

Offline Monitoring Report

January 28 2015
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Launch from 2015-01-23 (ver09)

- Ran over all data files from last fall run
- Output:
 - detector plugins
 - REST
 - EventStore files
- Goals:
 - Test computing capabilities for processing ~7300 files
 - Provide REST for all files
 - Search for errors

Processing

- Processing very quick (finished most jobs by Sunday night) on new CentOS65 machines
- Using 6 threads/job
- For each node, 32GB of RAM, 1TB of HDD, 42 threads
- Copying evio files from tape to node to cut down on accesses to /lustre disk

Errors

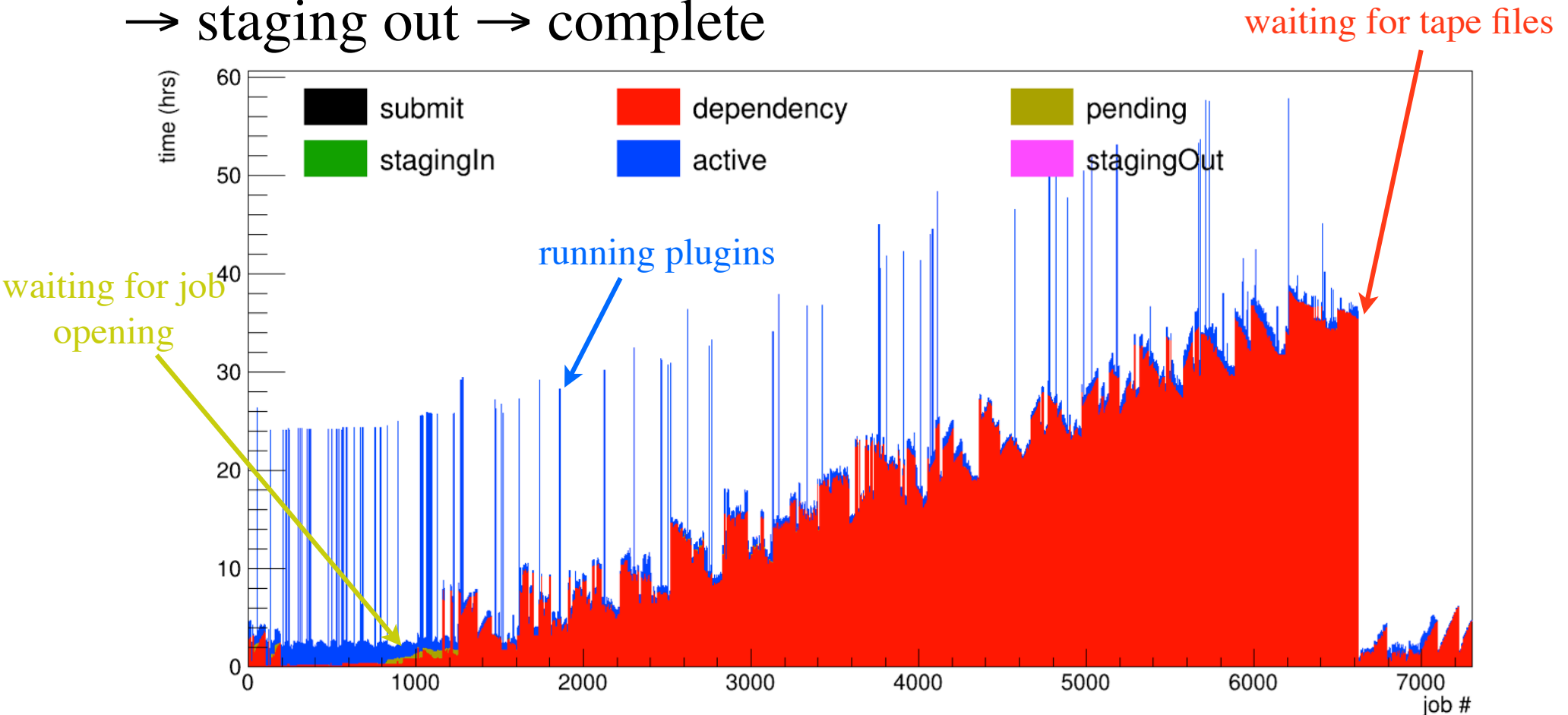
- Half of all files are completely error-free
- Most remaining are EVIO parsing errors

Output

- Detector plugin webpages being updated
- skim, REST files are in subdirs skims, REST of
/volatile/halld/RunPeriod-2014-10/offline_monitoring/ver09/
- Disk usage:
 - plugin ROOT files : 56GB
 - REST : 113GB
 - idxa : 705MB
- Ran EventStore for 2-track, 3-track, 4-track, 5-track,
2-track+ π^0 , 3-track+ π^0 , 4-track+ π^0 , 5-track+ π^0 ,

