

LHCb 2019Q4 sign-off

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LHCb 2019Q4 sign off: summary

- An essential part of LHCb computing activities
 - Archival storage on tape
 - Disk storage to support analysis and data processing jobs
 - Providing bulk CPU for Monte Carlo
- Problems with user analysis jobs and xrootd on worker nodes have been a continuing problem though
- Overall picture continues to be very good and LHCb congratulates the Tier-1 team

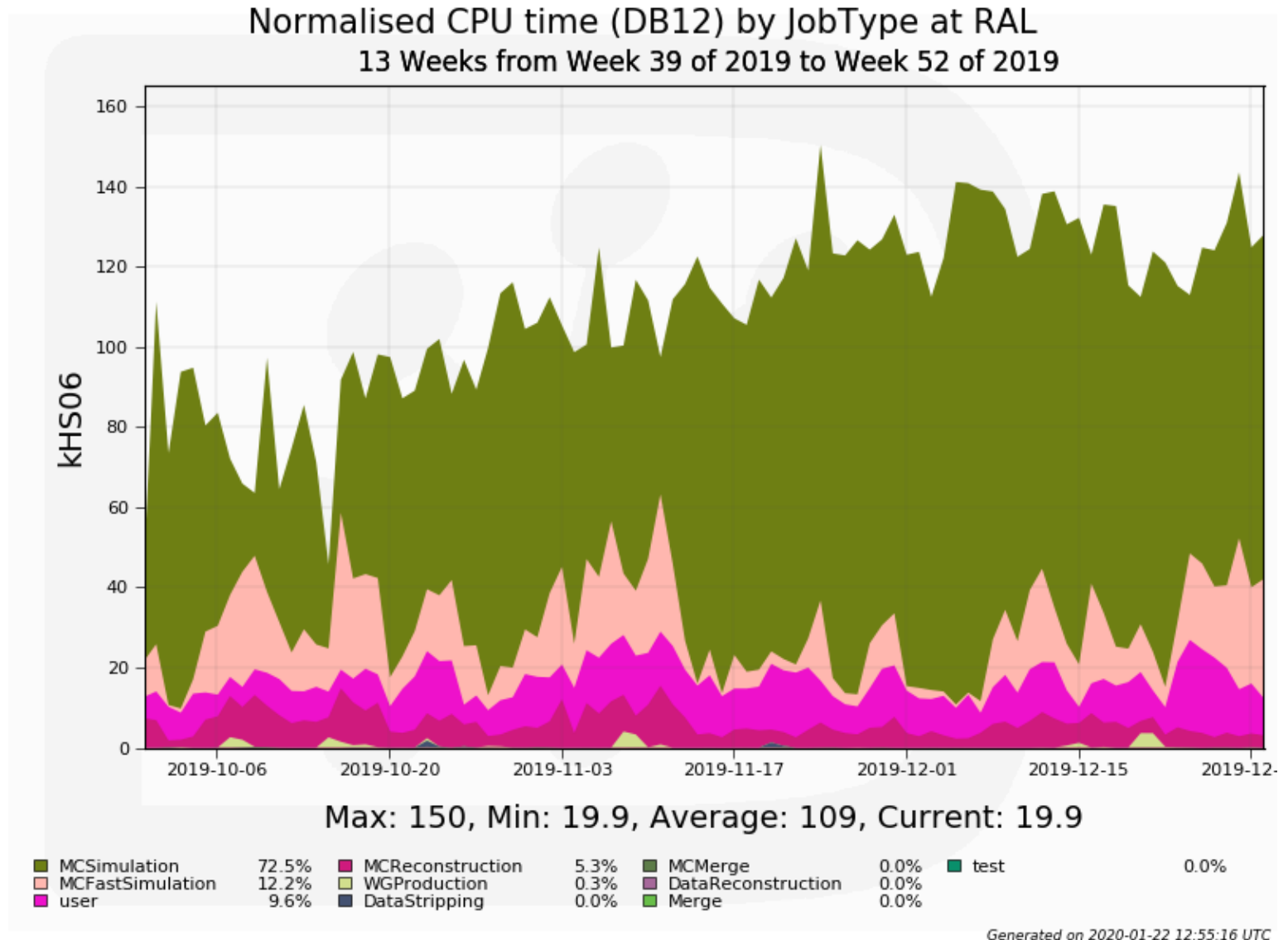
CPU accounting

- LHCb uses DB12 benchmark for internal monitoring
 - Measured by pilot at the start of each job
- For comparing with pledges, we use the EGI APEL accounting
 - ie the same plots as in Alastair's earlier talk
 - So not repeated here
 - **The RAL Tier-1 is providing its share as expected**

