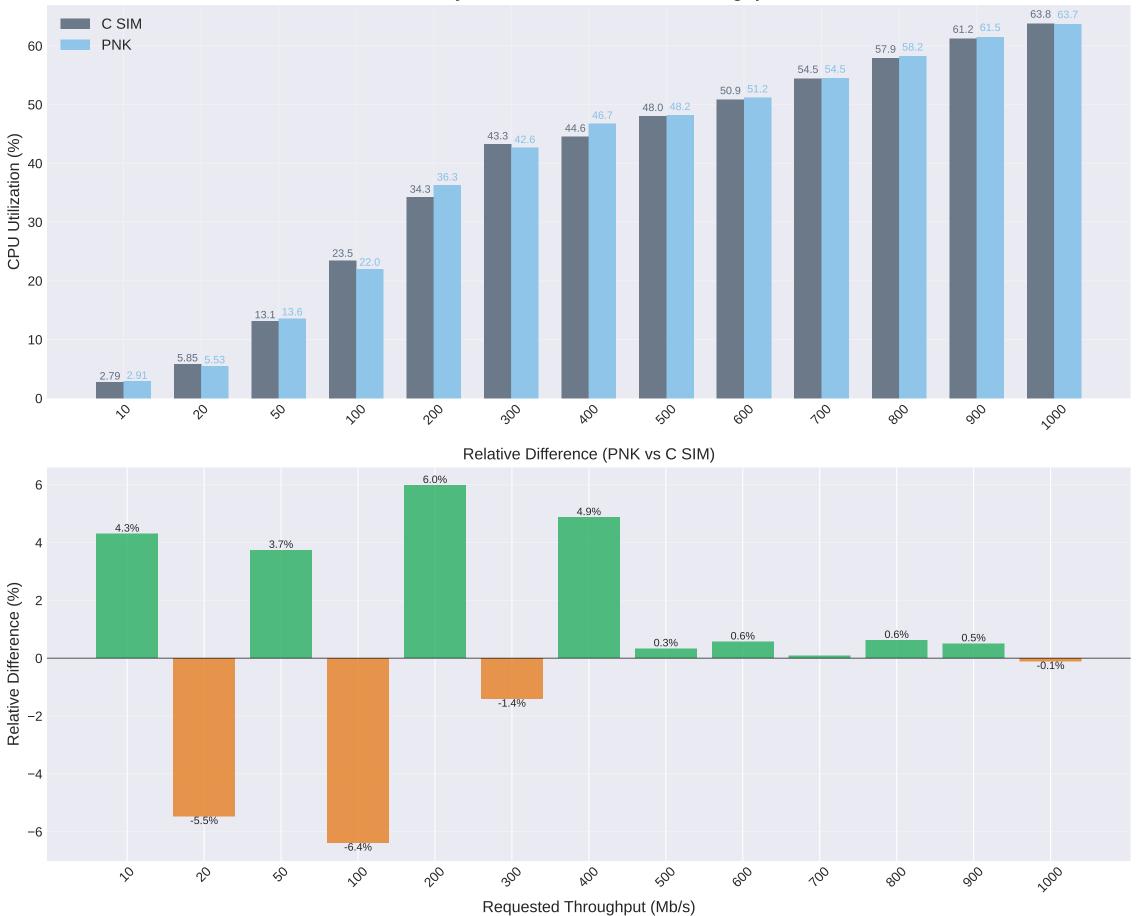
**Instructions per Second vs Throughput** 0.7 0.66 0.66 0.66 C SIM PNK 0.6 0.57 0.56 Instructions per Second (Billions) 0.52 0.50 0.52 0.51 0.51 0.51 0.51 0.51 0.50 0.51 0.50 0.50 0.50 0.49 0.49 0.41 0.36 0.1 0.0 100 200 300 400 400 600 700 800 900 2000 20 20 B Relative Difference (PNK vs C SIM) 26.2% 20 10 Relative Difference (%) 2.2% -1.0% -1.5% -1.6% -1.9% -2.1% -2.2% -7.3% -20 -30 -32.0% 200 200 300 400 100 900 30 20 SO NO 600

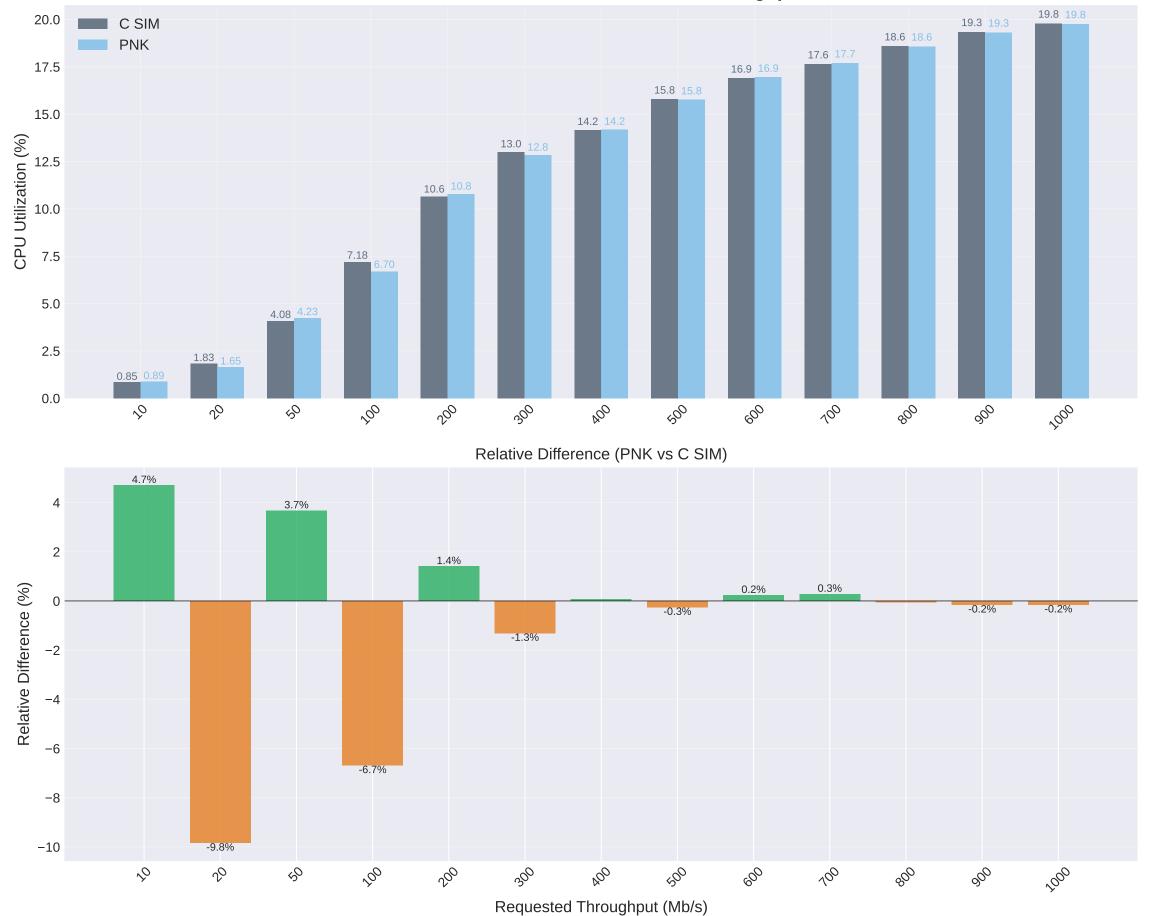
**Received Throughput vs Requested with CPU Utilization Overlay** 1000 C SIM Recv Throughput 957.1957.0 100 PNK Recv Throughput C SIM CPU Util 900.0900.0 PNK CPU Util 0.00800.008 800 80 700.0700.0 Received Throughput (Mb/s) 63.8% 61.5% 600.0600.0 600 CPU Utilization (%) 58.2% 54.5% 51.2% 500.0500.0 48.2% 46.7% 42:6% 400 300.0300.0 200.0200.0 200 20 100.0100.0 50.0 50.0 2.9% 20.0 20 0 900 200 NOO 400 2000 700 300 600 100 900 30 20 50

Requested Throughput (Mb/s)

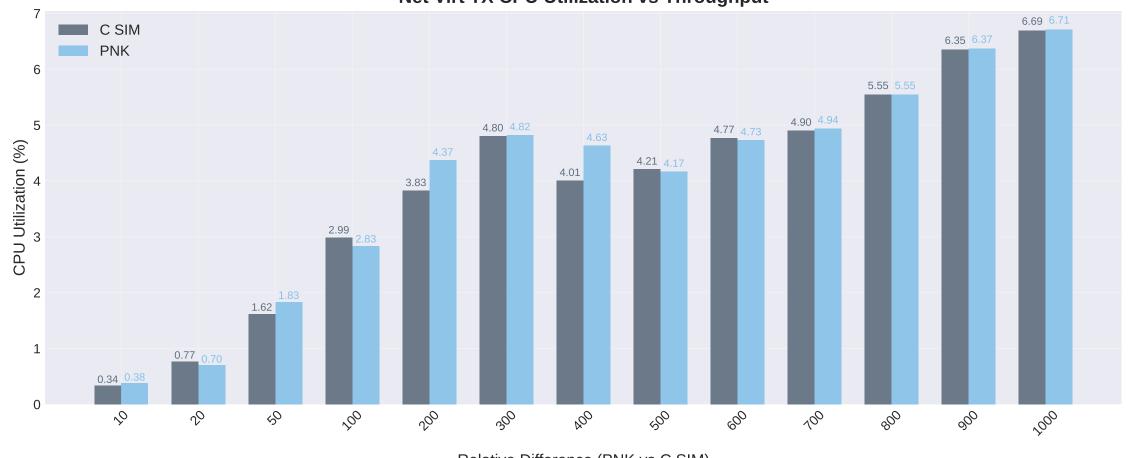
**Total System CPU Utilization vs Throughput** 