Statistics of Jobs

- Mark created mysql database from job IDs and info within SciComp's database: contains info on when each job entered which stage
- submit → dependency → pending → staging in → active → staging out → complete

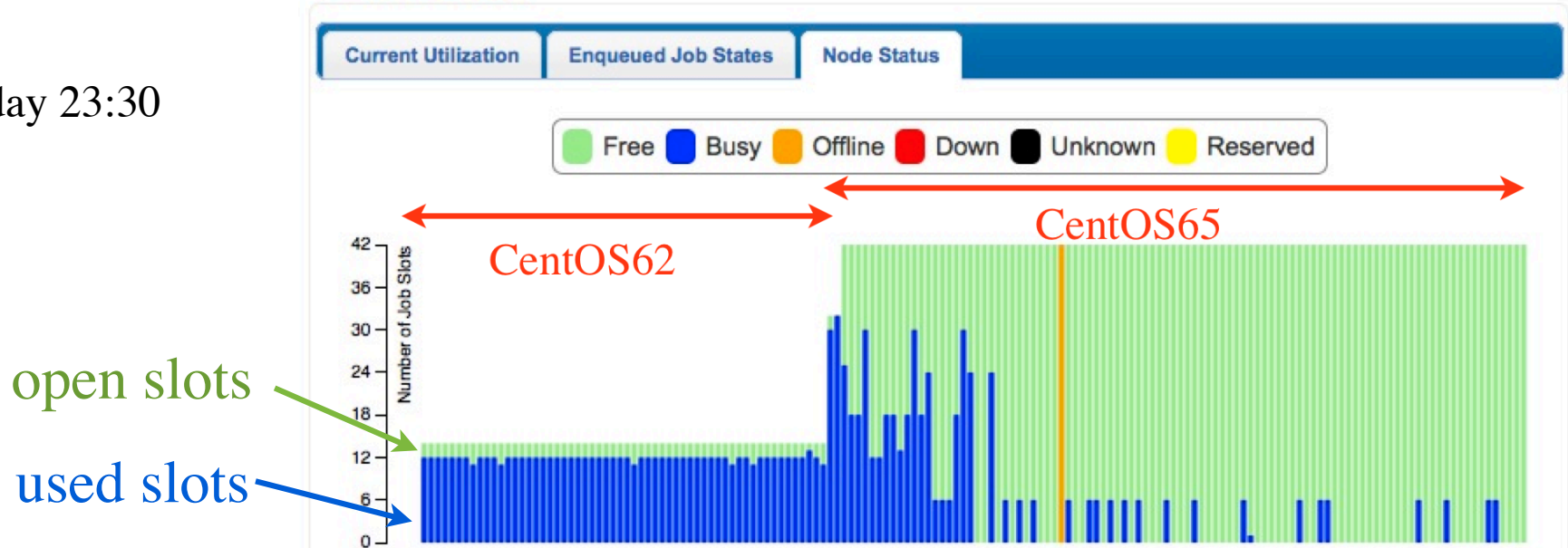


Screenshots

- From <http://scicomp.jlab.org/scicomp/#/>

Saturday 23:30

System Status



Batch Farm Jobs

Additional information is available through [custom queries](#).