LHCb CPU usage at RAL Tier-1

Not really
KHS06: CPU
power based
on DB12
benchmark in
DIRAC pilots

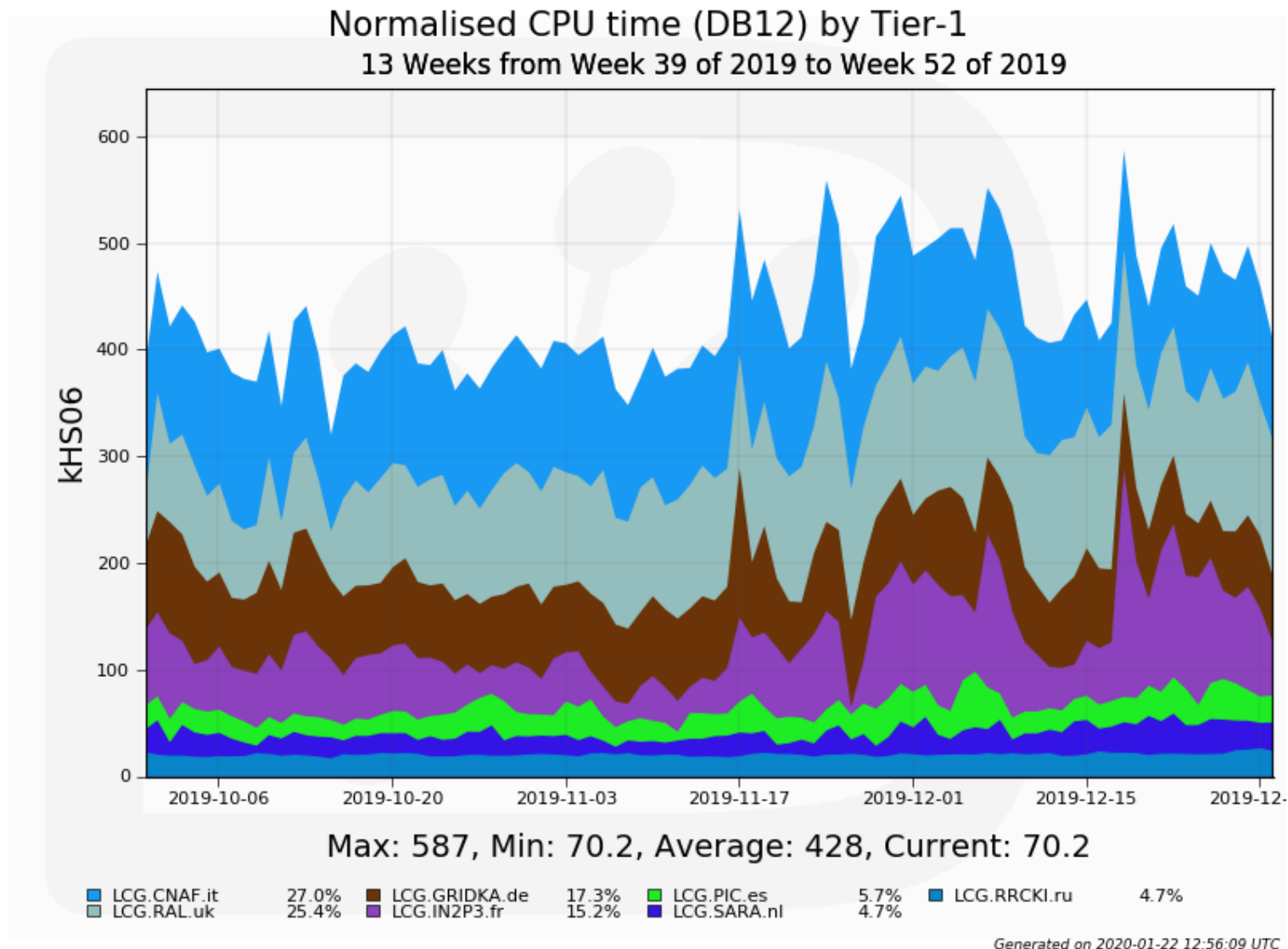
As usual,
LHCb mostly
runs Monte
Carlo
simulation at
all types of
site



