



Science and
Technology
Facilities Council

Resources Review Meeting: 2020Q4 ATLAS RAL

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XX YY 2020

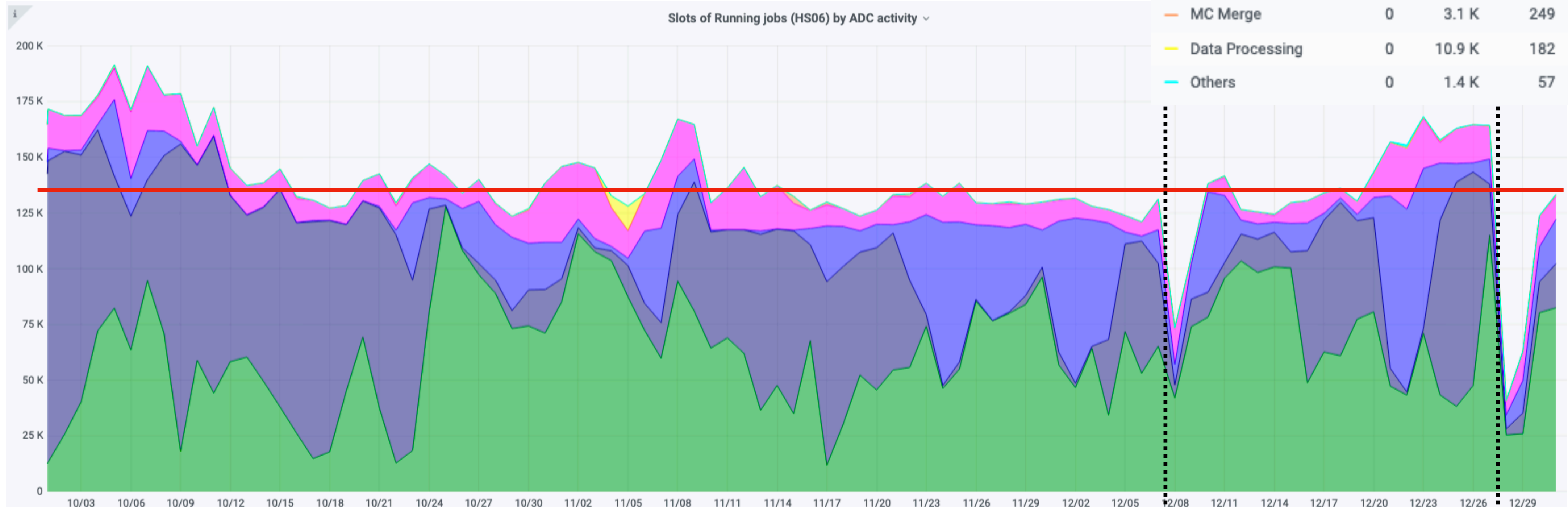
Highlights

- Reporting period:
 - Q3 2020: 1 Oct – 31 Dec
- Highlights:
 - Deletion campaign on MCTAPE
 - Disk carousel as ‘production’;
 - Changes to data placement model => fewer replicas on disk of AOD formats
 - Repack campaign of ATLAS Tape to new robot
- Major issues / events:
 - Occasional ATLAS/CERN issues, time taken for ATLAS to recover to fairshare
- New/Ongoing Issues
 - RAL to be able to run singularity in unprivileged mode; Experiments can then use own version of Singularity (from CVMFS)
 - Rolled into updating to Centos7 (and related batch farm services).
 - Also presume RAL to move to WLCG baseline version (3.5.2) for local version.

Batch farm CPU commitment

- 2020–21 pledge: 156.4 kHS06 (13.9% of ATLAS T1 pledge)
 - Increases to 173.2 kHS06 from 2021 Q2
- (Pledge line scaled by 10/11.7 to match effective corepower of site in Plot).

