

Time-based Setup

Time-based:

REC0_STEPS="Unpack DigiTrigger LocalReco Tracking"

run_cbmreco_1.sh for CPU

run_cbmreco_1_gpu.sh for GPU

Timings from “--timings-file” option

2x 16-Core Xeon Gold 6130

AMD MI100 32 GB

vt26test.00001.tsa

No thread pinning

CPU test date: 19/06/2026

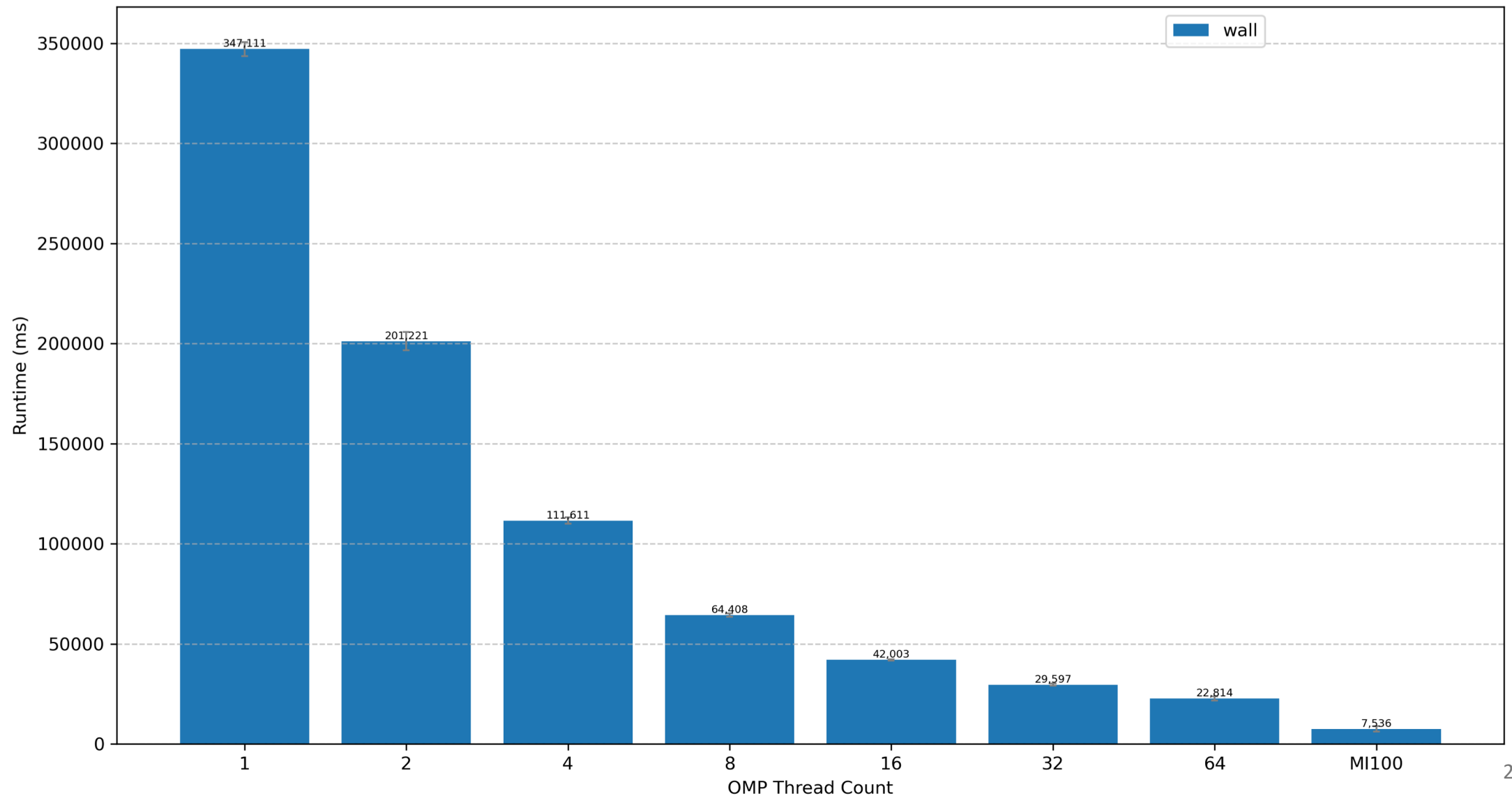
GPU test date: 03/07/2026

Average over 10 consecutive runs

Time-based CA Tracking

