

```

main.cc 189         int runKernel = ThreadBlockLayout( grid, block, numParticles);
190
191         //Call Cycle Tracking Kernel
192         if( runKernel )
193             CycleTrackingKernel<<<grid, block >>>( monteCarlo, numParticles, processingVault, proce
194
195         //Synchronize the stream so that memory is copied back before we begin MPI section
196         cudaPeekAtLastError();

```

Top-down view Bottom-up view Flat view



Scope

		GINS:Sum (I) ▾		GINS:Sum (E)	
▼ Experiment Aggregate Metrics		2.16e+11	100.0%	2.16e+11	100.0%
▼ <program root>		2.16e+11	100.0%		
▼ main		2.16e+11	100.0%		
▼ loop at main.cc: 55		2.16e+11	100.0%		
▼ 58: cycleTracking(MonteCarlo*)		2.16e+11	100.0%		
▼ loop at main.cc: 159		2.16e+11	100.0%		
▼ loop at main.cc: 159		2.16e+11	100.0%		
▼ loop at main.cc: 163		2.16e+11	100.0%		
▼ 193: [I] CycleTrackingKernel(MonteCarlo*, int, ParticleVault*, ParticleVault*)		2.16e+11	100.0%		
▼ 127: __device_stub__Z19CycleTrackingKernelP10MonteCarloiP13ParticleVaultS2_(MonteCarlo*, in		2.16e+11	100.0%		
▼ 14: [I] cudaLaunchKernel<char>		2.16e+11	100.0%		
▼ 210: cudaLaunchKernel [qs]		2.16e+11	100.0%		
▼ <gpu kernel>		2.16e+11	100.0%		
▶ MCT_Nearest_Facet(MC_Particle*, MC_Location&, MC_Vector&, DirectionCosine cons		4.92e+10	22.8%	4.92e+10	22.8%
▶ NuclearData::getReactionCrossSection(unsigned int, unsigned int, unsigned int)		4.42e+10	20.5%	4.42e+10	20.5%
▶ MC_Load_Particle(MonteCarlo*, MC_Particle&, ParticleVault*, int)		3.24e+10	15.0%	3.24e+10	15.0%
▶ macroscopicCrossSection(MonteCarlo*, int, int, int, int, int)		2.79e+10	12.9%	2.79e+10	12.9%
▶ CollisionEvent(MonteCarlo*, MC_Particle&, unsigned int)		2.21e+10	10.3%	2.21e+10	10.3%
▶ CycleTrackingGuts(MonteCarlo*, int, ParticleVault*, ParticleVault*)		1.11e+10	5.1%	1.11e+10	5.1%
▶ MC_Segment_Outcome(MonteCarlo*, MC_Particle&, unsigned int&)		9.10e+09	4.2%	9.10e+09	4.2%
▶ ParticleVaultContainer::addExtraParticle(MC_Particle&)		7.63e+09	3.5%	7.63e+09	3.5%
▶ NuclearData::getTotalCrossSection(unsigned int, unsigned int)		2.39e+09	1.1%	2.39e+09	1.1%
▶ weightedMacroscopicCrossSection(MonteCarlo*, int, int, int, int)		2.33e+09	1.1%	2.33e+09	1.1%
▶ NuclearData::getNumberReactions(unsigned int)		2.32e+09	1.1%	2.32e+09	1.1%
▶ NuclearData::getEnergyGroup(double)		2.10e+09	1.0%	2.10e+09	1.0%
▶ NuclearDataReaction::sampleCollision(double, double, double*, double*, int&, unsign		1.26e+09	0.6%	1.26e+09	0.6%
▶ MC_Facet_Crossing_Event(MC_Particle&, MonteCarlo*, int, ParticleVault*)		1.02e+09	0.5%	1.02e+09	0.5%
▶ MCT_Adjacent_Facet(MC_Location const&, MC_Particle&, MonteCarlo*)		2.11e+08	0.1%	2.11e+08	0.1%
▶ rngSpawn_Random_Number_Seed(unsigned long*)		1.33e+08	0.1%	1.33e+08	0.1%
▶ MCT_Reflect_Particle(MonteCarlo*, MC_Particle&)		1.20e+08	0.1%	1.20e+08	0.1%
▶ CycleTrackingKernel(MonteCarlo*, int, ParticleVault*, ParticleVault*)		7.31e+07	0.0%	7.31e+07	0.0%
▶ getGlobalThreadID()		1.67e+07	0.0%	1.67e+07	0.0%