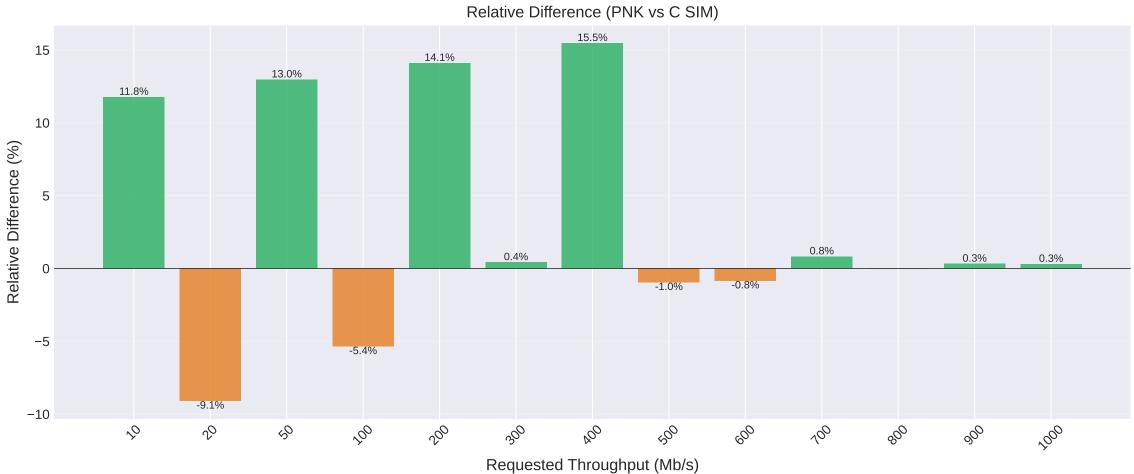


**Ethernet Driver CPU Utilization vs Throughput** 

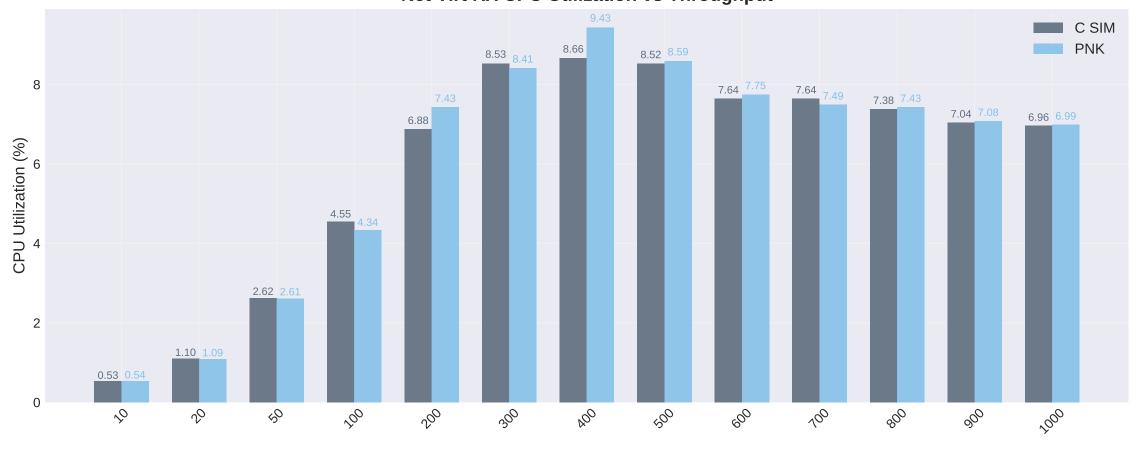


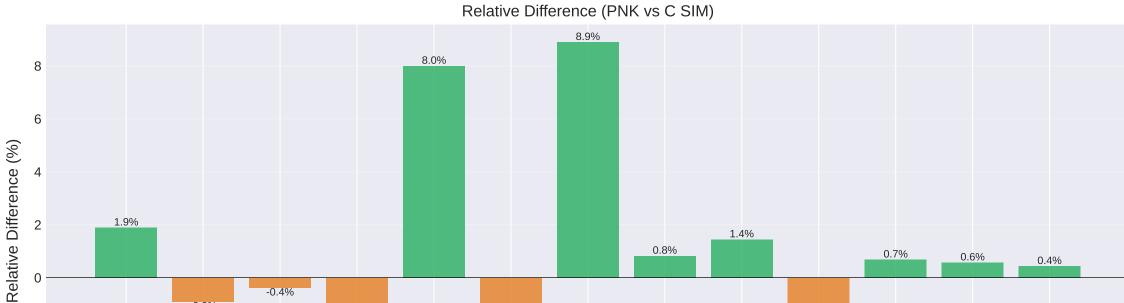
Net Virt TX CPU Utilization vs Throughput





## **Net Virt RX CPU Utilization vs Throughput**





-0.4%

50

-4.6%

200

-0.9%

20

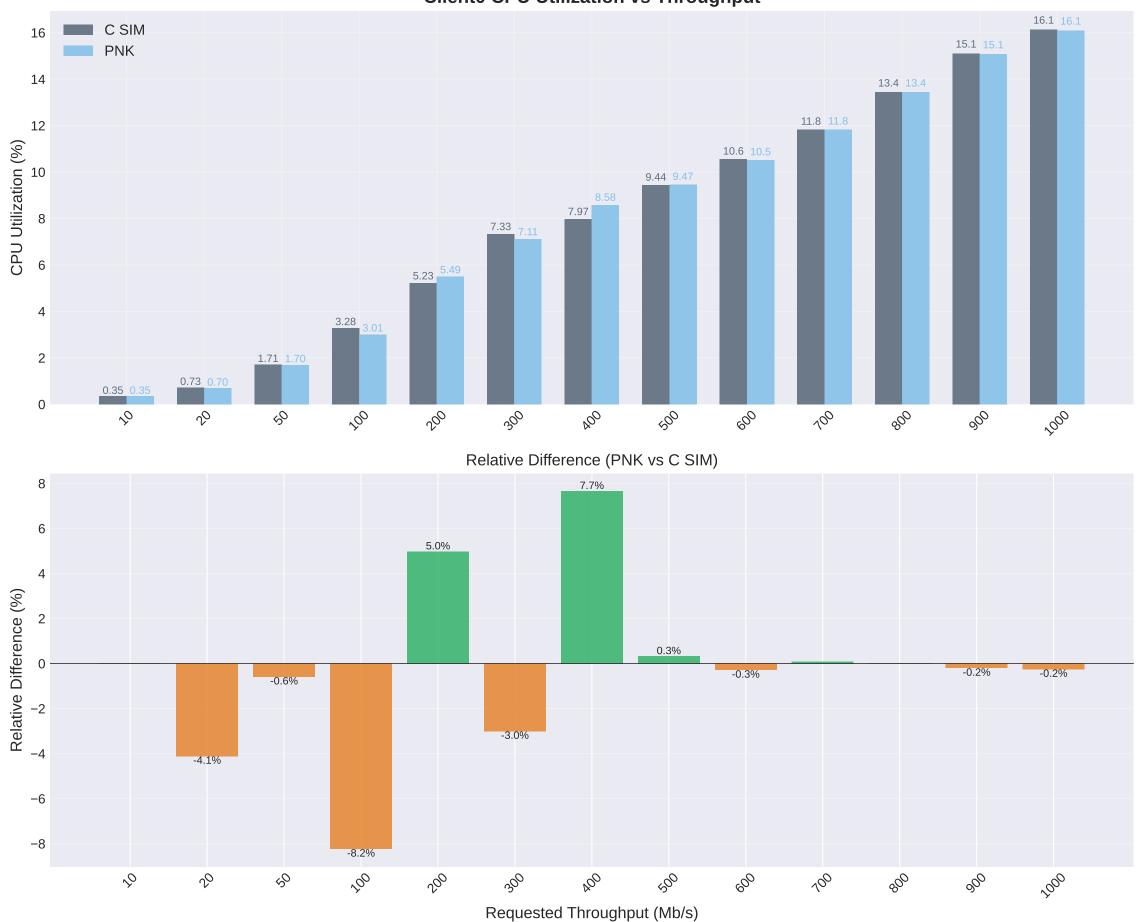
-2

-4

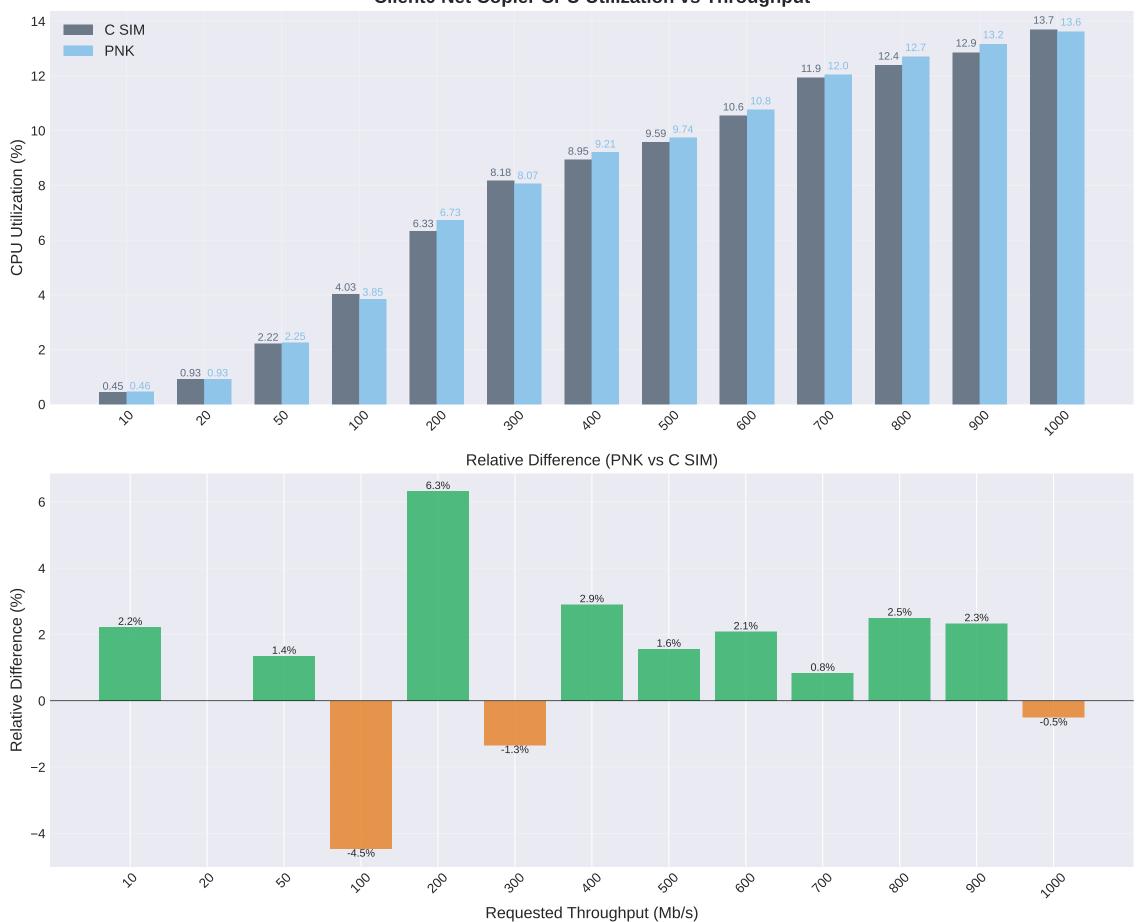
\$0

0.8% 0.7% 0.6% 0.4% -1.4% -2.0% 200 300 500 600 100 900 DOD Requested Throughput (Mb/s)

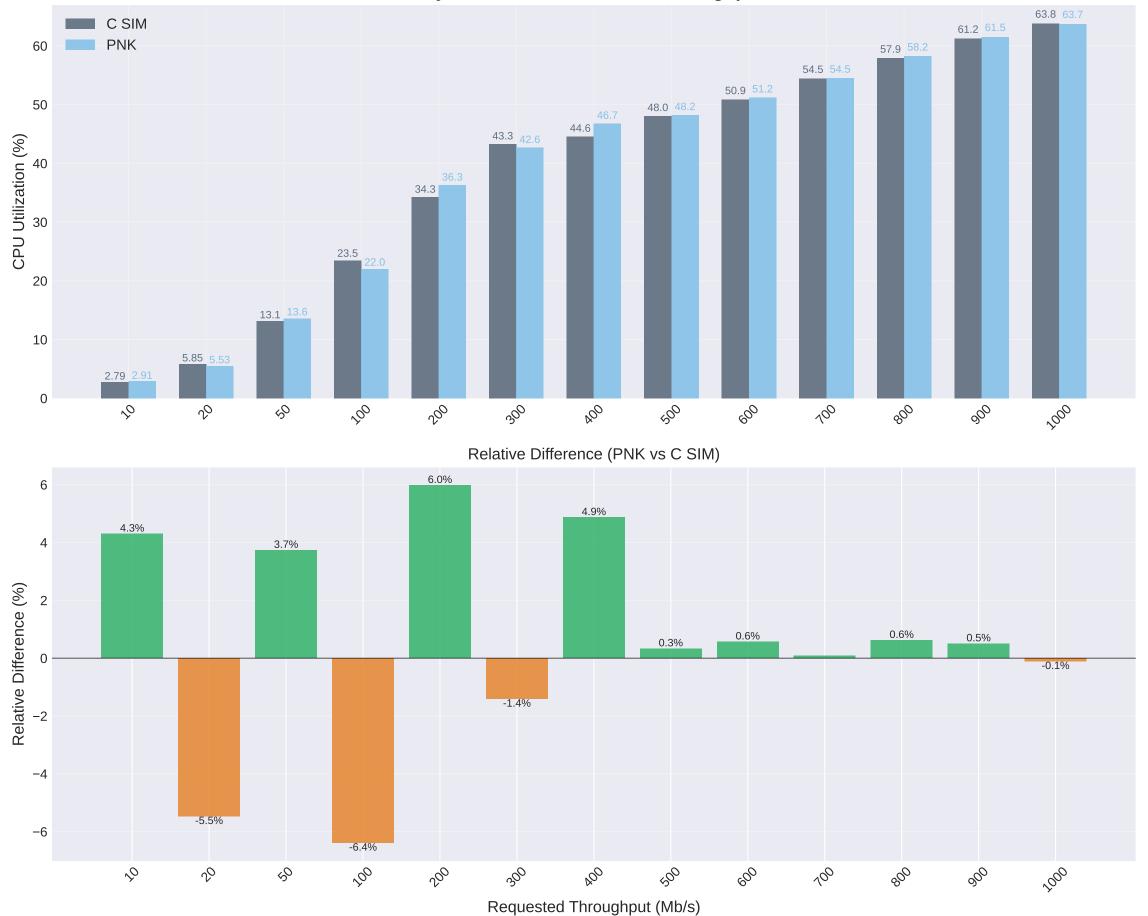
**Client0 CPU Utilization vs Throughput** 

