Smoke Past Sphere 768^3 PCG Iteration Breakdown			
PCG Iteration Substep	1-core	16-core	Speedup
(Re-)Initialization*	13s 200ms	2s 370ms	5.6
V-Cycle (finest level breakdown)			
Int. Smoothing and Residuals	7s 990ms	1s 170ms	6.8
Bdry. Smoothing and Residuals	0s 983ms	0s 160ms	6.1
Restriction	3s 430ms	0s 287ms	12.0
Prolongation	2s 950ms	0s 398ms	7.4
Bdry. Smooth (upstroke)	0s 719ms	0s 103ms	7.0
Int. Smooth (upstroke)	11s 700ms	1s 150ms	10.2
V-Cycle total (1 iteration)	32s 200ms	3s 910ms	8.2
PCG, line 6	11s 600ms	0s 895ms	13.0
PCG, line 8	2s 270ms	0s 453ms	5.0
PCG, line 13 (inc. V-Cycle)	32s 200ms	3s 910ms	8.2
DOG !! 40	5s 160ms	828ms	6.2
PCG, line 16	33 1001113		
PCG, line 16 PCG total (1 iteration)	51s 300ms		8.4
·	51s 300ms	6s 90ms	8.4
PCG total (1 iteration)	51s 300ms	6s 90ms	8.4 Speedup
PCG total (1 iteration)  Cost of 1 PCG Iteratio	51s 300ms	6s 90ms	
PCG total (1 iteration)  Cost of 1 PCG Iteration  Simulation and Resolution	51s 300ms	6s 90ms  ulation  16-core	Speedup
PCG total (1 iteration)  Cost of 1 PCG Iteration  Simulation and Resolution  Smoke flow past sphere	51s 300ms on By Simu 1-core	6s 90ms  ulation  16-core  23ms	Speedup
Cost of 1 PCG Iteration  Simulation and Resolution  Smoke flow past sphere 64x64x64	51s 300ms on By Simu 1-core 39ms	6s 90ms  ulation  16-core  23ms 47ms	Speedup
Cost of 1 PCG Iteration  Simulation and Resolution  Smoke flow past sphere 64x64x64 96x96x96	51s 300ms on By Simu 1-core 39ms 127ms	6s 90ms  ulation  16-core  23ms 47ms 67ms	1.7 2.7
Cost of 1 PCG Iteration  Simulation and Resolution  Smoke flow past sphere 64x64x64 96x96x96 128x128x128	51s 300ms  In By Simu  1-core  39ms 127ms 299ms	6s 90ms  ulation  16-core  23ms 47ms 67ms 167ms	1.7 2.7 4.5
Cost of 1 PCG Iteration  Simulation and Resolution  Smoke flow past sphere 64x64x64 96x96x96 128x128x128 192x192x192	51s 300ms  on By Simu  1-core  39ms 127ms 299ms 983ms	6s 90ms  Llation  16-core  23ms 47ms 67ms 167ms 289ms	1.7 2.7 4.5 5.9
Cost of 1 PCG Iteration  Simulation and Resolution  Smoke flow past sphere 64x64x64 96x96x96 128x128x128 192x192x192 256x256x256	51s 300ms  n By Simu 1-core  39ms 127ms 299ms 983ms 2s 110ms	6s 90ms  Llation  16-core  23ms 47ms 67ms 167ms 289ms 875ms	1.7 2.7 4.5 5.9 7.3
Cost of 1 PCG Iteration  Simulation and Resolution  Smoke flow past sphere 64x64x64 96x96x96 128x128x128 192x192x192 256x256x256 384x384x384	39ms 127ms 299ms 983ms 2s 110ms 7s 380ms	6s 90ms  Llation  16-core  23ms 47ms 67ms 167ms 289ms 875ms 1s 930ms	1.7 2.7 4.5 5.9 7.3 8.4
Cost of 1 PCG Iteration  Simulation and Resolution  Smoke flow past sphere 64x64x64 96x96x96 128x128x128 192x192x192 256x256x256 384x384x384 512x512x512	39ms 127ms 299ms 983ms 2s 110ms 7s 380ms 15s 500ms	6s 90ms  Ilation  16-core  23ms 47ms 67ms 167ms 289ms 875ms 1s 930ms 6s 90ms	1.7 2.7 4.5 5.9 7.3 8.4 8.0
Cost of 1 PCG Iteration  Simulation and Resolution  Smoke flow past sphere 64x64x64 96x96x96 128x128x128 192x192x192 256x256x256 384x384x384 512x512x512 768x768x768	39ms 127ms 299ms 983ms 2s 110ms 7s 380ms 15s 500ms 51s 300ms	6s 90ms  Ilation  16-core  23ms 47ms 67ms 167ms 289ms 875ms 1s 930ms 6s 90ms	1.7 2.7 4.5 5.9 7.3 8.4 8.0 8.4
Cost of 1 PCG Iteration  Simulation and Resolution  Smoke flow past sphere 64x64x64 96x96x96 128x128x128 192x192x192 256x256x256 384x384x384 512x512x512 768x768x768 768x768x1152	39ms 127ms 299ms 983ms 2s 110ms 7s 380ms 15s 500ms 51s 300ms	6s 90ms  Ilation  16-core  23ms 47ms 67ms 167ms 289ms 875ms 1s 930ms 6s 90ms 9s 120ms	1.7 2.7 4.5 5.9 7.3 8.4 8.0 8.4
Cost of 1 PCG Iteratio  Simulation and Resolution  Smoke flow past sphere 64x64x64 96x96x96 128x128x128 192x192x192 256x256x256 384x384x384 512x512x512 768x768x768 768x768x1152  Smoke past car	39ms 127ms 299ms 983ms 2s 110ms 7s 380ms 15s 500ms 51s 300ms 76s 800ms	6s 90ms  Llation  16-core  23ms 47ms 67ms 167ms 289ms 875ms 1s 930ms 6s 90ms 9s 120ms	1.7 2.7 4.5 5.9 7.3 8.4 8.0 8.4 8.4