



アイダイアグラム

出力波形の観測

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2021/7/19の目的:

ハーフエントリが出ない理研のテストベンチで波形を測定する

→ conv.の長さの違いが結果に影響を及ぼしていた

→ 理研は唯一#smallのconv.を使用していた、#largeを使用すると奈良女、台湾同様ハーフエントリが出現

測定の確認事項

- 送信に成功したラインと失敗したラインに違いはあるか
 - シンクビット一つ分の見た目では違いを判断できない
- チップごとでシンクビットが来るタイミングが異なるのか
 - 異なる

2021/7/20の目的:

Bus Extenderを使わずに条件を変えて波形を測定する

- LVDS SCAN(2mA~8mA)
- CHIP(chip1, 7, 13, 14, 20, 26)
- Conv. 20cm / 40cm
- (ROC port, Ladderは変更できず)

測定の比較基準にした条件

Bus-extender	Intcpt-bd	Conv.	ROC	port	LVDS current	probe	chip-line
N/A	N/A	#large 3	NE2	A-2	2mA	Unknown	chip13-line0



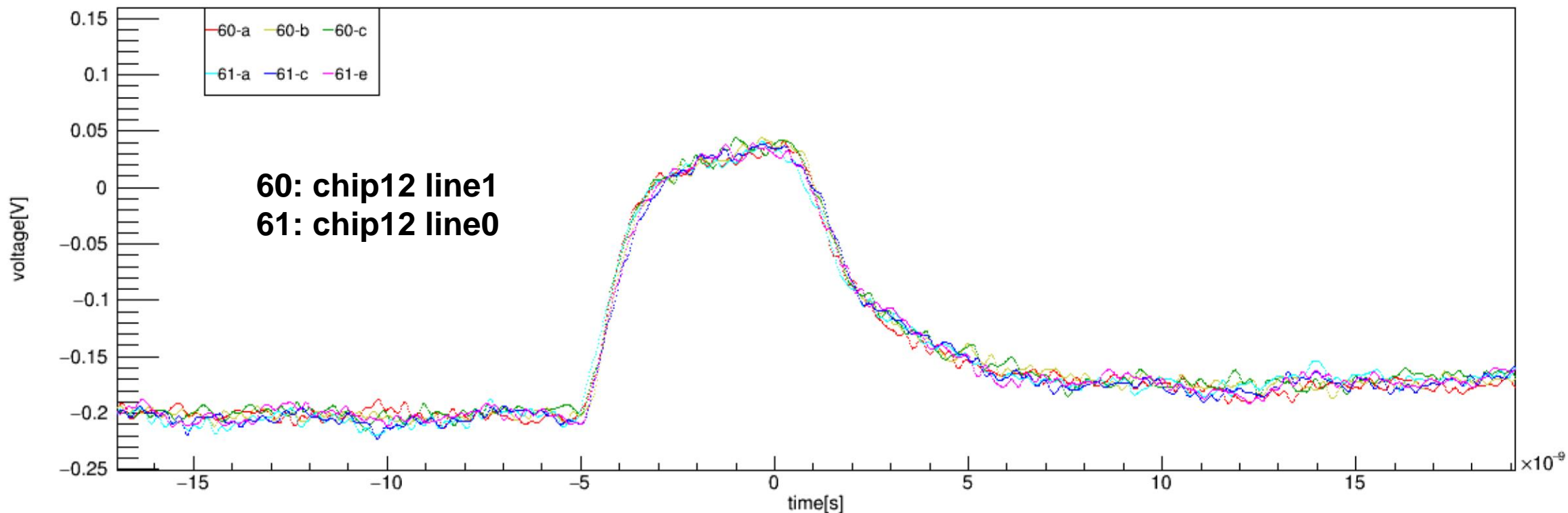
成功例と失敗例の比較

filename	INTT	Bus-extender	Intcpt-bd	Conv.	ROC	port	LVDS current	probe	chip-line	data	other	note
60-a.txt	PPB2-L4S	1.2m Prepro 3	something	#large 3	NE2	A-2	2mA	R1296	chip12-line1	2211	J1 chip12_OUT0 short	nothing
60-b.txt	PPB2-L4S	1.2m Prepro 3	something	#large 3	NE2	A-2	2mA	R1296	chip12-line1	2214		nothing
60-c.txt	PPB2-L4S	1.2m Prepro 3	something	#large 3	NE2	A-2	2mA	R1296	chip12-line1	2216		nothing
61-a.txt	PPB2-L4S	1.2m Prepro 3	something	#large 3	NE2	A-2	2mA	Unknown	chip12-line0	2223	J1 chip12_OUT1 short	half
61-c.txt	PPB2-L4S	1.2m Prepro 3	something	#large 3	NE2	A-2	2mA	Unknown	chip12-line0	2231		half
61-e.txt	PPB2-L4S	1.2m Prepro 3	something	#large 3	NE2	A-2	2mA	Unknown	chip12-line0	2318		half