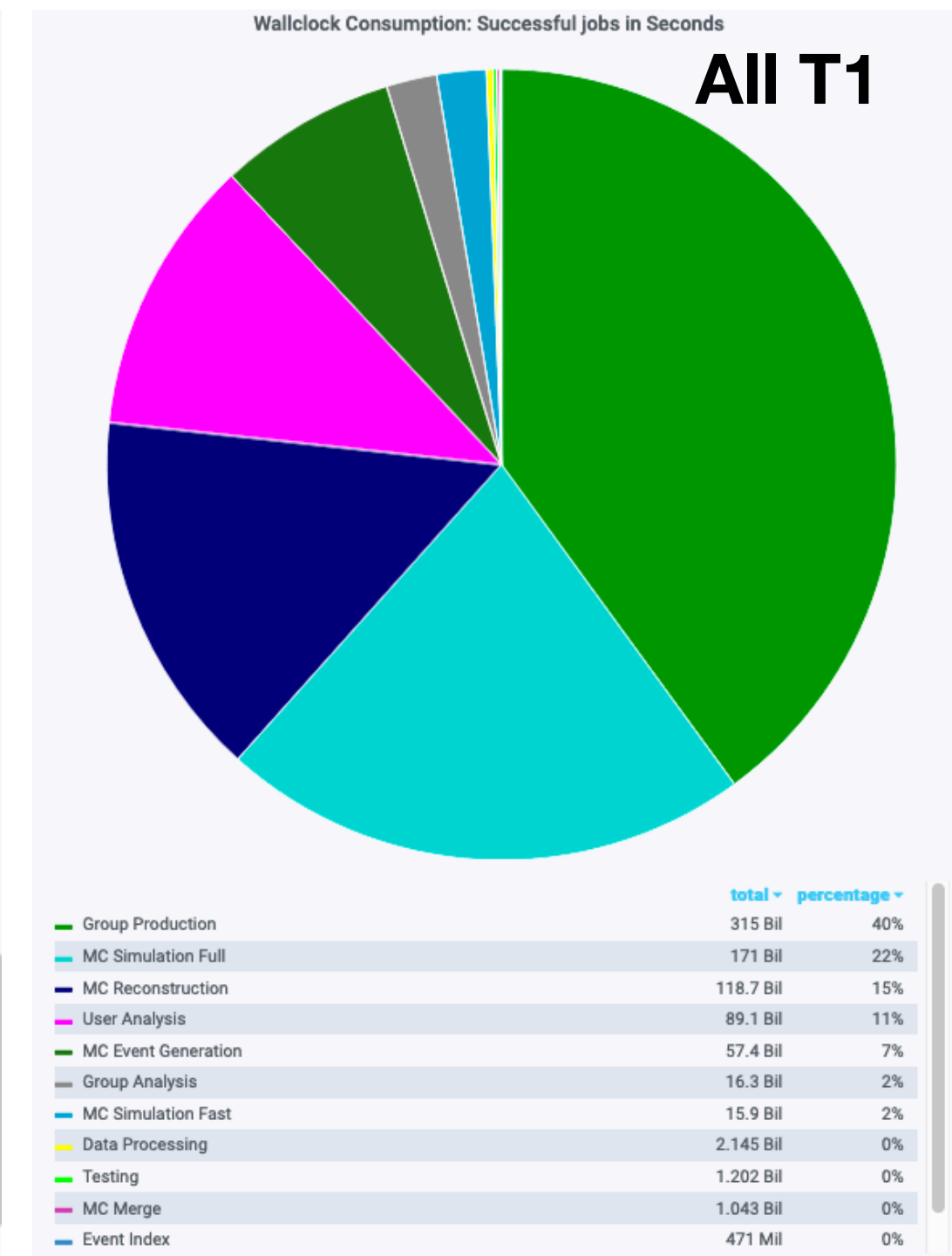
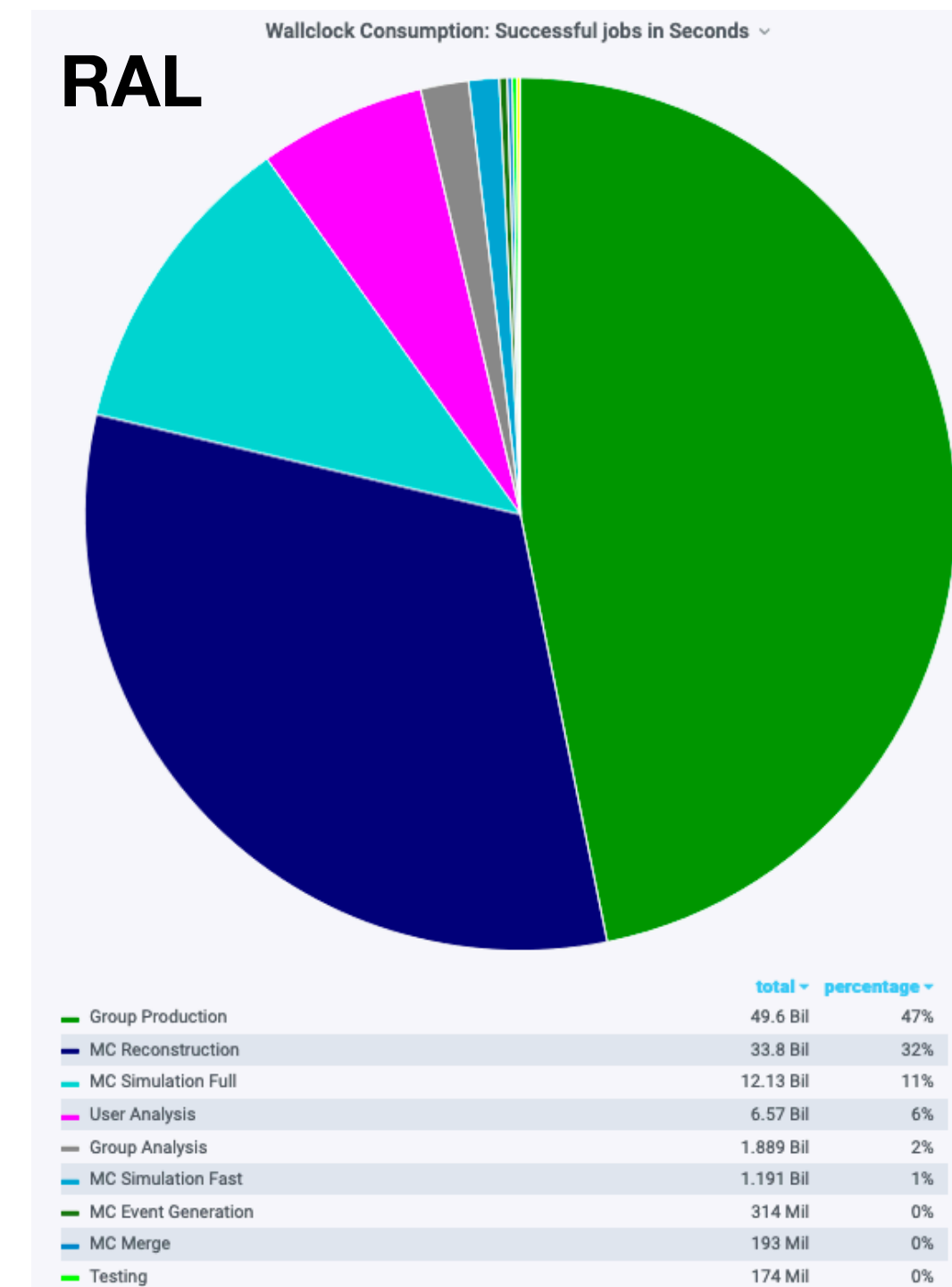
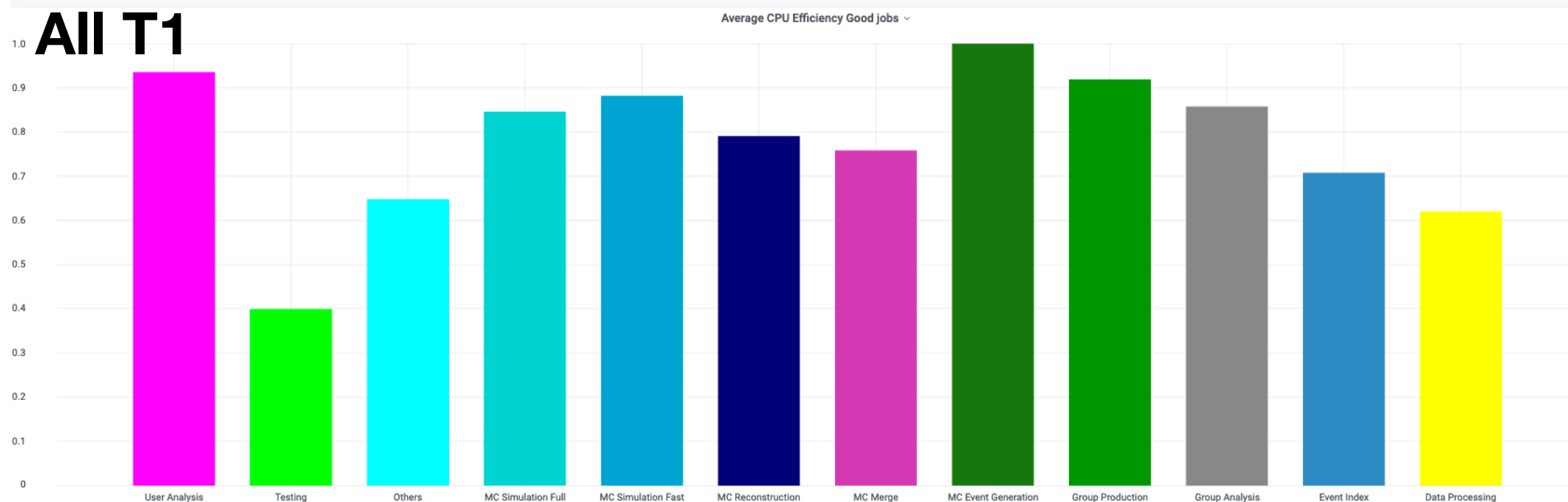
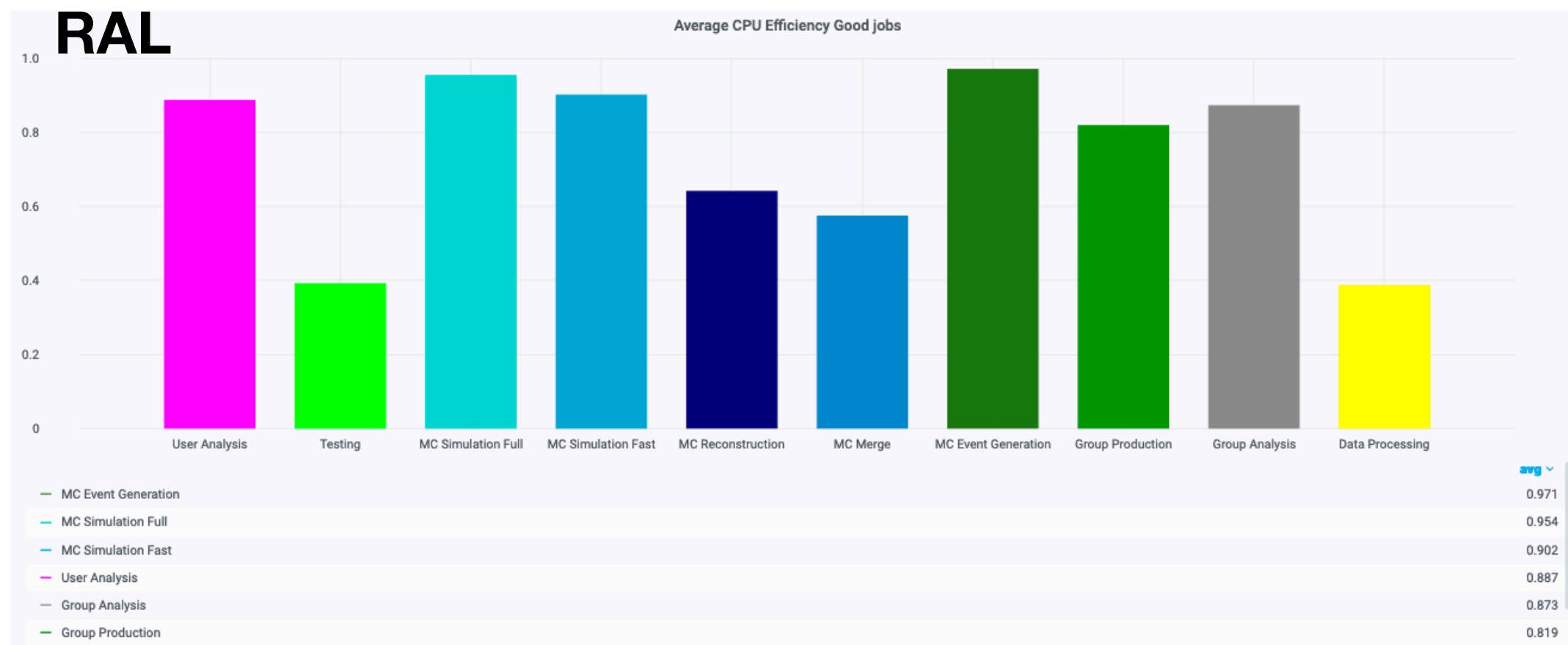
