

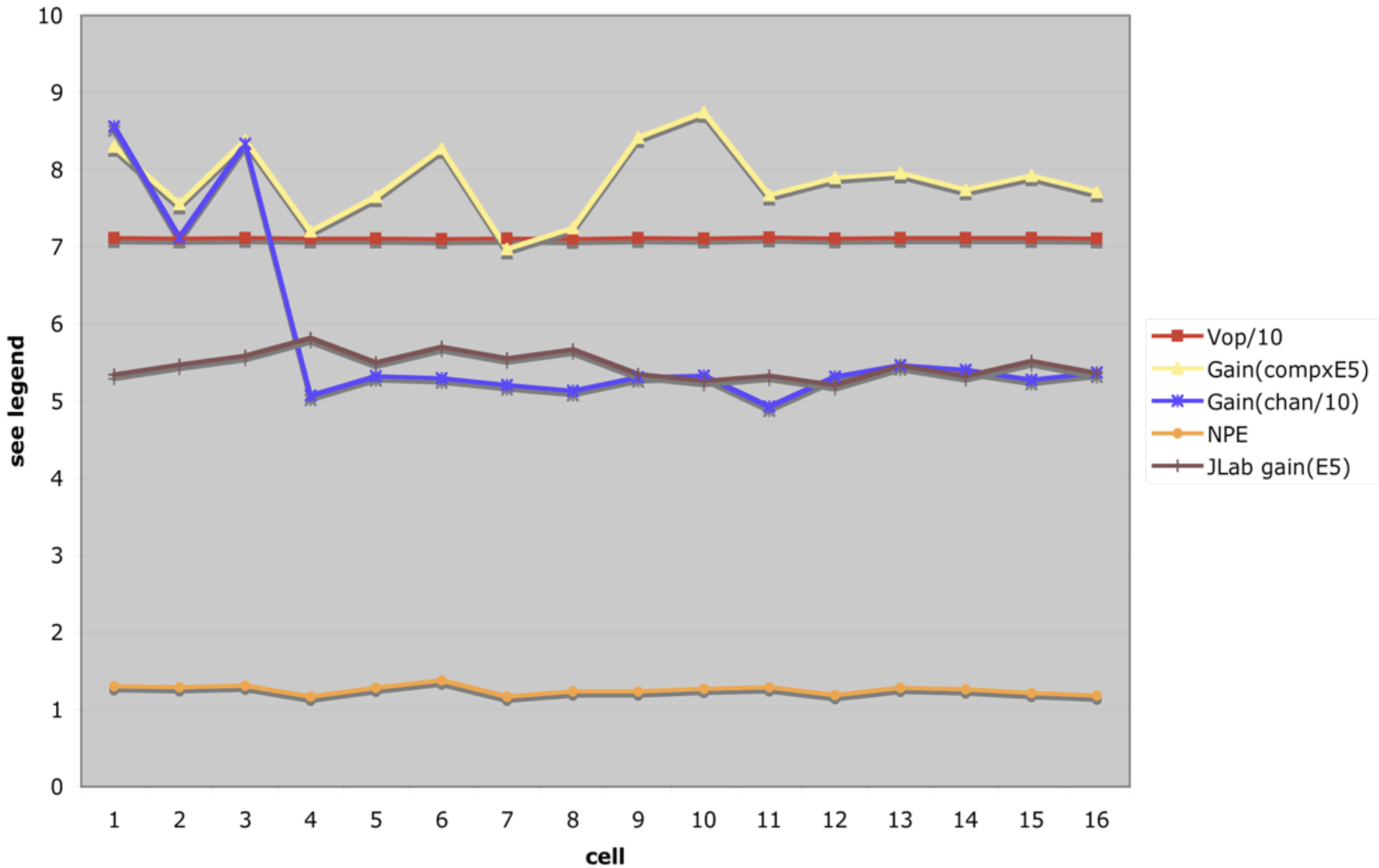
**Update: USM Measurements from Station
3: V_{op} , Gain, NPE, (Crosstalk, Dark rate)**

