Summary of Ground Plane Activities in the Previous Run

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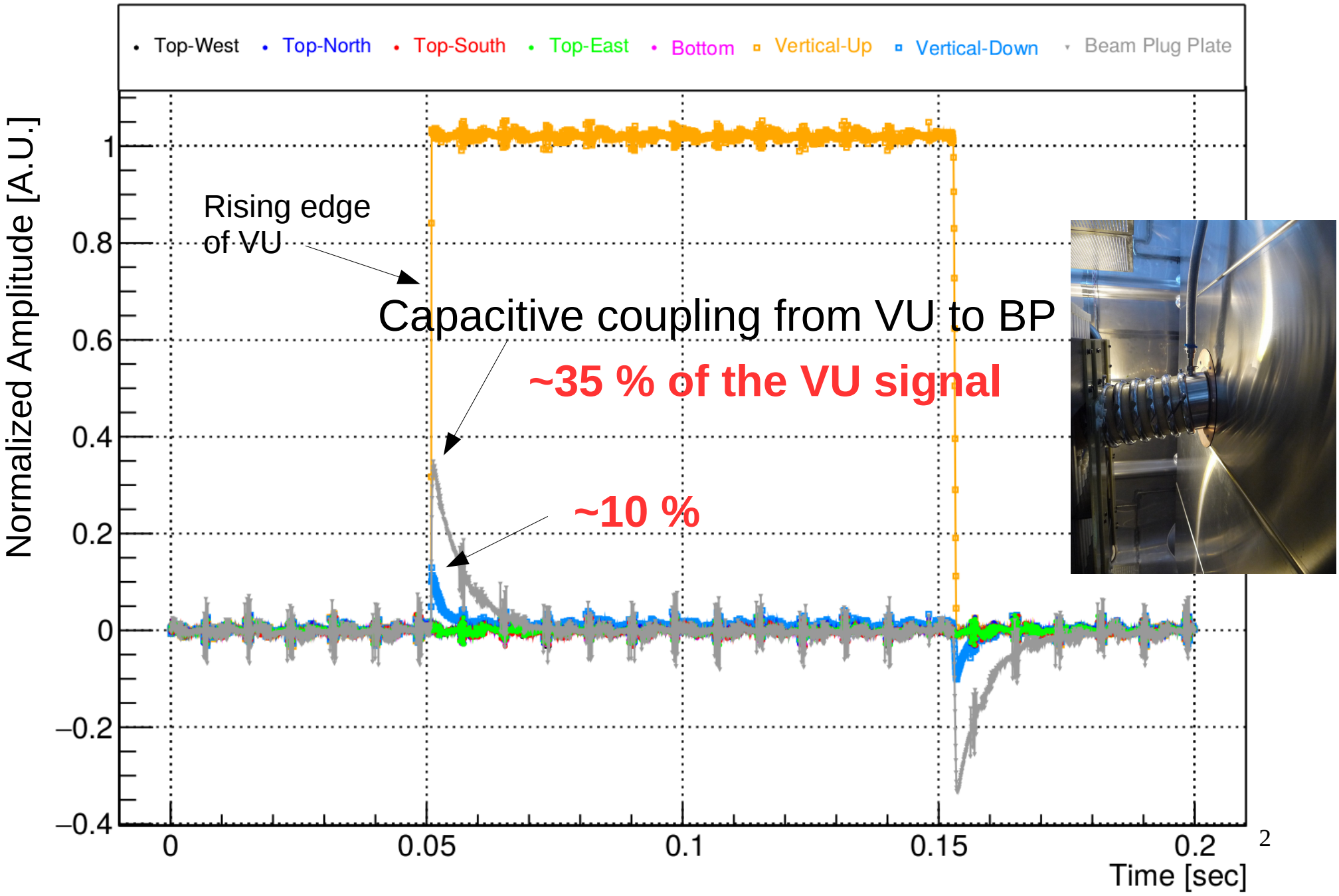
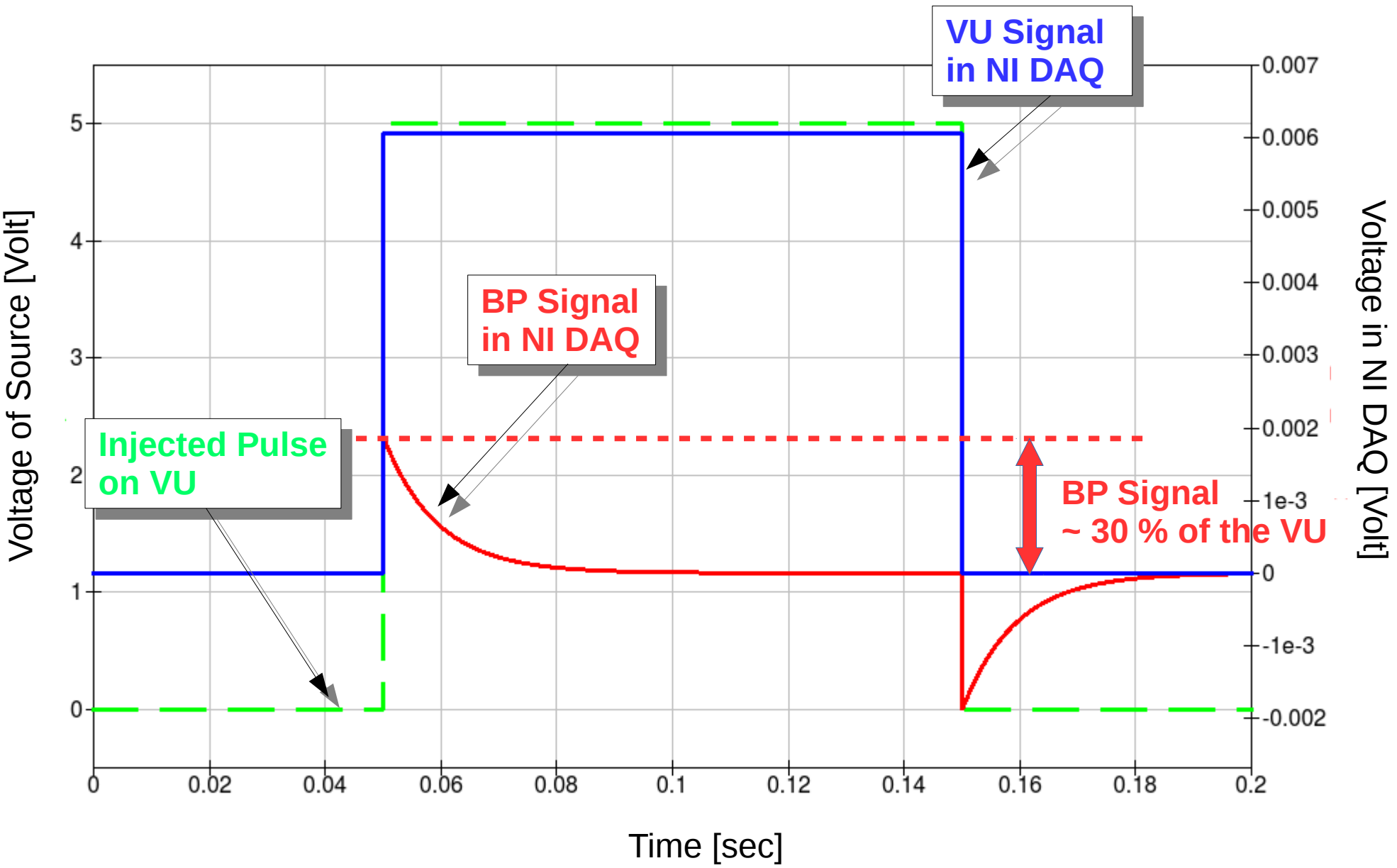
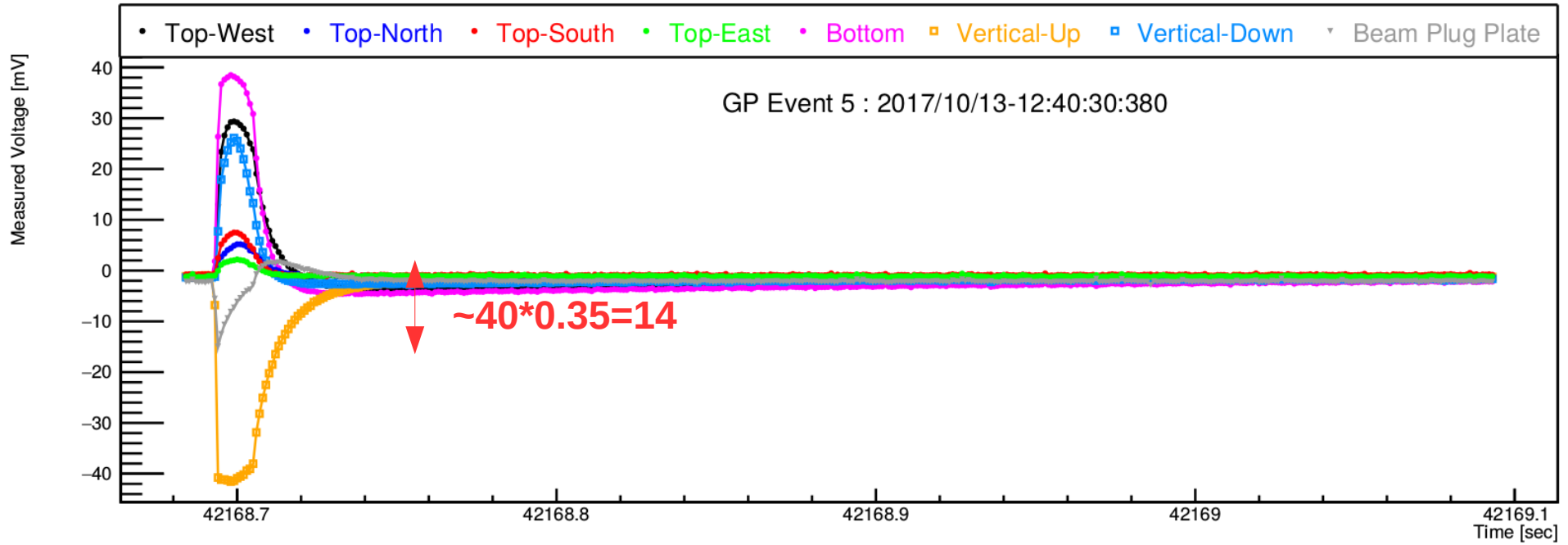
Pulser Measurement