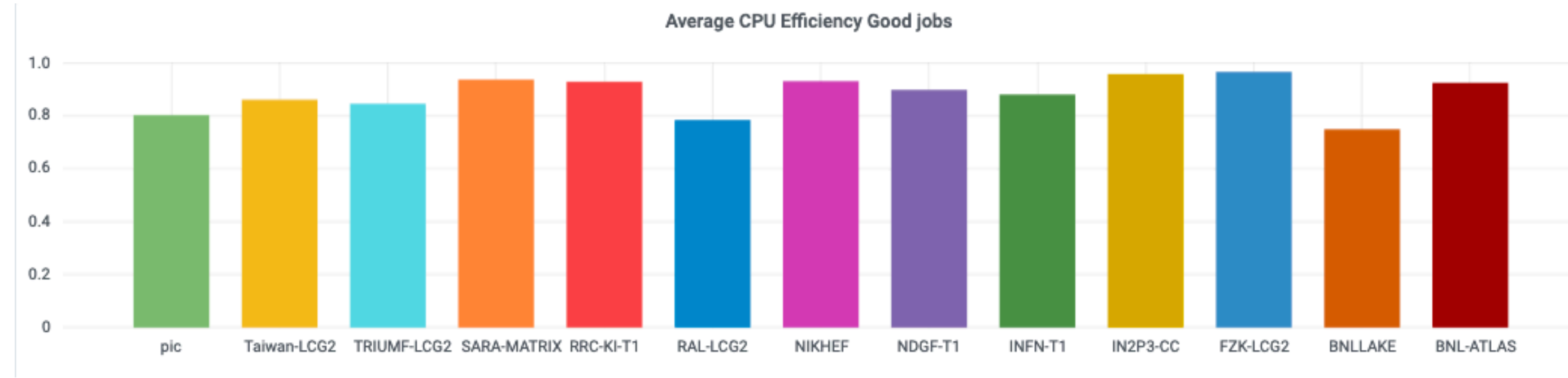
	min	max	avg	current	total
Group Production	509	127.8 K	62.7 K	82.4 K	5.8281 Mil
MC Reconstruction	6	137.7 K	43.4 K	19.8 K	4.0378 Mil
MC Simulation	18	82.0 K	17.5 K	20.0 K	1.6300 Mil
Analysis	495	33.7 K	13.0 K	10.3 K	1.2046 Mil
MC Merge	0	3.1 K	249	627	23.2 K
Data Processing	0	10.9 K	182	0	16.9 K
Others	0	1.4 K	57	252	5.3 K



