

TDECQ/TECQ/SECQ Coefficients

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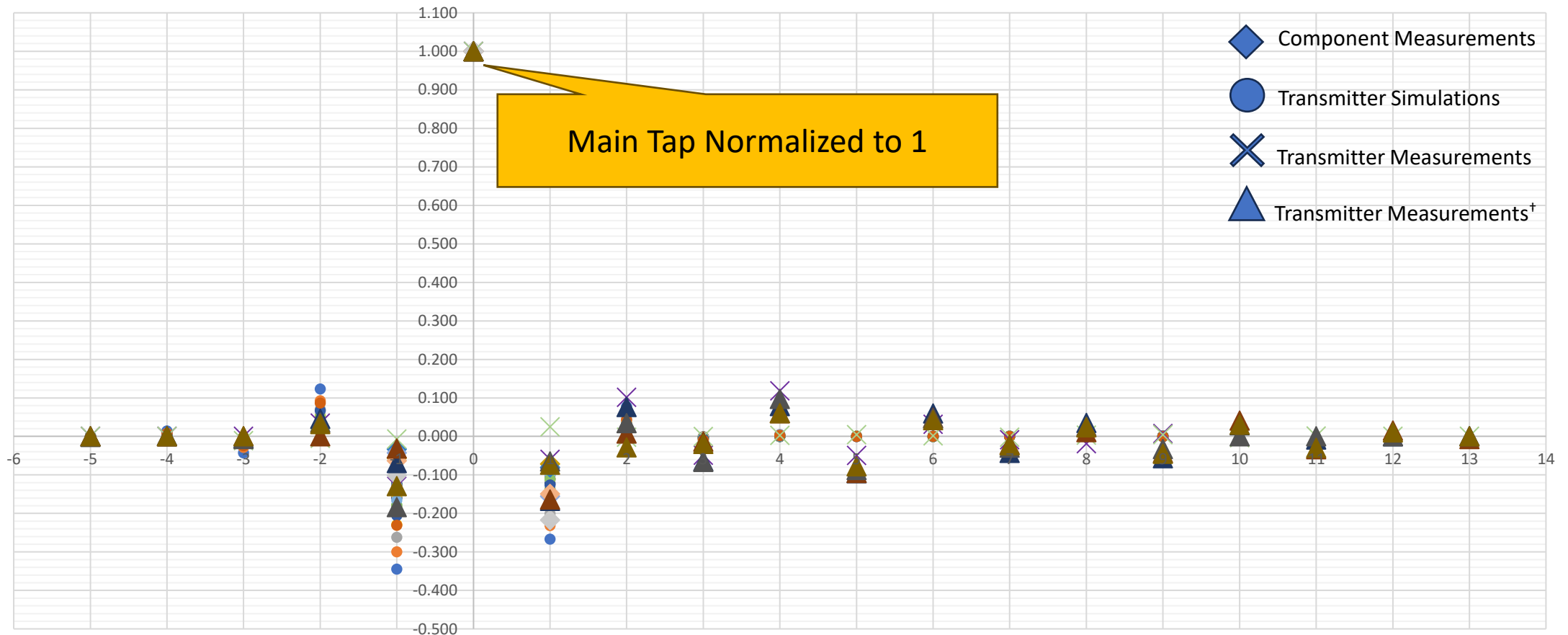
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TDECQ/TECQ/SECQ Coefficients

- In the 500m and 2km optical baselines, we adopted the requirements for limits to reference FFE coefficients, with values left as TBD.
- In this presentation we propose values for the TBDs in the 500m optical baselines, with the form of coefficient limits modified from the template that was adopted.
 - More data needed to propose values for 2km PMDs.
- It is assumed/expected that editorial license will be applied if this proposal is accepted.