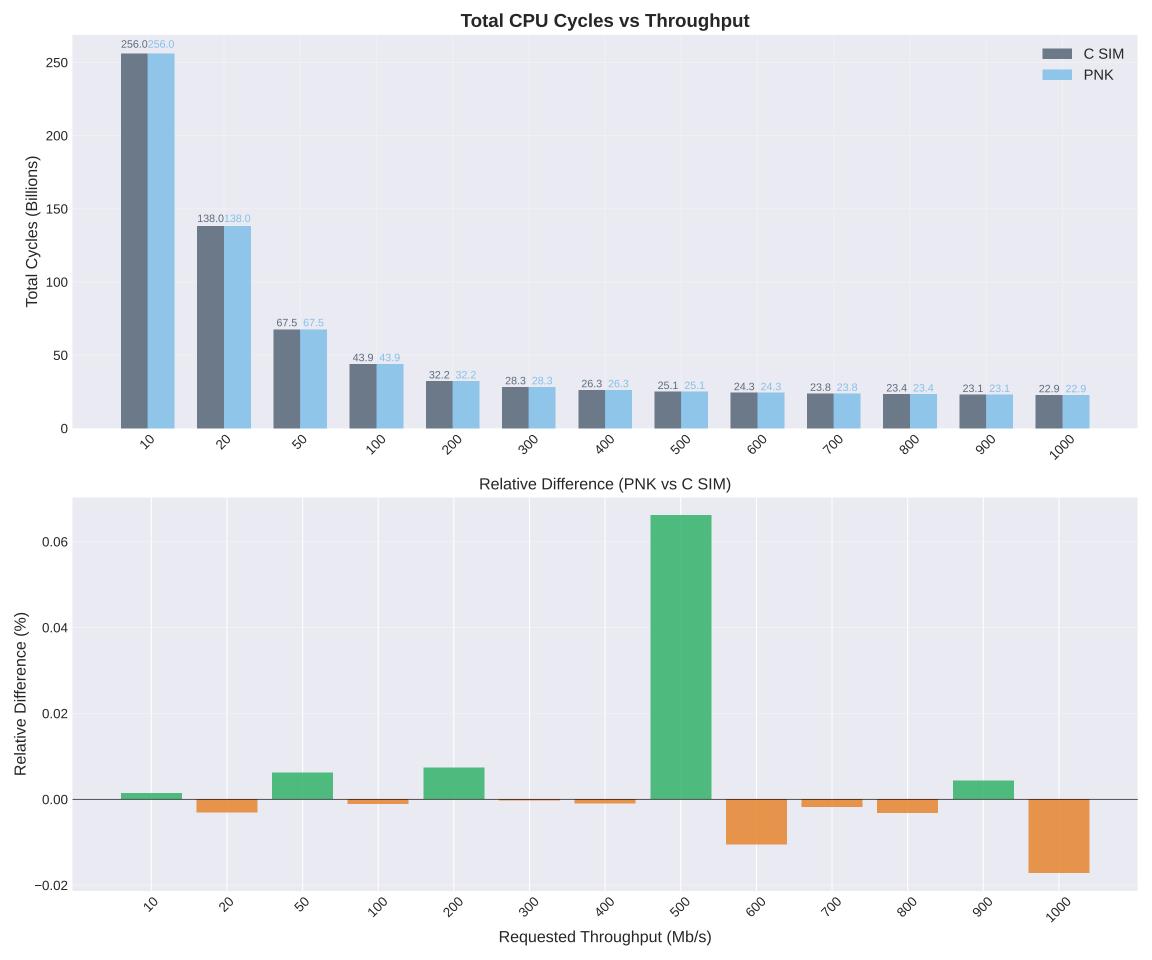


**Client0 Net Copier CPU Utilization vs Throughput** 

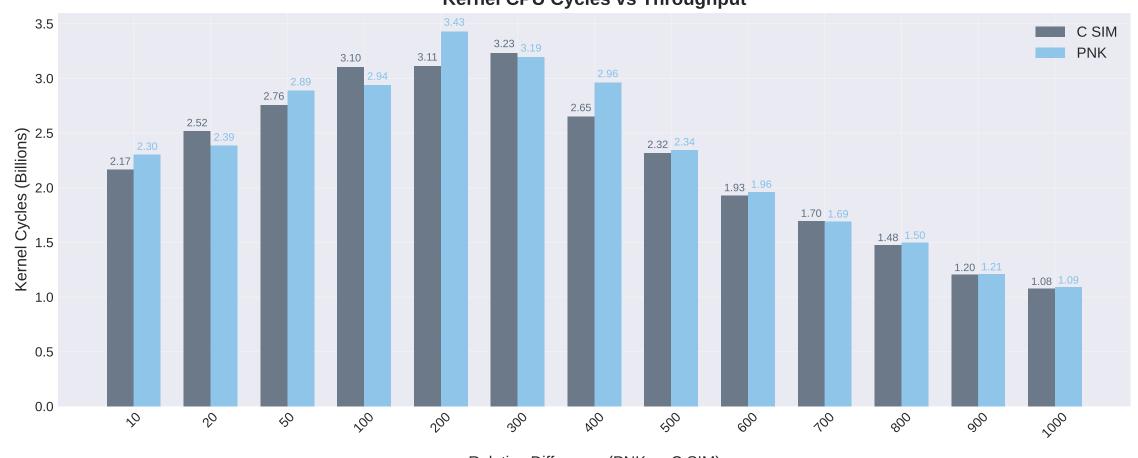


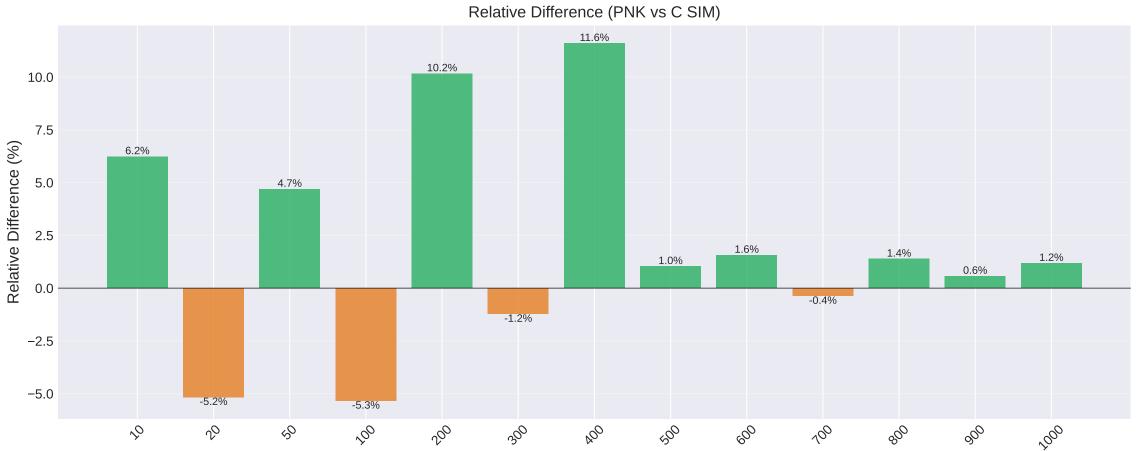
**System CPU Utilization vs Throughput** 