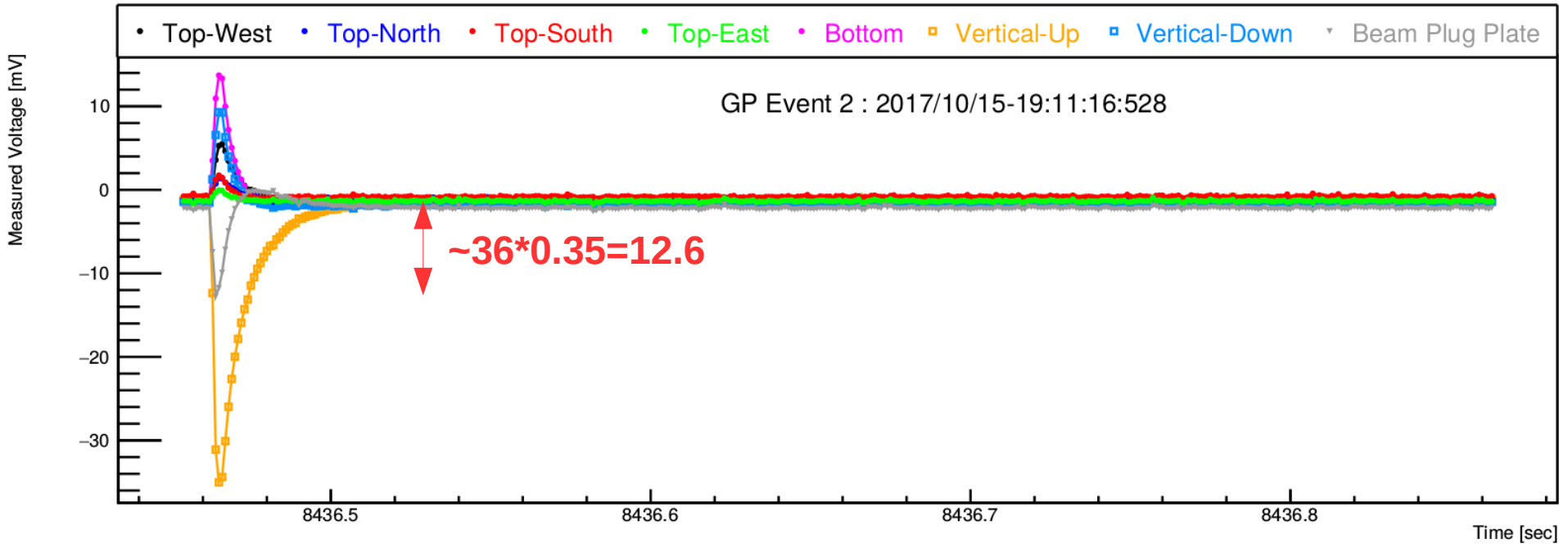


Electrical Circuit Simulation