Recently Completed Jobs

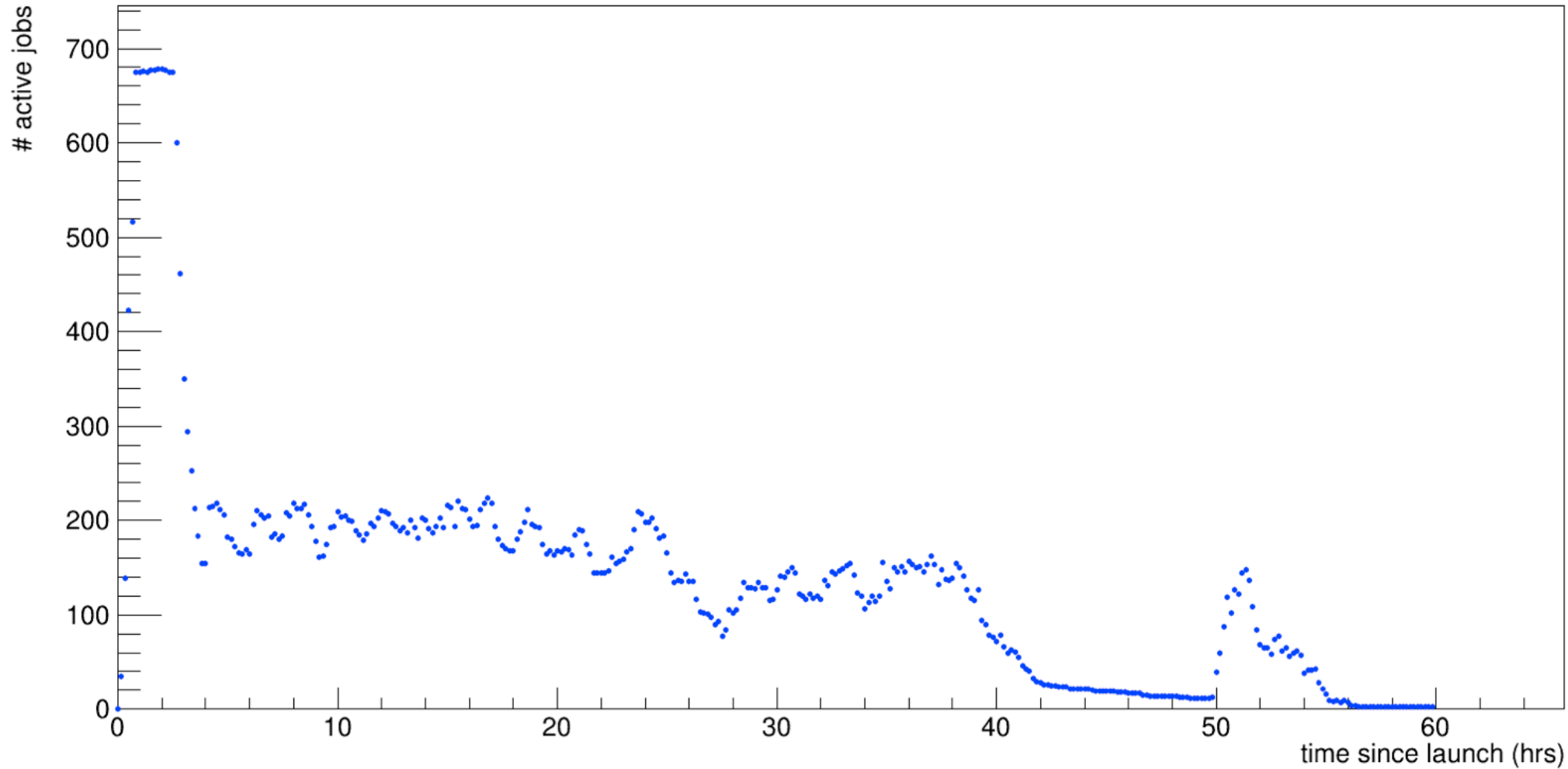
User	Success	Failed	Cancelled	Timeout	Over Limit	Total
all	14840	216	5	250	32	15343

Job Queue

User	Account	Depend	Pending	Staging	Running	Staged	Total
crede	clas	733	67	0	41	0	841
fangguo	hallc	0	0	0	19	0	19
gxproj1	halld	1830	0	0	84	0	1914
igorko	clas	47	0	0	0	0	47
primex	clas	0	0	0	3	0	3
rsholmes	halla	0	0	0	10	0	10
tianye	clas	0	2313	0	680	0	2993
whit	hallc	0	0	0	3	0	3
All Users		2610	2380	0	840	0	5830