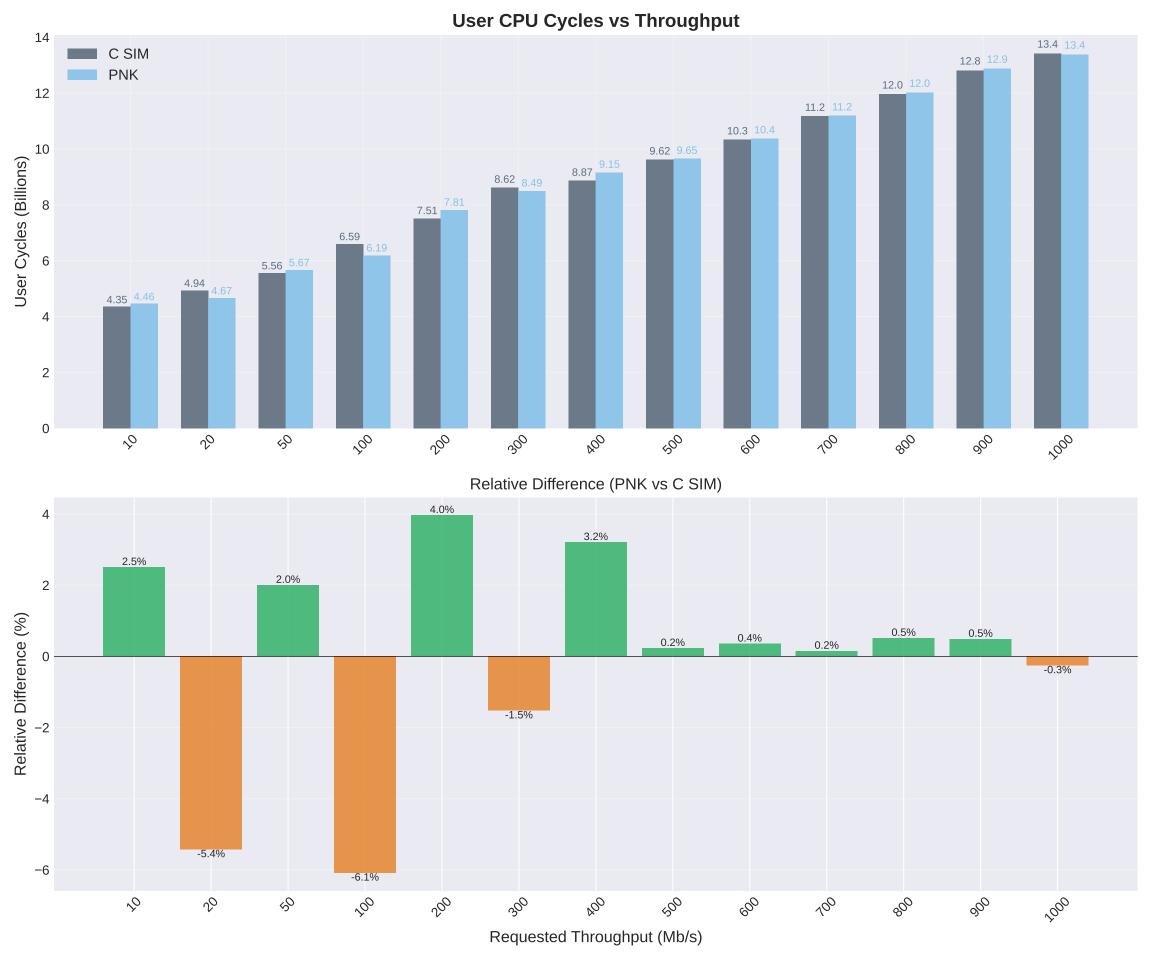






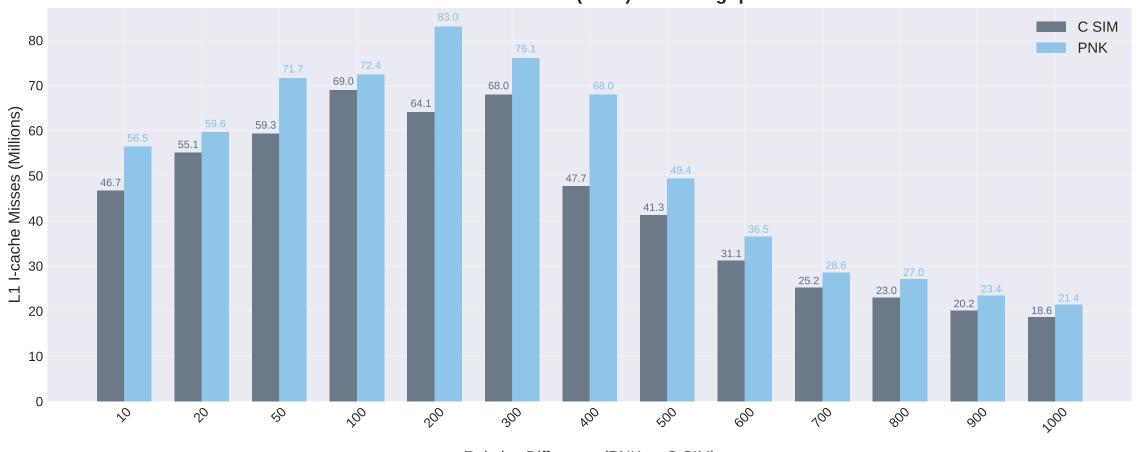


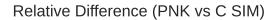


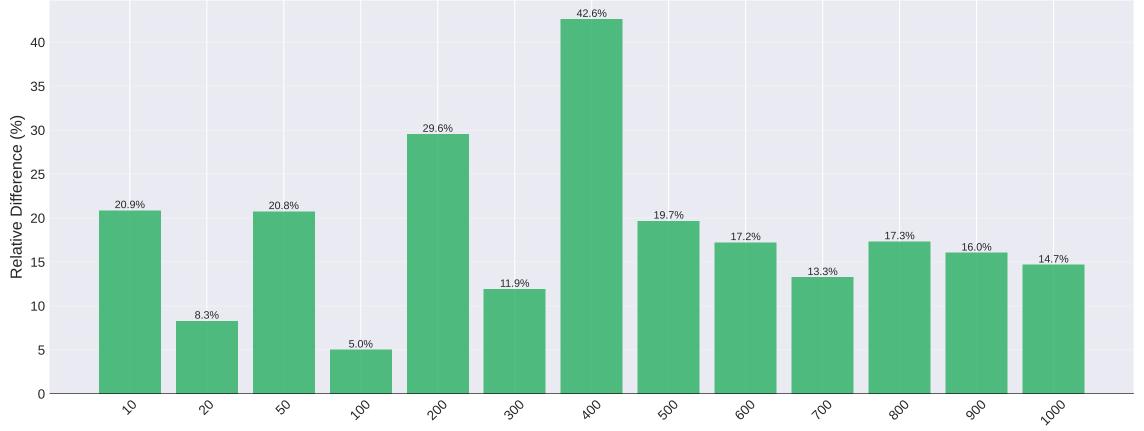


Idle CPU Cycles vs Throughput 248.8248.5 250 C SIM PNK 200 Idle Cycles (Billions) 130.0130.4 58.7 58.4 50 33.6 34.3 21.2 20.5 16.1 16.2 14.6 14.0 13.0 13.0 11.9 11.9 10.8 10.8 9.85 9.77 8.94 8.87 8.29 8.30 0 600 \$ 200 200 300 NOO 400 700 800 900 2000 20 50 Relative Difference (PNK vs C SIM) 2.0% 2 1.1% 1 0.3% Relative Difference (%) 0.2% -0.1% -0.1% -0.2% -0.6% -0.6% -0.8% -0.9% -3 -3.1% -3.9% -4 30 SO 200 200 300 NOO 400 600 100 900 20

## **L1** I-cache Misses (Total) vs Throughput

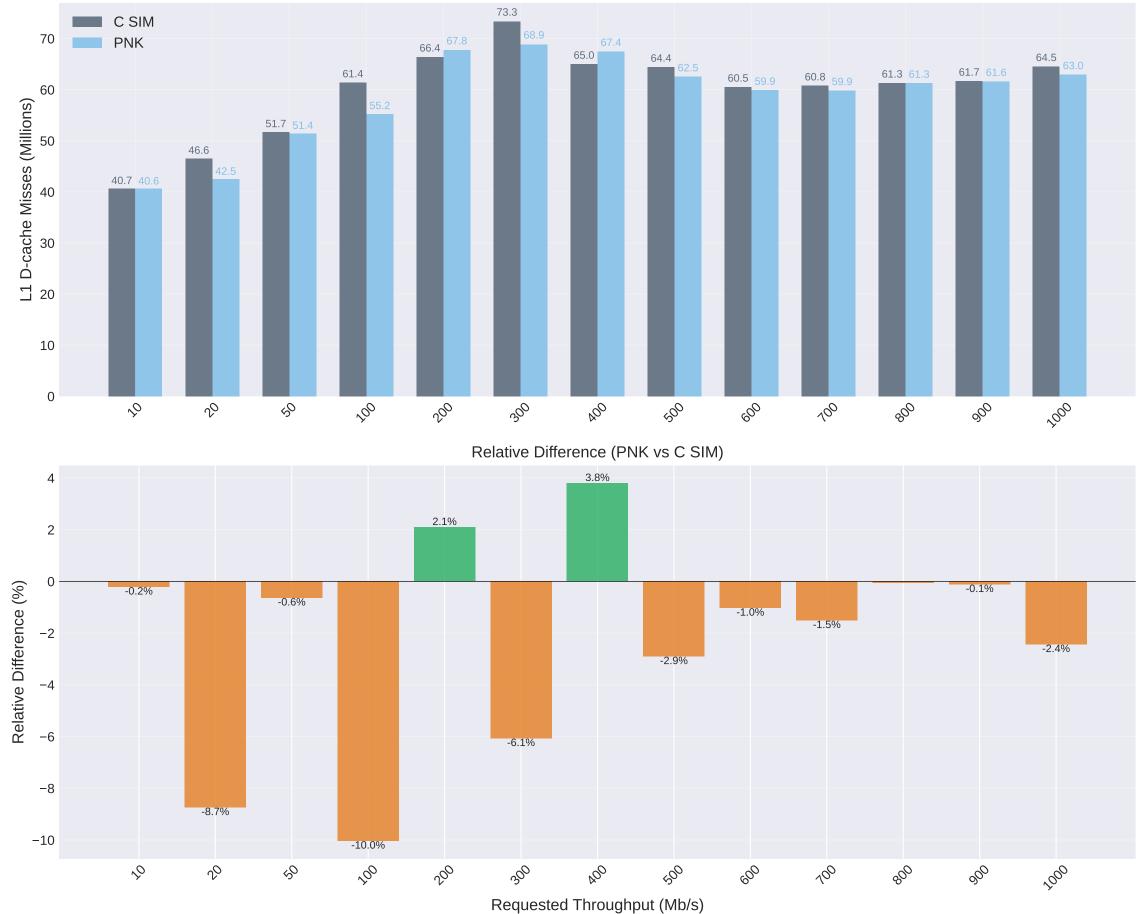




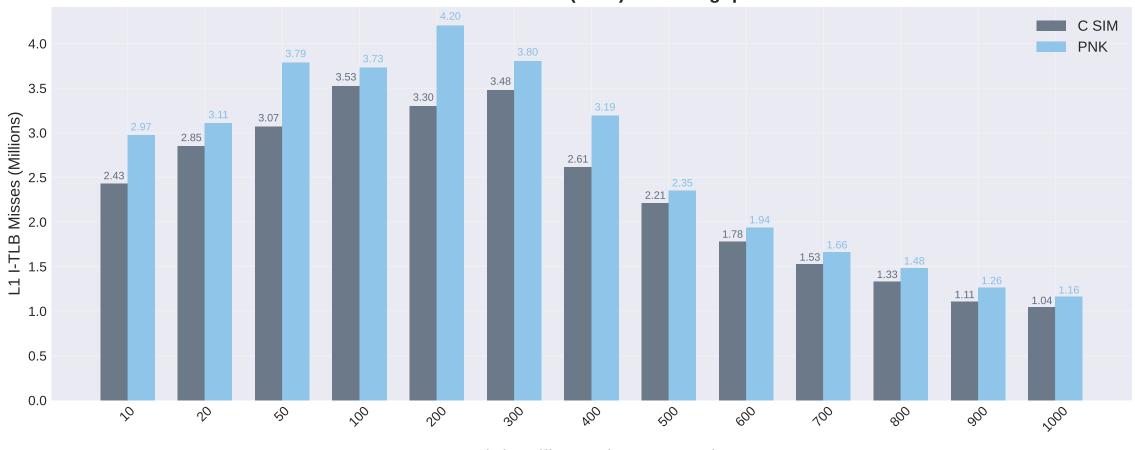


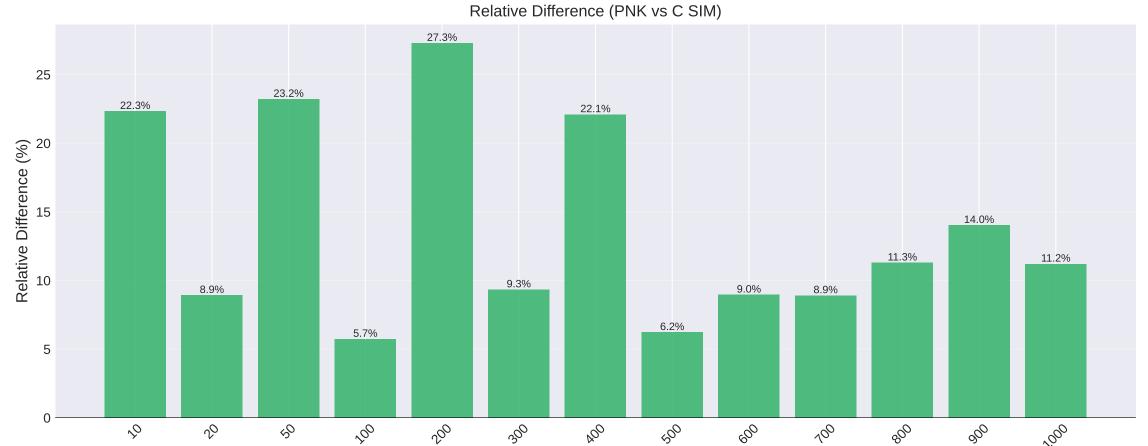
Requested Throughput (Mb/s)