FFE Coefficients Normalized to Main Tap @ 212Gbps – Various Datasets



† Contributed by Eric Bernier (HiSilicon)

TDECQ/TECQ/SECQ Reference Receiver – FFE Coefficients – As Adopted

	Symbol	Value	Units
Feedforward equalizer (FFE) length	N_b	15	UI
Maximum FFE pre-cursors		3	UI
Maximum FFE post-cursors		13	UI
Normalized FFE coefficient maximum limit $n = -3$ $n = -2$ $n = -1$ $n = 0$ $n = 1$ $n = 2$ $n \geq 3$	$bb_{\max}(n)$	TBD [†] TBD TBD TBD TBD TBD TBD [†]	-
Normalized FFE coefficient minimum limit $n = -3$ $n = -2$ $n = -1$ $n = 0$ $n = 1$ $n = 2$ $n \geq 3$	$bb_{\min}(n)$	TBD [†] TBD TBD TBD TBD TBD TBD [†]	-
Sum of all tap weights	bb_{sum}	1	

[†] Coefficients at +/- 3 and beyond expected to be small

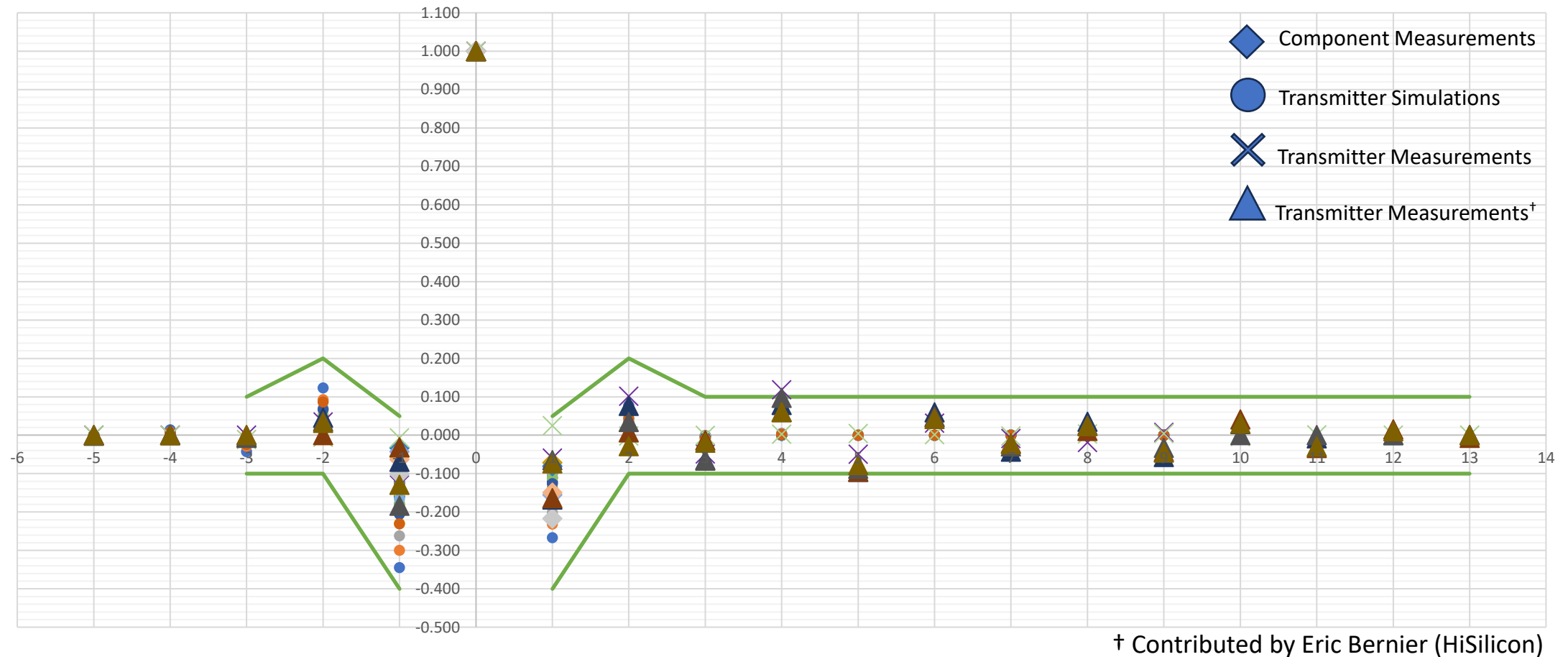
TDECQ/TECQ/SECQ Reference Receiver – FFE Coefficients– Proposed

