US DOE HPC Usage Summary

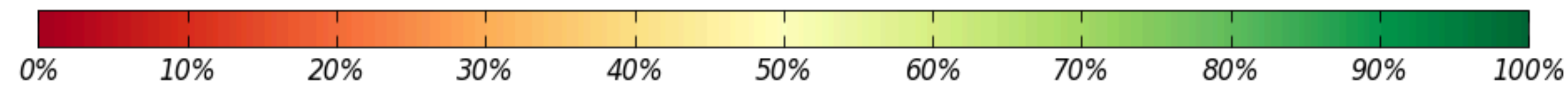ALCF_Theta converted to Globus Online

ALCF_Theta understanding GO and debugging

ALCF_Theta offline

NERSC_Cori_p2_mcore ran out of allocation

NERSC_Edison offline

ORNL_Titan chugging along.

Efficiency based on success/all accomplished jobs
30 Days from 2017-08-27 to 2017-09-27
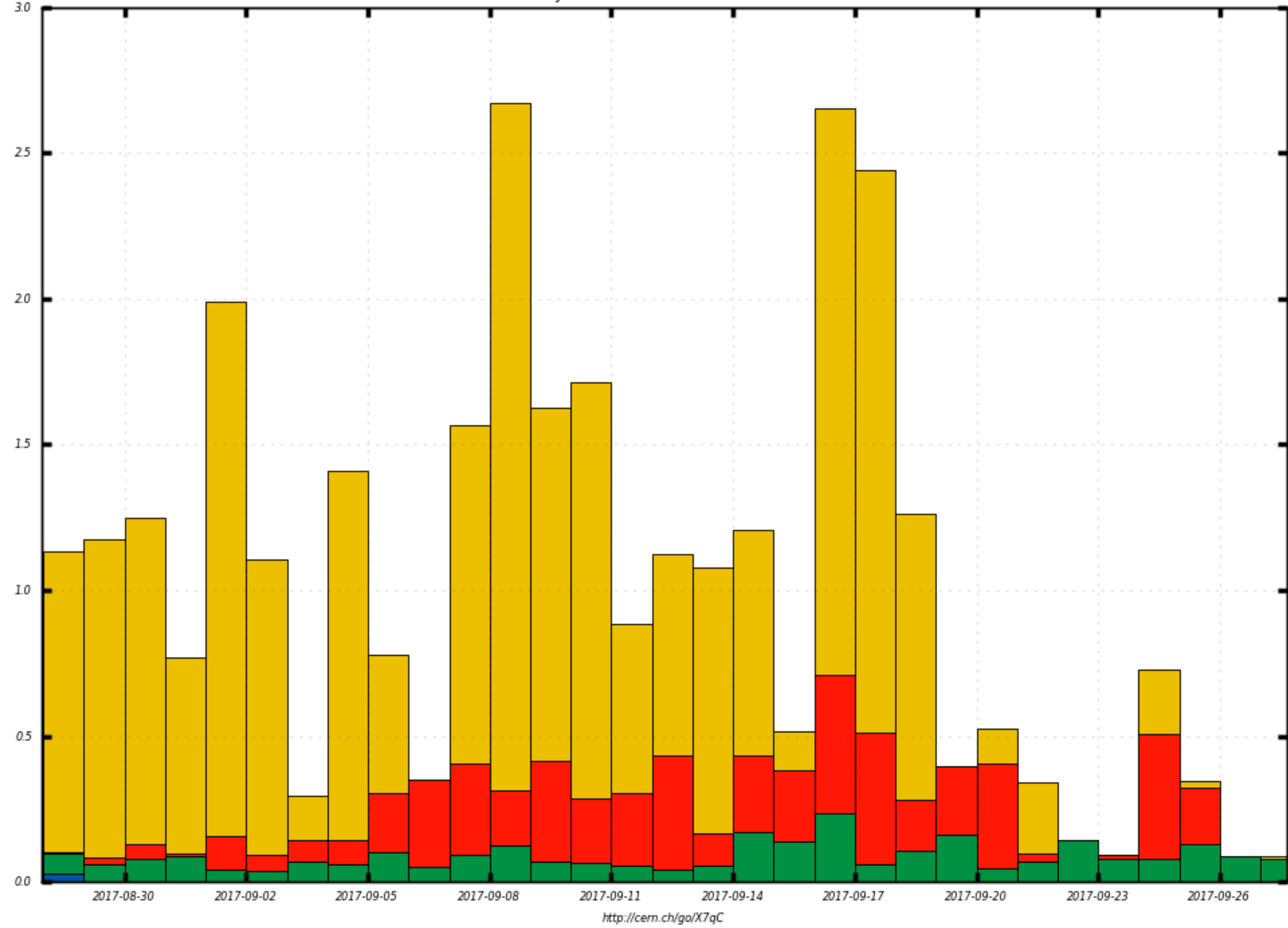
ALCF_Theta
NERSC_Cori_p2_mcore
NERSC_Edison_mcore
ORNL_Titan_MCORE

2017-08-30   2017-09-02   2017-09-05   2017-09-08   2017-09-11   2017-09-14   2017-09-17   2017-09-20   2017-09-23   2017-09-26

http://cern.ch/go/z9Xk

0%   10%   20%   30%   40%   50%   60%   70%   80%   90%   100%

US DOE HPC Usage Summary

Wall Clock consumption Good Jobs in seconds
30 Days from 2017-08-27 to 2017-09-27