LHCb CPU usage at Tier-1 sites

Not really
kHS06: CPU
power based
on DB12
benchmark in
DIRAC pilots

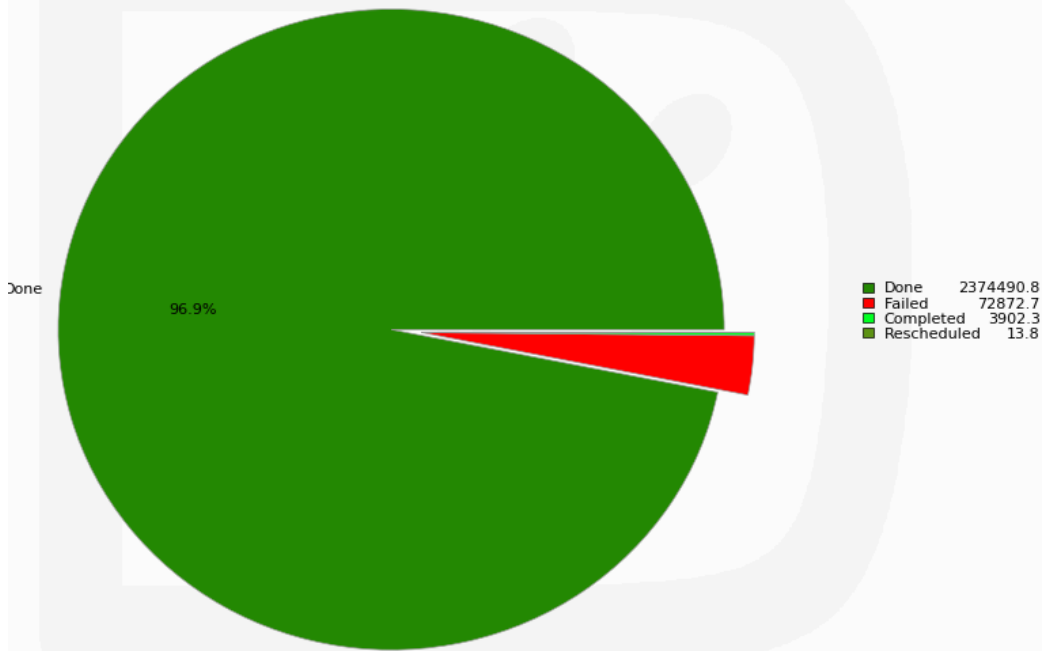
RAL Tier-1 in
line with
other Tier-1s



LHCb job outcomes

Job outcomes (all Tier-1s)

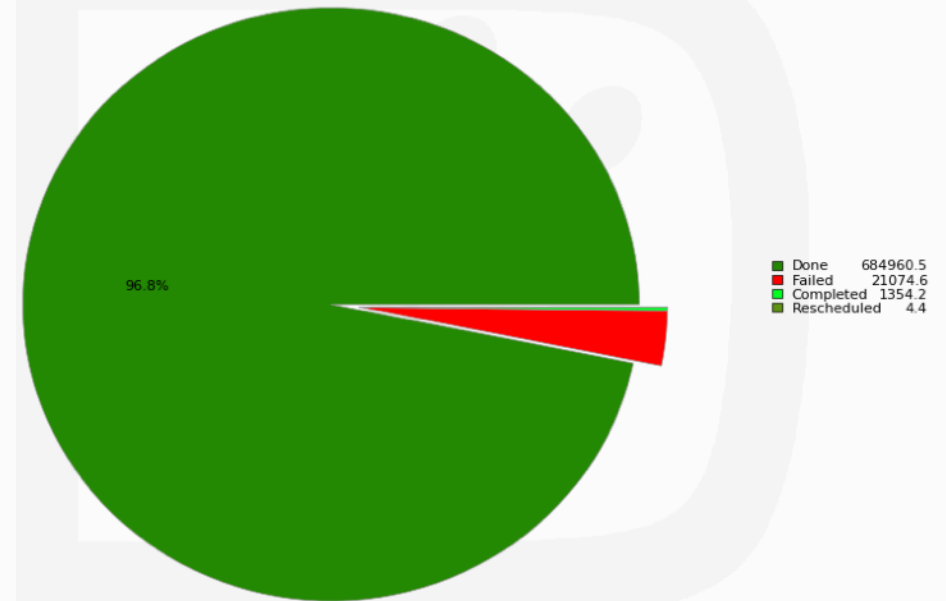
13 Weeks from Week 39 of 2019 to Week 52 of 2019