	Symbol	Min	Max	Units
Feedforward equalizer (FFE) length	N_b		15	UI
Maximum FFE pre-cursors			3	UI
Maximum FFE post-cursors			13	UI
FFE main tap coefficient limit		0.9	2.5	-
Normalized FFE coefficient limits [†]	$bb(n)$			
$n = -3$		-0.1	0.1	
$n = -2$		-0.1	0.2	
$n = -1$		-0.4	0.05	
$n = 1$		-0.4	0.05	-
$n = 2$		-0.1	0.2	
$n \geq 3$		-0.1	0.1	
FFE Gain [‡]		1	1	-

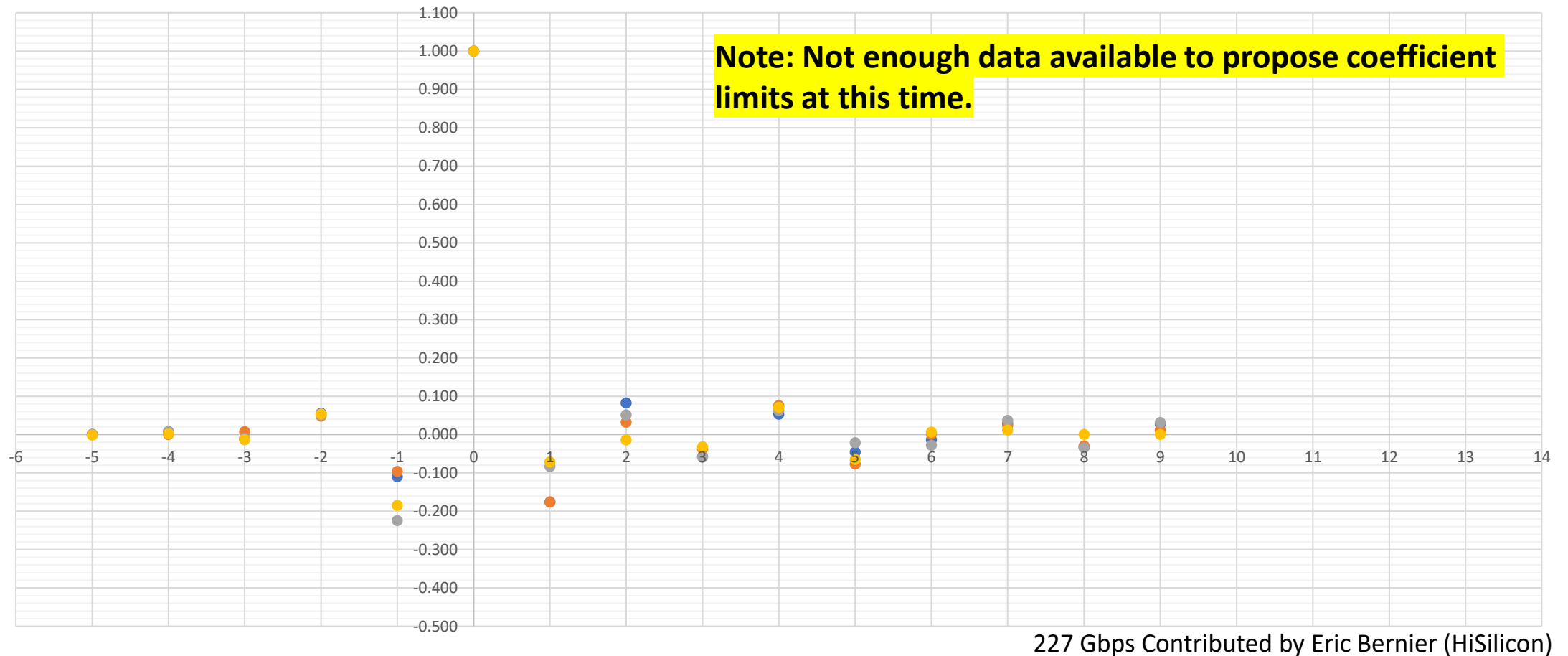
† Measured relative to the main tap

‡ The sum of FFE Coefficients must equal one

FFE Coefficients Normalized to Main Tap @ 212Gbps – Limits Applied



FFE Coefficients Normalized to Main Tap @ 227Gbps



227 Gbps Contributed by Eric Bernier (HiSilicon)

End