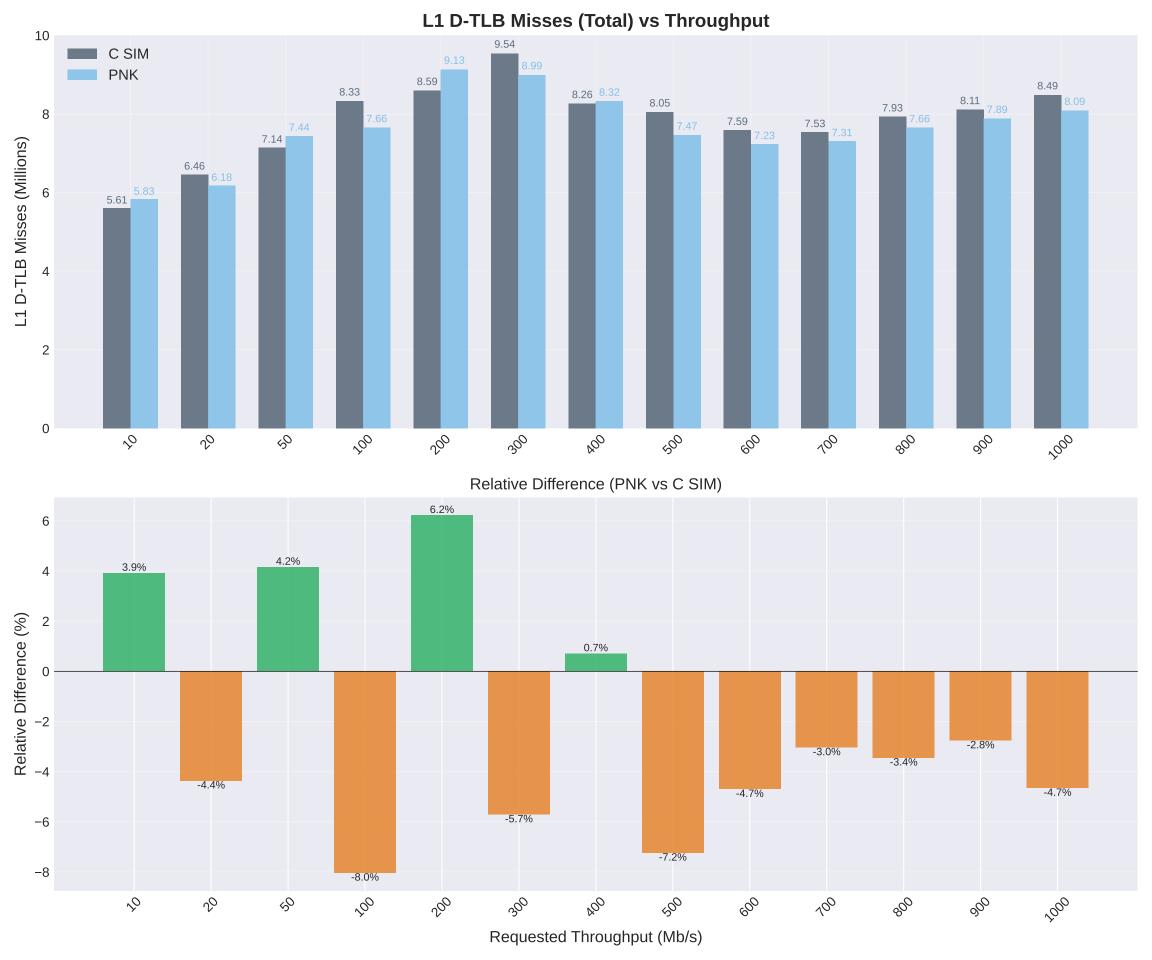
**L1** D-cache Misses (Total) vs Throughput



L1 I-TLB Misses (Total) vs Throughput



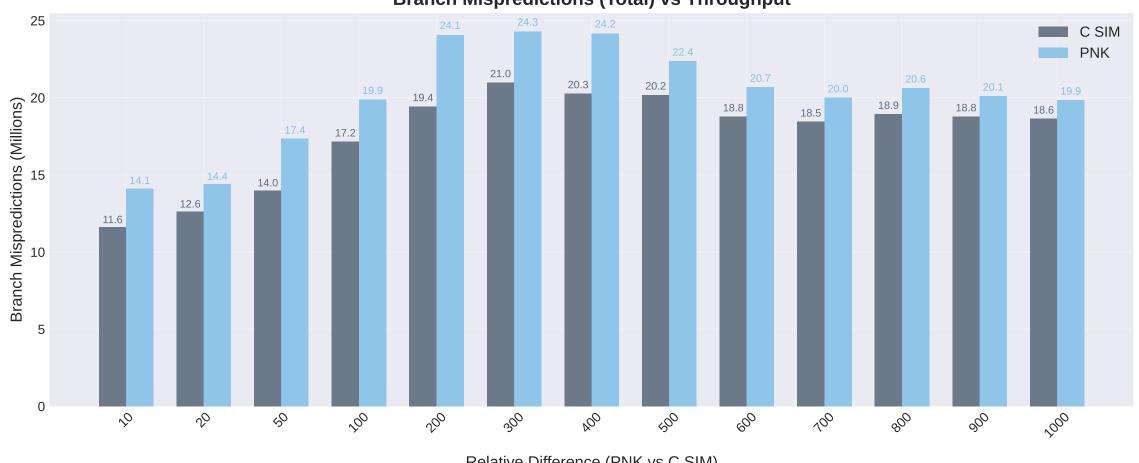


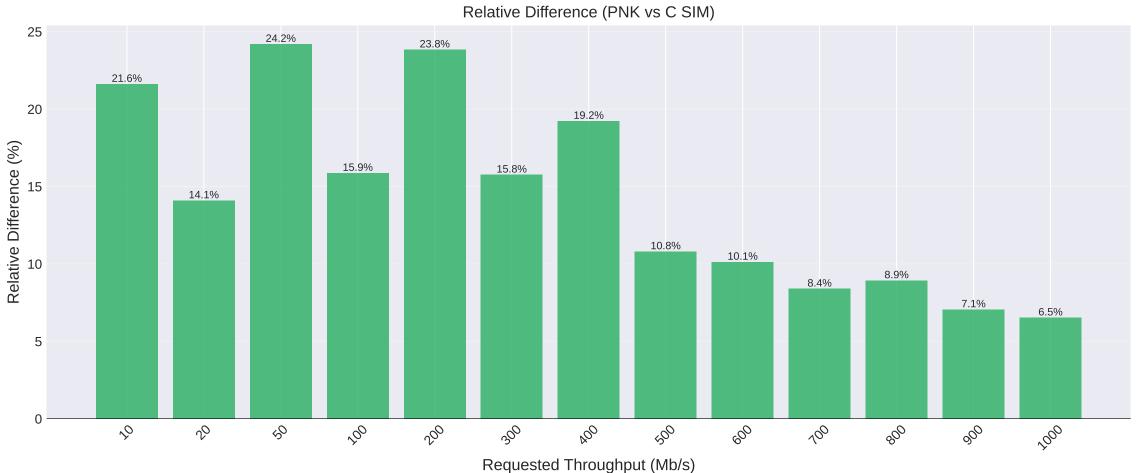


## **Instructions (Total) vs Throughput** 178510.0 174712<mark>.0</mark> C SIM 175000 PNK 150000 125000 (Willions) 100000 75000 9426790200.9 50000 3926139673.5 25000 2169&1696.9 13251.2 14396.1 12833.7552.9 12423.4161.6 12059.4865.9 11790.5566.1 1156315372.2 1134011224.9 9291.6614.1 0 200 200 zo NOO 400 600 100 900 900 2000 \$ 20 SO Relative Difference (PNK vs C SIM) 26.2% 20 10 Relative Difference (%) 2.2% -1.5% -1.6% -2.2% -7.3% -10 -20 -30 -32.0% 30 20 200 200 300 NO 400 600 700 50

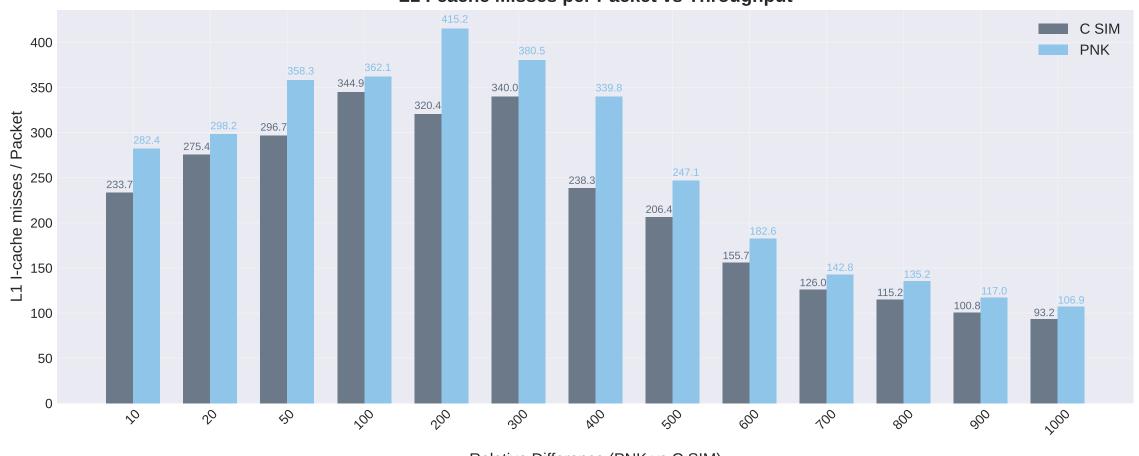
Requested Throughput (Mb/s)

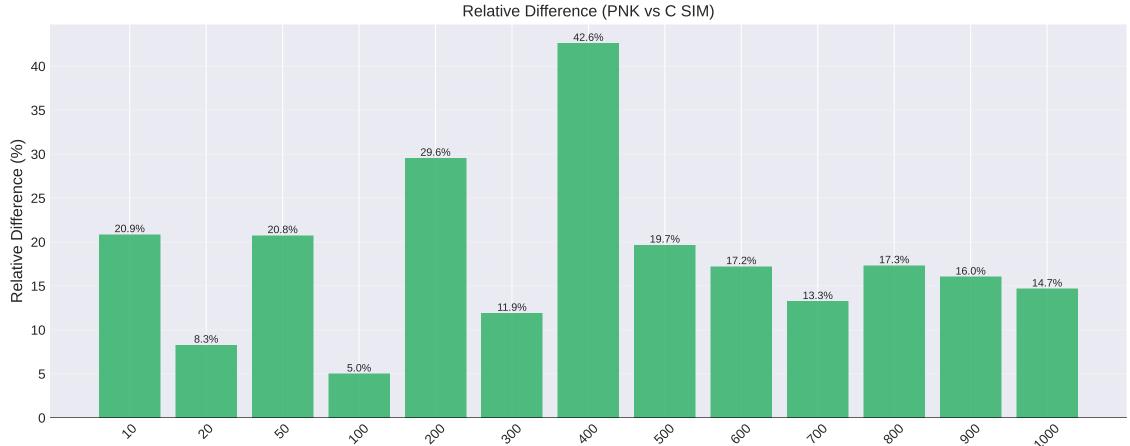
**Branch Mispredictions (Total) vs Throughput** 