成功例と失敗例の比較

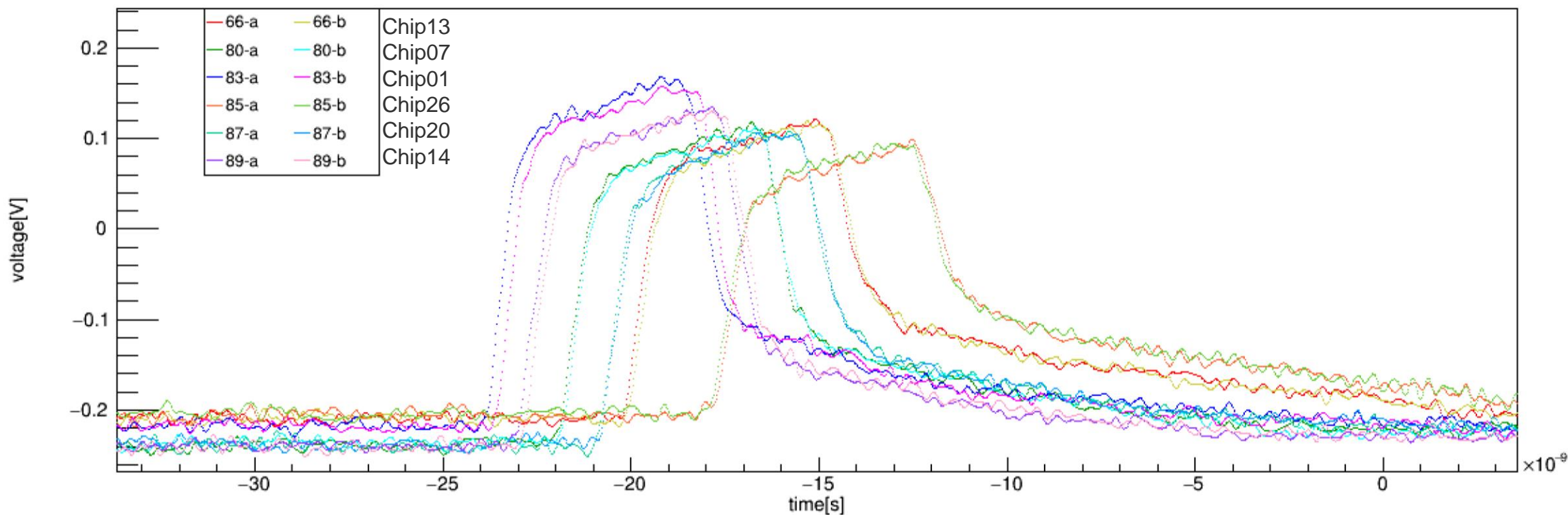
60 failed
61 successful



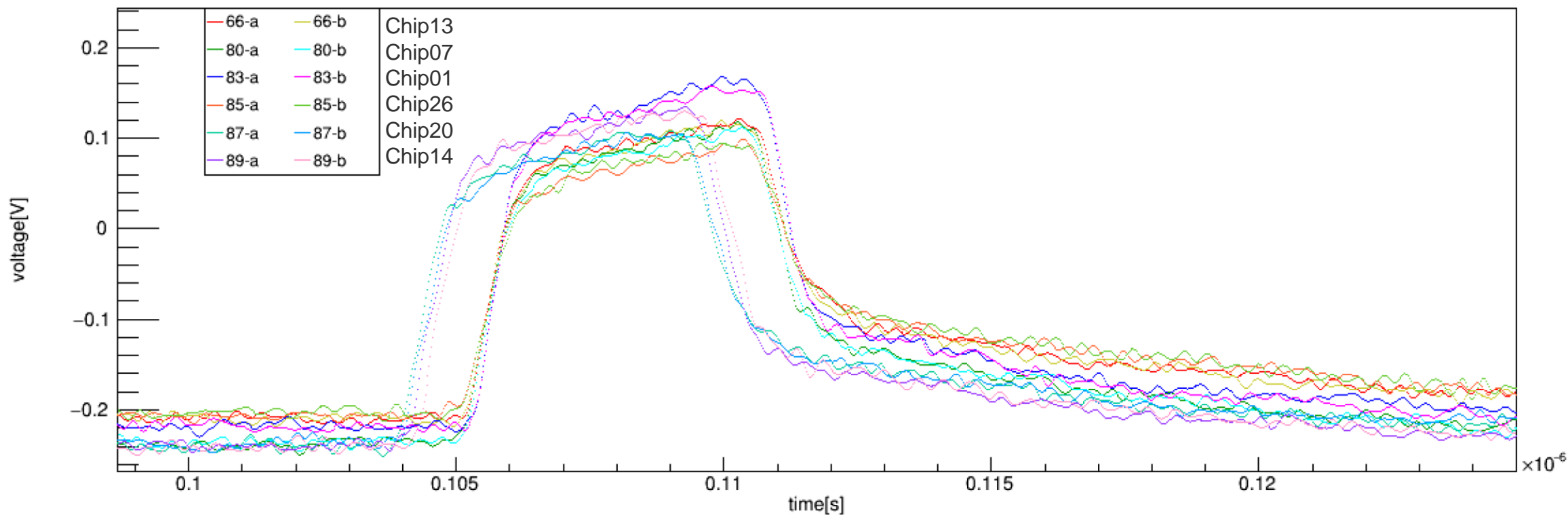


Chip SCAN

filename	INTT	Bus-extender	Intcpt-bd	Conv.	ROC	port	LVDS current	probe	chip-line	data	other	note
66-a.txt	PPB2-L4S	N/A	N/A	#large 3	NE2	A-2	2mA	Unknown	chip13-line0	1409		full
66-b.txt	PPB2-L4S	N/A	N/A	#large 3	NE2	A-2	2mA	Unknown	chip13-line0	1411		full
80-a.txt	PPB2-L4S	N/A	N/A	#large 3	NE2	A-2	2mA	R1318	chip07-line0	1624		full
80-b.txt	PPB2-L4S	N/A	N/A	#large 3	NE2	A-2	2mA	R1318	chip07-line0	1628		full
83-a.txt	PPB2-L4S	N/A	N/A	#large 3	NE2	A-2	2mA	R1164	chip01-line0	1640		full
83-b.txt	PPB2-L4S	N/A	N/A	#large 3	NE2	A-2	2mA	R1164	chip01-line0	1642		full
85-a.txt	PPB2-L4S	N/A	N/A	#large 3	NE2	A-2	2mA	Unknown	chip26-line0	1654		full
85-b.txt	PPB2-L4S	N/A	N/A	#large 3	NE2	A-2	2mA	Unknown	chip26-line0	1656		full
87-a.txt	PPB2-L4S	N/A	N/A	#large 3	NE2	A-2	2mA	Unknown	chip20-line0	1728		full
87-b.txt	PPB2-L4S	N/A	N/A	#large 3	NE2	A-2	2mA	Unknown	chip20-line0	1730		full
89-a.txt	PPB2-L4S	N/A	N/A	#large 3	NE2	A-2	2mA	Unknown	chip14-line0	1739		full
89-b.txt	PPB2-L4S	N/A	N/A	#large 3	NE2	A-2	2mA	Unknown	chip14-line0	1740		full



