

CS 575
Project #0: Simple OpenMP Experiment
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Code is run on flip server. Got results as:

```
[wuxum@flip2 ~/CS575/ArrayMult$] bash ./benchmark.sh
NUMT = 1
Using 1 threads
We have 24 processors
Peak Performance = 328.55 MegaMults/Sec

NUMT = 4
Using 4 threads
We have 24 processors
Peak Performance = 1168.19 MegaMults/Sec
```

threads\size	24576
1	328.55
4	1168.19

In this case:

The speedup $S = 3.5556$

The parallel fraction $F_p = 0.9583$

From the result, we can observe that the speedup is less than 4.0. I think one reason is that OpenMP sections decrease does not uniformly distribute tasks to each thread, which means each thread may have different execution time. Besides, each thread is executing some part of the same program, threads need time to access the same global data in memory as well as to exchange data. As a result, the speedup is less than 4.0.