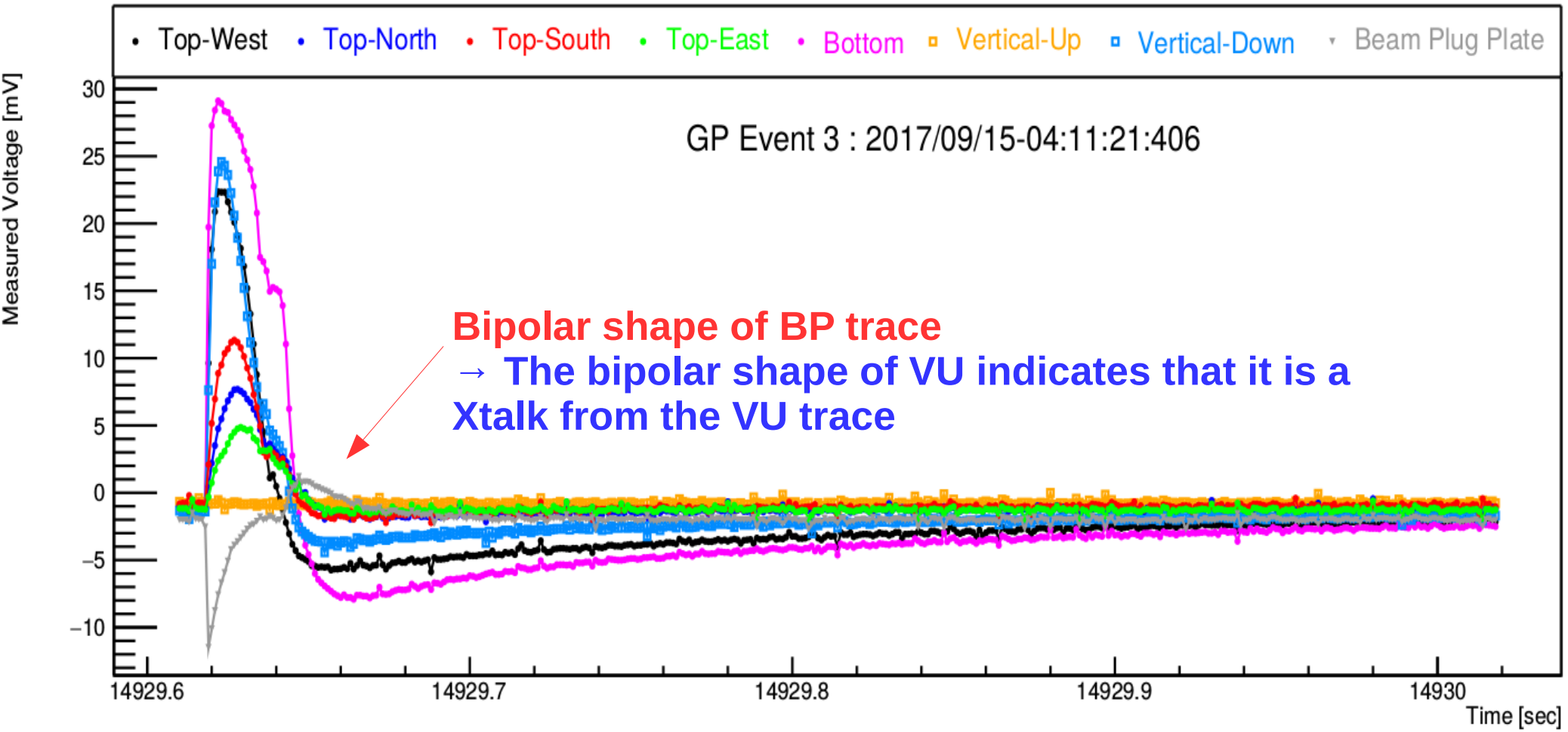


Previous VU+BP Eevents



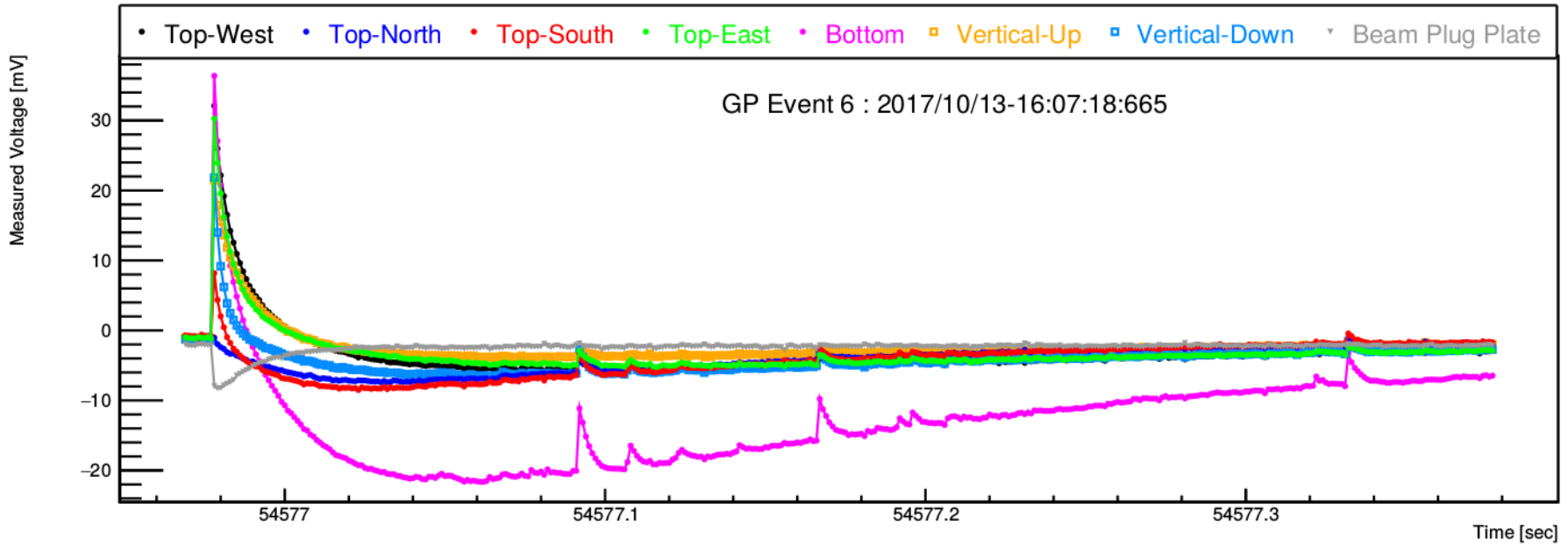


