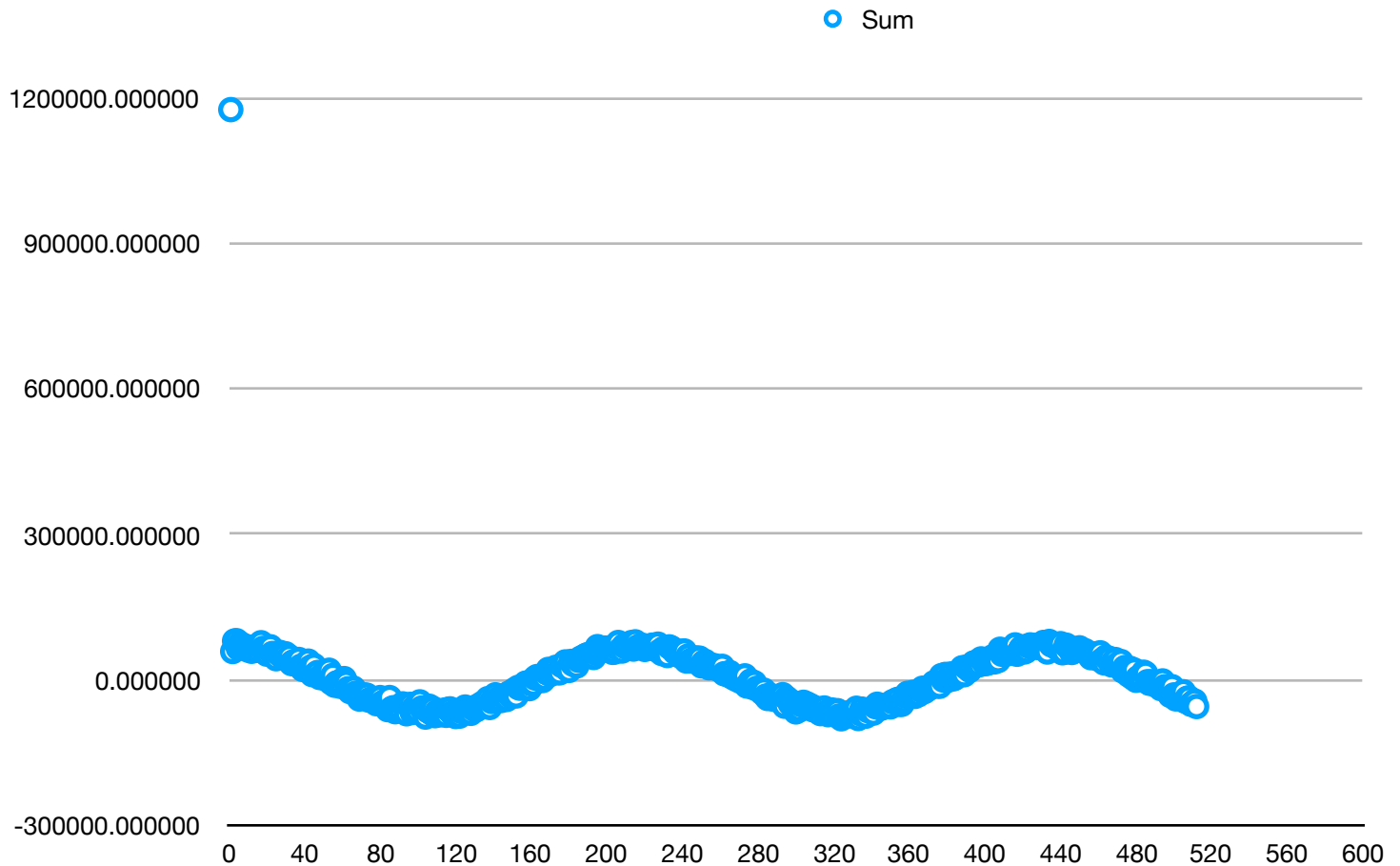


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June 10, 2019

Project 7B - Autocorrelation using CPU OpenMP, CPU SIMD, and GPU {OpenCL or CUDA}

1. I ran this on rabbit.
2. Scatter Plot (offset vs sum):



3. The period of the sine wave seems to be about 210.
4. Bar chart for reference is on page 2. It shows that OpenMP is faster than SIMD, but only if it has multiple threads. OpenCL blows everything else out of the water (over 12x the speed of the next fastest method).

5. I think this is because GPUs have so many processors, and this is a large brute-force calculation, which is what they are made for. OpenMP is faster than nothing, but it's still only doing 16 things at a time. SIMD is also working with smaller work groups. Because of the size and simplicity of this task, OpenCL is the best choice.

