# ATLAS
# Tier-1 Experiment sign off for Q4 2019

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RAL Tier1 Resource Review Meeting

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# RAL Tier-1 ATLAS CPU use

**Slots of running jobs (HEPSPEC06)**



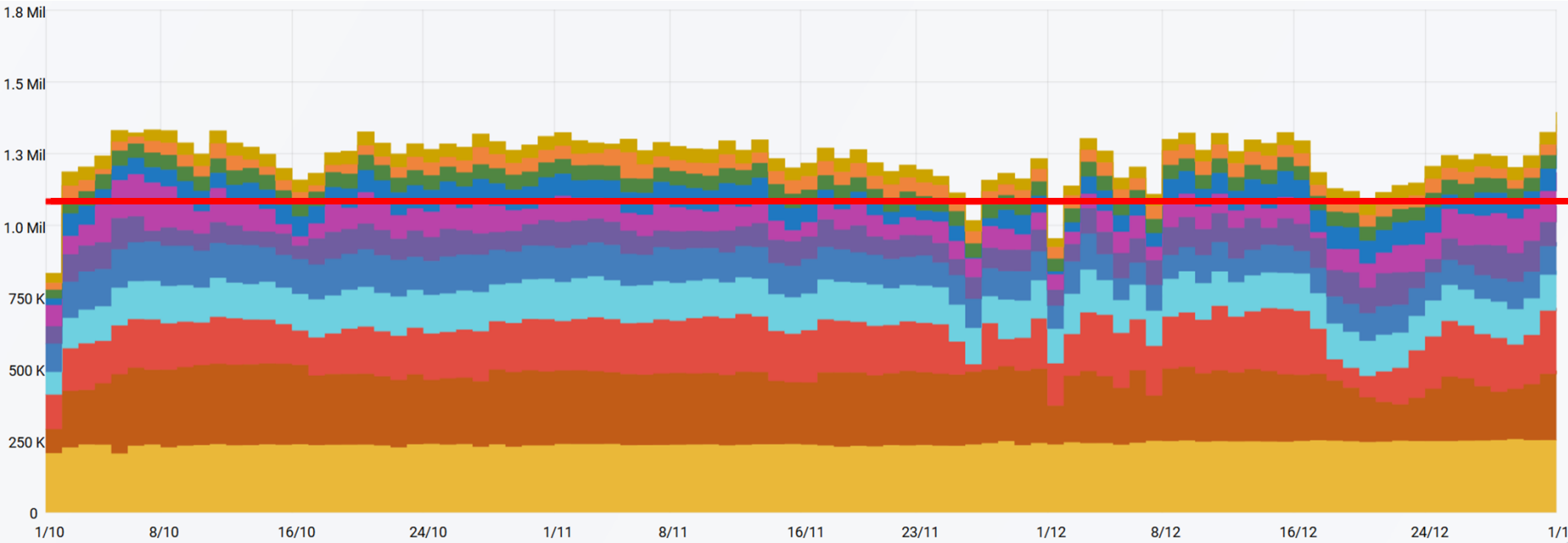| | min | max | avg | total▾ |
|---|---|---|---|---|
| — Pledges | 132.1 K | 132.1 K | 132.1 K | 48.7541 Mil |
| — Group Production | 4.8 K | 88.8 K | 55.7 K | 5.1816 Mil |
| — MC Reconstruction | 200 | 98.0 K | 19.4 K | 1.8041 Mil |
| — User Analysis | 4.0 K | 36.3 K | 19.1 K | 1.7764 Mil |