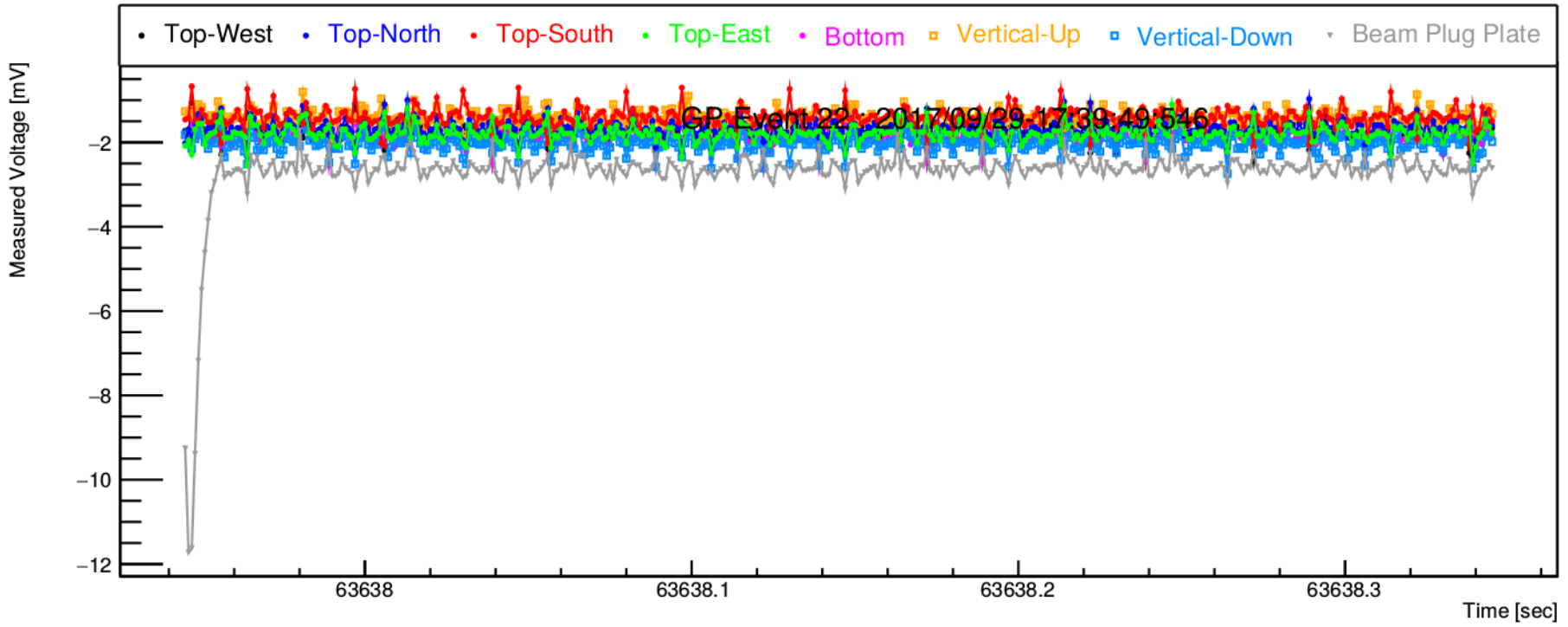
BP Event (VU was NOT connected before 10/03)



