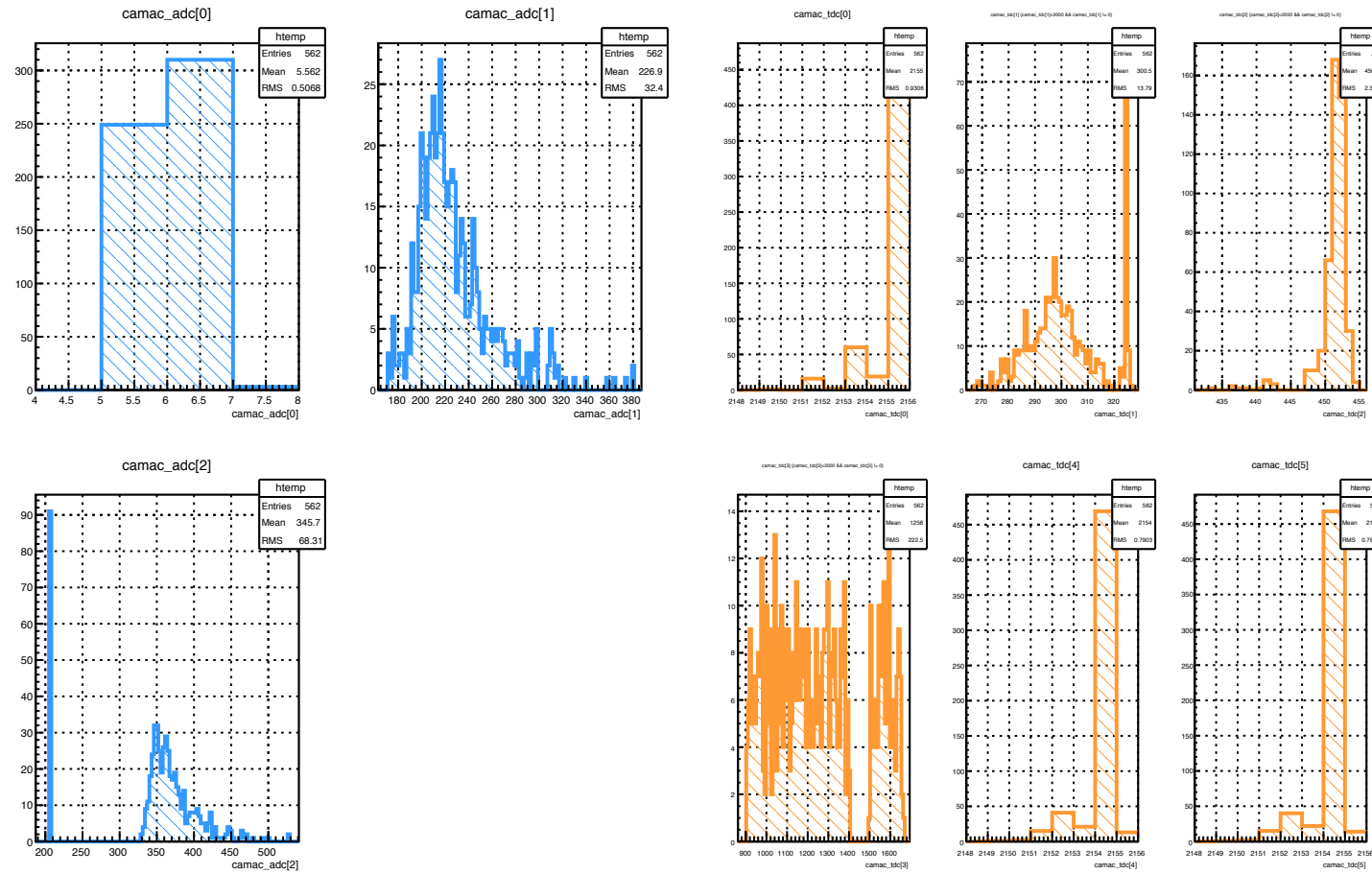
Cosmic Ray Data Taking



Thanks to Genki, Miu, Hikaru for support over the zoom!