測定した座標データそのまま重ねた場合

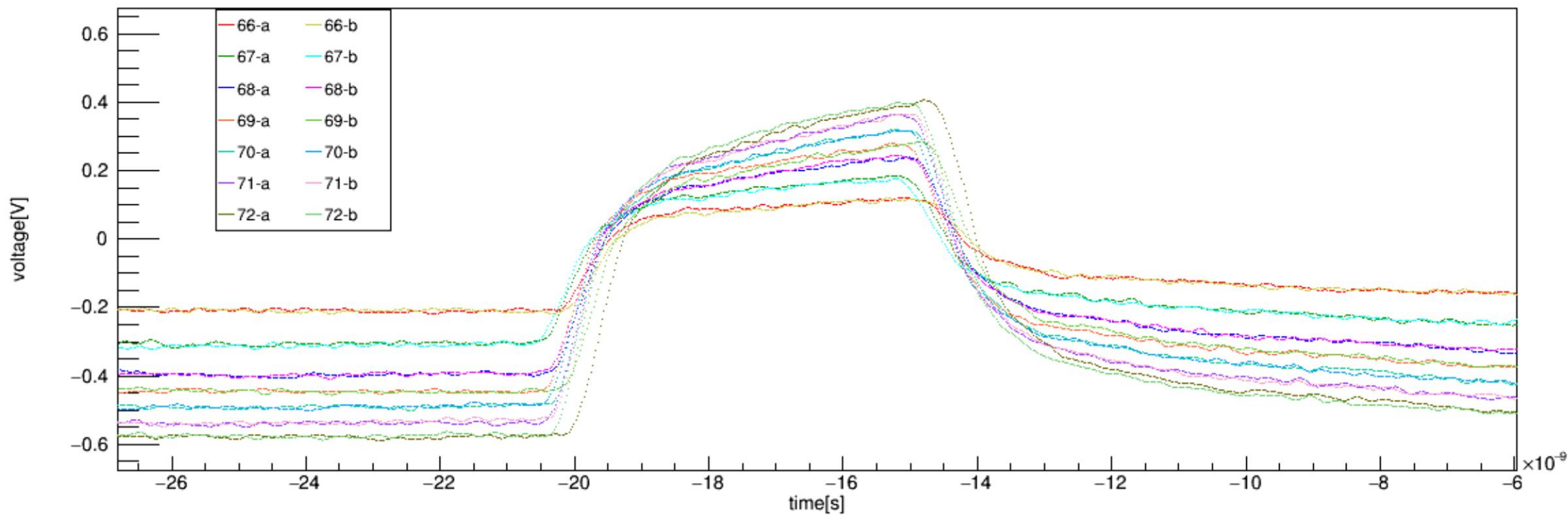


波形の立ち上がりの傾きから電位0をそろえた場合

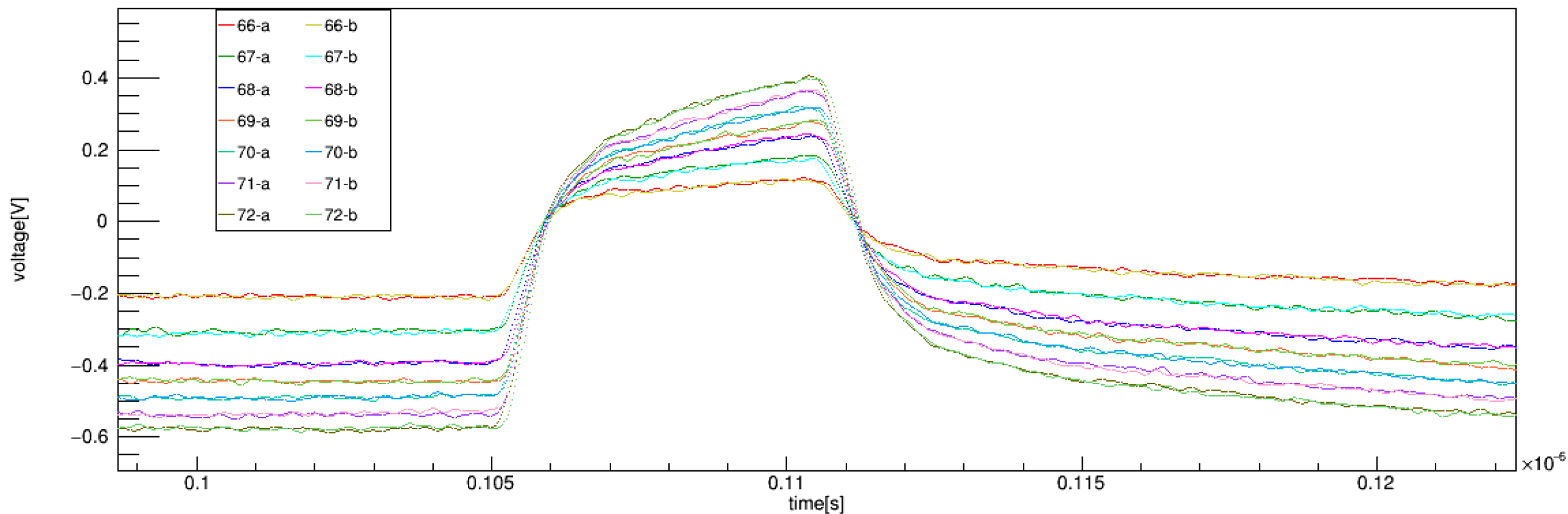


LVDS SCAN

filename	INTT	Bus-extender	Intcpt-bd	Conv.	ROC	port	LVDS current	probe	chip-line	data	other	note
66-a.txt	PPB2-L4S	N/A	N/A	#large 3	NE2	A-2	2mA	Unknown	chip13-line0	1409		full
66-b.txt	PPB2-L4S	N/A	N/A	#large 3	NE2	A-2	2mA	Unknown	chip13-line0	1411		full
67-a.txt	PPB2-L4S	N/A	N/A	#large 3	NE2	A-2	3mA	Unknown	chip13-line0	1413		full
67-b.txt	PPB2-L4S	N/A	N/A	#large 3	NE2	A-2	3mA	Unknown	chip13-line0	1417		full
68-a.txt	PPB2-L4S	N/A	N/A	#large 3	NE2	A-2	4mA	Unknown	chip13-line0	1420		full
68-b.txt	PPB2-L4S	N/A	N/A	#large 3	NE2	A-2	4mA	Unknown	chip13-line0	1422		full
69-a.txt	PPB2-L4S	N/A	N/A	#large 3	NE2	A-2	5mA	Unknown	chip13-line0	1426		full
69-b.txt	PPB2-L4S	N/A	N/A	#large 3	NE2	A-2	5mA	Unknown	chip13-line0	1428		full
70-a.txt	PPB2-L4S	N/A	N/A	#large 3	NE2	A-2	6mA	Unknown	chip13-line0	1432		full
70-b.txt	PPB2-L4S	N/A	N/A	#large 3	NE2	A-2	6mA	Unknown	chip13-line0	1434		full
71-a.txt	PPB2-L4S	N/A	N/A	#large 3	NE2	A-2	7mA	Unknown	chip13-line0	1437		full
71-b.txt	PPB2-L4S	N/A	N/A	#large 3	NE2	A-2	7mA	Unknown	chip13-line0	1439		full
72-a.txt	PPB2-L4S	N/A	N/A	#large 3	NE2	A-2	8mA	Unknown	chip13-line0	1442		full
72-b.txt	PPB2-L4S	N/A	N/A	#large 3	NE2	A-2	8mA	Unknown	chip13-line0	1444		full