| — MC Event Generation | 7 | 24.5 K | 6.3 K | 589.3 K |
| — Group Analysis | 188 | 22.0 K | 5.2 K | 482.0 K |
| — Data Processing | 0 | 47.2 K | 3.9 K | 364.4 K |
| — MC Simulation Full | 0 | 6.8 K | 520 | 48.3 K |
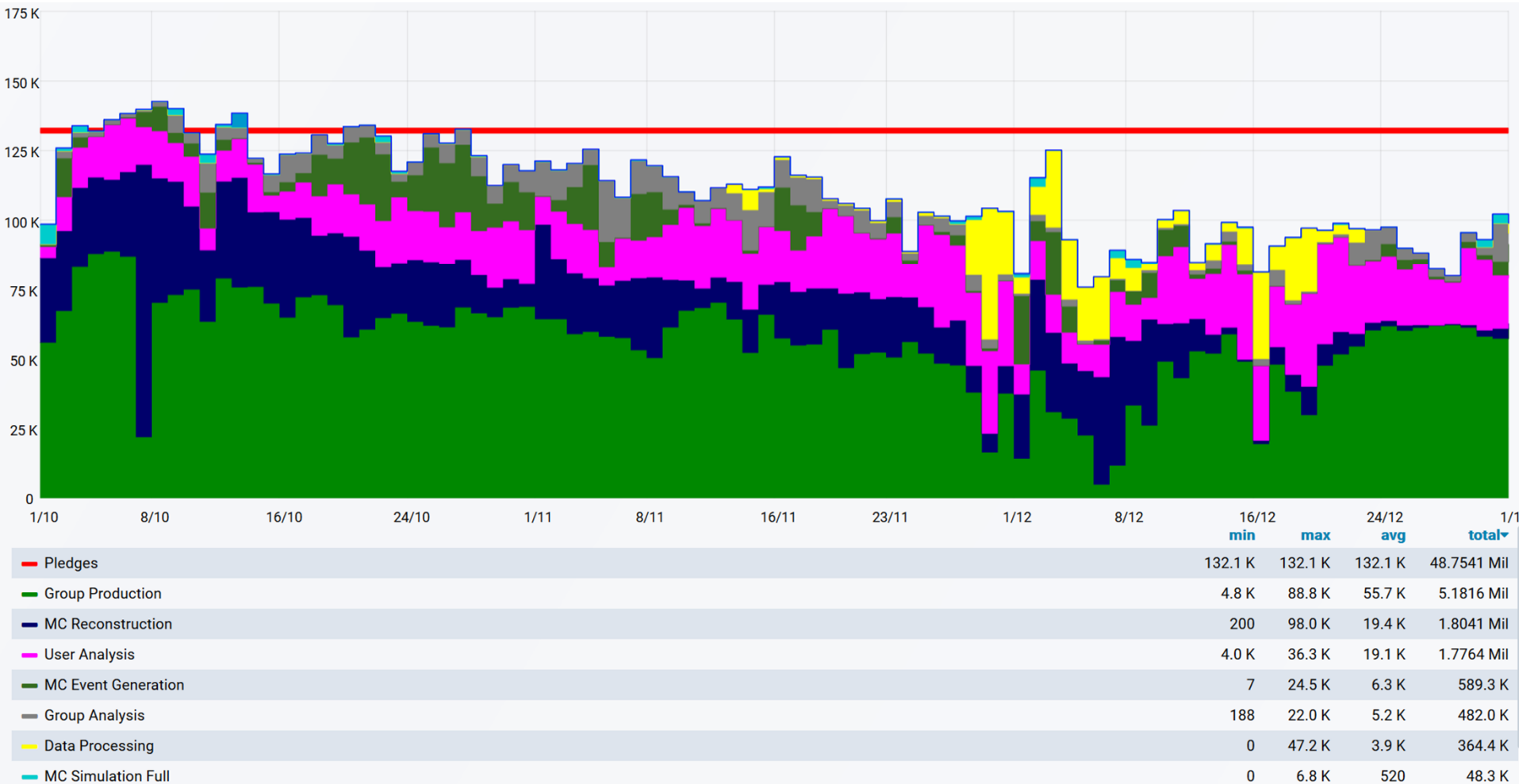
Total usage (all activities) = 110.3 kHS06 ("avg"),  pledge = 132.1 kHS06 ("avg"), ie. 83.5%
We have dropped below our fairshare of the farm, mostly 89% of farm allocation.
James has tweaked the fairshare parameters and we should catch up the shortfall in the next months.
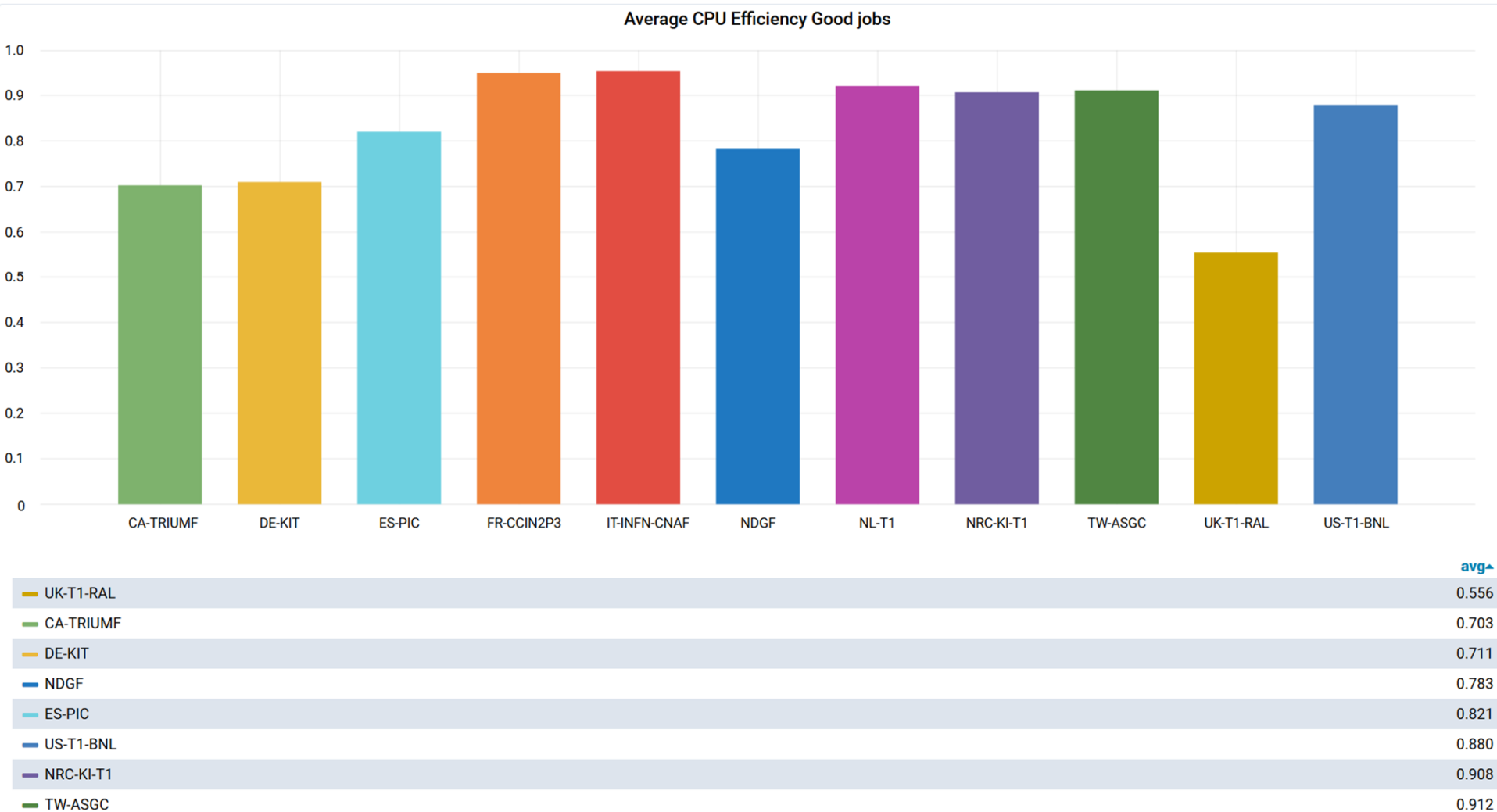
# ATLAS Tier-1s CPU use