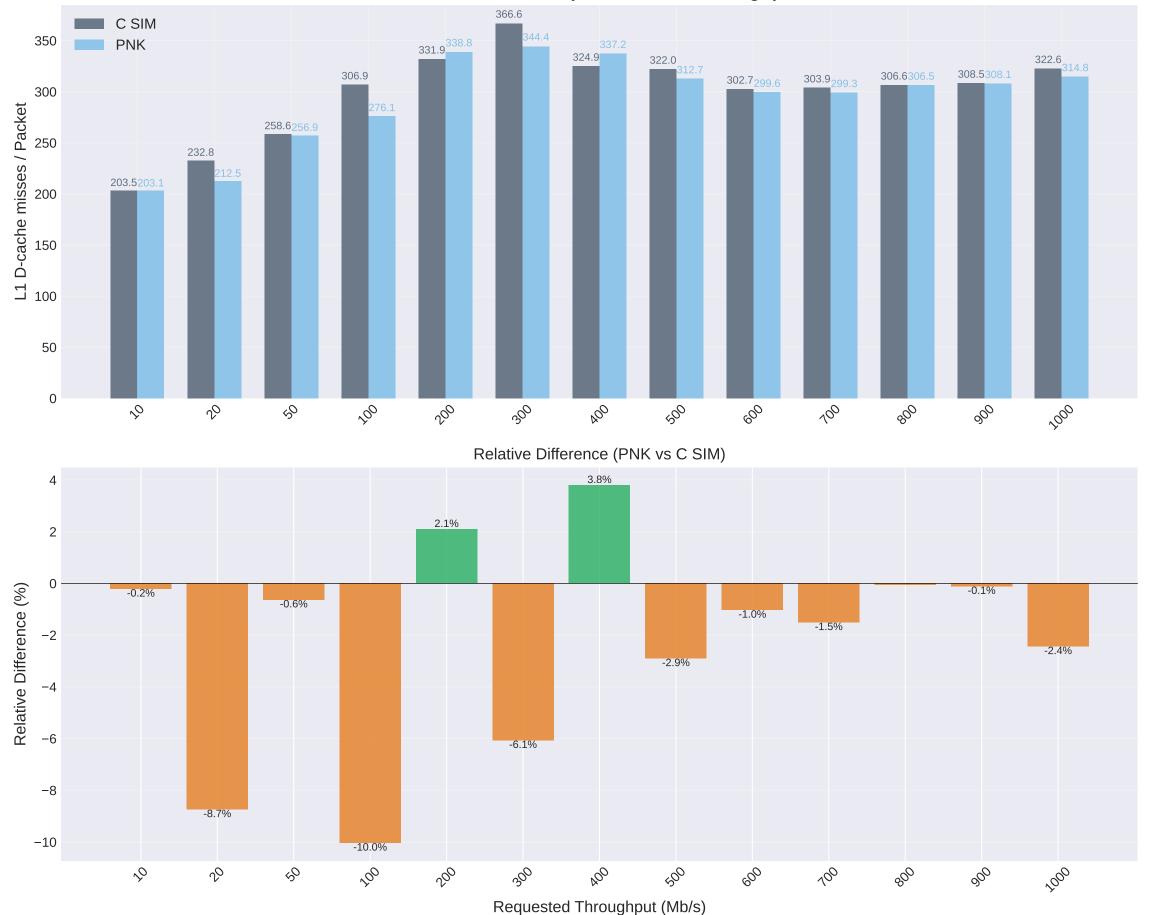


**L1** I-cache Misses per Packet vs Throughput

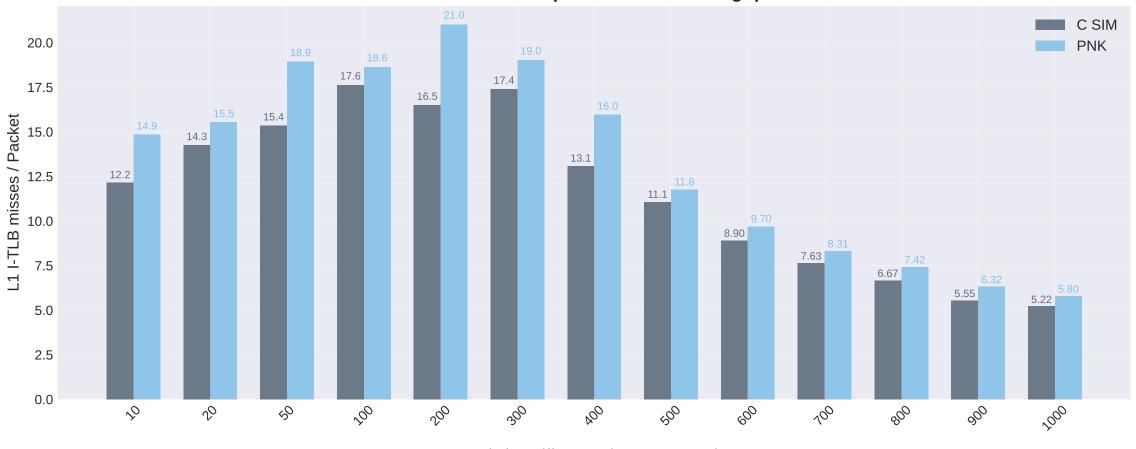


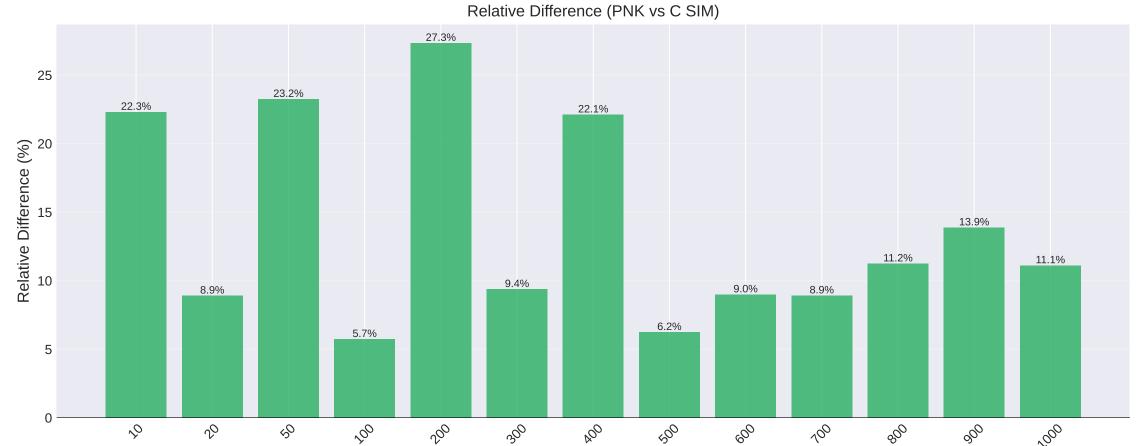


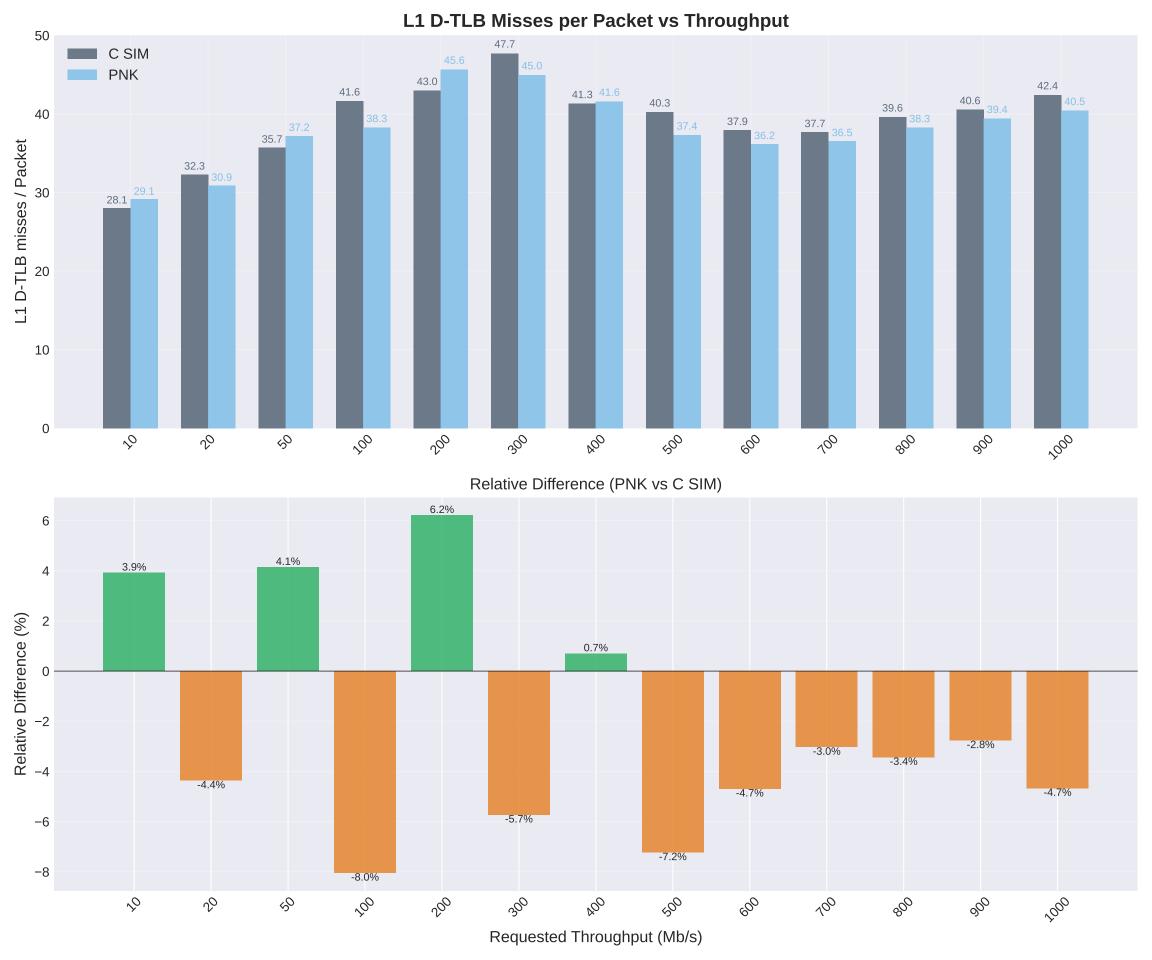
**L1 D-cache Misses per Packet vs Throughput** 



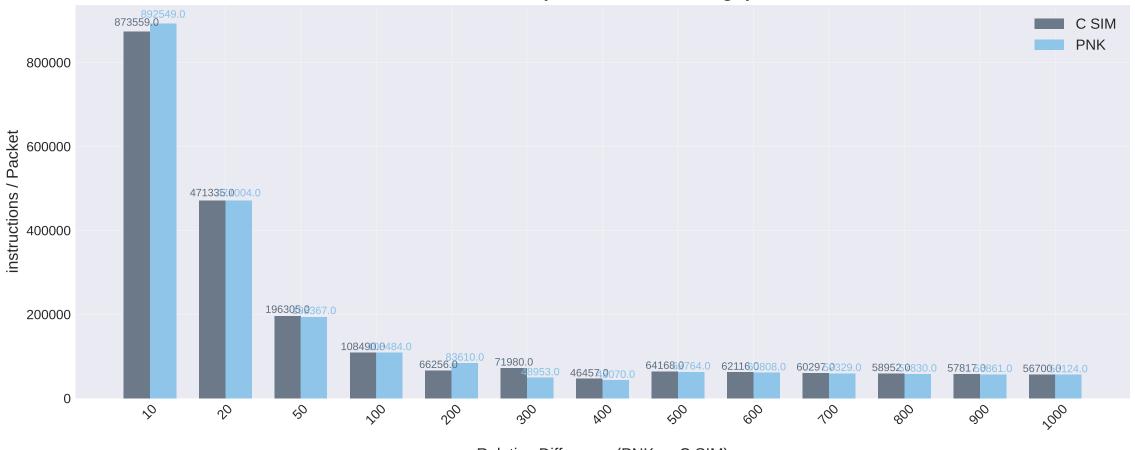
## **L1 I-TLB Misses per Packet vs Throughput**