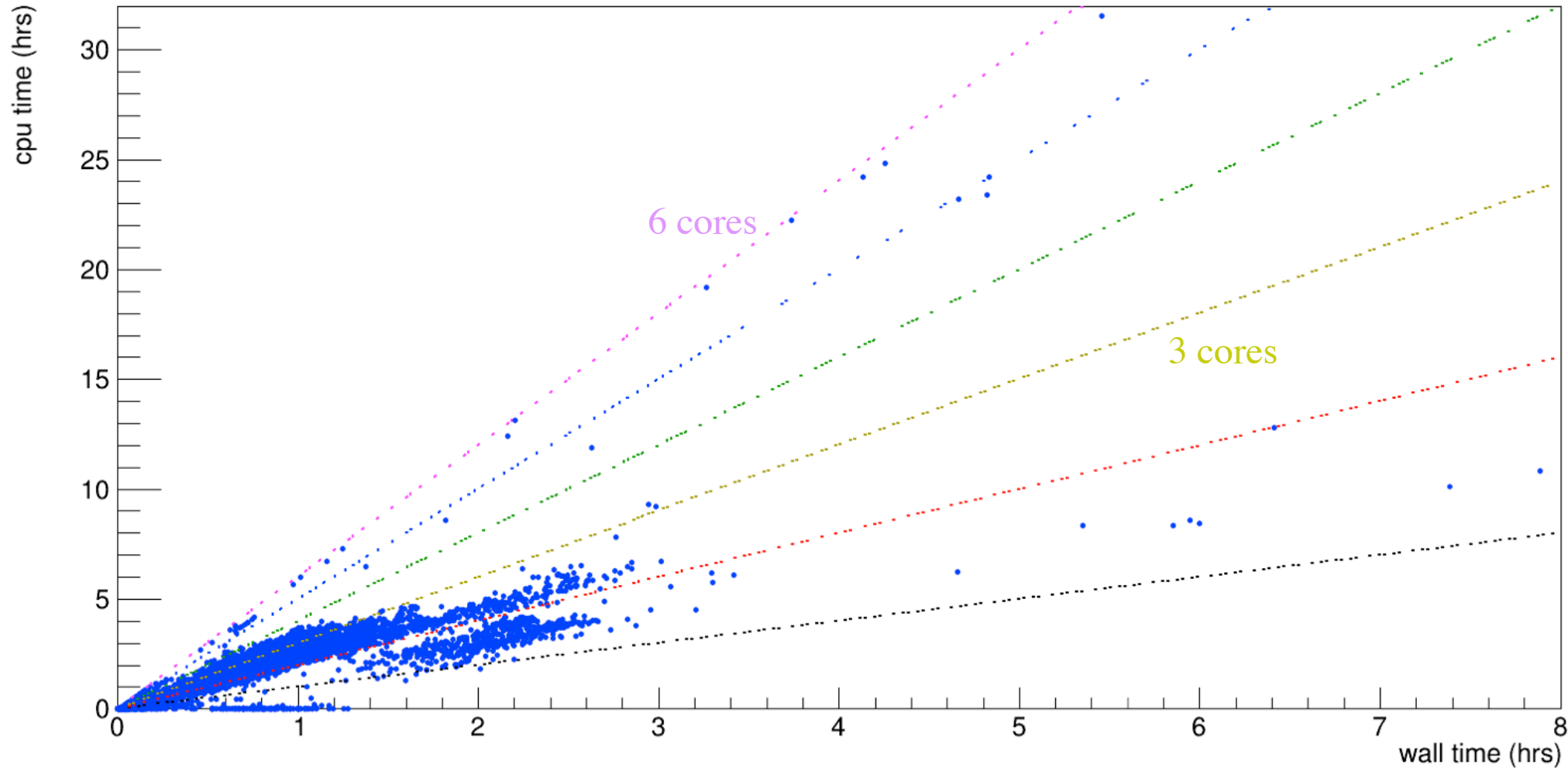
Active Jobs

- # of jobs running at a given time



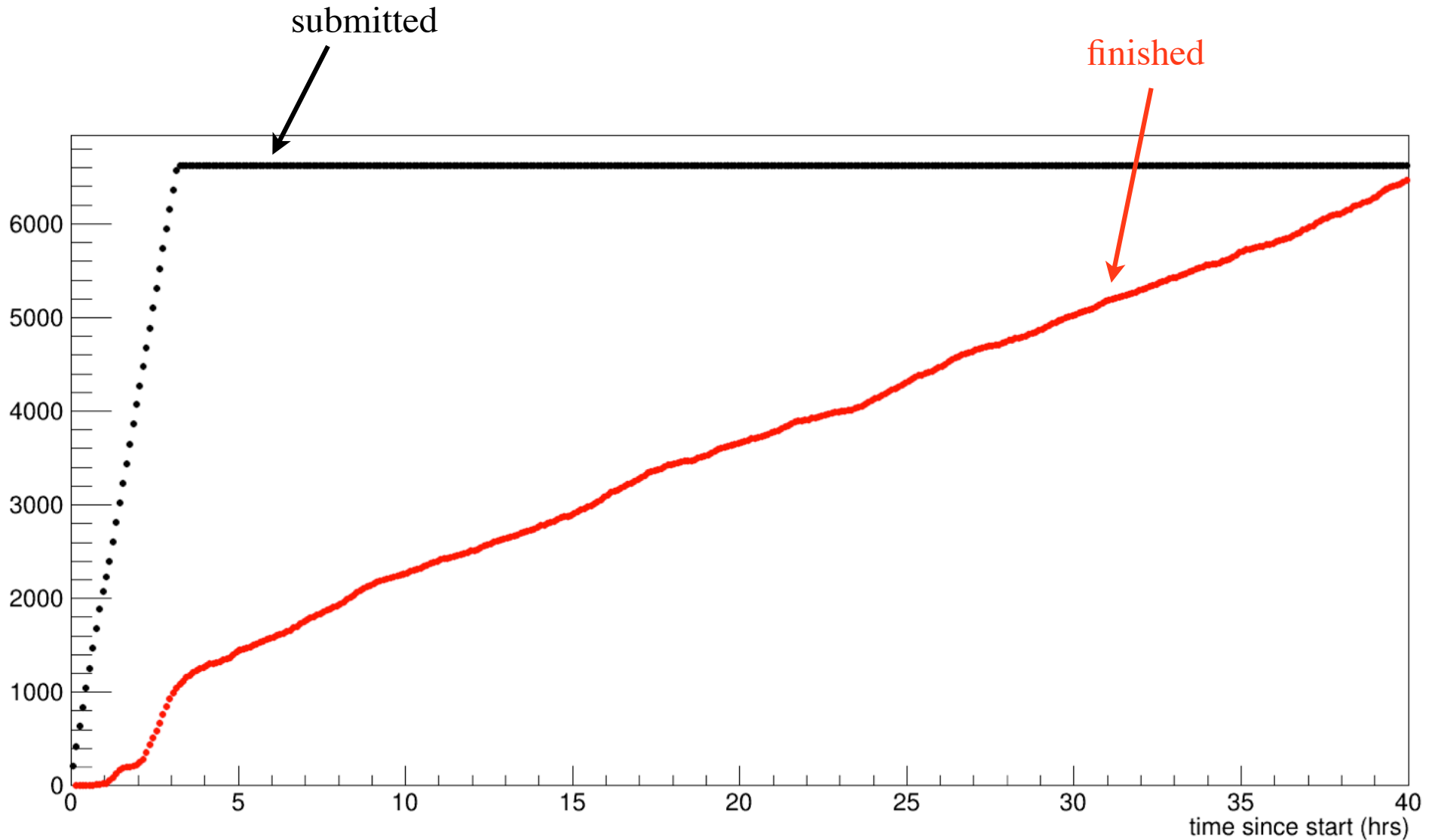