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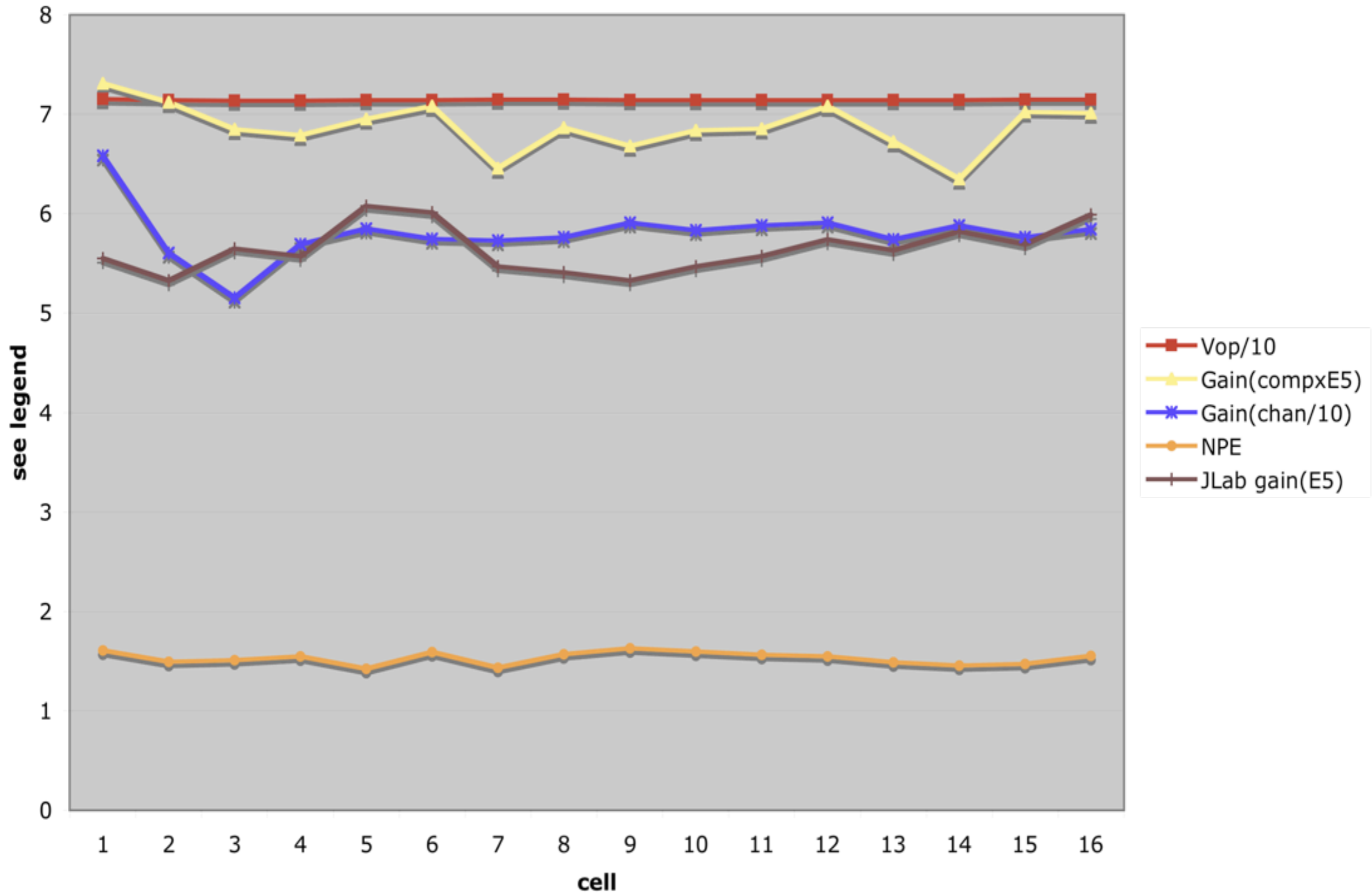
METHOD

- Determine breakdown voltage via gain vs. bias voltage, extrapolate
 - Gain is $2 p_e \text{ peak} - 1 p_e \text{ peak}$
- Operating voltage is breakdown voltage + 0.9V
- Illuminate each cell of MPPC with pulsed green LED, QDC gate of 100 ns
- “Raw” gain is in QDC channels, “computed” gain uses individually measured amplifier gain