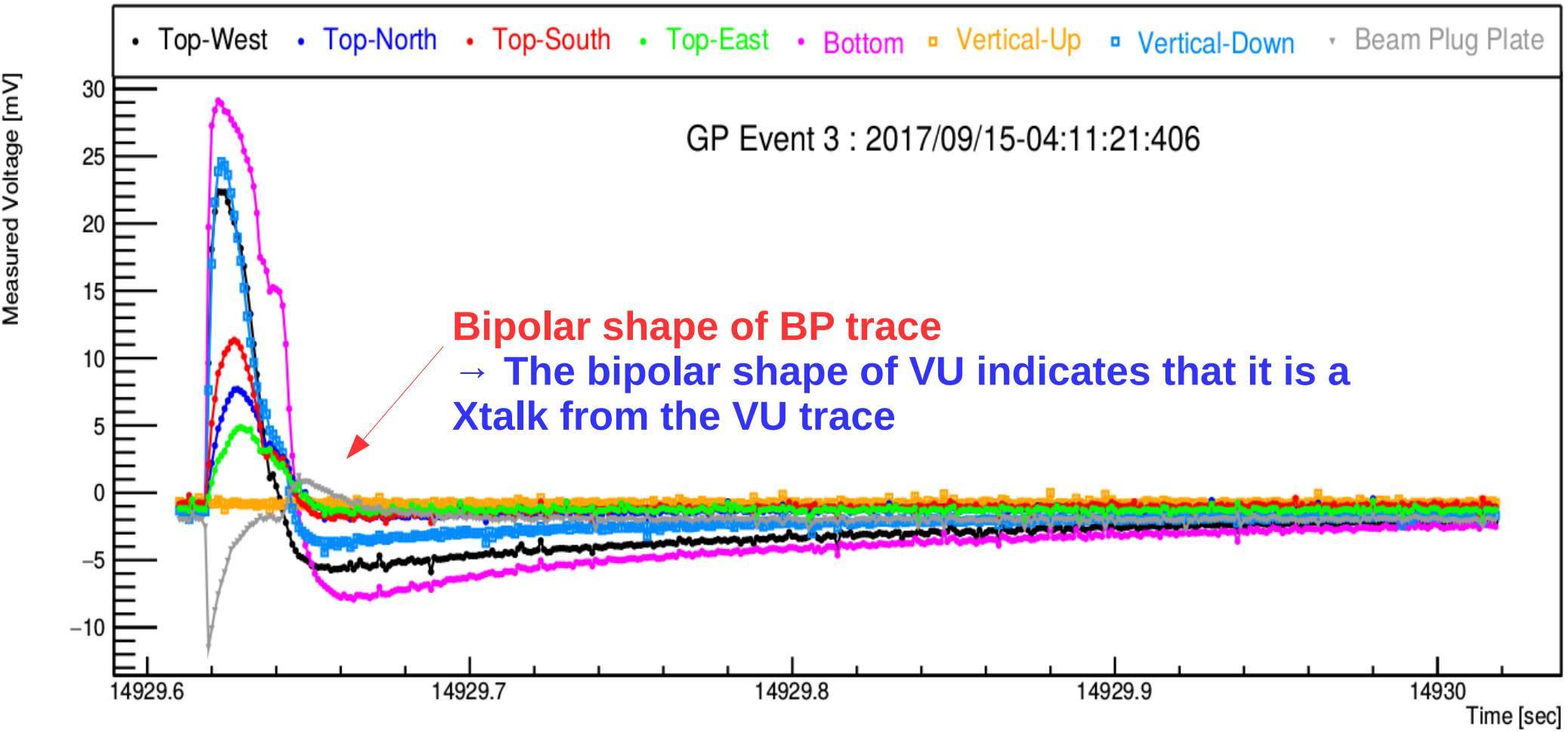
* See a collection of traces in DUNE docDB #6101