Online Time-based - CA - Time

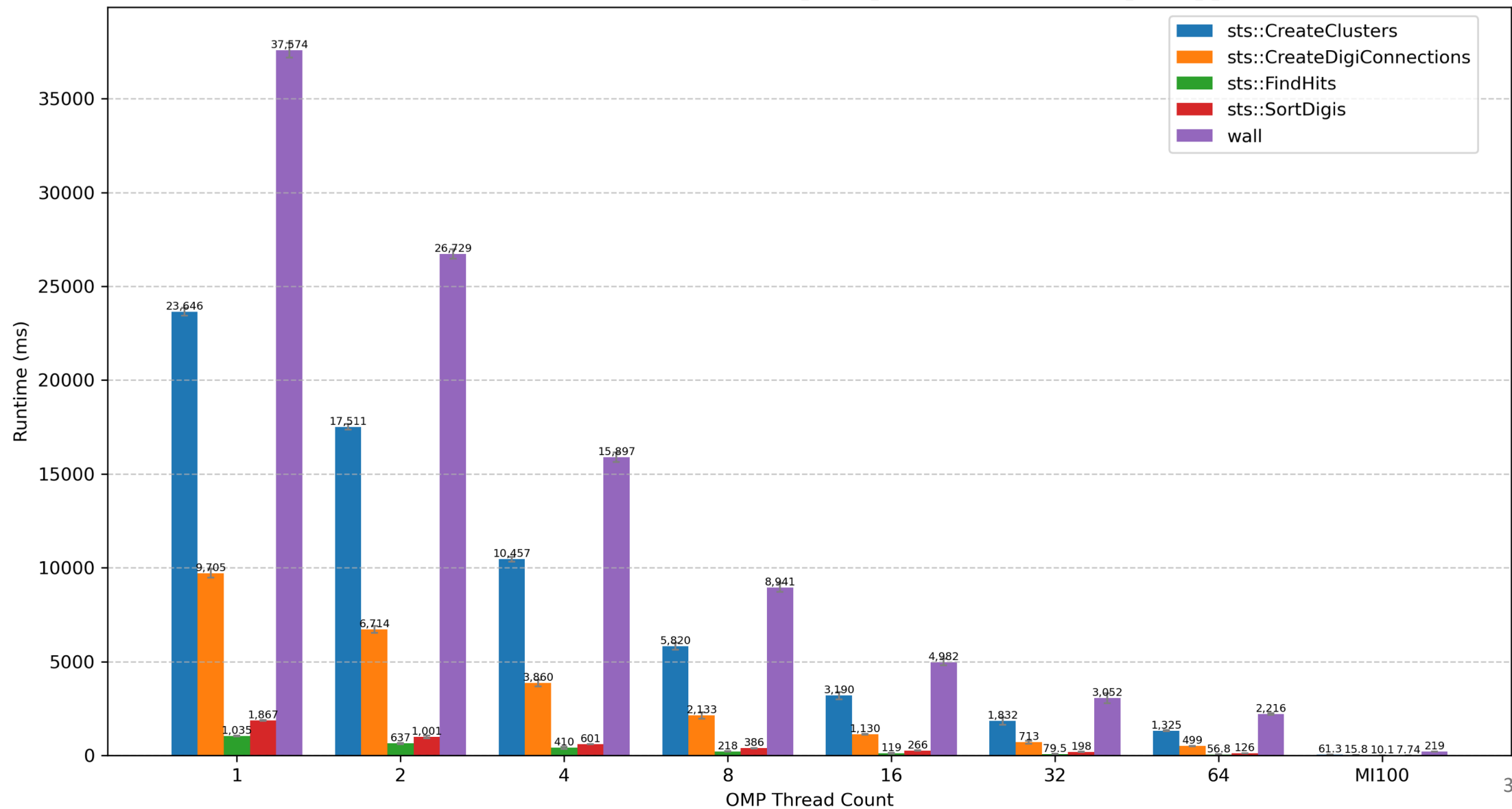
Average over 10 runs, vt26test.00001.tsa, 2x 16-Core Xeon Gold 6130, run_cbmreco_1.sh, 19/06/2026; AMD MI100, run_cbmreco_1_gpu.sh, 03/07/2026



Time-based STS Reco

Online Time-based - STS Reco - Time

Average over 10 runs, vt26test.00001.tsa, 2x 16-Core Xeon Gold 6130, run_cbmreco_1.sh, 19/06/2026; AMD MI100, run_cbmreco_1_gpu.sh, 03/07/2026



