

**Experiment:** Strong Scaling Analysis (Fixed Problem Size N=10000)

**Objective:** Measure the reduction in solution time as the number of processing cores increases from 1 to 16.

Cores (p)	Solver Time (s)	Speedup $S(p) = T_1 / T_p$	Efficiency $E(p) = S(p) / p$	Status vs Reference
1	257.02	1.00x	100.0%	Faster (Ref: 1700s)
2	130.86	1.96x	98.2%	Faster (Ref: 858s)
4	65.53	3.92x	98.0%	Faster (Ref: 450s)
8	33.21	7.74x	96.7%	Faster (Ref: 269s)
16	18.15	14.16x	88.5%	Faster (Ref: 163s)