NEvents Processed in MEvents (Million Events)
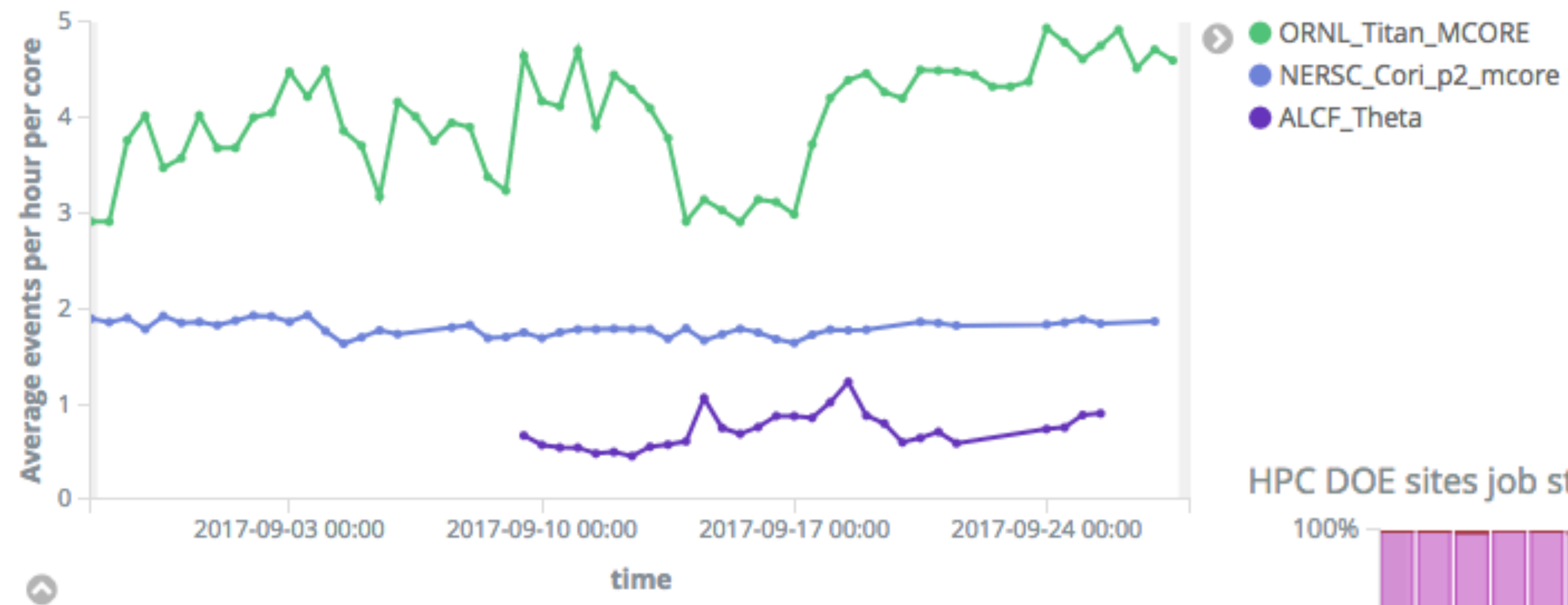30 Days from 2017-08-27 to 2017-09-27
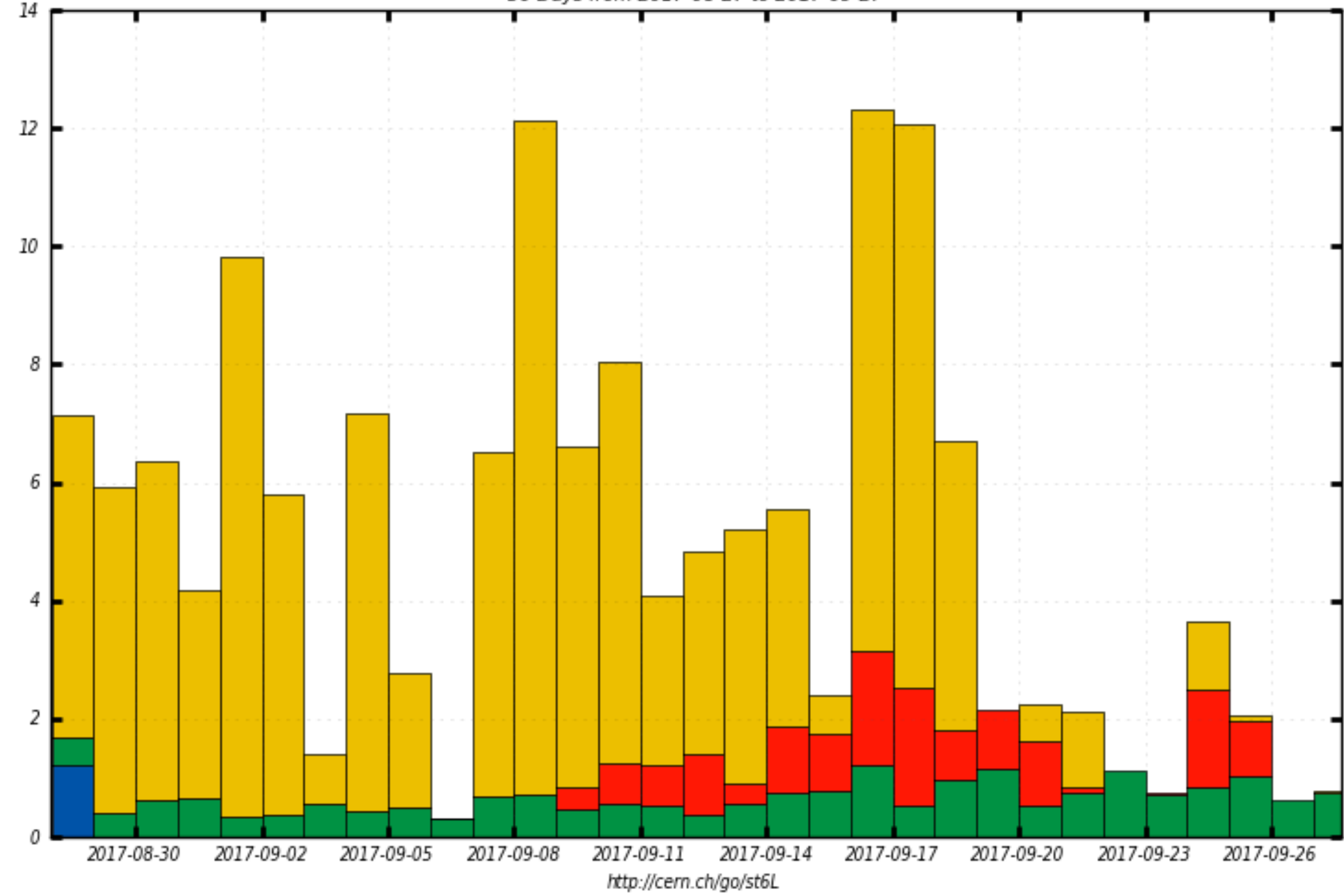
Legend:
- NERSC_Cori_p2_mcore
- NERSC_Edison_mcore
- ORNL_Titan_MCORE
- ALCF_Theta