Details and cross-checks

GPU Tracking:

- Runtimes have been seen 1–2 s shorter by Grigory, but fit generally fit in the expected range
- CPU overhead currently accounts for over 90% of the runtime
- ~50% of runtime spent splitting Timeslice into Time Windows (multithreaded on CPU, per default 40 threads)

Event-based Setup

Event-based:

```
REC0_STEPS="Unpack DigiTrigger EventReco"
```

```
run_cbmreco_1.sh
```

Timings from console summary

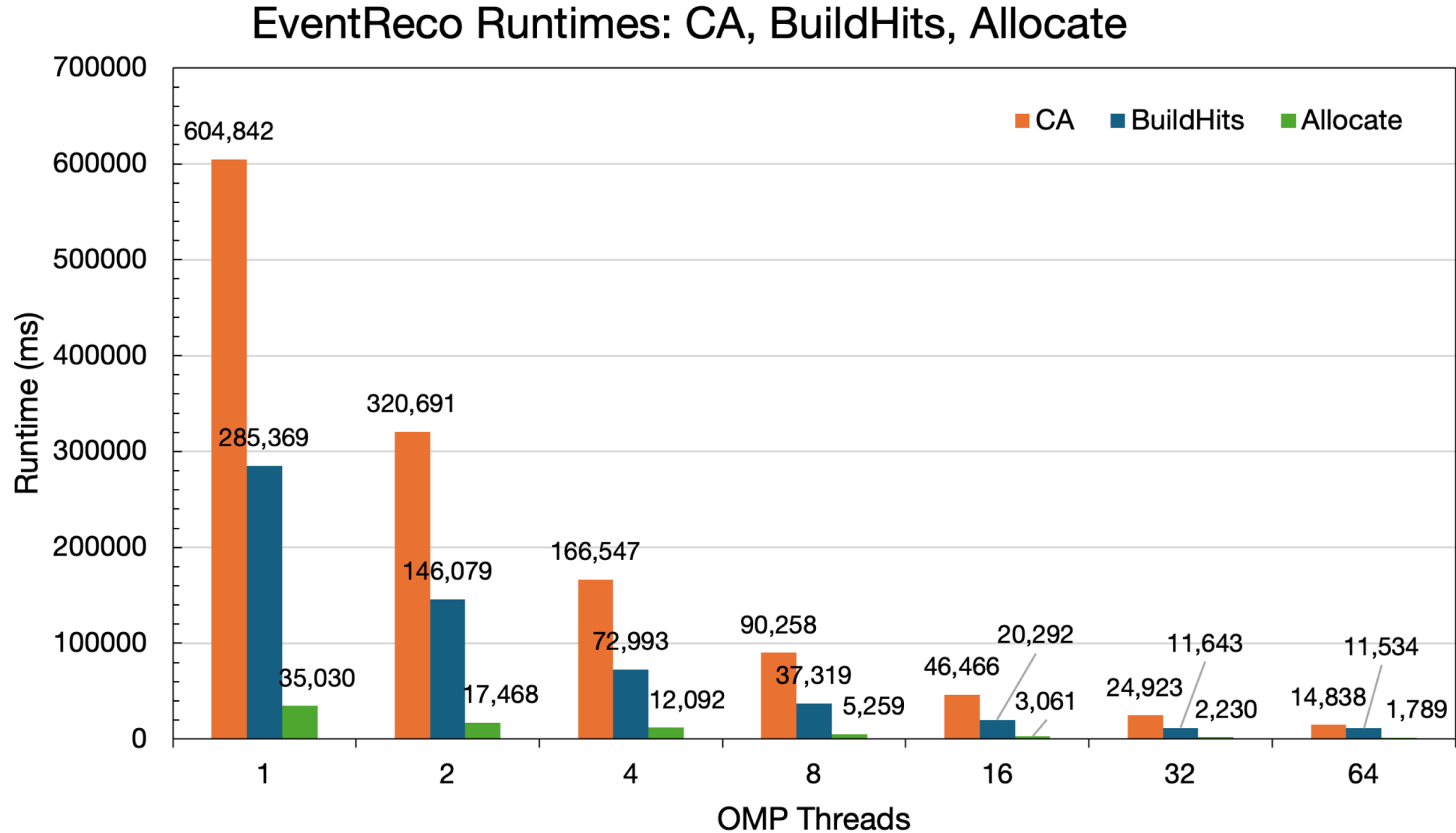
2x 16-Core Xeon Gold 6130

vt26test.00001.tsa (4550 Events)