**Slots of running jobs (HEPSPEC06)**



| | min | max | avg | total |
|---|---|---|---|---|
| ▬ Pledges | 1.084 Mil | 1.084 Mil | 1.084 Mil | 399.863 Mil |
| ▬ CA-TRIUMF | 205 K | 255 K | 238 K | 22.169 Mil |
| ▬ US-T1-BNL | 83 K | 282 K | 234 K | 21.741 Mil |
| ▬ FR-CCIN2P3 | 26 K | 227 K | 166 K | 15.463 Mil |
| ▬ DE-KIT | 79 K | 152 K | 128 K | 11.948 Mil |
| ▬ UK-T1-RAL | 76 K | 143 K | 110 K | 10.260 Mil |
| ▬ NL-T1 | 37 K | 128 K | 81 K | 7.511 Mil |
| ▬ NDGF | 20 K | 168 K | 80 K | 7.481 Mil |

# ATLAS Tier-1s CPU efficiency



**Average CPU Efficiency Good jobs**

| | avg▲ |
|---|---|
| — UK-T1-RAL | 0.556 |
| — CA-TRIUMF | 0.703 |
| — DE-KIT | 0.711 |
| — NDGF | 0.783 |
| — ES-PIC | 0.821 |
| — US-T1-BNL | 0.880 |
| — NRC-KI-T1 | 0.908 |
| — TW-ASGC | 0.912 |

ATLAS haven't traditionally worried about efficiencies, since different sites have quite different definitions. Still, 56% doesn't look good.