測定した座標データそのまま重ねた場合



波形の立ち上がりの傾きから電位0をそろえた場合

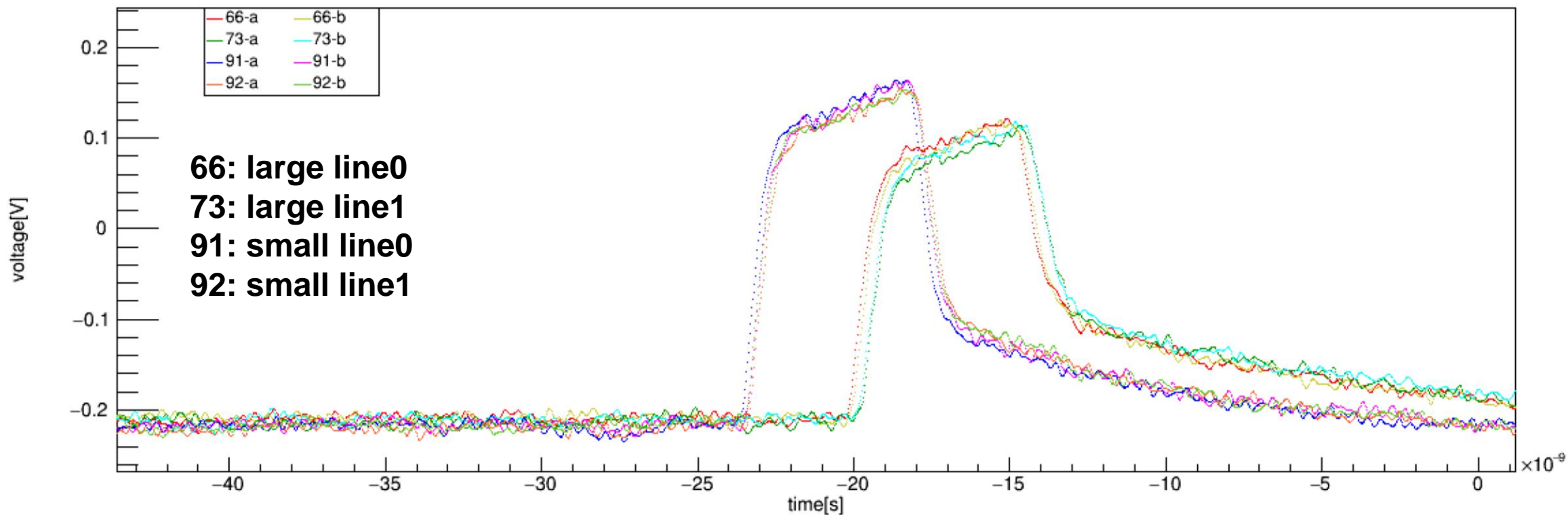


Conv. SCAN

filename	INTT	Bus-extender	Intcpt-bd	Conv.	ROC	port	LVDS current	probe	chip-line	data	other	note
66-a.txt	PPB2-L4S	N/A	N/A	#large 3	NE2	A-2	2mA	Unknown	chip13-line0	1409		full
66-b.txt	PPB2-L4S	N/A	N/A	#large 3	NE2	A-2	2mA	Unknown	chip13-line0	1411		full
91-a.txt	PPB2-L4S	N/A	N/A	#small 8	NE2	A-2	2mA	Unknown	chip13-line0	1824		full
91-b.txt	PPB2-L4S	N/A	N/A	#small 8	NE2	A-2	2mA	Unknown	chip13-line0	1826		full