US DOE HPC Usage Summary

HPC DOE sites events per hour per core

- ORNL_Titan_MCORE
- NERSC_Cori_p2_mcore
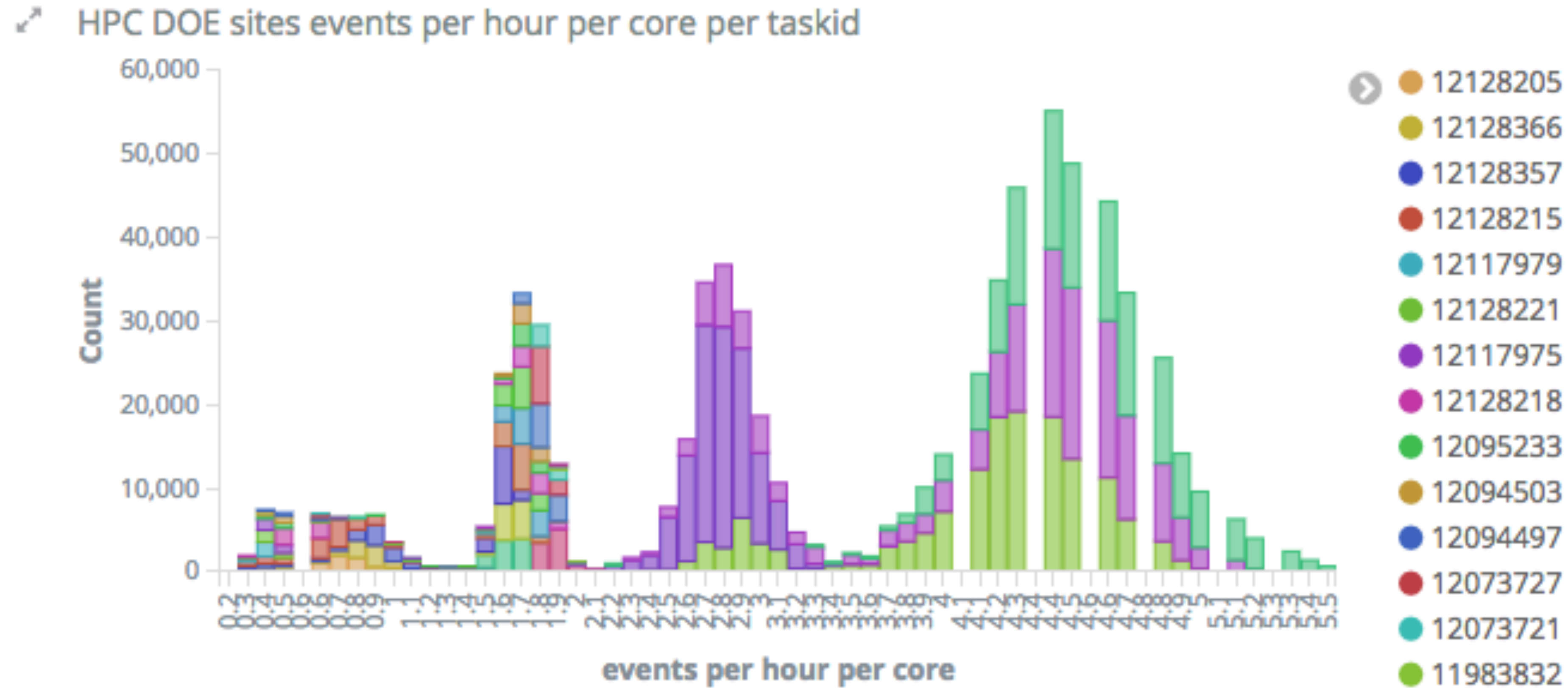- ALCF_Theta