‘Pure’ BP Events





BP Event (VU was NOT connected before 10/03)



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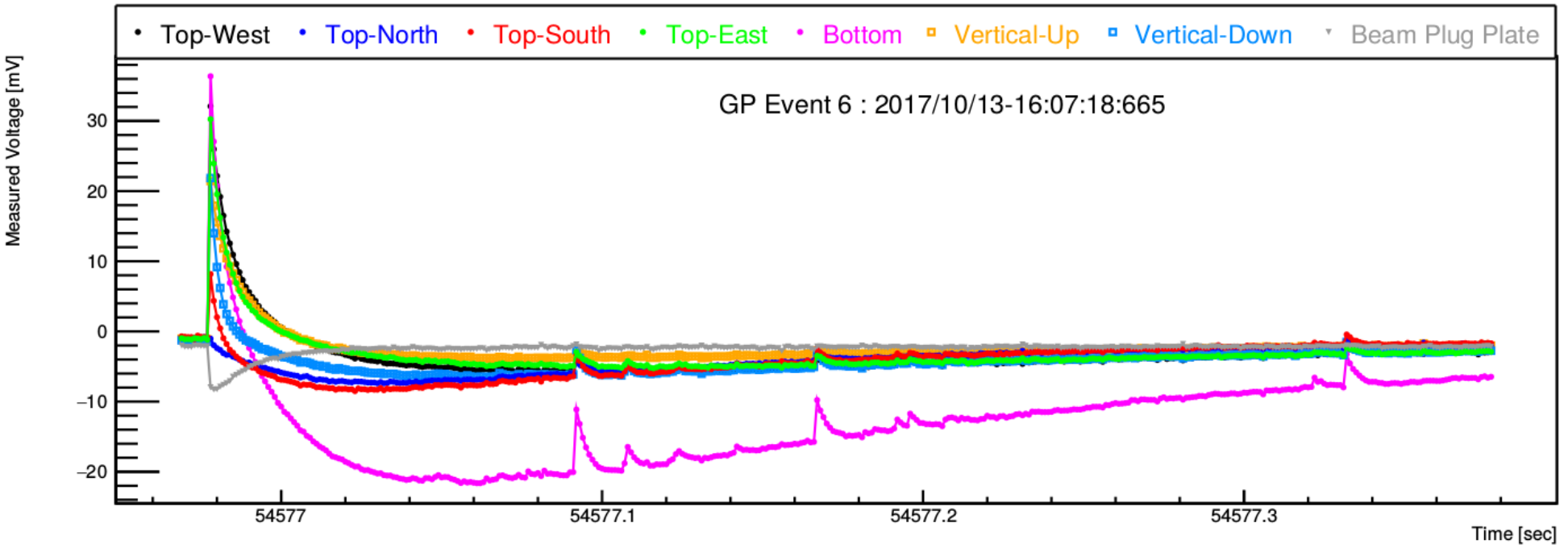
‘Pure’ BP Events



- We have 3 pure BP events (no bipolar shape).

  p.s. All of them are not associated with the Toroid signals

Re-Classification of BP Events

- VU+BP (with bipolar shape) → Only VU

  When BP has a bipolar shape + ~35% of the VU size → I re-classify BP as a Xtalk from VU

- BP (with bipolar shape) → VU

  Before 10/03, VU was not connected. We still can identify whether the BP signals are ‘fake’ (Xtalk from VU) or not.

  → If BP trace is bipolar → Xtalk from VU

- Re-label the tag of each BP and VU+BP event

  Remake the summary table.

Summary of the Previous Run

Trigger	Ground Plane Activity [Counts]					
	Before VU was fixed (09/14 - 10/03)		After VU was fixed (10/04 - 10/22)		VU was fixed+Low HV (10/24 - 10/30)	
	Total	Toroid Trig.	Total	Toroid Trig.	Total	Toroid Trig.
Single-Hit						
TW	2	0	0	0	0	0
BOT	3	0	1	0	0	0
VU	23	0	26	0	13	0
VD	17	1	1	0	3	0
TN	0	0	0	0	0	0
TS	23	0	1	0	0	0
TE	1	0	0	0	0	0
BP	2	0	1	1	0	0
Multi-Hit						
VU+BP	0	0	0	0	0	0
TS+TW	0	0	0	0	1	0
No Visible Hit						
NVH	24	0	4	0	1	0
NVHD	4	4	3	3	1	1
Sum	99	5	37	4	19	1
Run Time [day]	16.77		10.38		3.89	