chip13



台湾テストベンチの結果

It's the data in NTU the morning of July/27th/2021

Ladder : 259

BEC : #4

40 cm CC : large #6

ROC : ROC1

Regulator voltage : 4.2 V

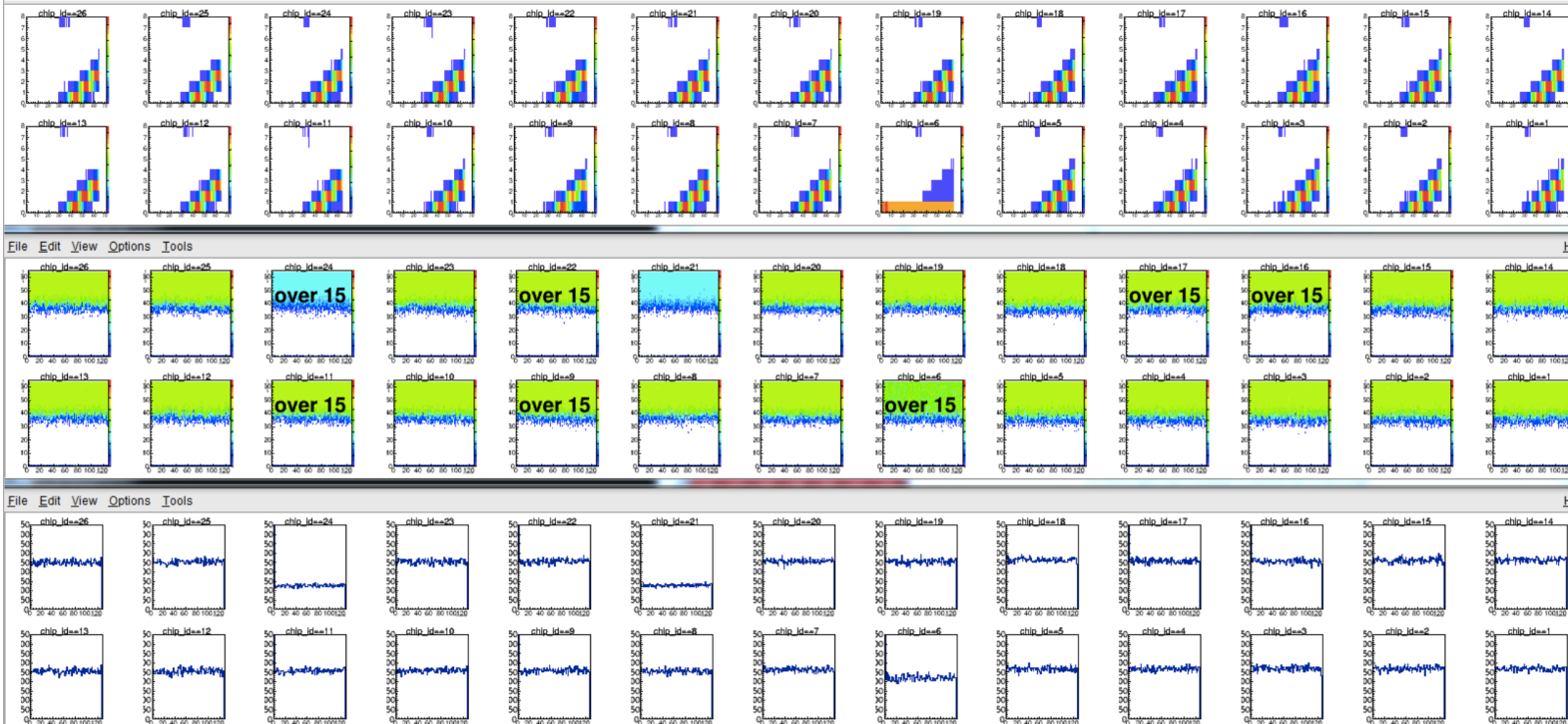
Regulator current : 0.652 A

ROC port : P420 421

LVDS current : 8mA

Sensor bias voltage : 100 V

Sensor bias current : 90 nA



台湾テストベンチの結果

It's the data in NTU the morning of July/27th/2021