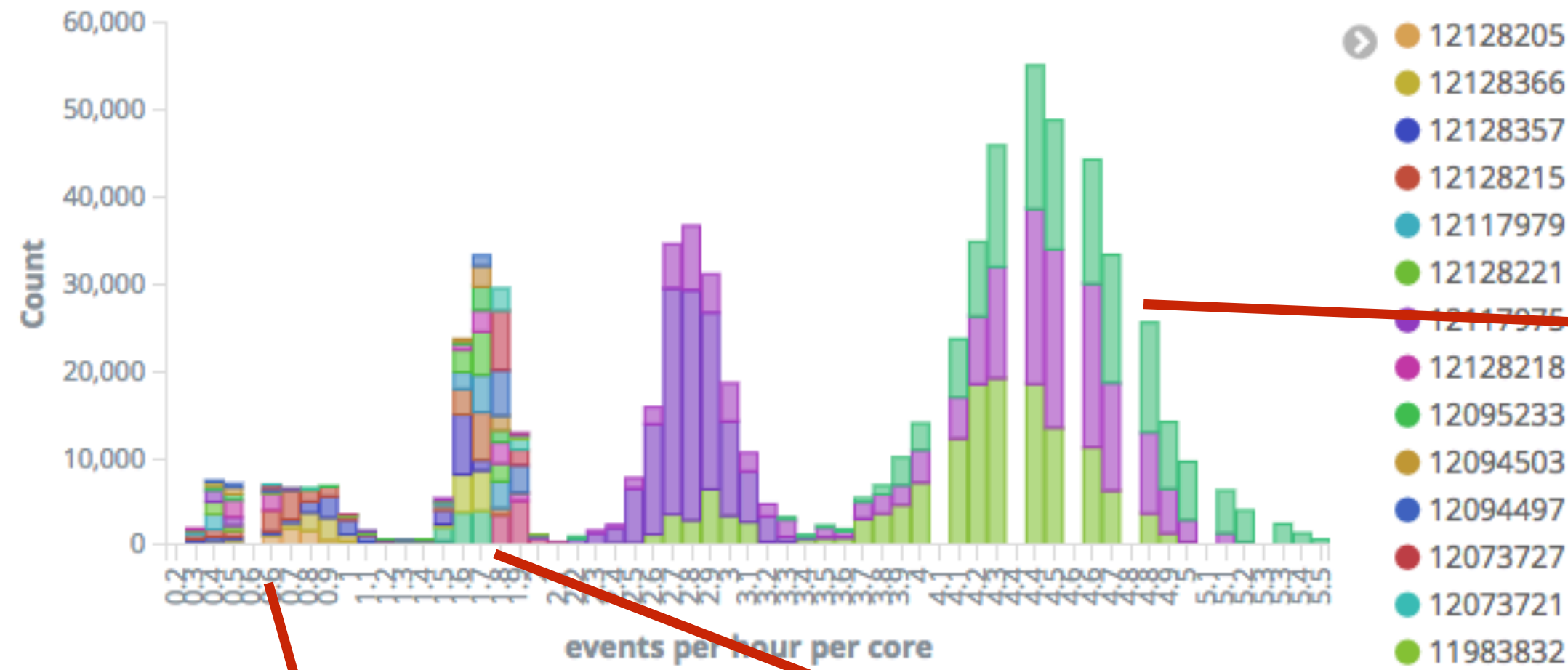Playing with Kibana

HPC DOE sites job status percentage

- finished
- failed
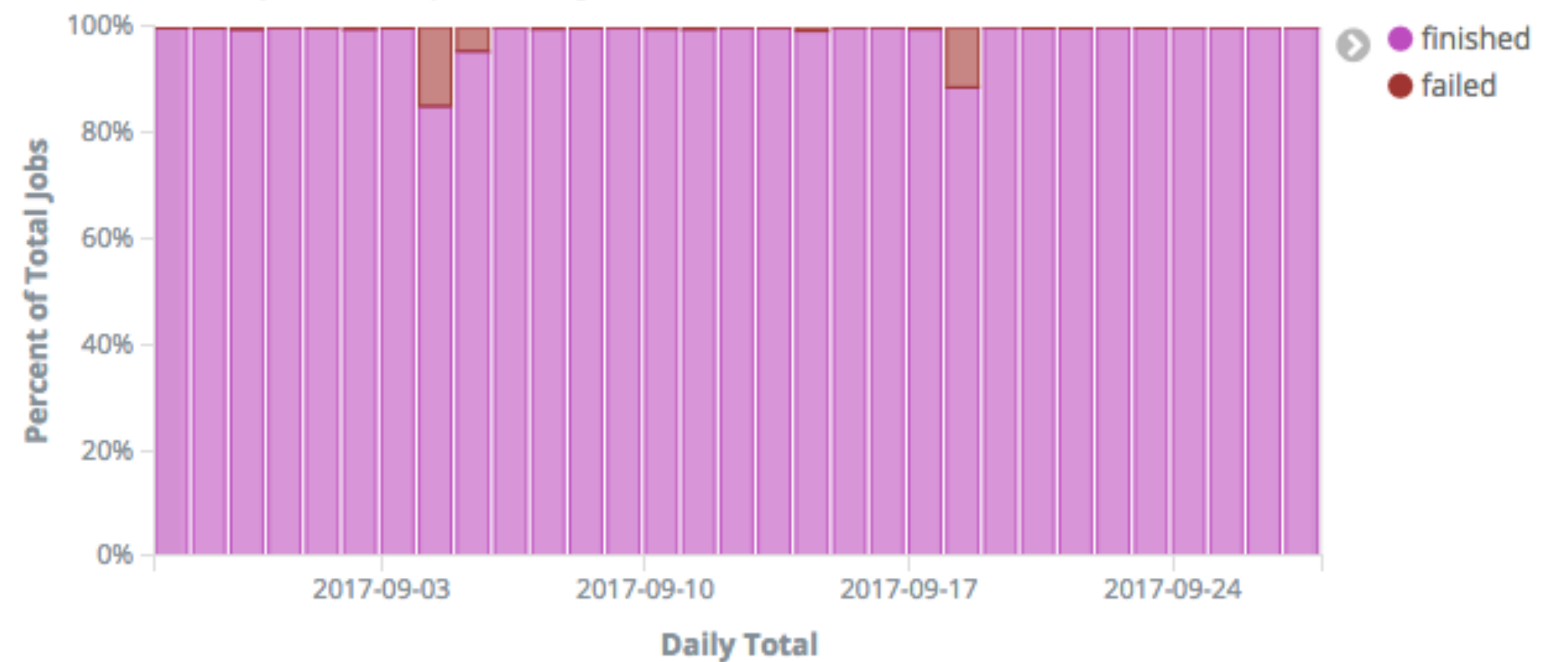
US DOE HPC Usage Summary

HPC DOE sites events per hour per core per taskid

US DOE HPC Usage Summary
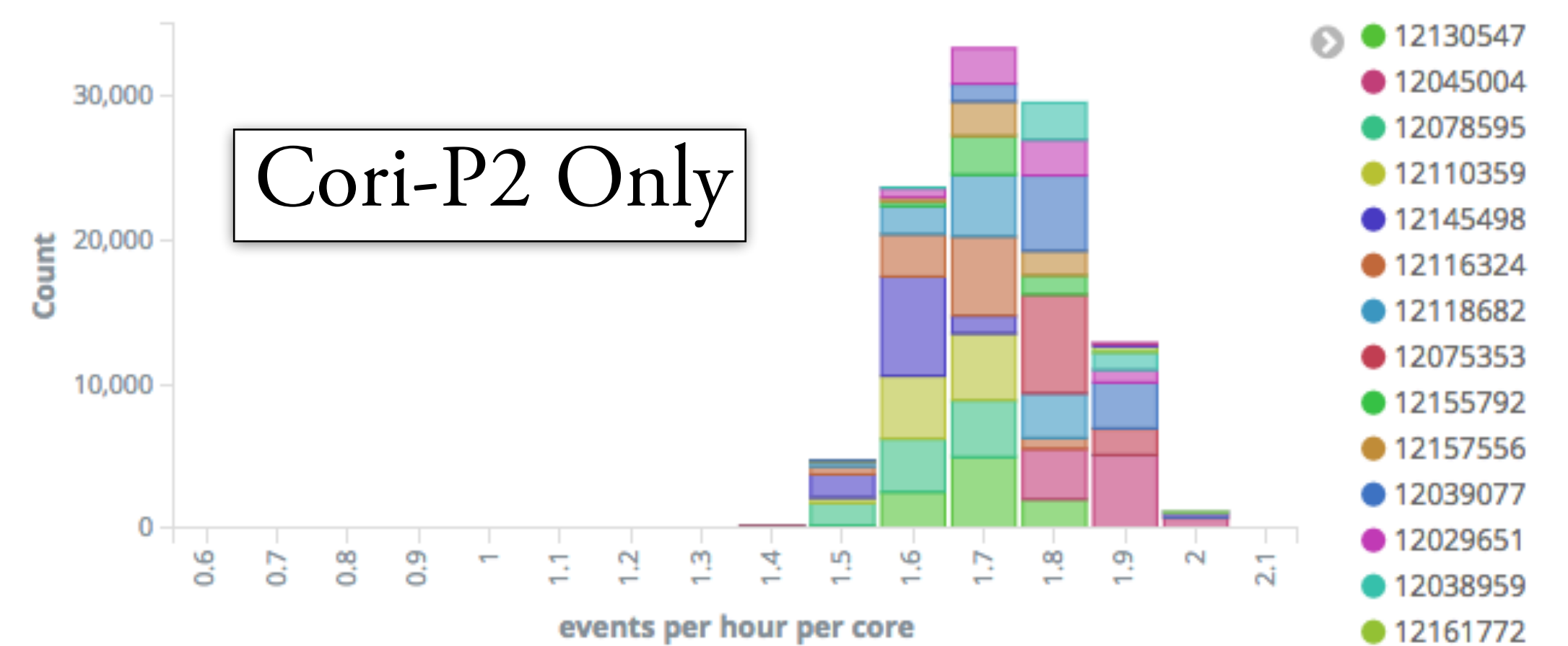
OLCF Highlights