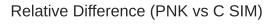


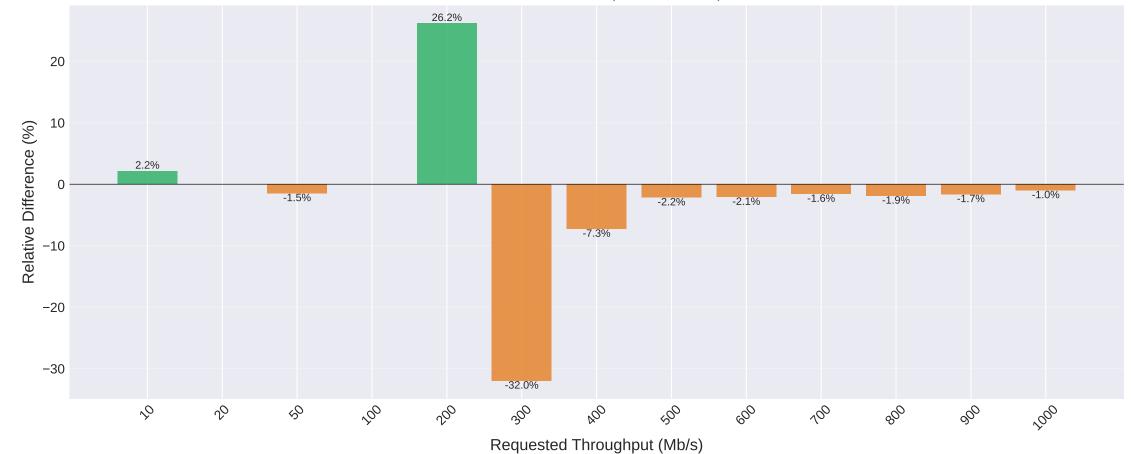




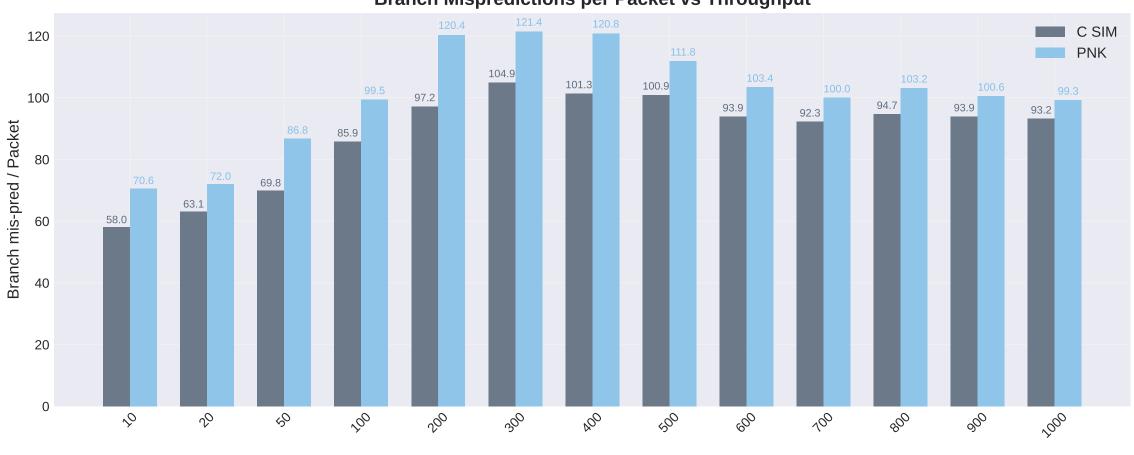


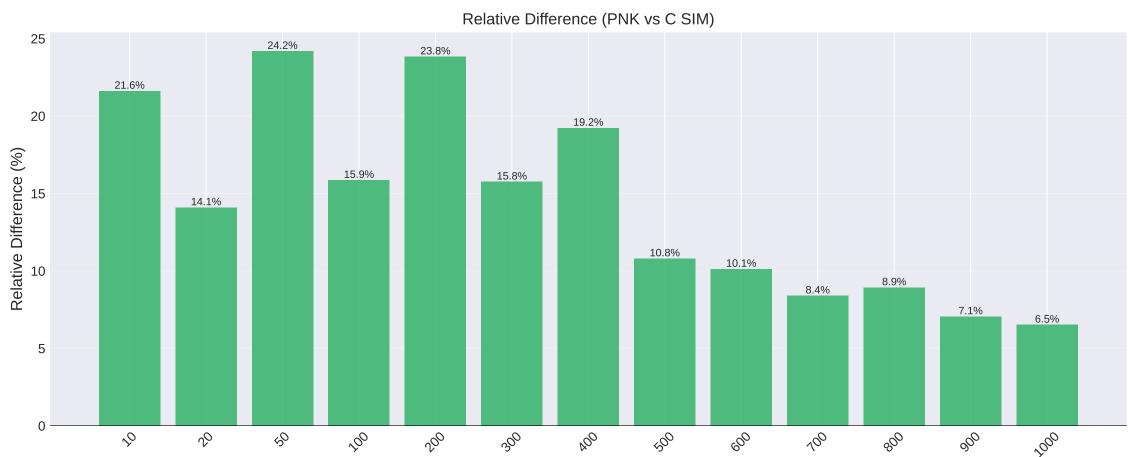


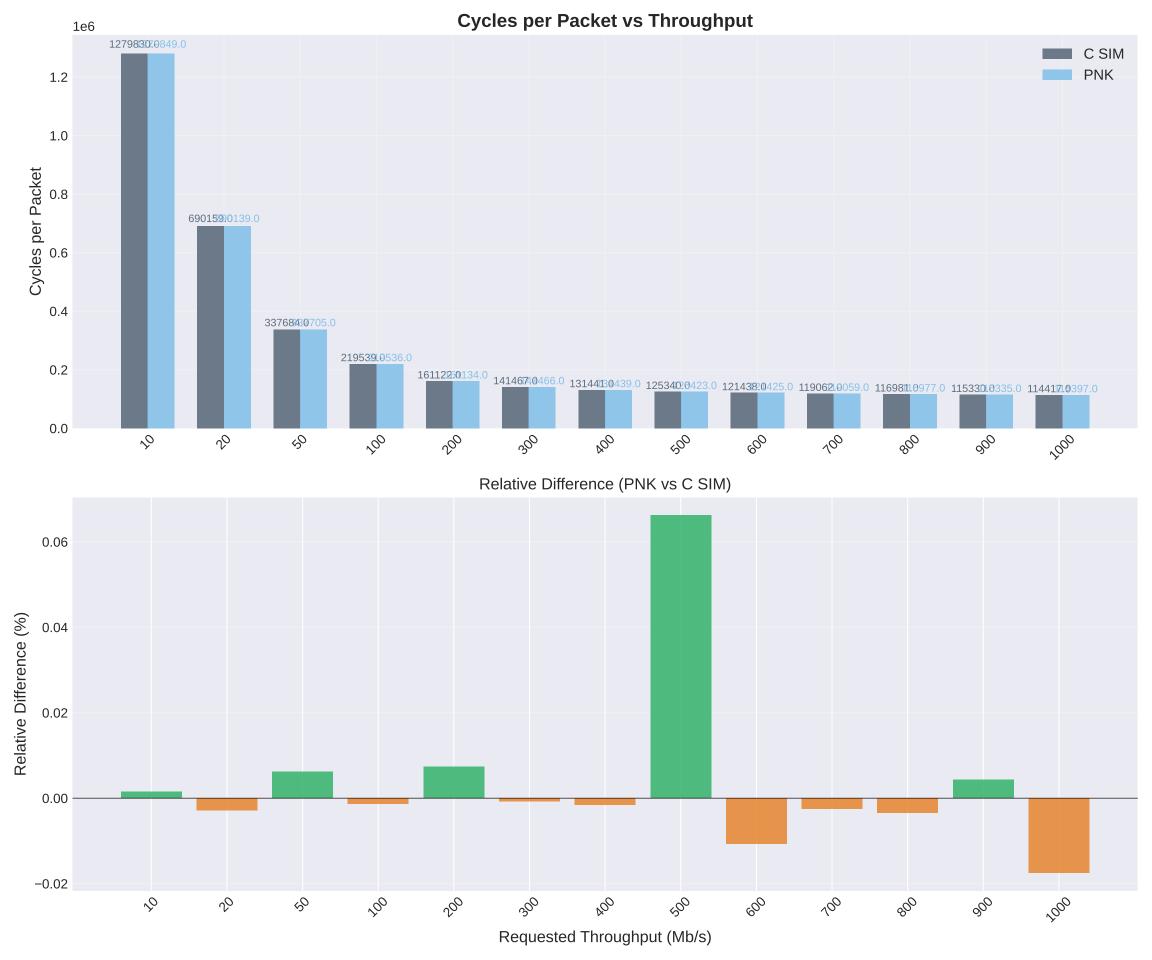




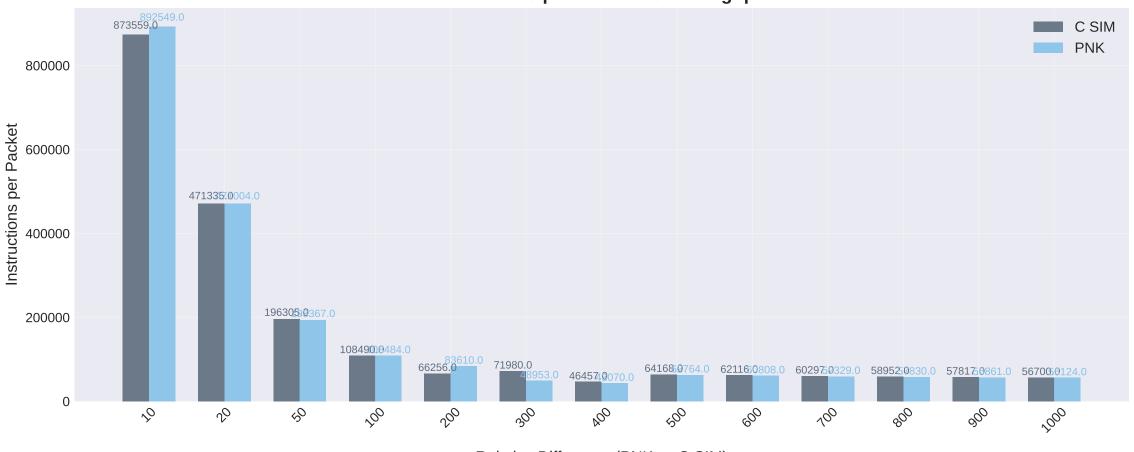
Branch Mispredictions per Packet vs Throughput

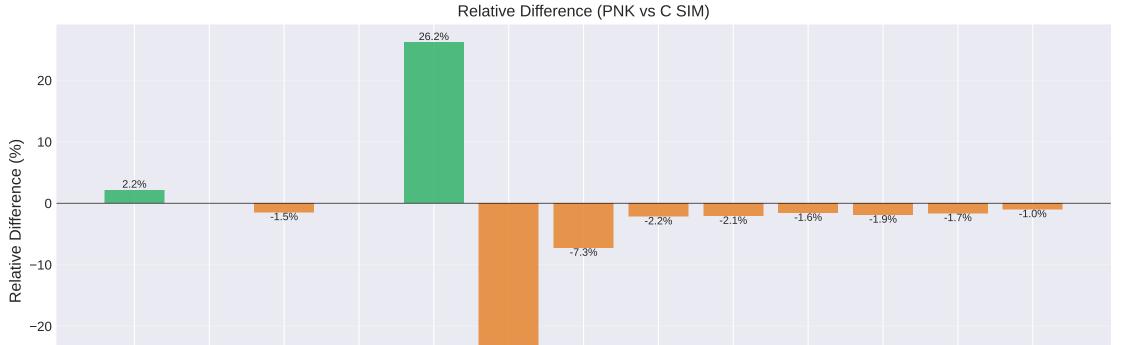












NO

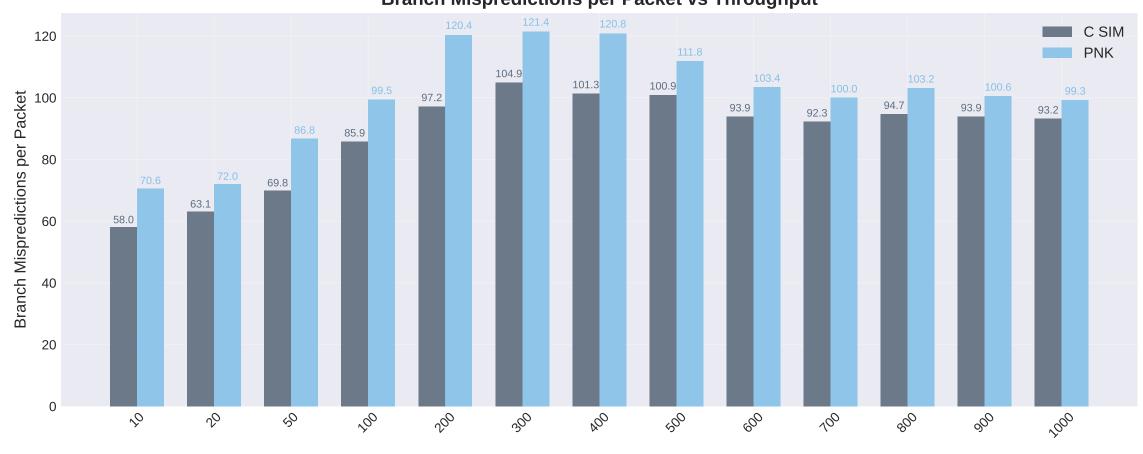
Requested Throughput (Mb/s)