Ladder : 259

BEC : #4

20 cm CC : small #3

ROC : ROC1

Regulator voltage : 4.2 V

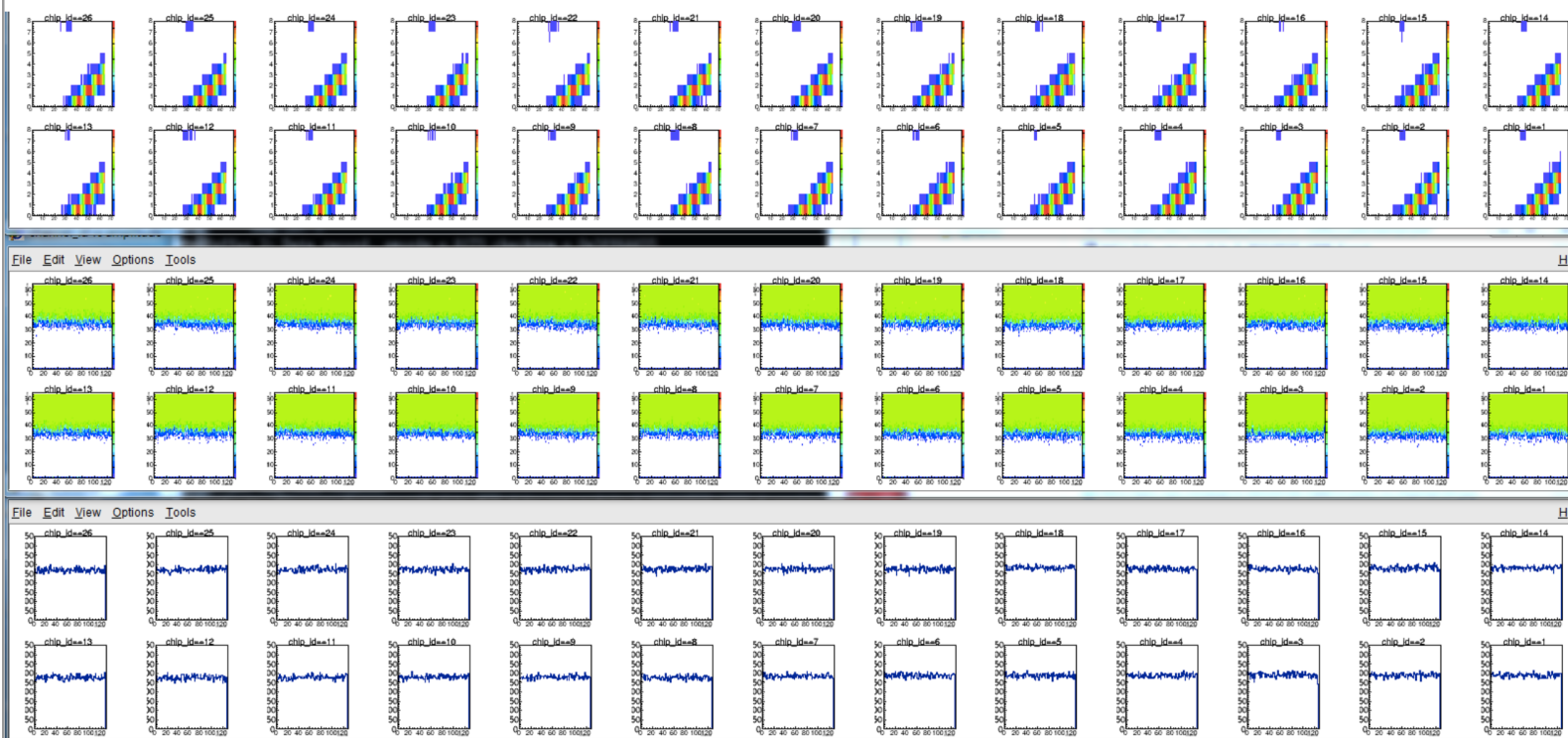
Regulator current : 0.677 A

ROC port : P420 421

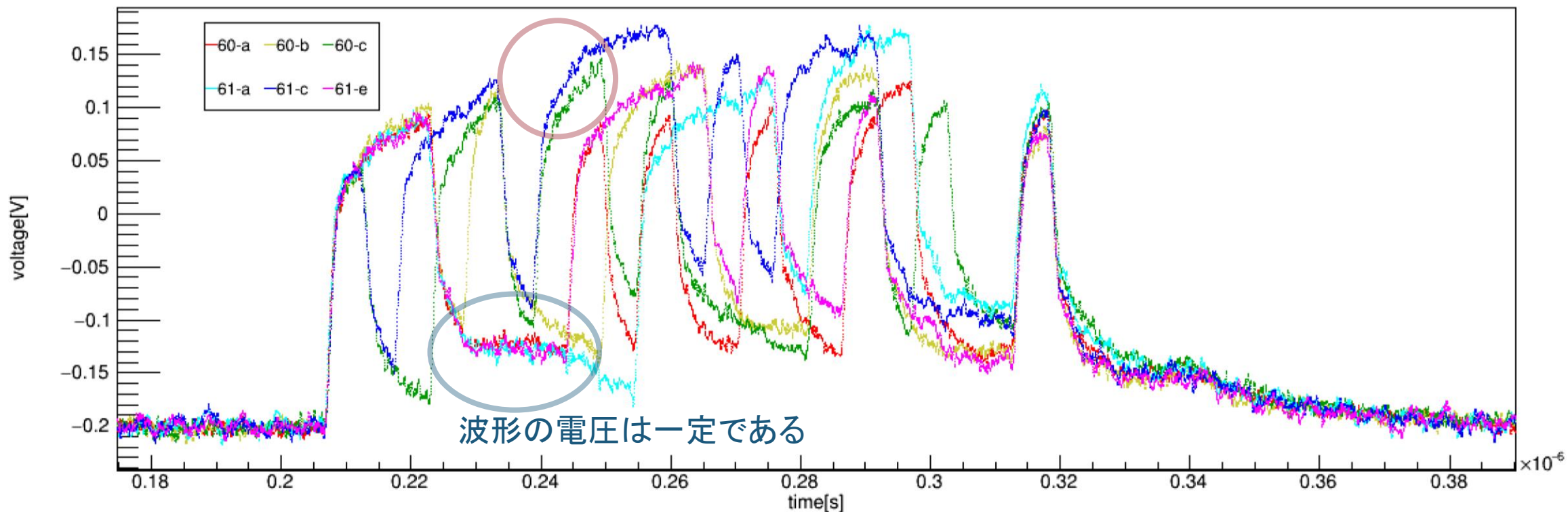
LVDS current : 8mA

Sensor bias voltage : 100 V

Sensor bias current : 90 nA



波形の電圧が変化している



波形の電圧は一定である

延與さんより

Back Up



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