- Average over period: 160.4 = 137.1*(11.7/10) kHS06 (with scaling)
- Main issues over period highlighted; affected only ATLAS, hence slow recovery due to reclaiming of 'lost' slots.

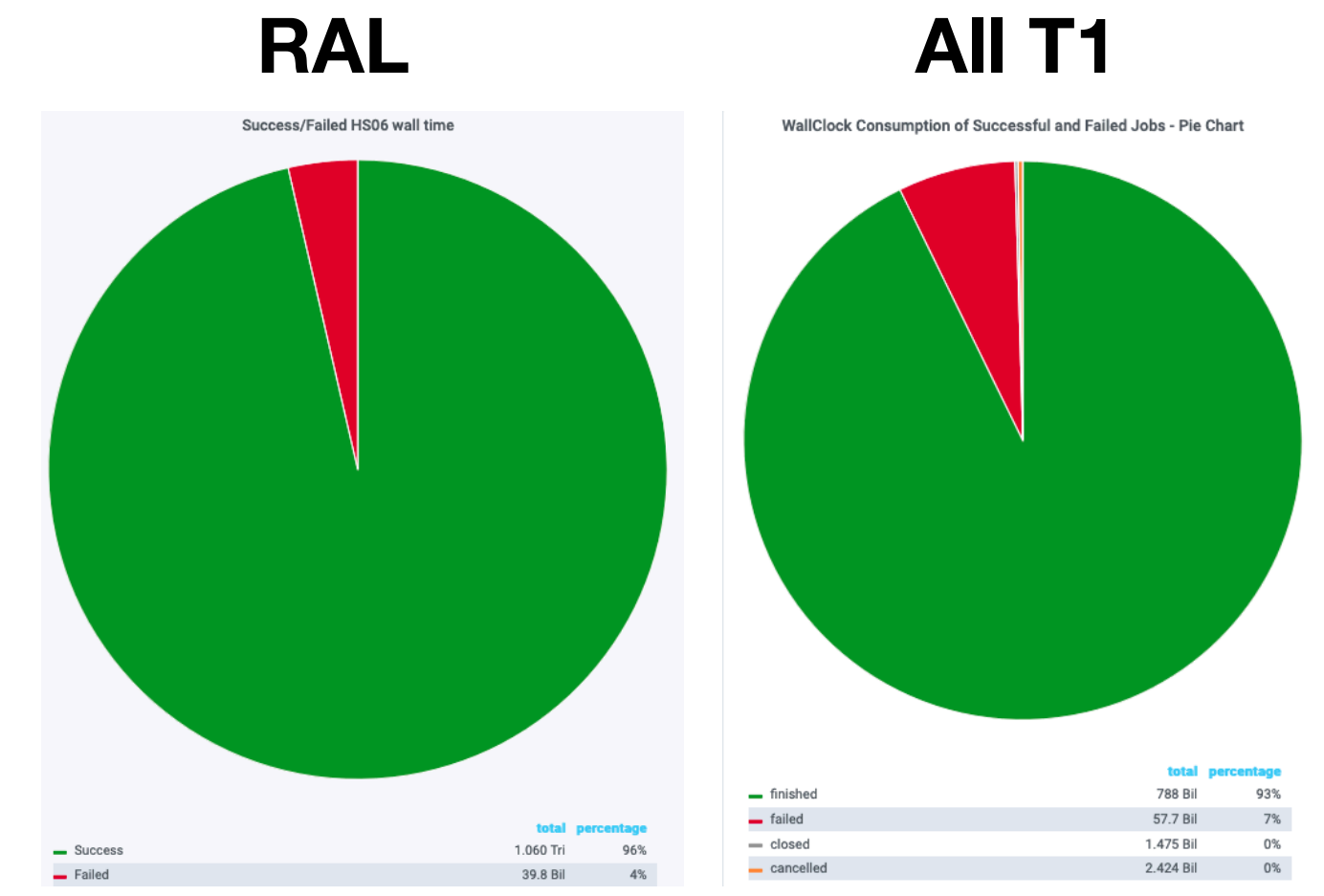
T1 Comparison

- RAL average CPU efficiency continues to improve, 78% (from ~ 75%); depends substantially on job-type.
 - Eg. RAL does very little MC gen. cf all T1's
 - But variation seen within the categories