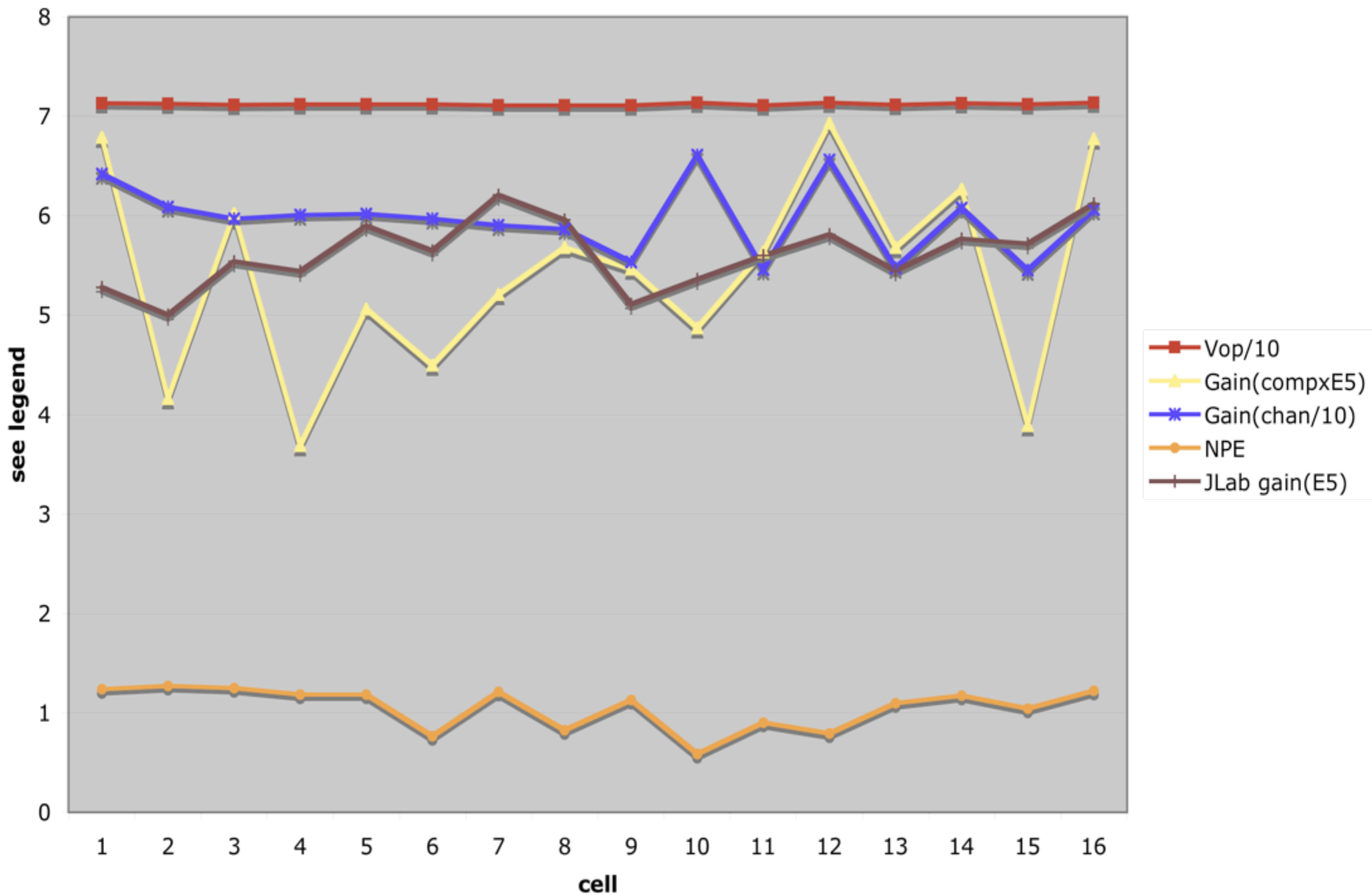
MPPC 62, Station 3: Vop, Gain, NPE



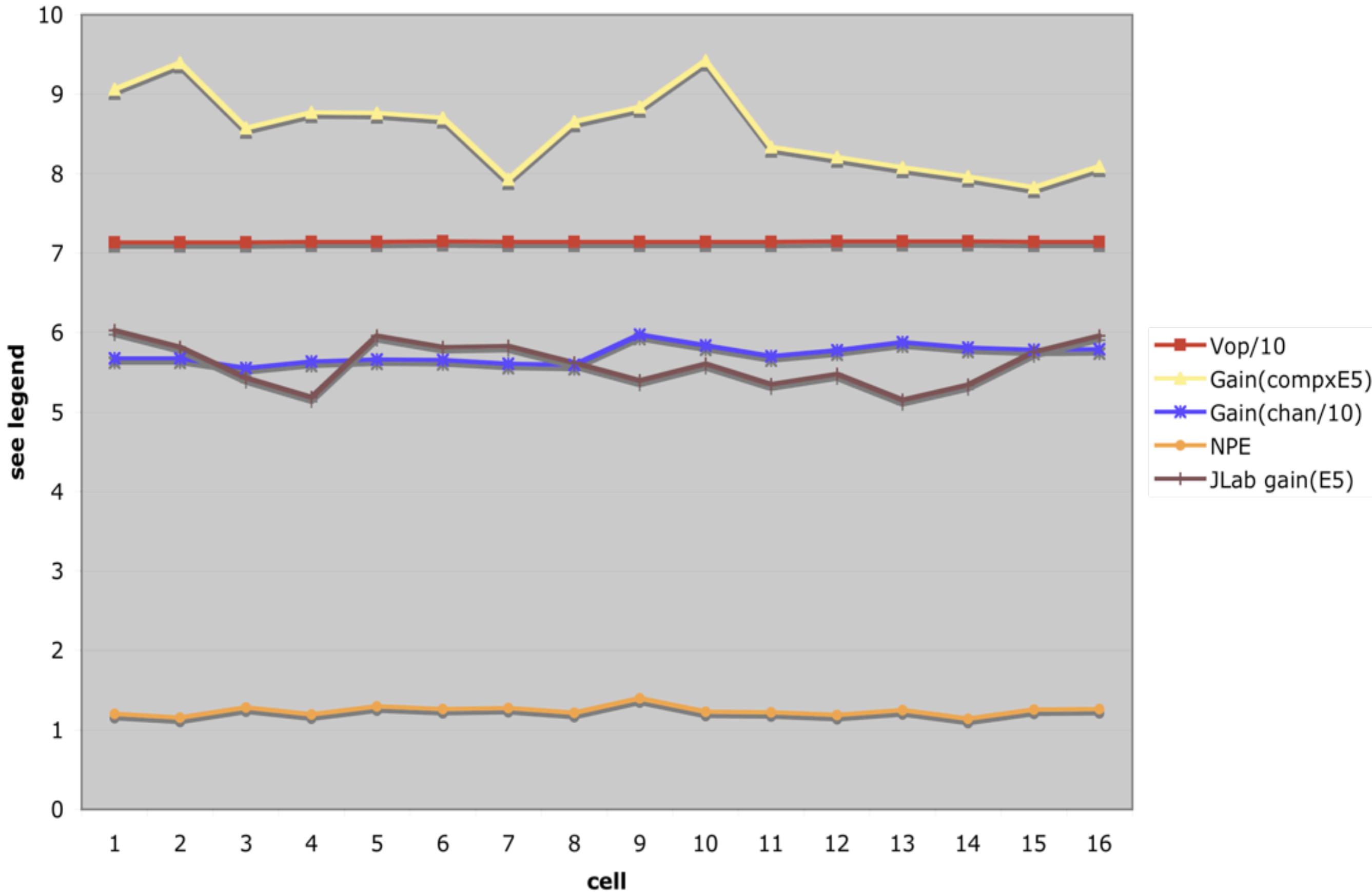
MPPC 65, Station 3: Vop, Gain, NPE



MPPC 89, Station 3: Vop, Gain, NPE



MPPC 90, Station 3: Vop, Gain, NPE



Hamamatsu measurements

PDE at 490nm				
Serial No.	ch.	Vop[V]	PDE at 490nm	
43	1-1	72.11	39.5%	
50		72.25	39.1%	
57		72.08	42.2%	
64		72.52	37.4%	
71		71.51	40.3%	
78		71.91	41.6%	
85		72.13	40.1%	
92		73.00	38.4%	
99		72.09	40.5%	
106		72.07	40.9%	
113		71.81	40.9%	
120		72.32	41.6%	

Serial No.	ch.	Vop (at M=7.5E+05) [V]	Mvari	Dark(0.5p.e.) (at Vop) [Mcps]	Dark16ch.Total (0.5p.e.) (at Vop) [Mcps]
MPPC 62	1-1	72.60	-0.5%	1.40	17.4
	1-2	72.58		1.10	
	1-3	72.61		1.20	
	1-4	72.58		1.20	
	2-1	72.55		1.10	
	2-2	72.52		1.00	
	2-3	72.58		0.99	
	2-4	72.54		1.00	
	3-1	72.63		1.10	
	3-2	72.59		1.20	
	3-3	72.62		1.10	
	3-4	72.59		1.10	
	4-1	72.63		1.00	
	4-2	72.59		1.00	
	4-3	72.62		1.00	
	4-4	72.57		0.92	