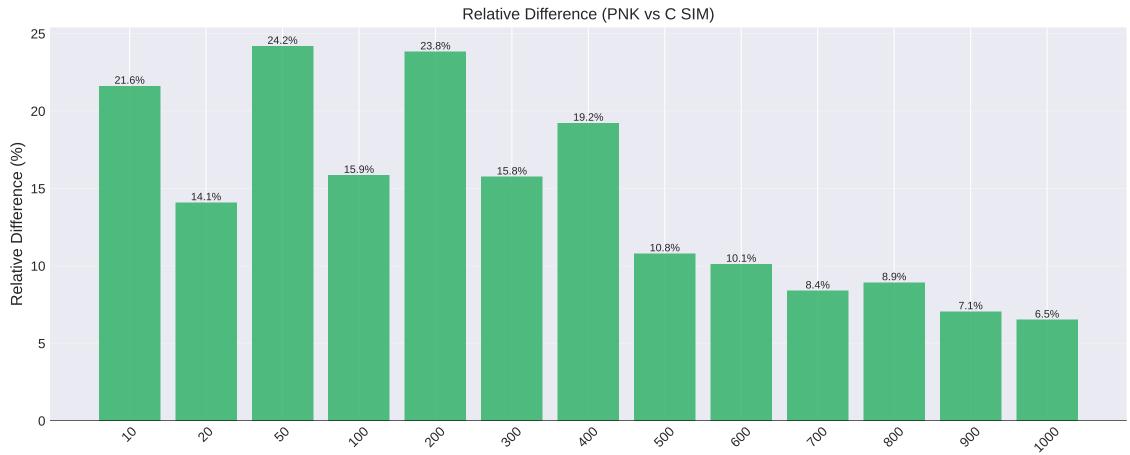
-32.0%

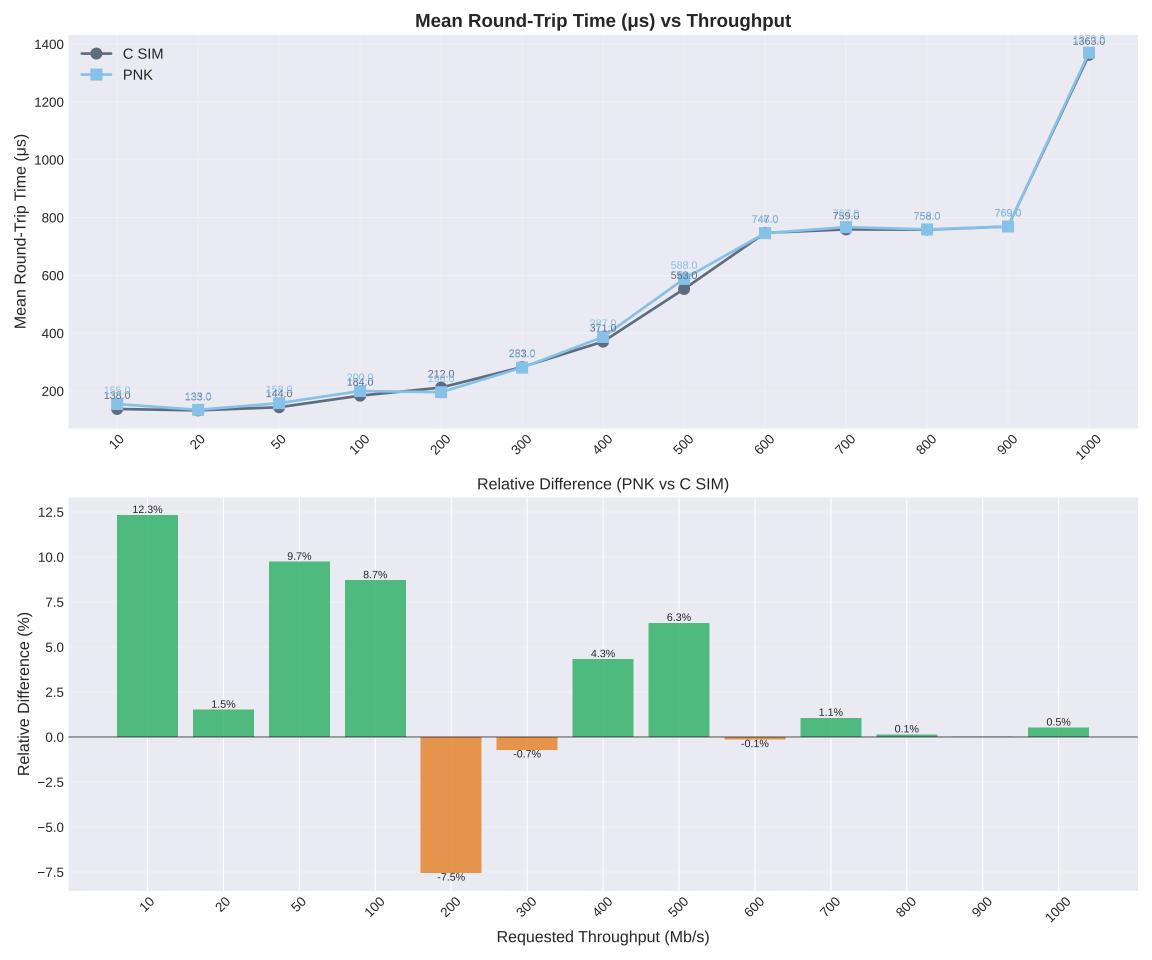
-30

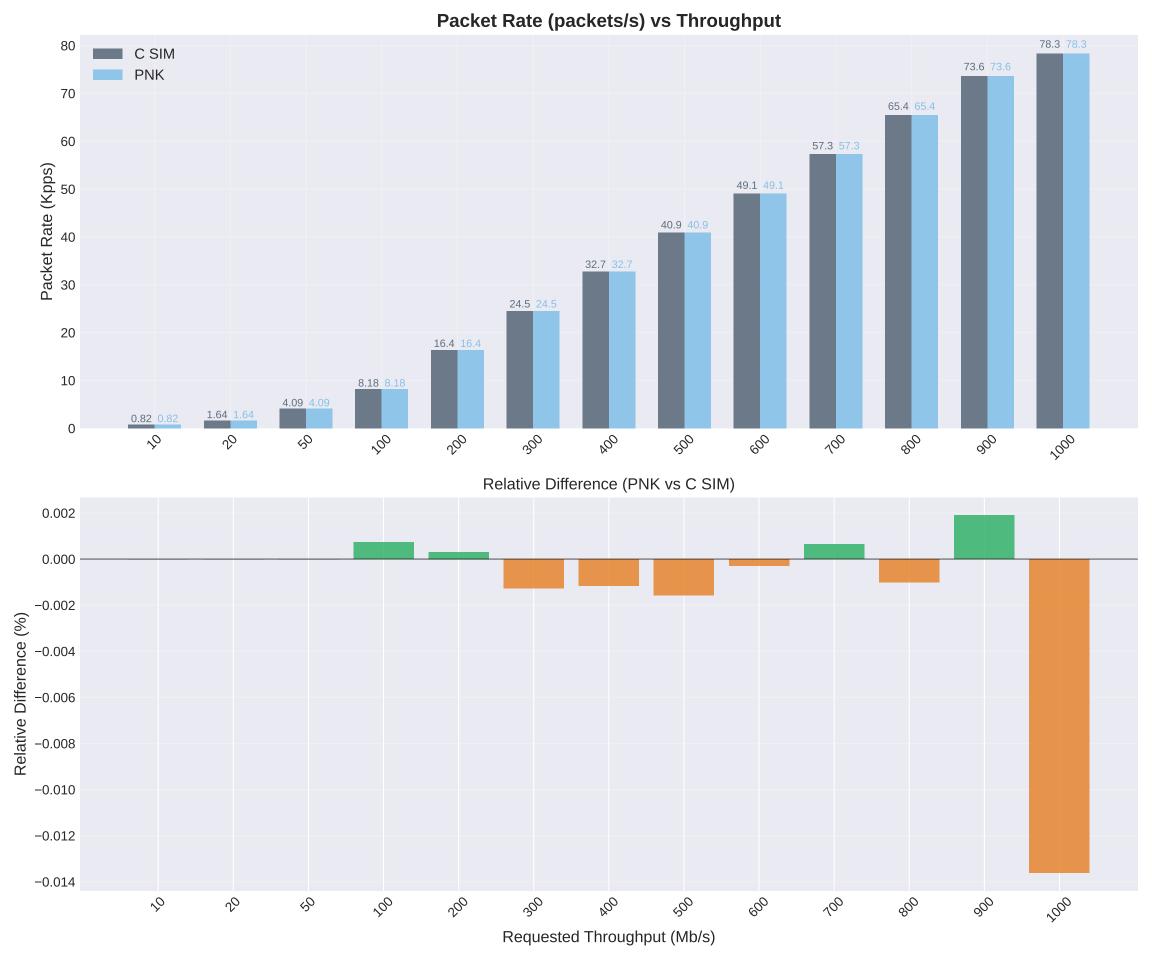
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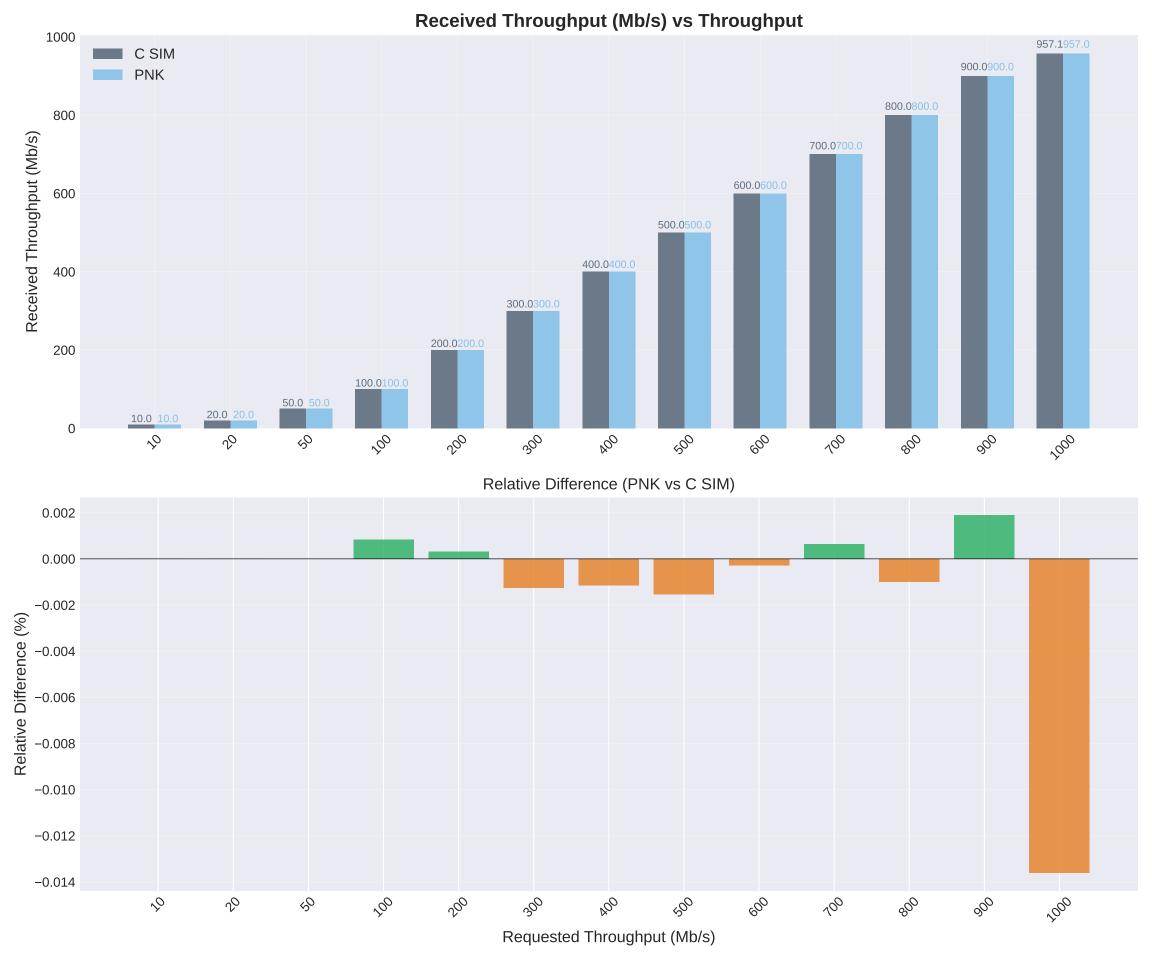
**Branch Mispredictions per Packet vs Throughput** 











Sent Throughput (Mb/s) vs Throughput