# RAL Tier-1 ATLAS CPU efficiency

CPU Efficiency: Good jobs

We have been investigating a problem where some worker nodes have can get stuck staging in files. This would likely affect MC reco jobs worst.
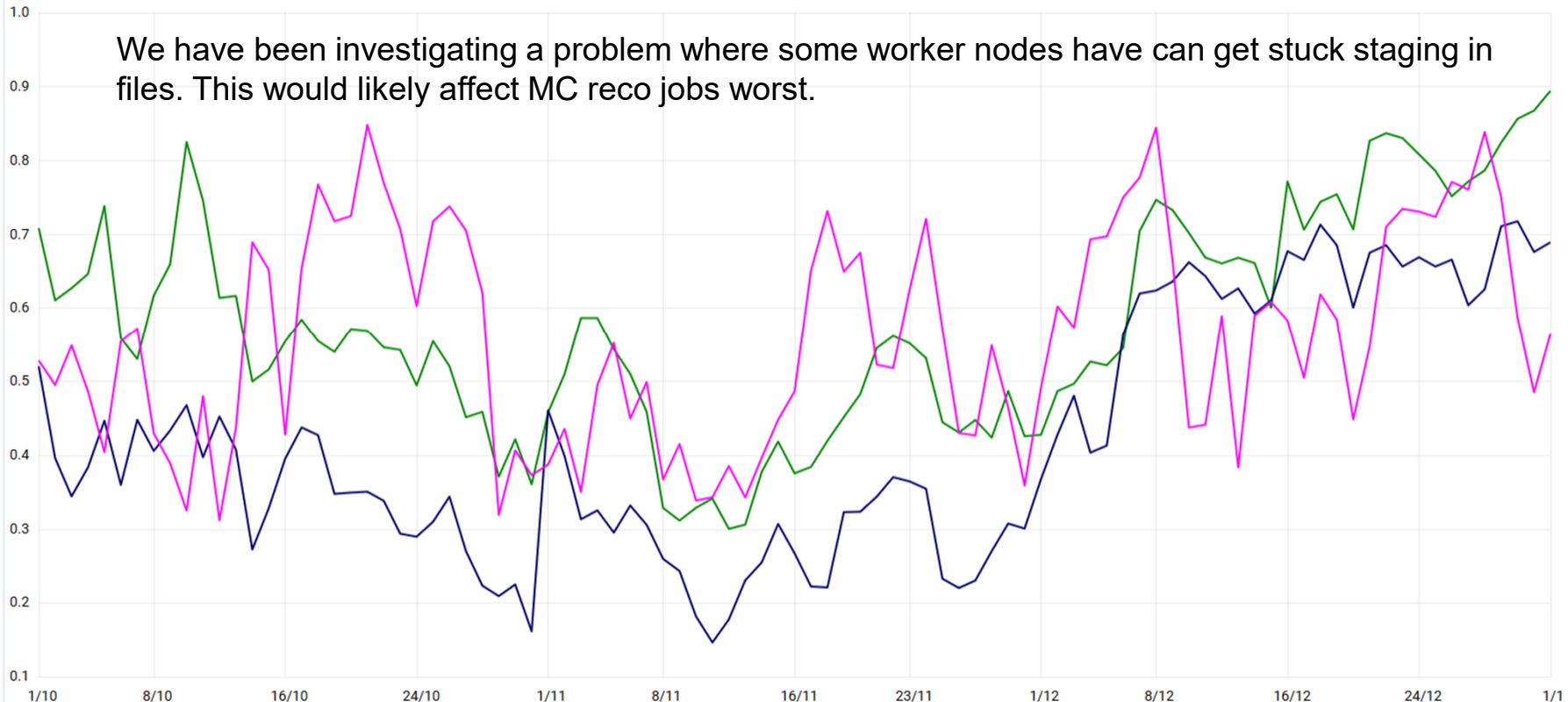