CPU Time vs Wall Time

- Requested 6 cores for each job



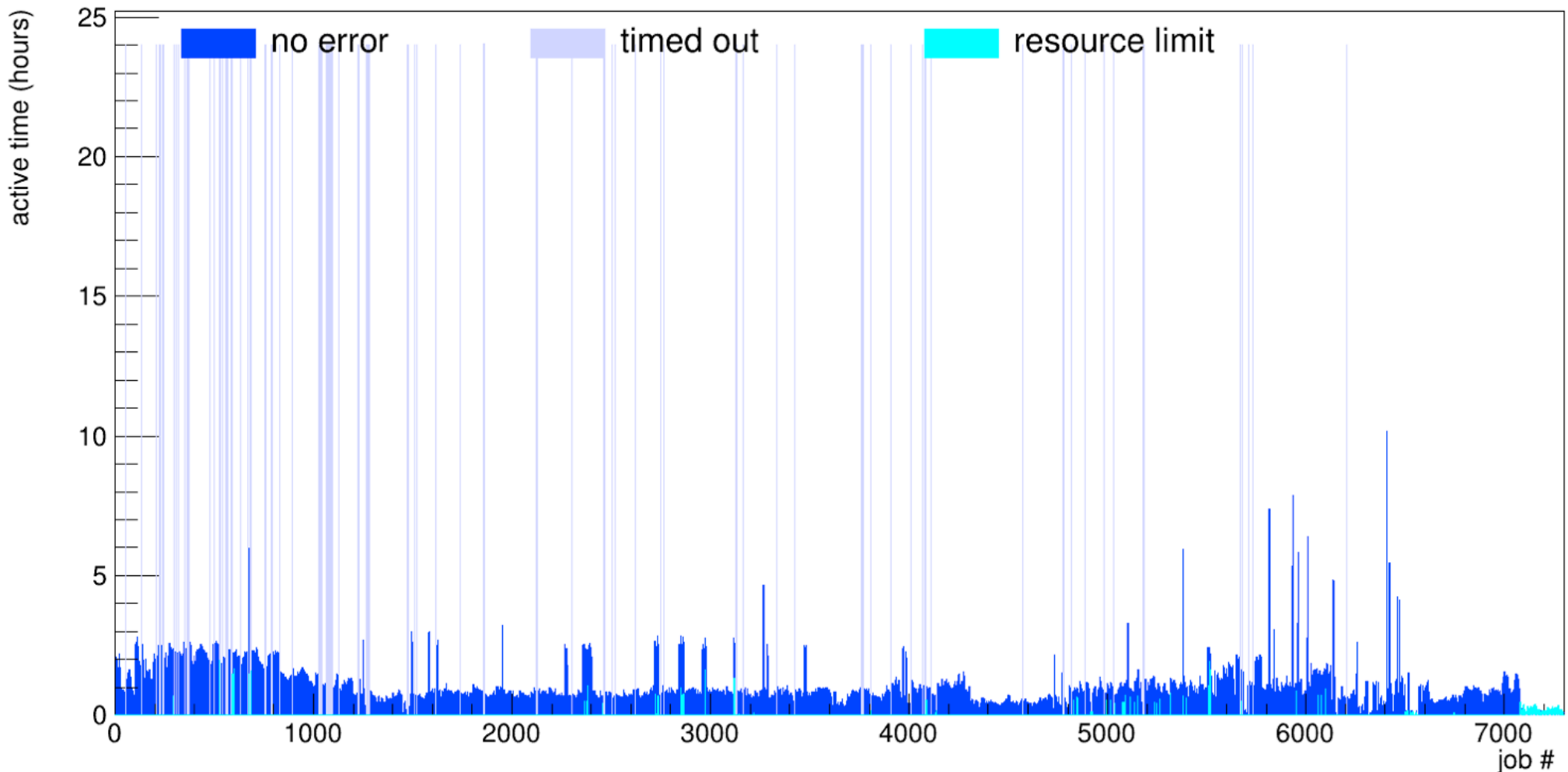
Time Since Start

- Track how many jobs