‣ Titan processed 27M events in September
‣ Running in backfill
‣ Running tests with validation task and allocation setup
‣ Eventually move to Harvester with two queues, one for backfill, one for allocation.
‣ After FS issues, increasing their batch job sizes again, which can be seen below.
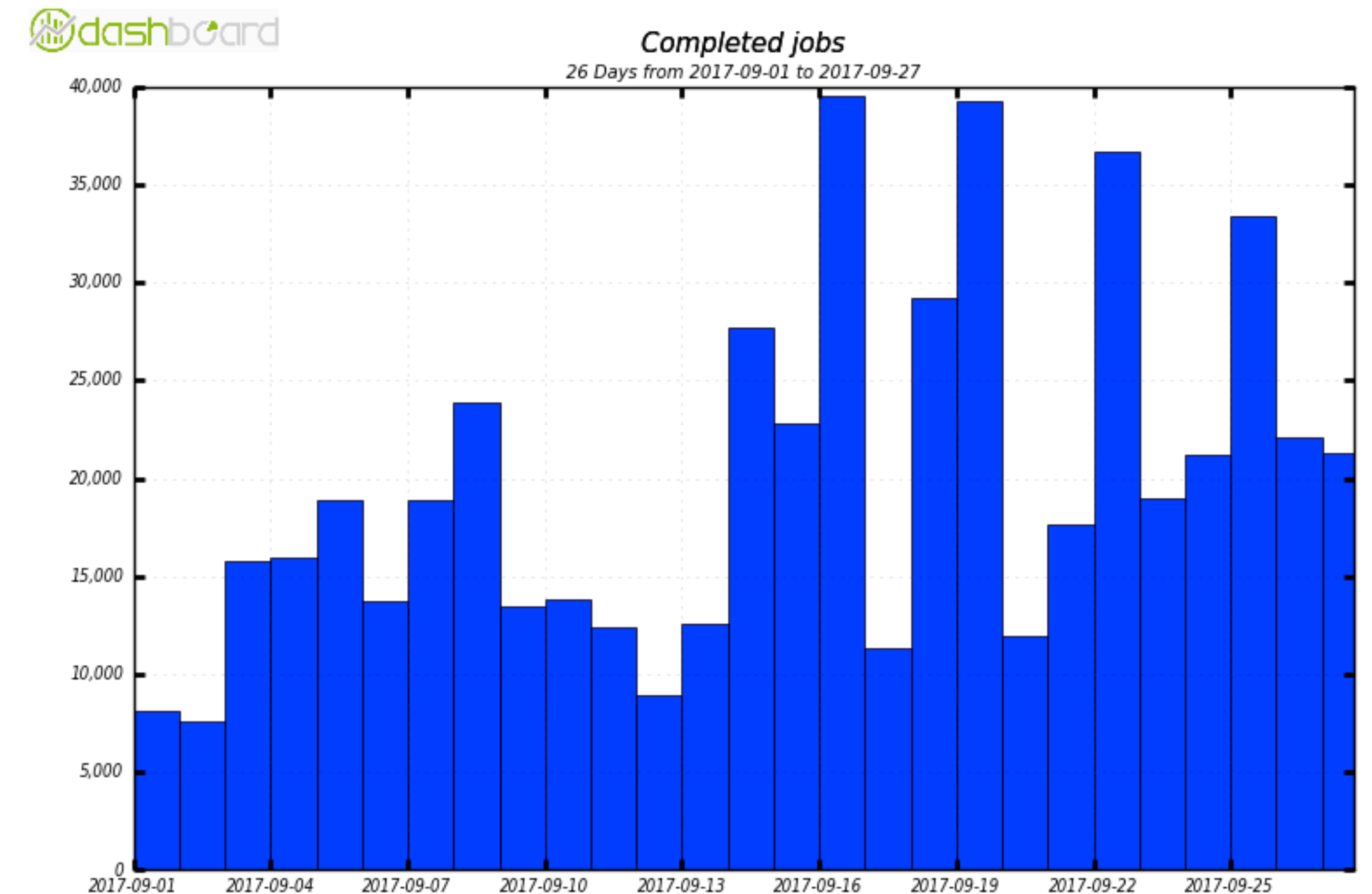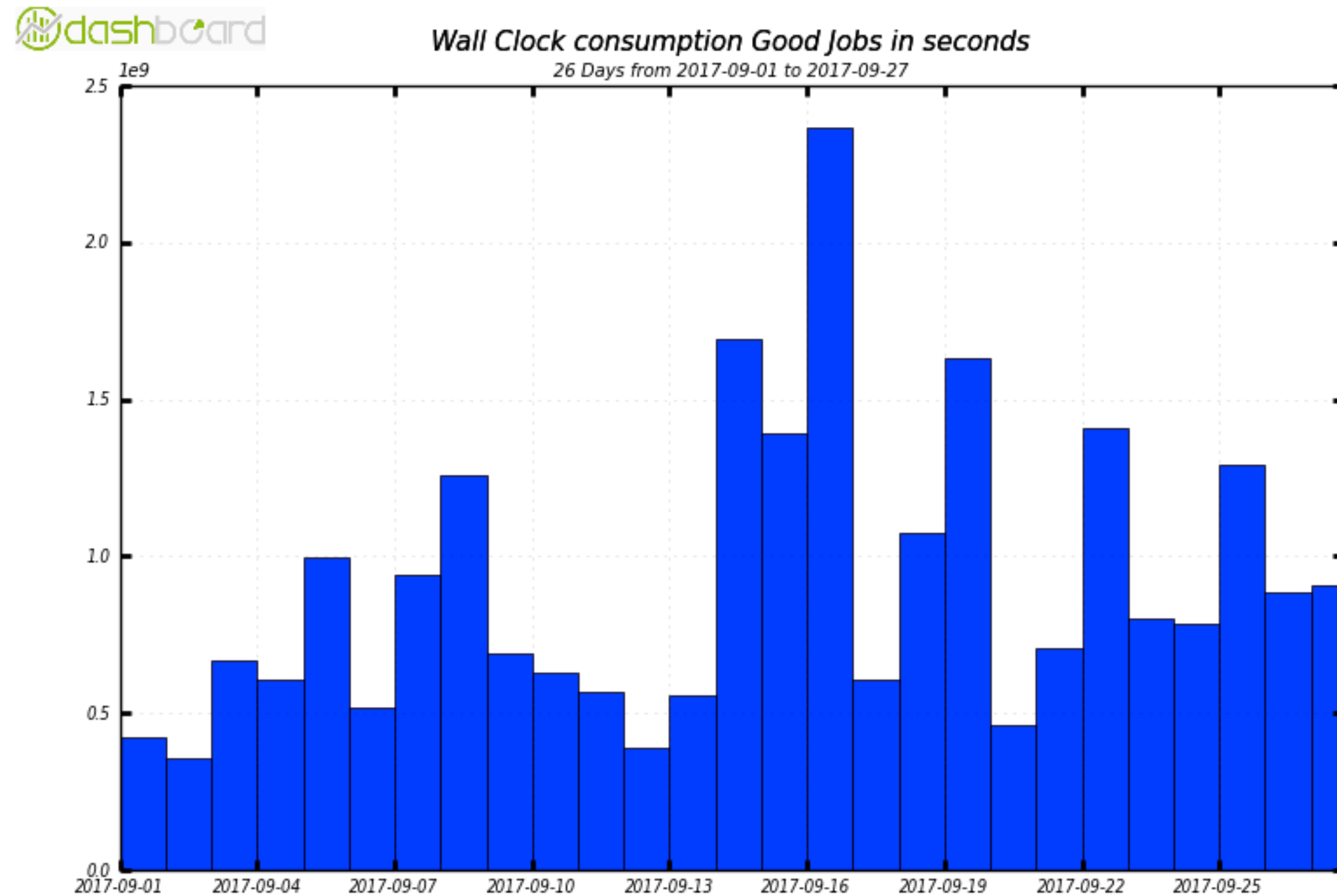
NERSC Highlights