| | | min | max | current |
|---|---|---|---|---|
| ▬ Data Processing | | 0 | 0.912 | 0 |
| ▬ Group Analysis | | 0.211 | 0.968 | 0.849 |
| ▬ Group Production | | 0.301 | 0.894 | 0.894 |
| ▬ MC Event Generation | | 0 | 1.882 | 0.989 |
| ▬ MC Reconstruction | | 0.147 | 0.718 | 0.689 |
| ▬ MC Simulation | | 0 | 0.547 | 0.523 |
| ▬ MC Simulation Fast | | 0 | 0.992 | 0.917 |
| ▬ MC Simulation Full | | 0 | 0.979 | 0.978 |
| ▬ Others | | 0 | 0.765 | 0.283 |
| ▬ Testing | | 0.155 | 0.781 | 0.691 |
| ▬ User Analysis | | 0.312 | 0.848 | 0.565 |

# RAL Disk usage
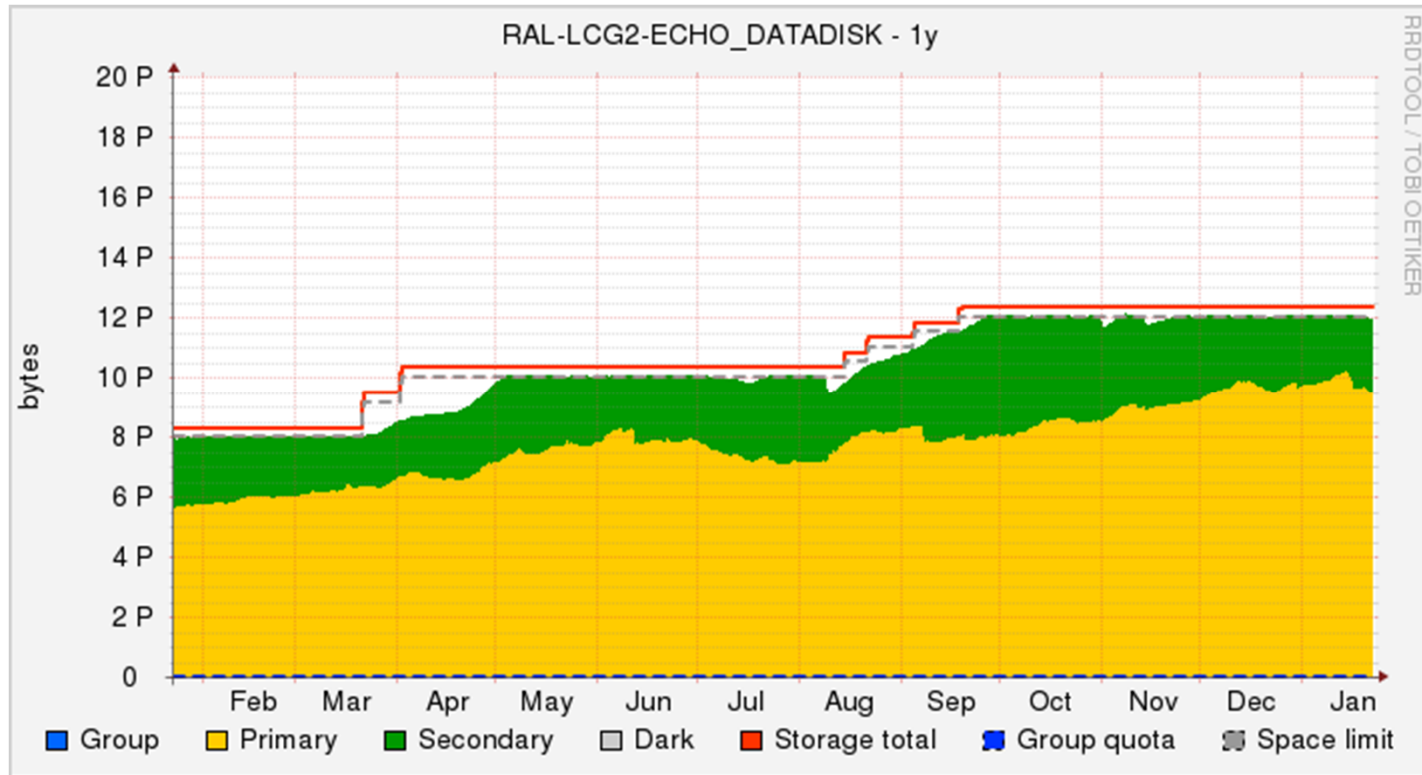


RAL Echo quota increased on request in Aug/Sep to provide 2020 quota early.