finished since launch

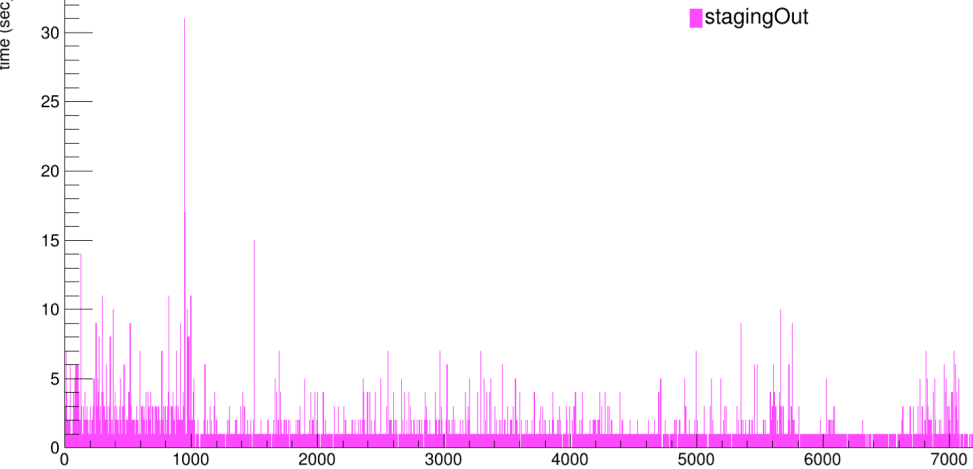
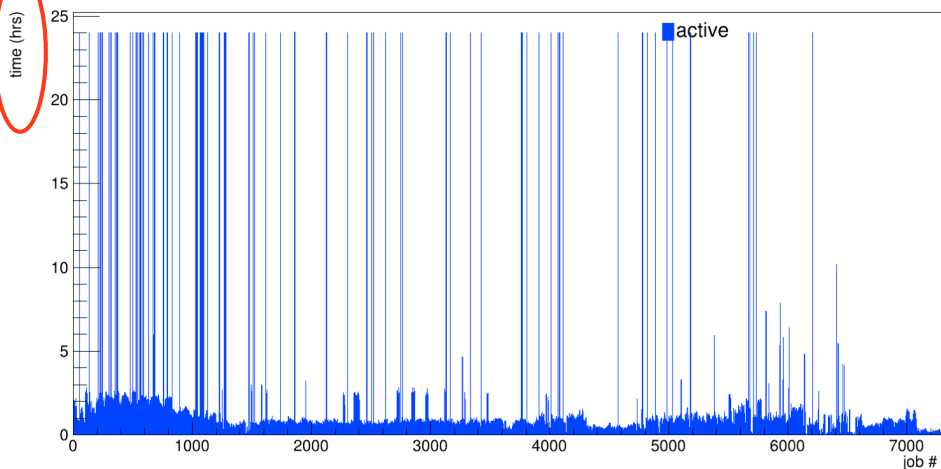
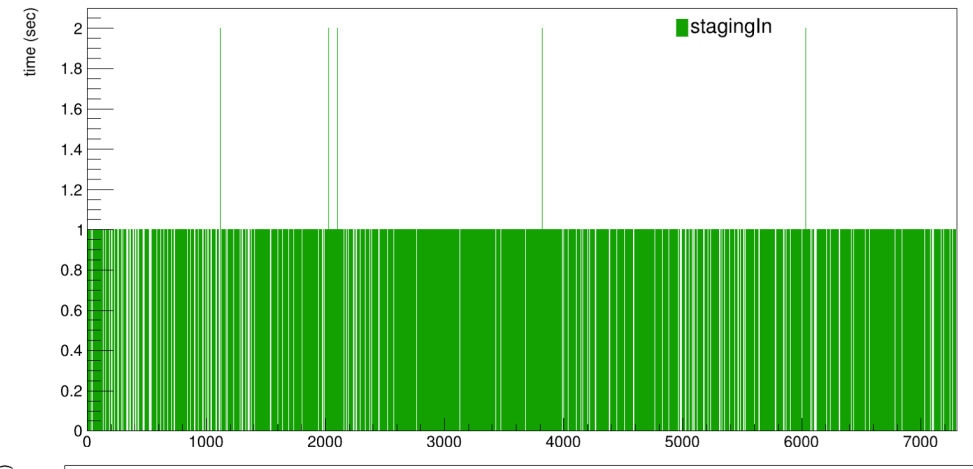