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Job outcomes (RAL)

13 Weeks from Week 39 of 2019 to Week 52 of 2019



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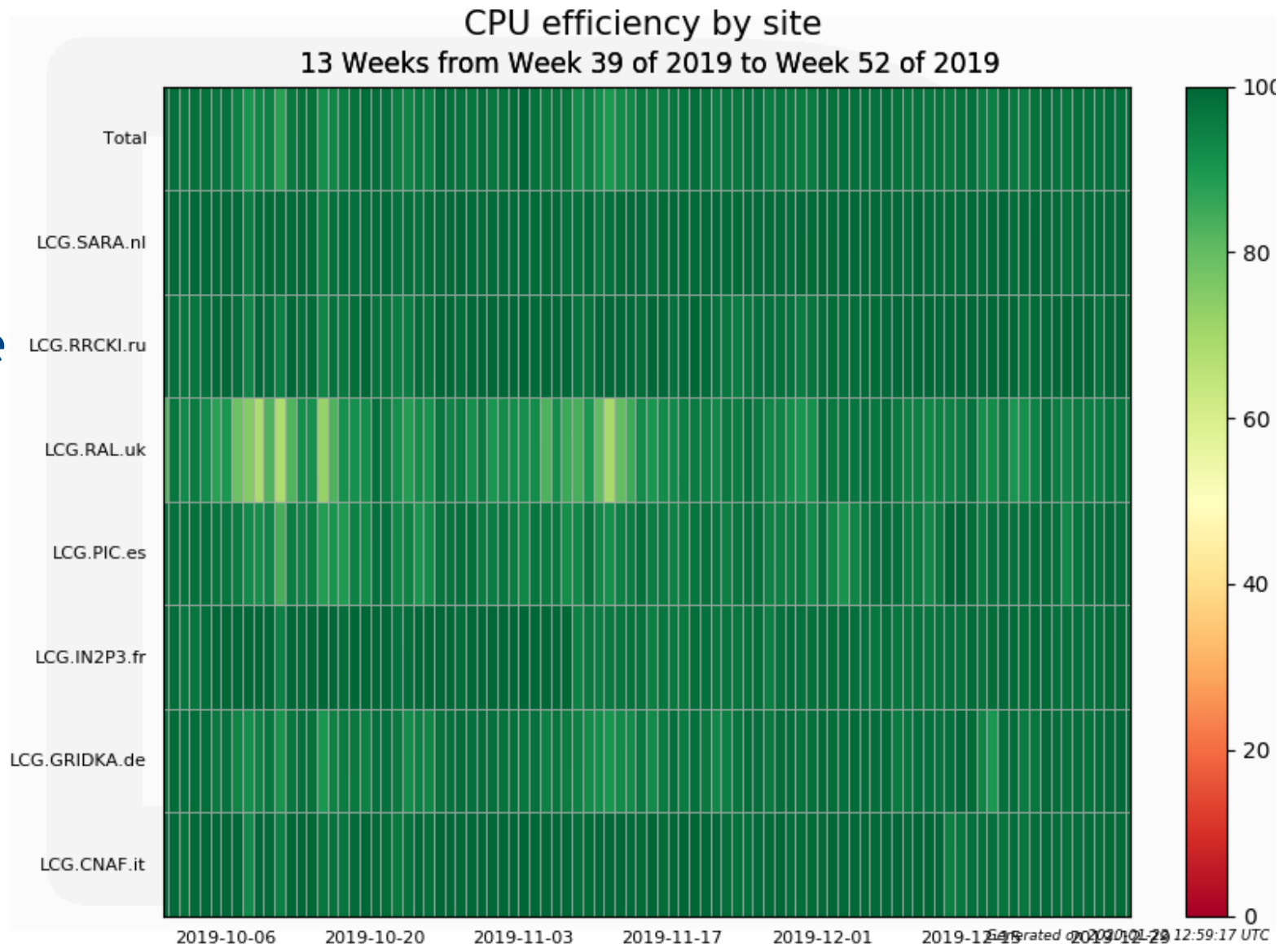
Overall job outcomes (failures etc) at RAL is in line with other sites