# RAL tape usage
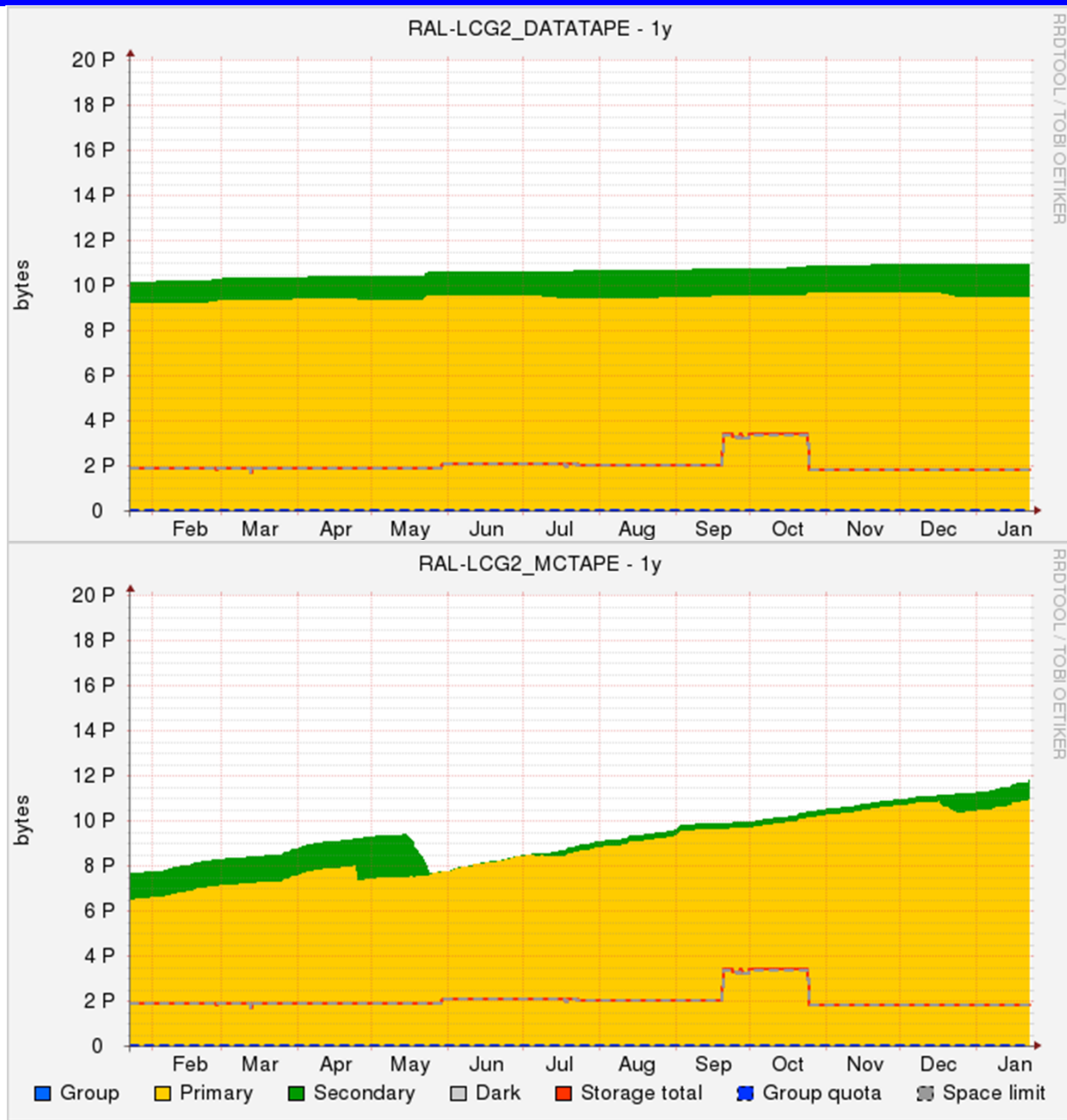


SRM quotas don't seem to be used for RAL tape.
No problem, as we are still well below our allocation.
We should keep an eye on this.