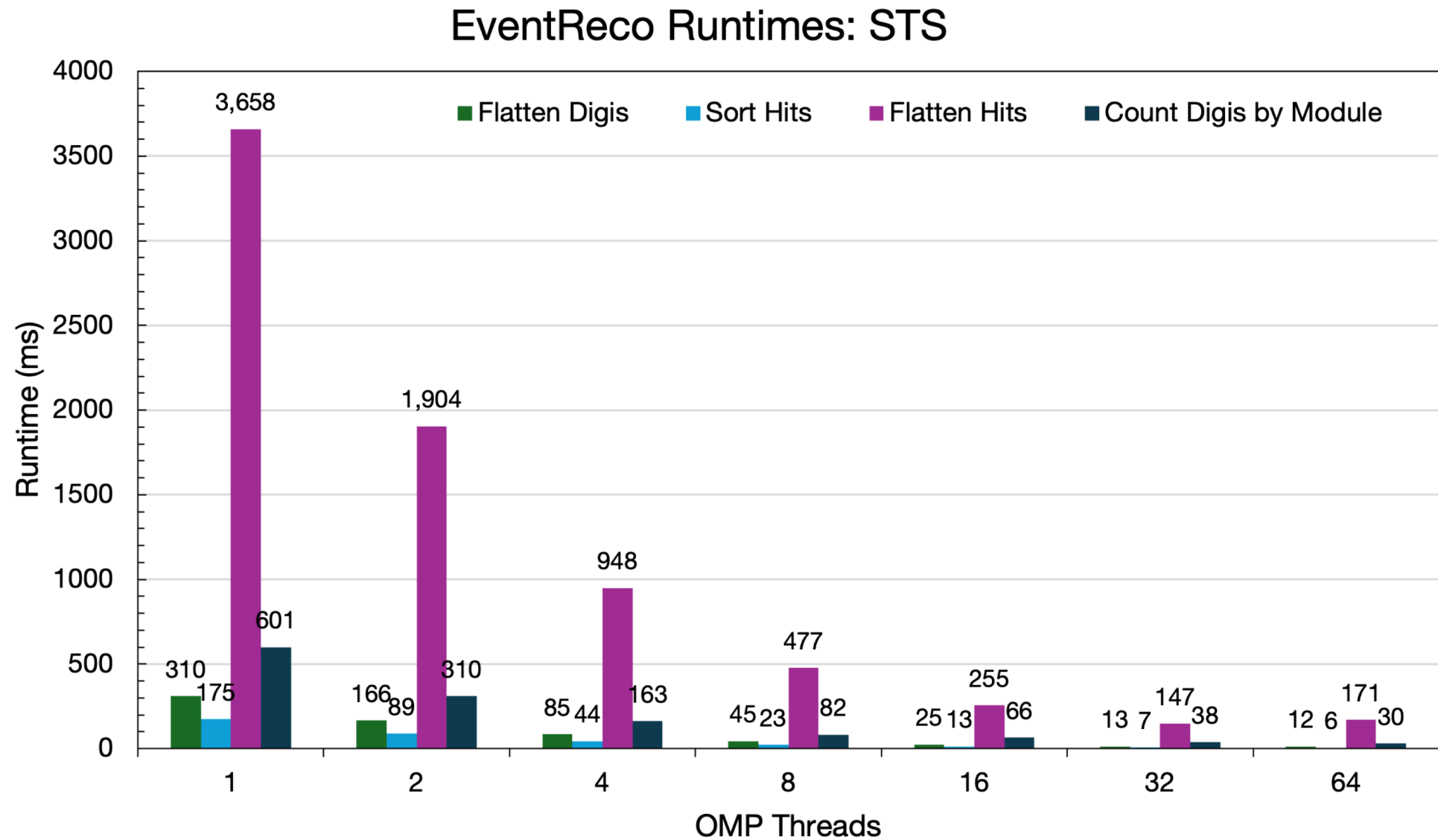
No thread pinning

1 Run

Event-based



Event-based



Questions and next steps

Runtime Measurements on VIRGO nodes (CPU + GPU)

VIRGO account is acquired, but additional configuration is needed:

- Lustre storage space: 100 GB should be reasonable
- Probably GPU access addition in Slurm account association