- September NERSC processed 96M events
- ERCAP (from my.nersc):
  - Allocated 76.5M core-hours since March
  - Used 94.6M core-hours since March
- ALCC (from my.nersc):
  - Allocated 70.5M core-hours since January
  - Used 68.2M core-hours since January
- Totals (from nim.nersc):
  - Used 158M core-hours since January
  - Charged for 133M core-hours since January
  - That's 25M core-hours in backfill time.
- Ran out of allocation over last week.
- This reduces us to about 1M core-hours per day.
- There also seems to be a bug in SLURM such that when we run out, our queued jobs do not get changed to 'scavenger' and they never execute, requiring by hand intervention.
- Received 10M more core-hours this week.
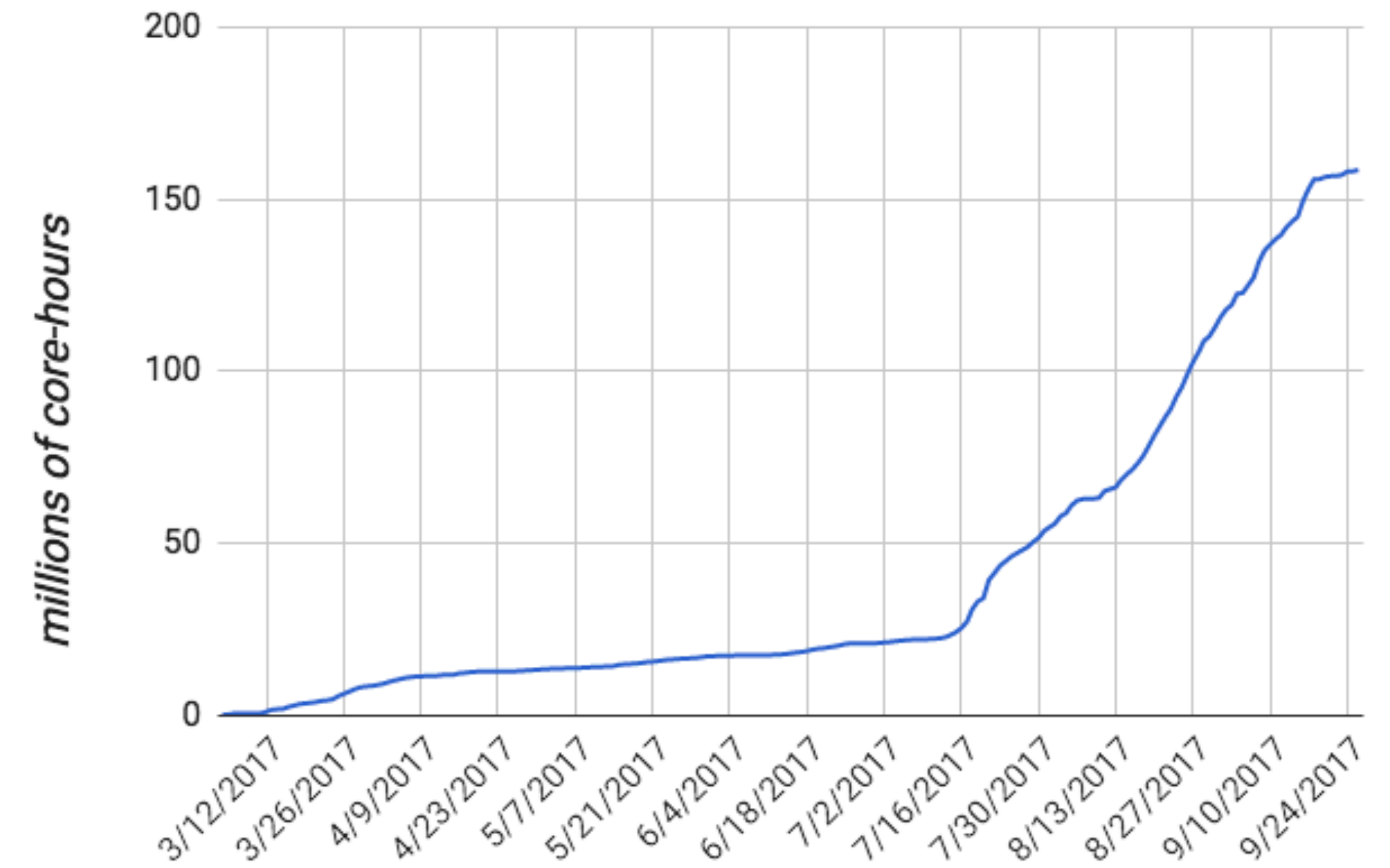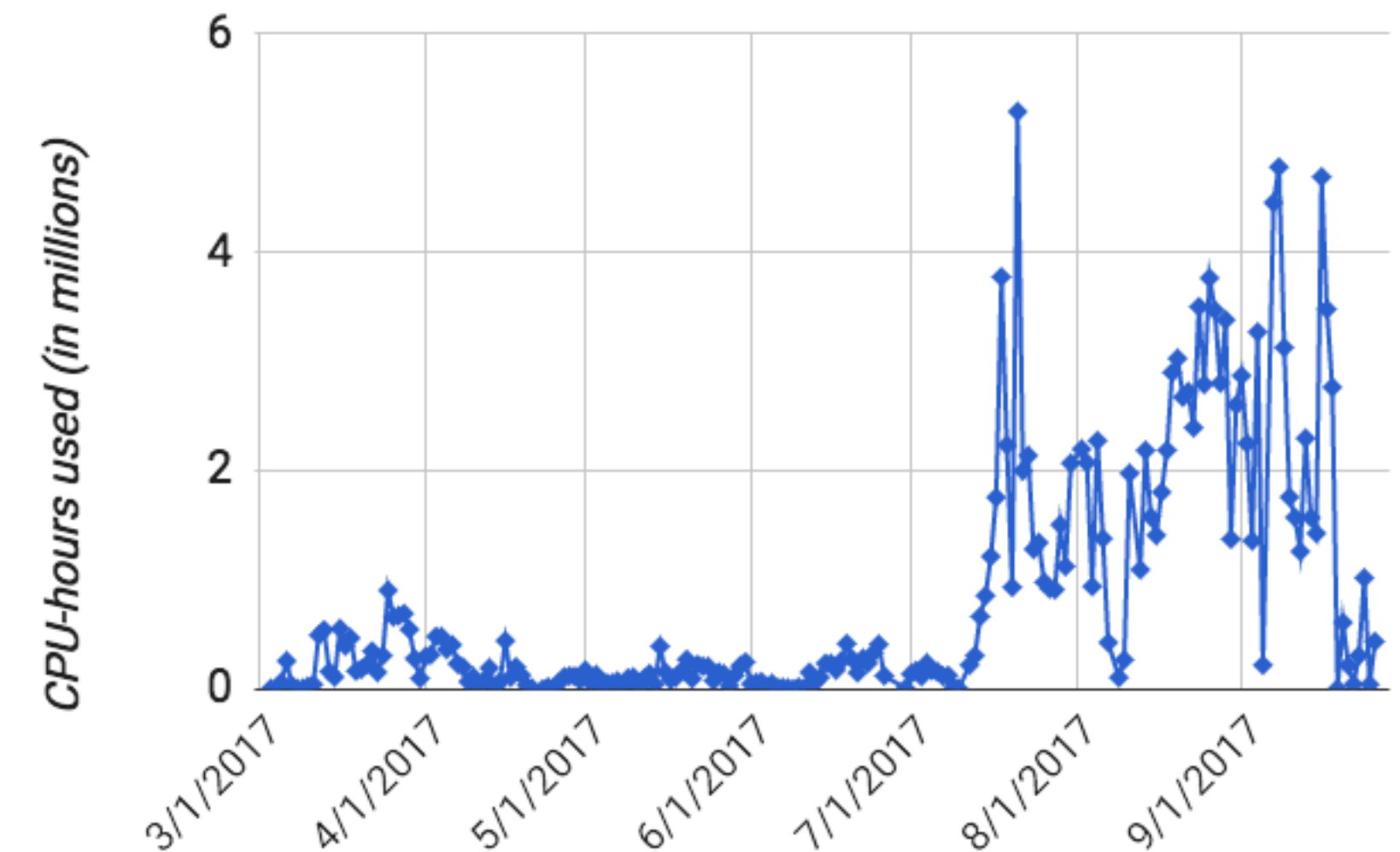
ALCF Highlights