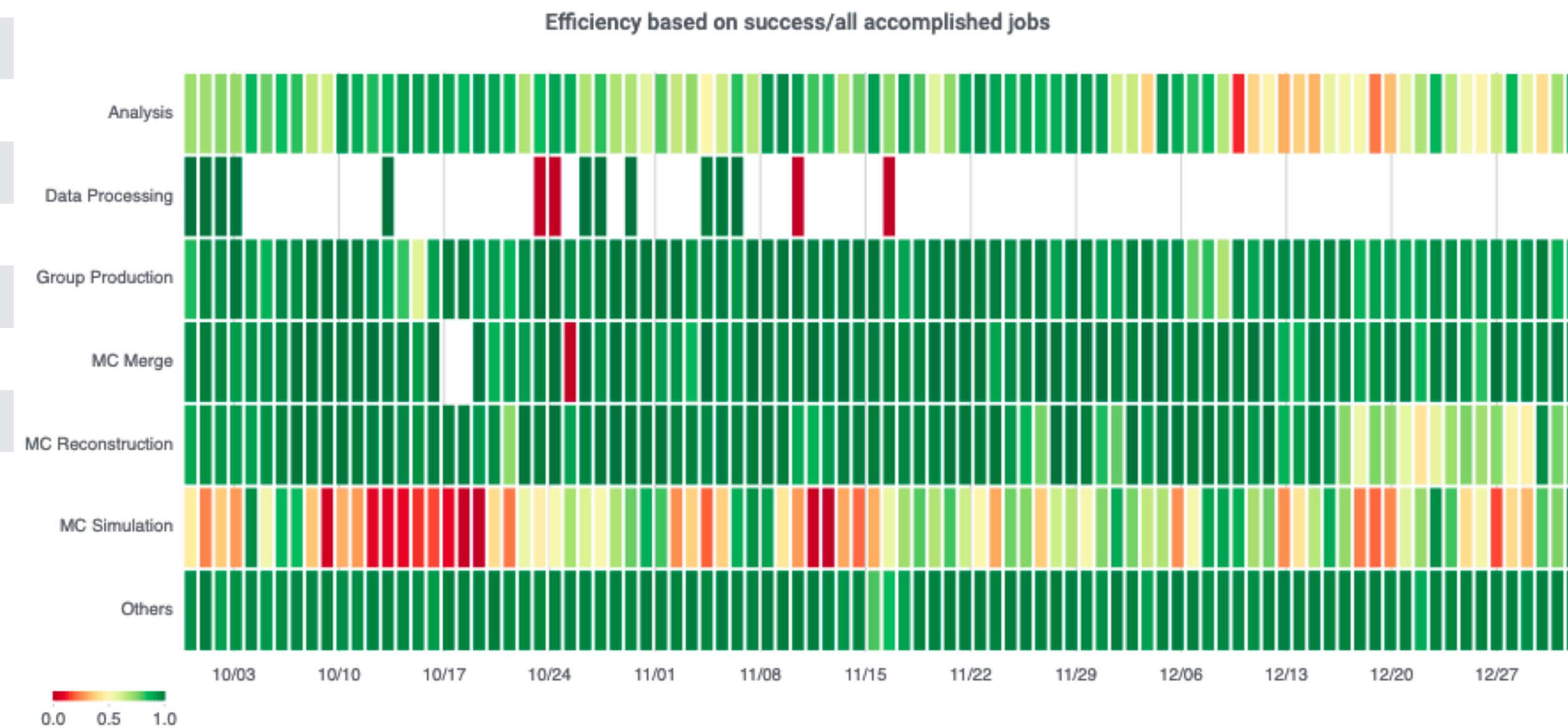
Job Failures

- 96% success fraction (of walltime), cf. 93% to all T1s
- Job success fraction not strongly varying with tranche:
 - (Data from last ~ 60 days)
 - Low stats. in some cells (possible bias from few specific jobs)