Summary of the Previous Run

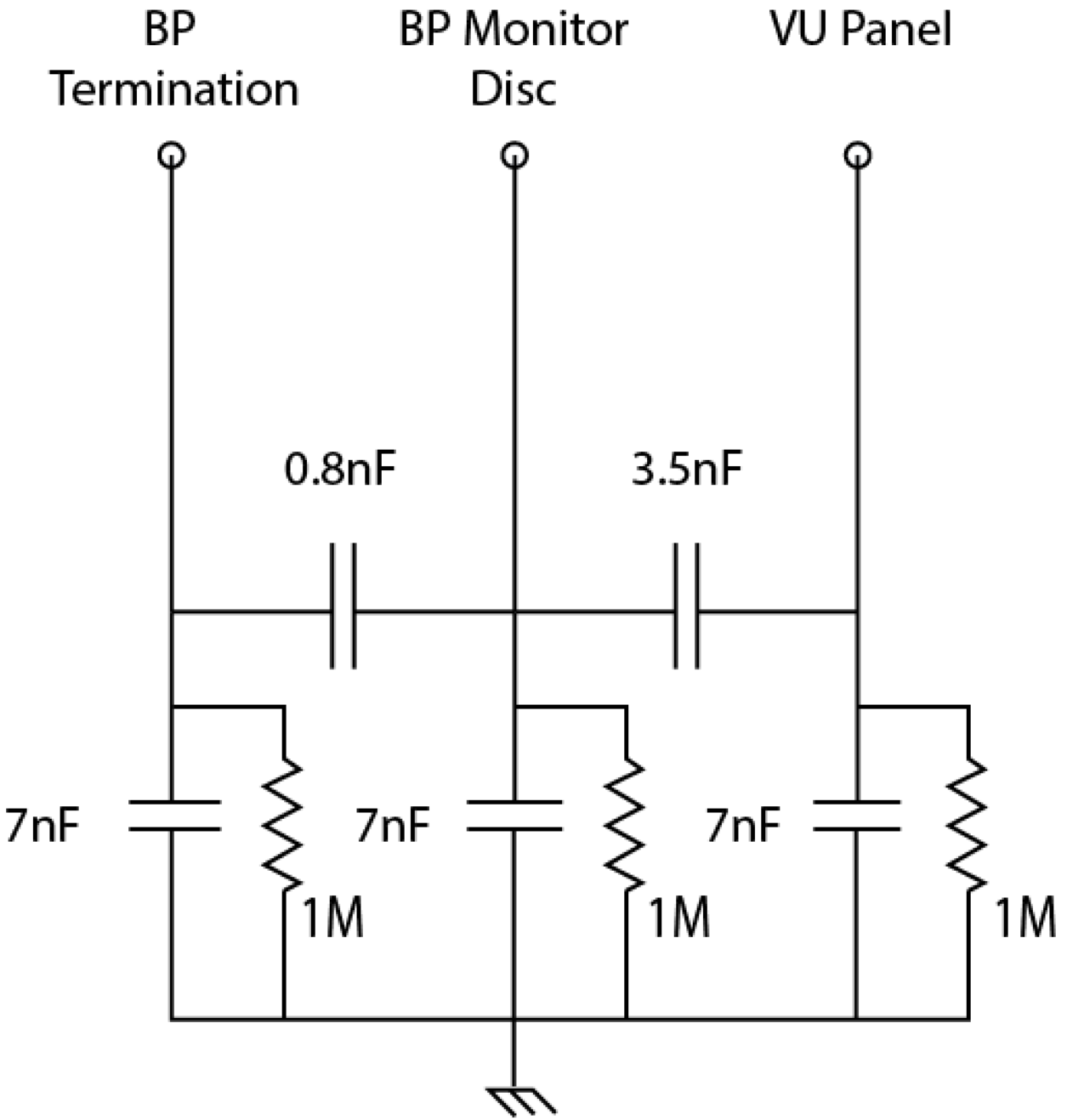
Total GP #	155
Run Time	31.04 days

Event Classification	Fraction (%)
TW	1.3
TS	15.5
TN	0.0
TE	0.6
VU	40.0
VD	13.5
BP	1.9
BOT	2.6
TS+TW	0.6
NVH	18.7
NVHD	5.2

*Note: Table excluding data during ramping up/down and bad data

Backup

Bo’s Electric Diagram



Electrical Circuit Simulation Based on Bo's Drawing