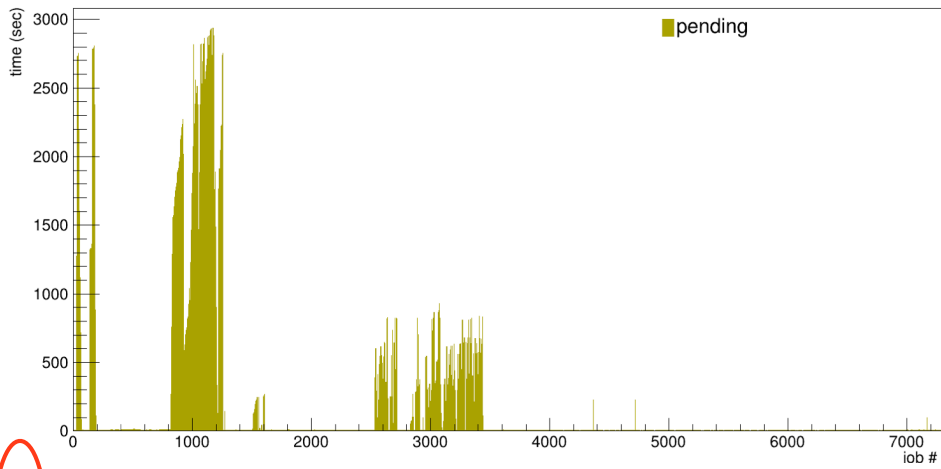
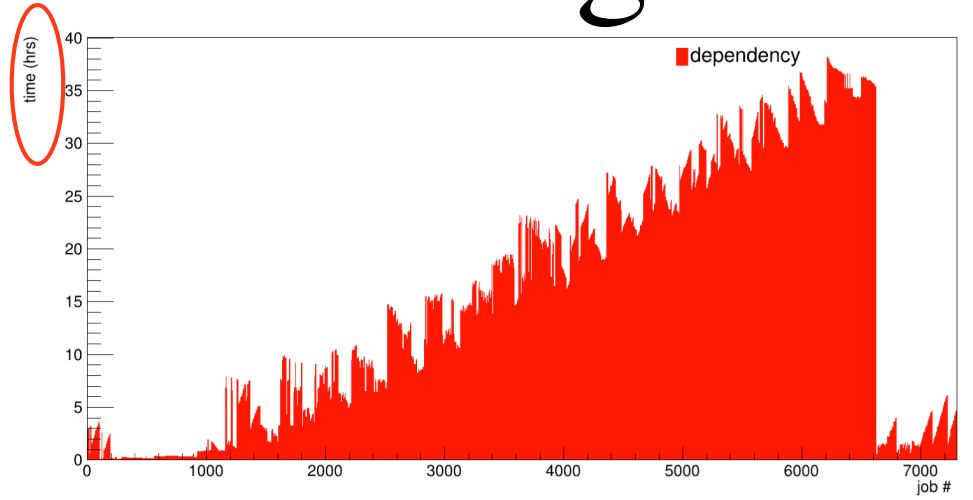
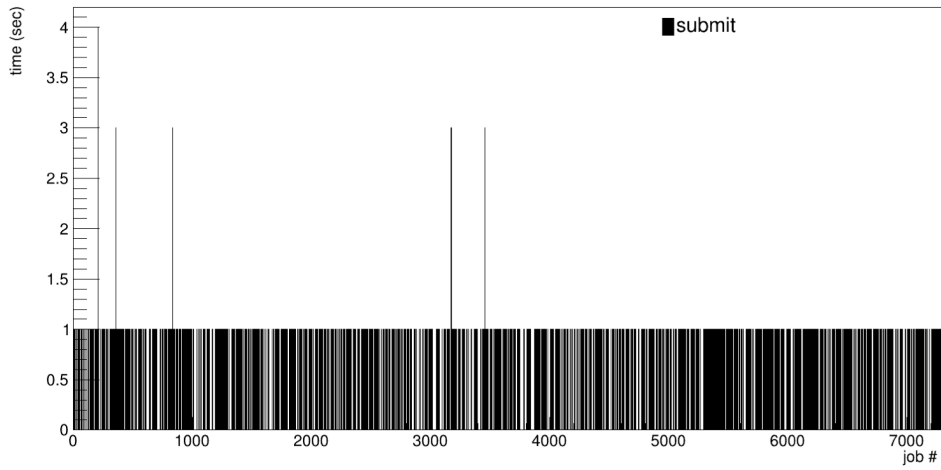