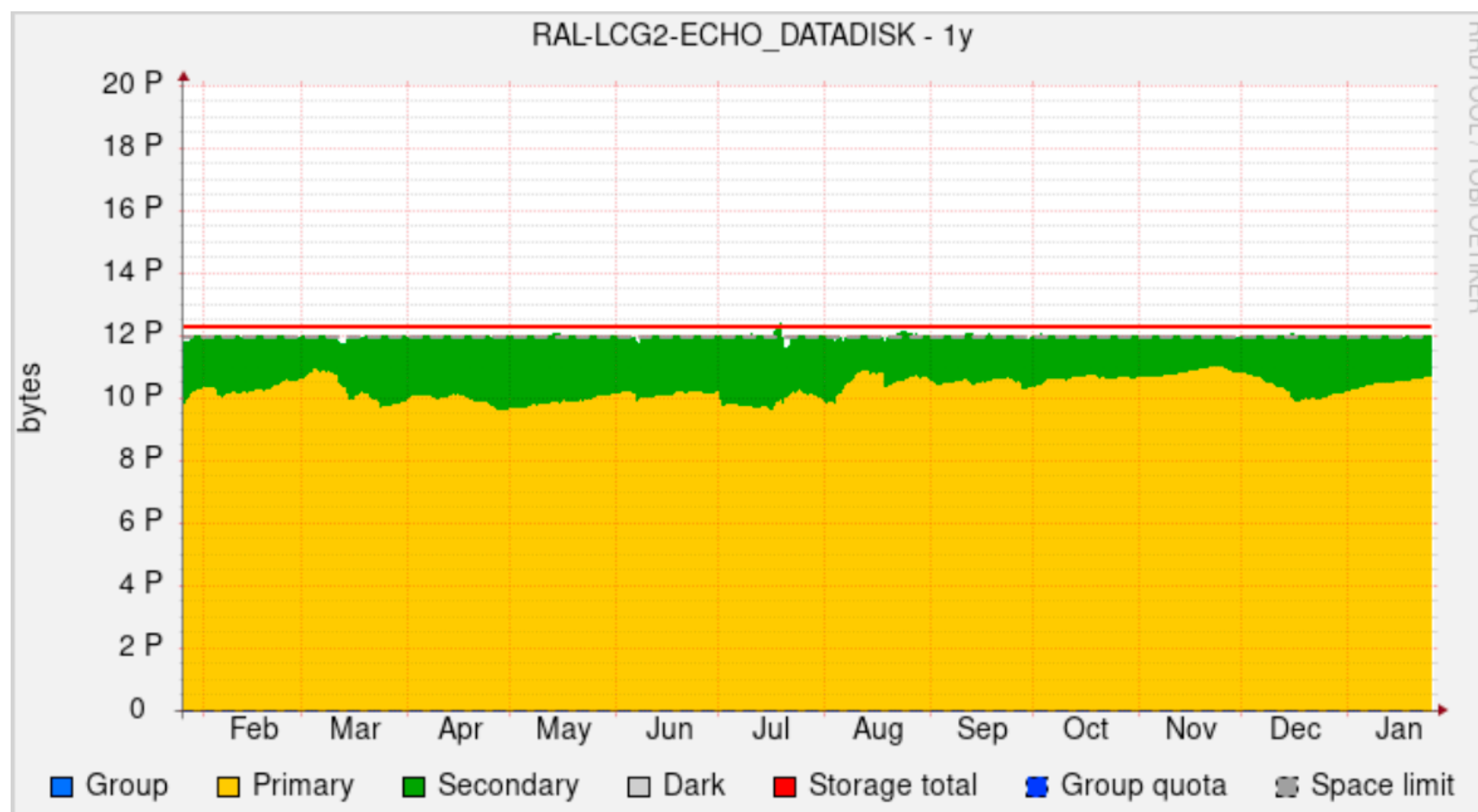
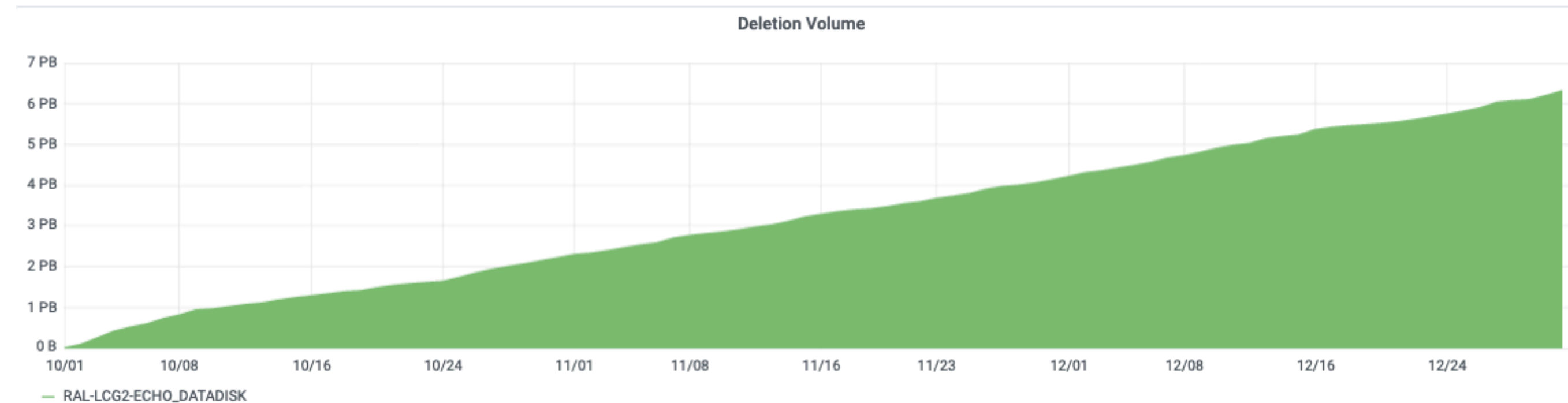
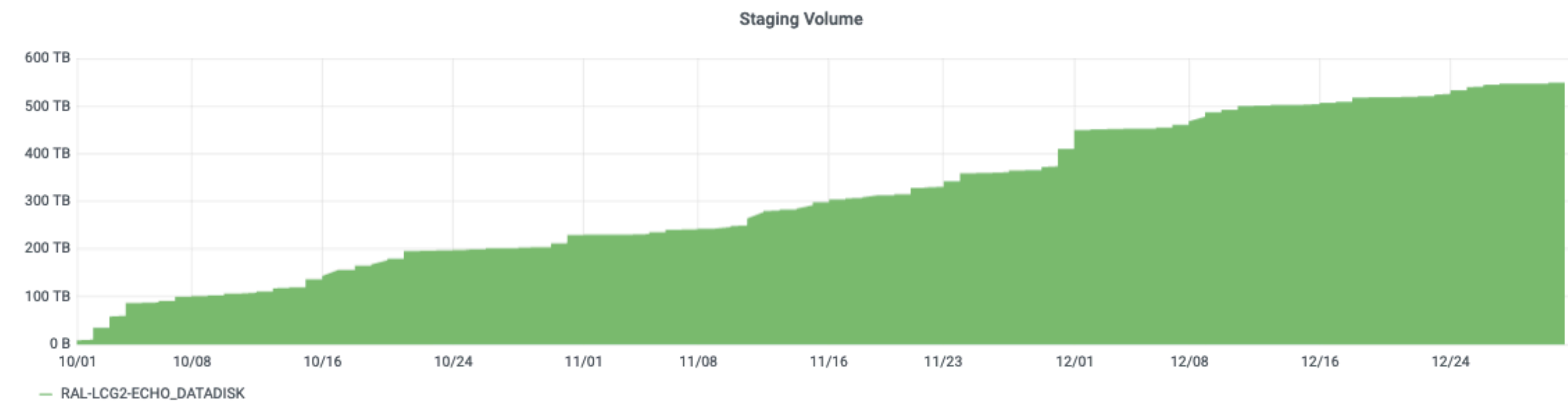
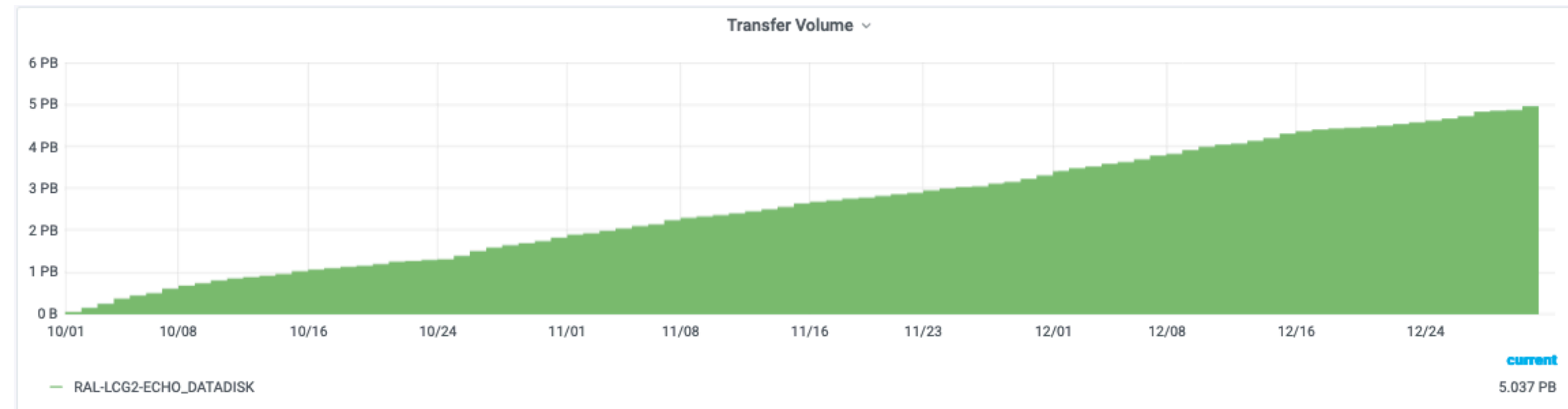
Success fraction	Group Prod	MC Reco	Analysis	MC merge
All	93.7% +/- 0.0%	96.3% +/- 0.0%	79.4% +/- 0.1%	93.0% +/- 0.1%
2019-dell	94.1% +/- 0.1%	97.2% +/- 0.1%	81.8% +/- 0.1%	96.7% +/- 0.2%
2018-xma	94.4% +/- 0.1%	97.4% +/- 0.1%	92.4% +/- 1.4%	7.3% +/- 4.1%
2017-xma	94.0% +/- 0.2%	96.6% +/- 0.2%	77.2% +/- 0.1%	82.9% +/- 0.4%
2017-dell	94.9% +/- 0.1%	97.7% +/- 0.1%	79.6% +/- 0.1%	96.1% +/- 0.2%
2016-dell	93.4% +/- 0.4%	95.1% +/- 0.4%	76.3% +/- 0.2%	94.1% +/- 0.3%
2015-hpe	92.3% +/- 0.1%	91.3% +/- 0.2%	76.6% +/- 0.3%	84.5% +/- 1.0%
2015-xma	93.6% +/- 0.1%	97.5% +/- 0.1%	92.9% +/- 1.0%	12.3% +/- 4.3%
2014-himem	92.6% +/- 0.7%	97.9% +/- 0.4%	82.4% +/- 0.3%	97.6% +/- 0.5%

- Temporal job success efficiency; largely VO / user related



Disk usage

- 12PB used on disk
 - 6PB deleted over period
 - (includes scheduled lifetime deletion and obsolesce campaigns).
- Pledge to increase to 15.5PB from 2021 Q2



Tape

- 12.1PB (11.6PB) for Data (MC);
23.7PB total tape usage (~32PB pledged).
- 2PB (4PB) deleted from Data (MC) Tape

- Almost 2PB transferred into Tape over the period
- Pledge to increase to 34.8 PB from 2021 Q2

