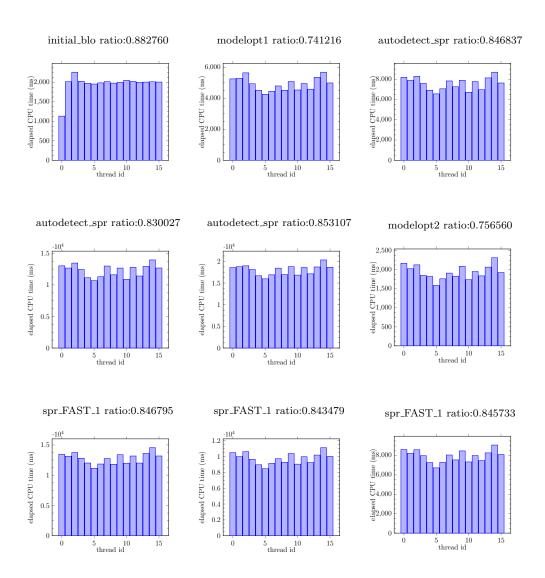
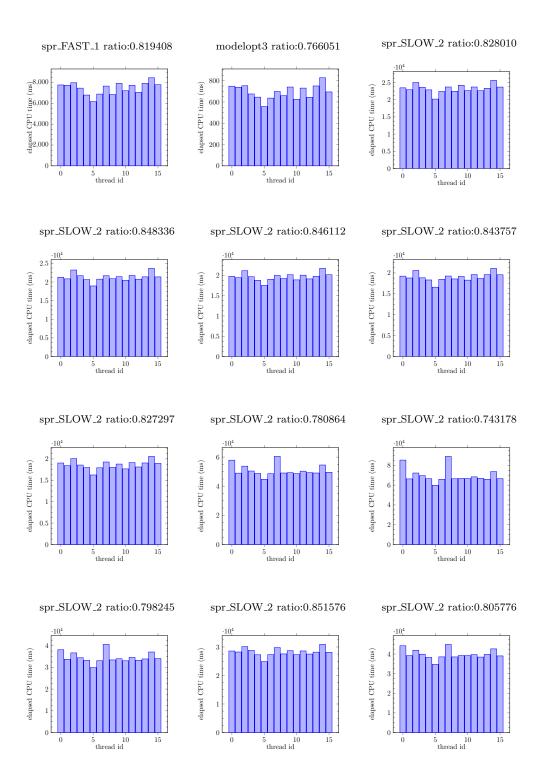
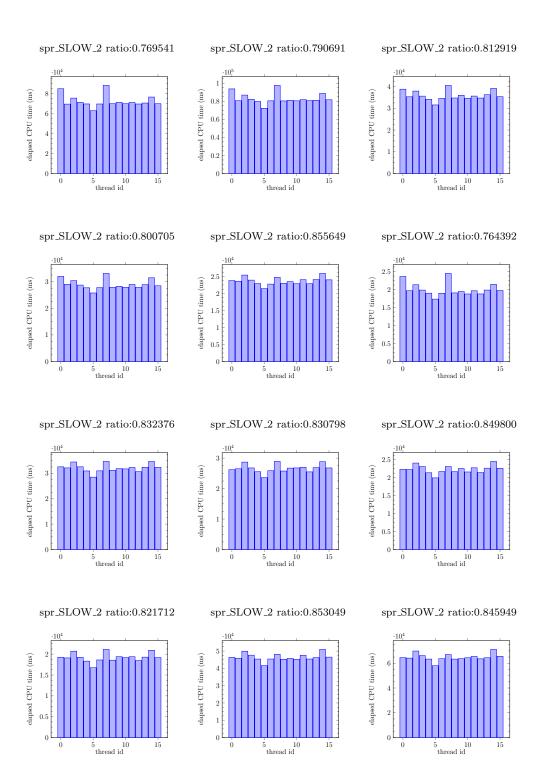
## 1 Description

- Each graph corresponds to one step of the pipeline (one model paramater opt, one spr round etc.).
- Each graph represents the cpu time (y axis) spent in each thread (x axis) for its step.
- The ratio value after the name of the step is the average time spent in real computations (not waiting for the other cores) over all the threads.

## 2 DNA 404, 16 threads, repeats

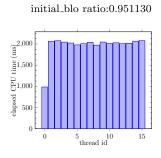


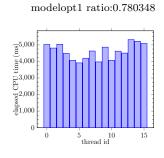


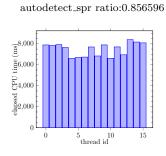


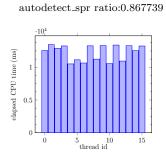
modelopt4 ratio:0.767658  $\underbrace{\widehat{\text{gil}}_{1,500}}_{0} \underbrace{\widehat{\text{pg}}_{1,500}}_{0} \underbrace{\widehat{\text{local distance of the position}}_{15}}_{10}$ 