‣ Running in ManyToOne mode with mini-pilot
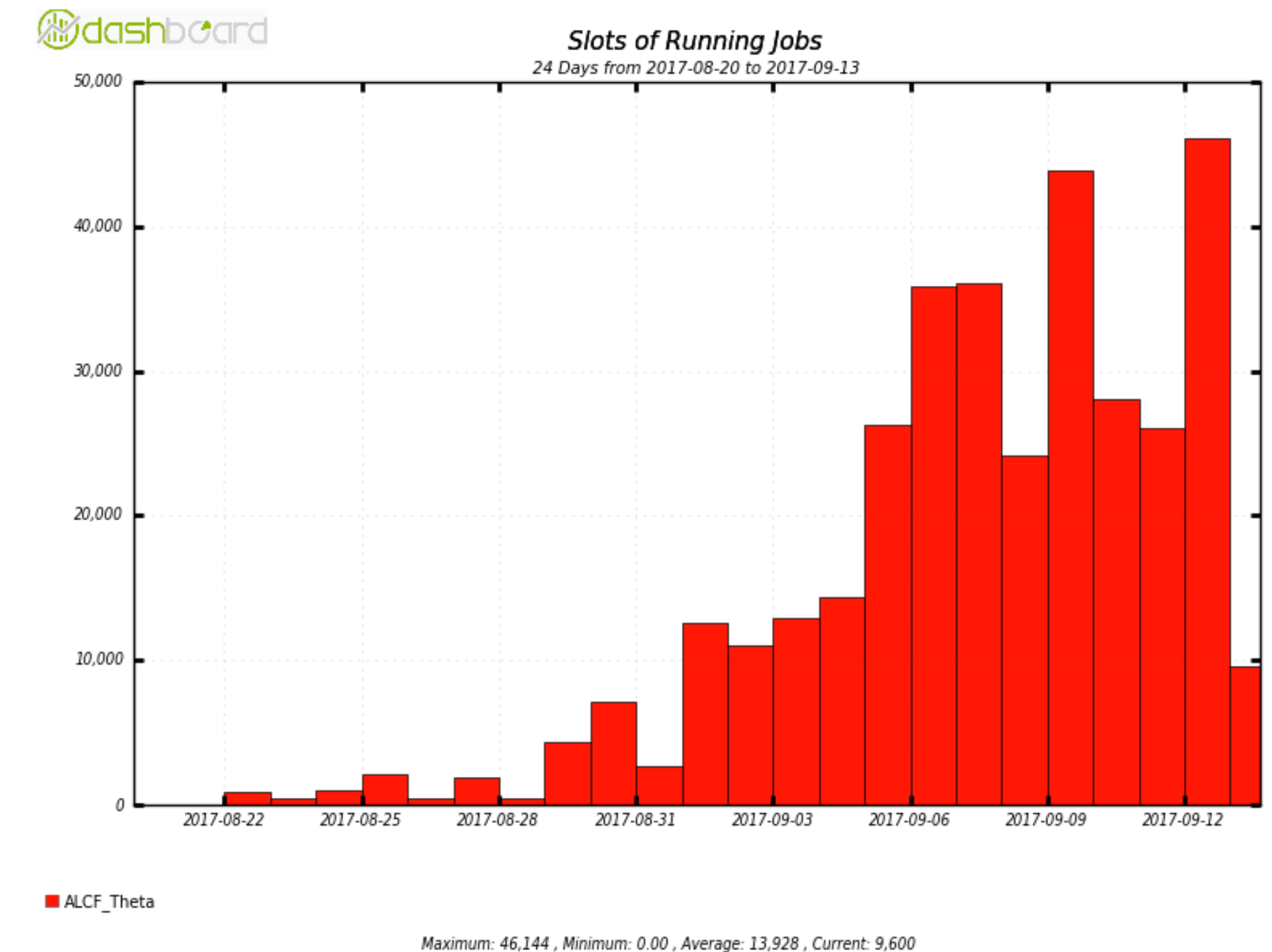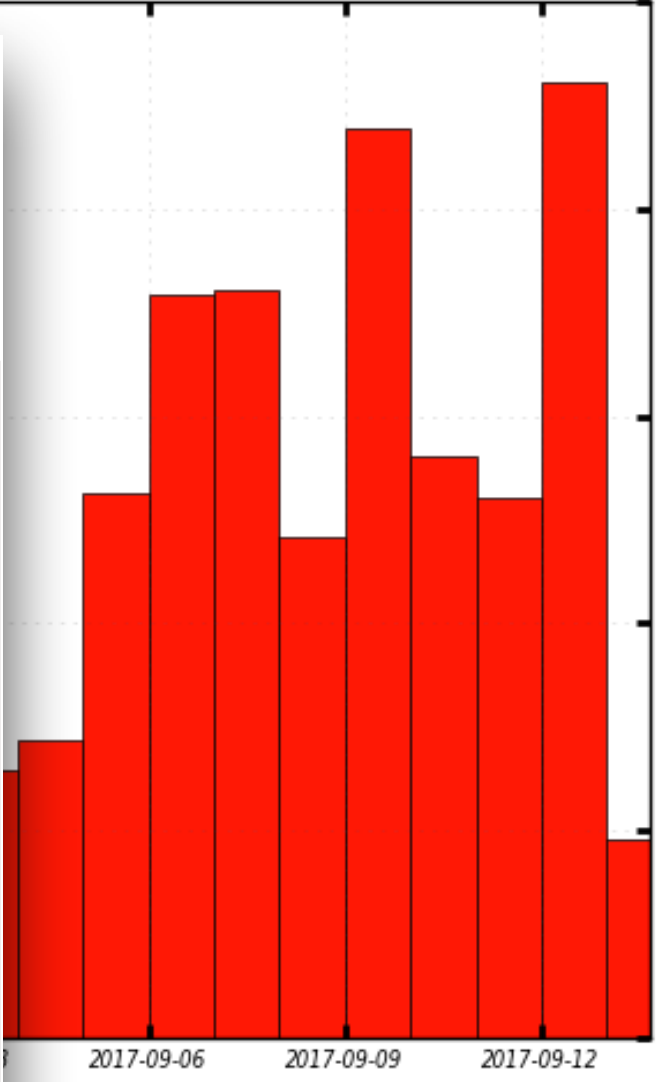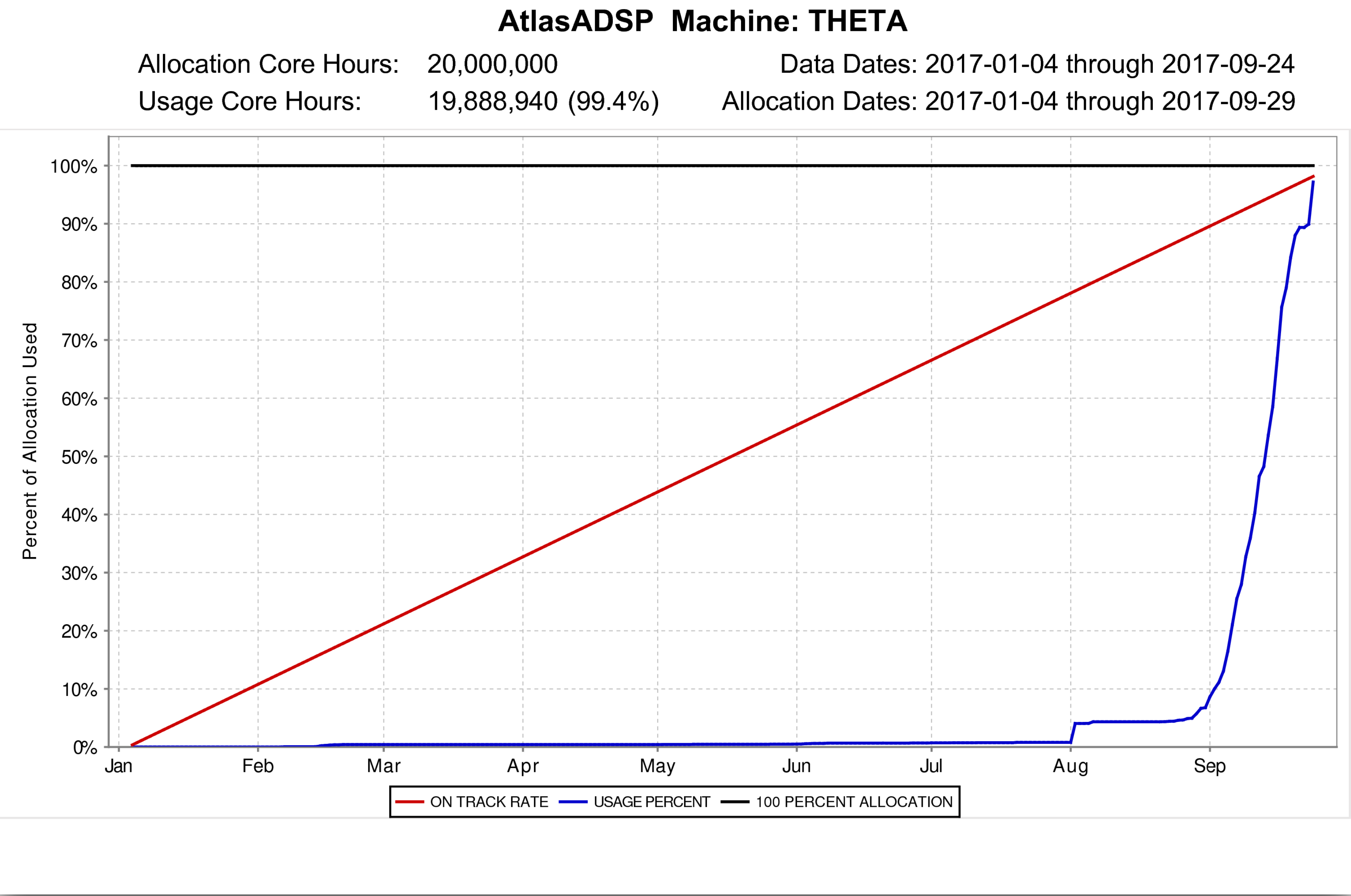‣ Currently running 128-node batch jobs on Theta with up to 8 concurrent jobs, 1024 nodes or 25% of machine.
‣ Processed about 15M validation events in September
‣ Getting a handle on Harvesters resource utilization
‣ Transitioned to Globus Online transfers on Sept 17.
‣ Debugging this and understanding features of GO
‣ Discussed Harvester readiness at CERN:
  • Need to finalize GO transfers, mainly pooling
  • Cleanup and publish mini-pilot for harvester
  • Define how to handle scheduled downtimes
‣ Then Harvester can be released to OLCF for deployment

‣ Otherwise, harvester has been doing its job. We've used the 20M core-hours and were just awarded another 45M core-hours to use in FY18.

Slots of Running Jobs
24 Days from 2017-08-20 to 2017-09-13

ALCF_Theta

Maximum: 46,144 , Minimum: 0.00 , Average: 13,928 , Current: 9,600

ALCF Highlights

- Running in M
- Currently run
  8 concurrent
- Processed abo
- Getting a han
- Transitioned t
- Debugging th
- Discussed Ha
  - Need to fi
  - Cleanup an
  - Define how
- Then Harvest

- Otherwise, ha
  20M core-ho
  hours to use i

AtlasADSP Machine: THETA

Allocation Core Hours: 20,000,000   Data Dates: 2017-01-04 through 2017-09-24

Usage Core Hours: 19,888,940 (99.4%)   Allocation Dates: 2017-01-04 through 2017-09-29

Slots of Running Jobs
24 Days from 2017-08-20 to 2017-09-13

50,000

Current: 9,600

Legend: ON TRACK RATE — USAGE PERCENT — 100 PERCENT ALLOCATION

ATLAS Software Distribution via Containers

‣ Doug & Wei discussed this last week and in todays meeting
‣ Starting to work out the details of how to automate the creation/ distribution