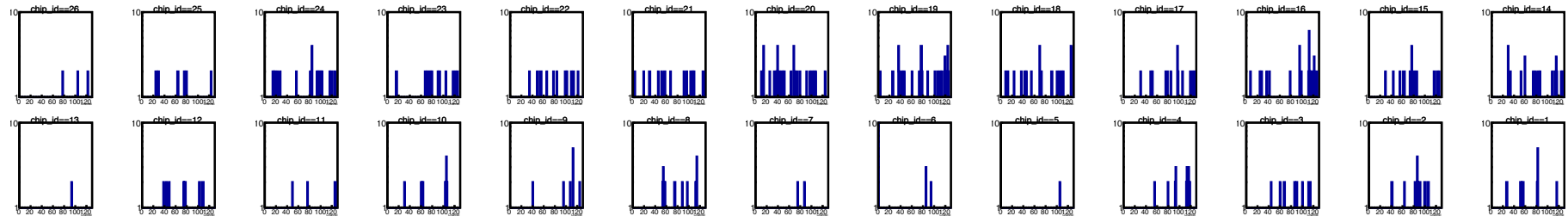


Run1126-0116 CAMAC Data Taking

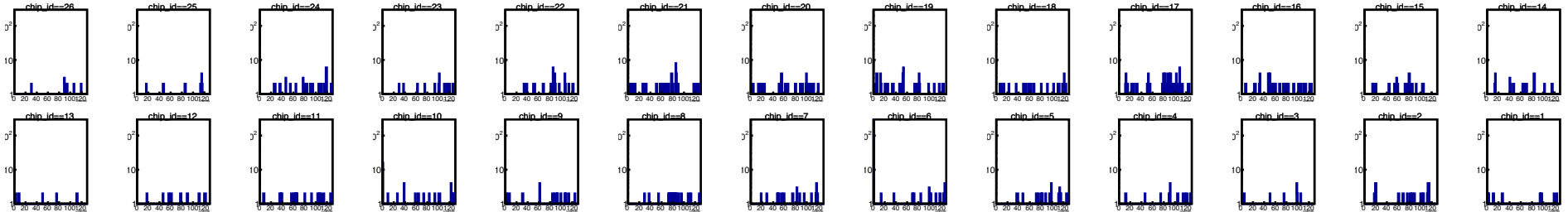


Channel Distrubution

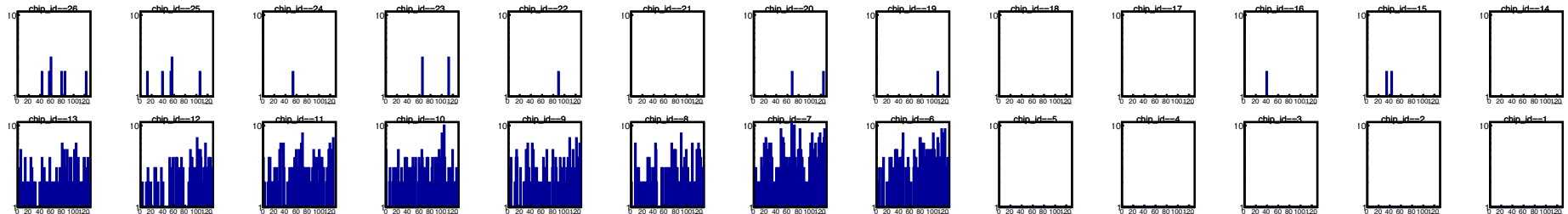
Module-8



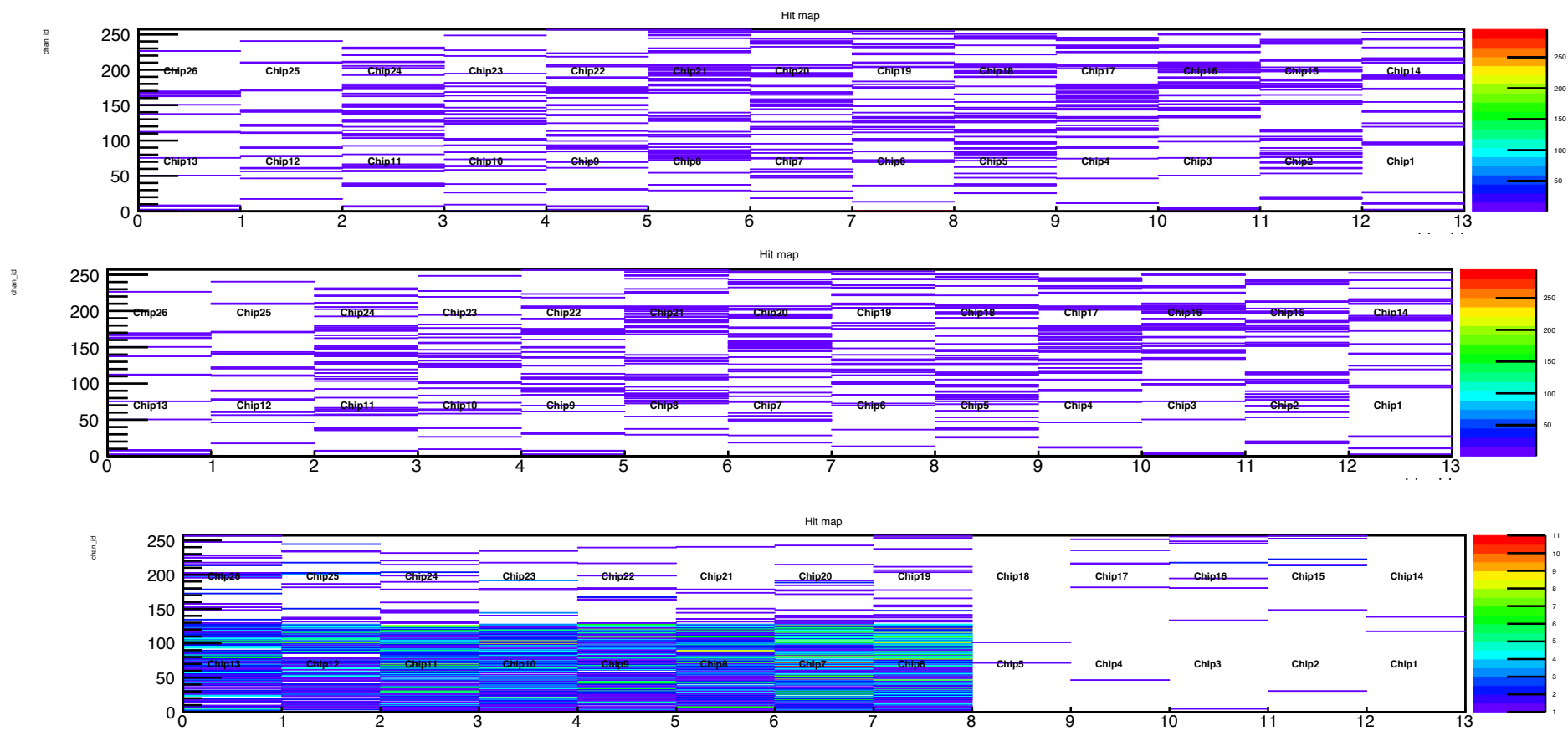
Module-6



Module-1



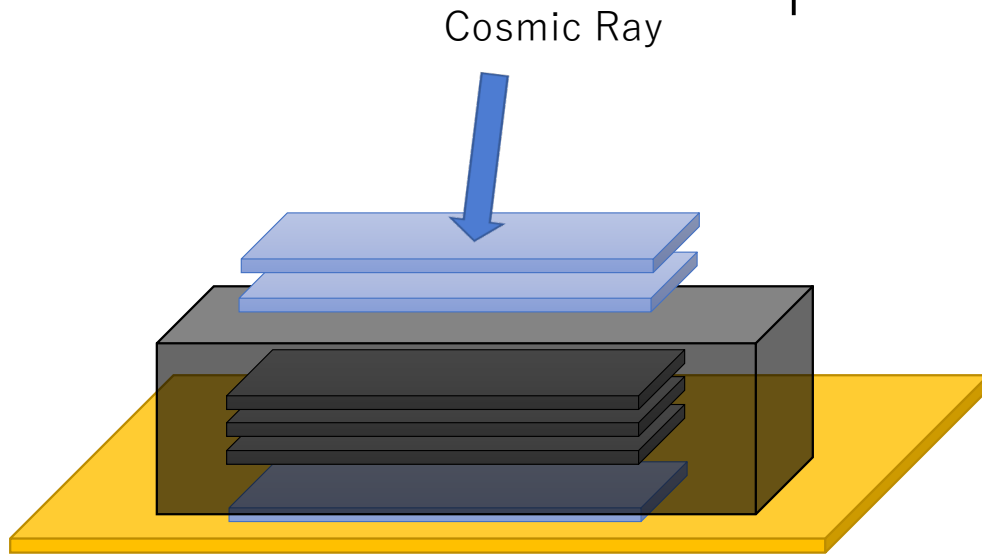
Hitmap



To do list this week

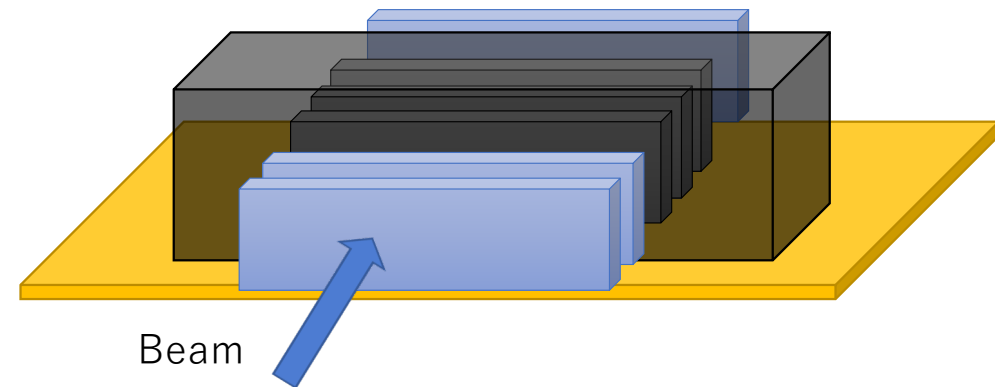
- Assemble the dark box. Drill holes to the aluminum plate. (done)
- Install 3 ladders telescope to the dark box. (done)
- Mount Trigger Scintillators to the ROC support frame (done)
- Setup cooling system
- Establish 3/4 folds scintillator trigger.
 - Install 100ns delay box. Test channels. (done)
 - Setup ADC/TDC. (done)
 - Test spare TDC module.
- Mount ROC to the ROC support frame and hook up 3 ladders. (done)
- Rotate ROC support frame by 90 degrees and start cosmic ray data taking with 2 folds coincidence trigger over the weekend. (long term stability test and tracking code tuning.)

Ladder Telescope Configurations



- To be taken data in NWU until packing starts next week. Hit data are to be used for the ladder alignment and tracking tune for Cheng-Wei's code.
- Continue to take data in Tohoku until Tuesday morning.

A. Cosmic Ray Setup



- Flip the cosmic ray setup by 90 degrees.
- No change necessary in electronics from cosmic setup to take beam data. (May be change 3 fold to 4 fold trigger?)

B. Beam Setup