LHCb job CPU efficiency

CPU seconds
per second

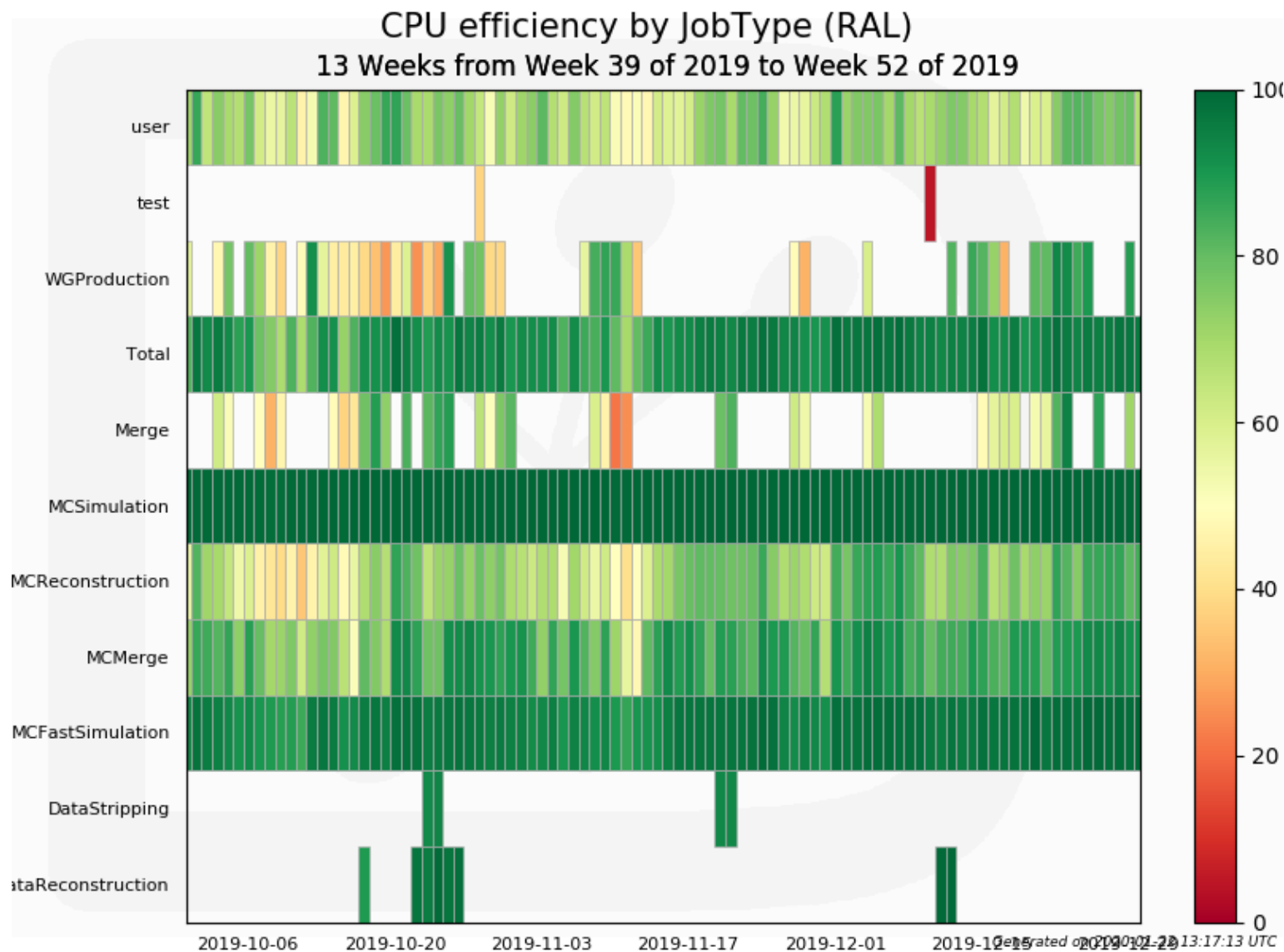
This is for the
payload jobs
and ignores
the pilot
overhead