Active Time

- Time to run plugins - usually CPU time is several times this
- Some jobs do not get any CPU time
- Many jobs for run 2439 required more memory

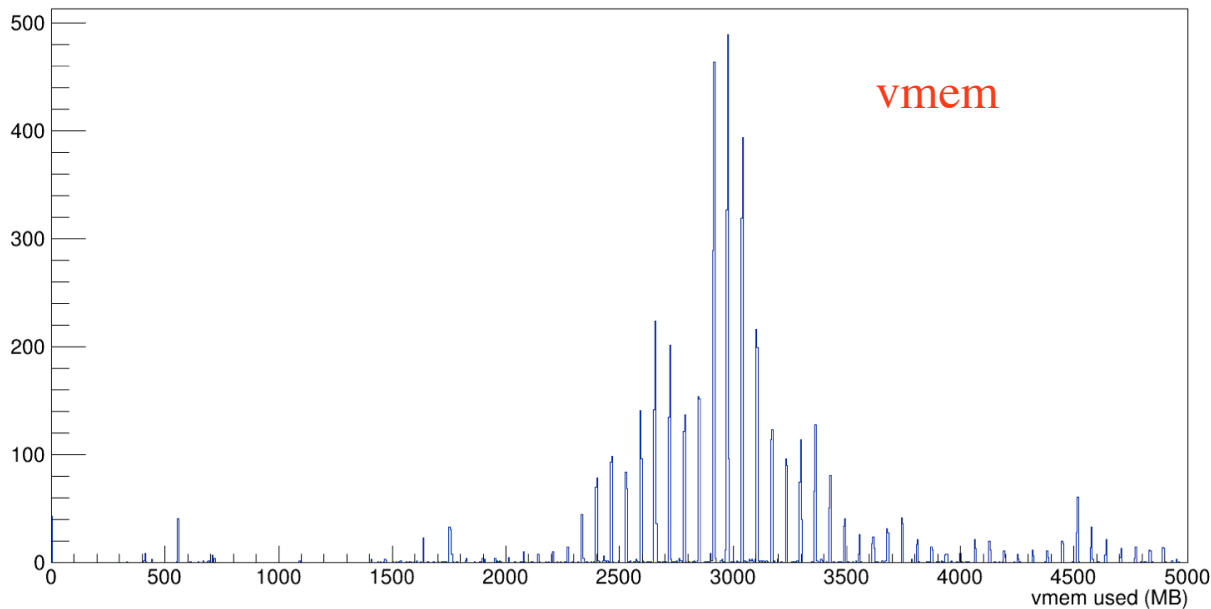
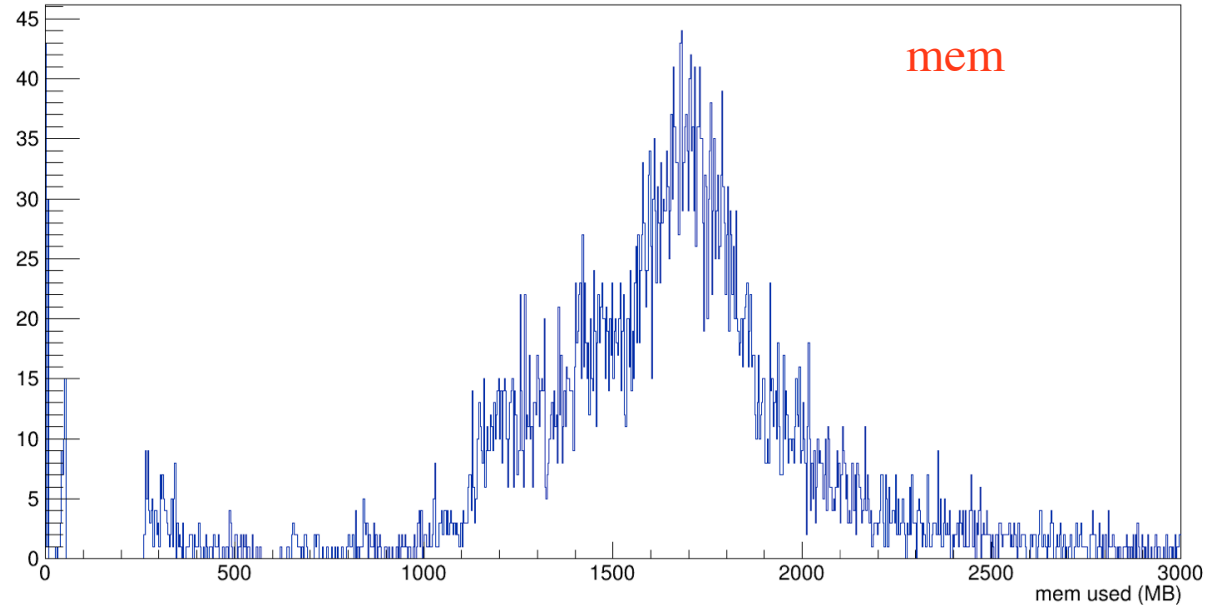


Lengths for Each Stage



Memory Usage

- Requested 4.5 GB for each job
- 265 jobs killed due to lack of resources



To Come

- CPU time per event
- More diagnosis of job failures, bottlenecks