

# CS 441 A2

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	Asteroids Only	Asteroids + Image	Full Code
Sequential	24990.2 ns	25610 ns	27300 ns
OpenMP	3930.41 ns	4575.33 ns	5228.27 ns
CUDA	43.9468 ns	259.402 ns	300.264 ns

In OpenMP I optimized by making a array of closest approaches that way the code did not need to access the same data item from each of its open mp threads. This resulted in the total time coming down from 8244ns to 5229ns (both using OpenMP).

Getting CUDA to run I simply put the run step into the gpu and got a speed-up of 3 orders of magnitude! excellent result!

closest approach: 1.34645e+06. Same for all.