1. For the partition strategy of the tasks I decided to use 2 for loops to iterate through the matrix and with that I combined them with a “#pragma omp for collapse” to handle the multi-threading.
2. The speed up was quite large when thread allocation was not higher than the core count, but oddly enough I did not see halfing of performance with higher core count. My only theory is I partitioned the resources incorrectly or the cache was managed poorly enough by the collapse that no increase in thread count was able to help. Will have to experiment on manually allocated threads.