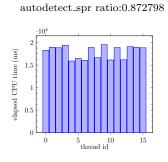
## 3 square

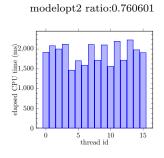


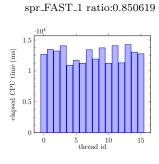


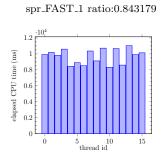


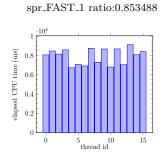


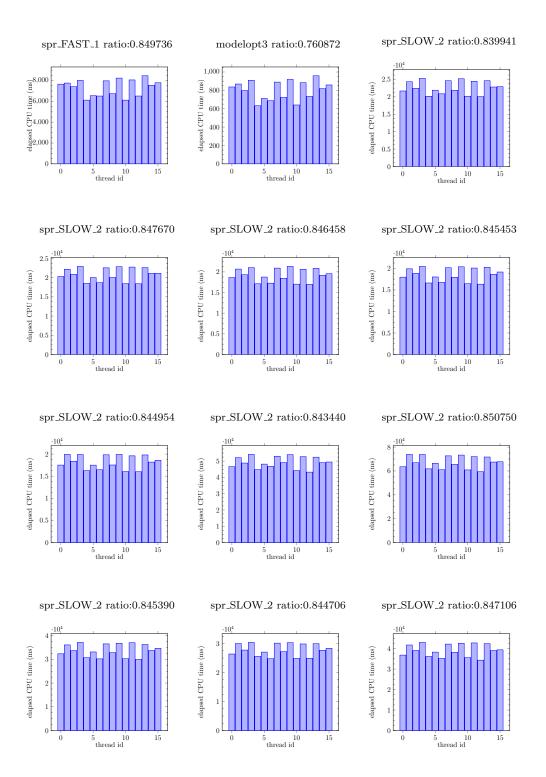


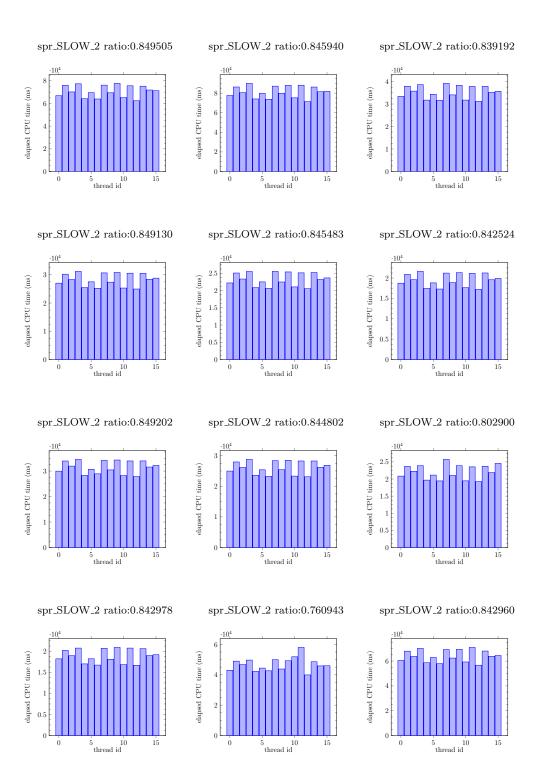






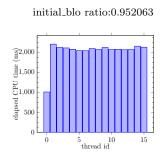


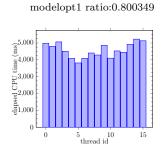


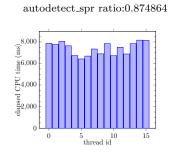


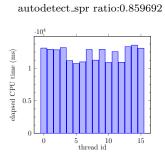
modelopt4 ratio:0.678218  $\frac{\frac{2}{2}}{\frac{2}{3}}\frac{1,500}{\frac{2}{3}}$ 

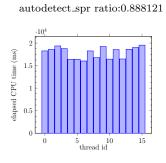
## 4 constants

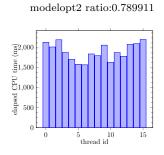


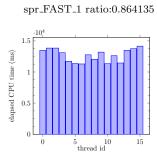


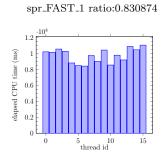


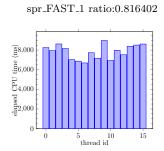


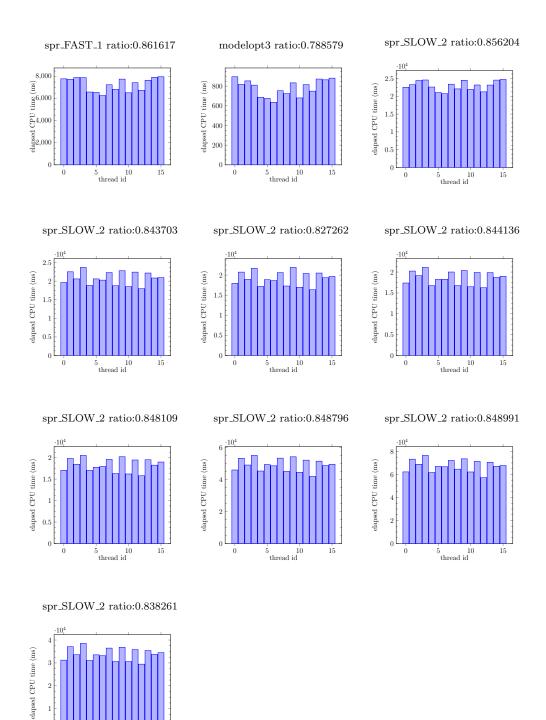












5 10 thread id

0