RAL is a bit
worse than
the other
Tier-1s



LHCb job CPU efficiency at RAL

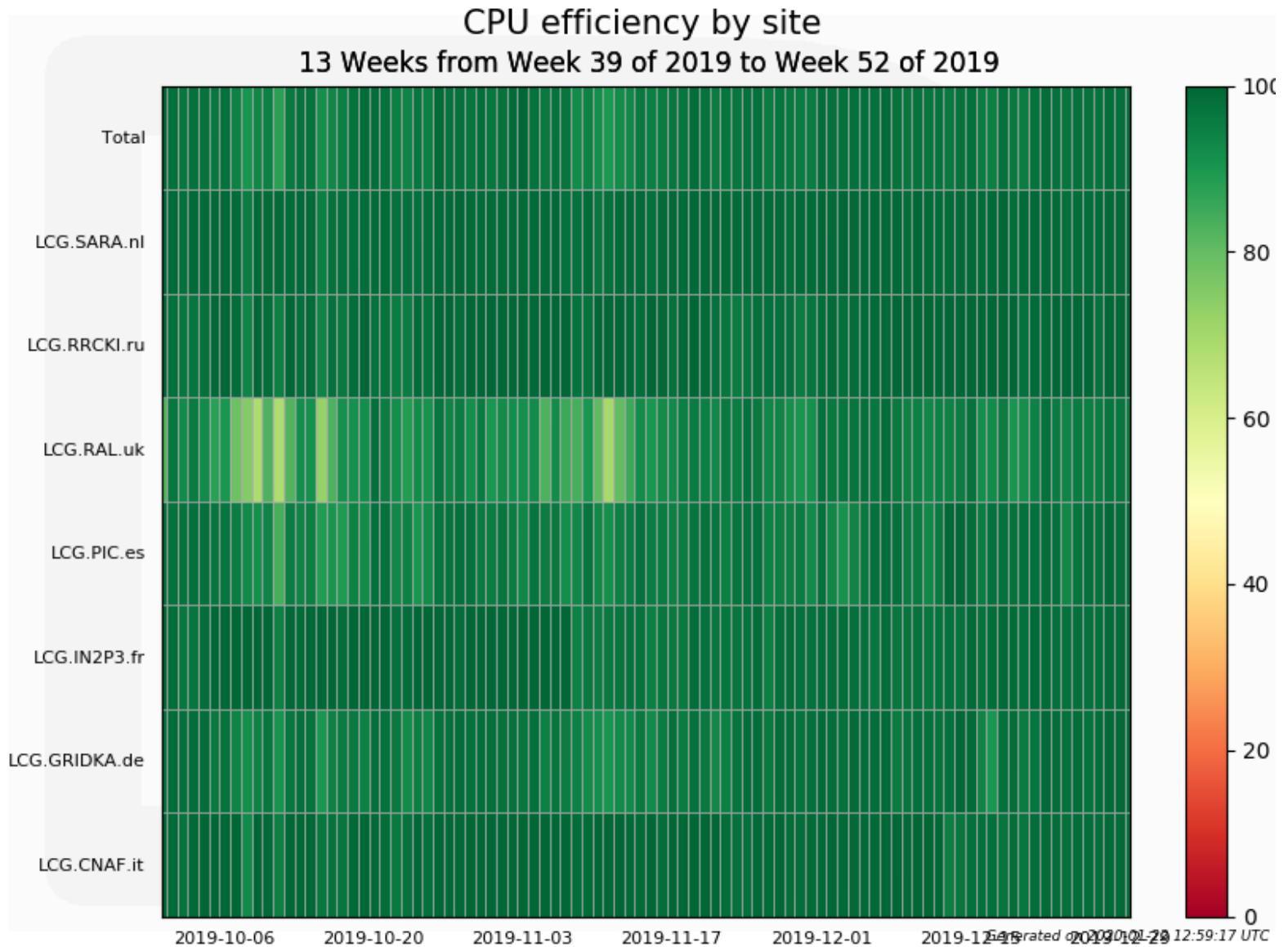
Simulation is the best and user jobs are the worst



LHCb job CPU efficiency: sim

CPU efficiency just for simulation jobs

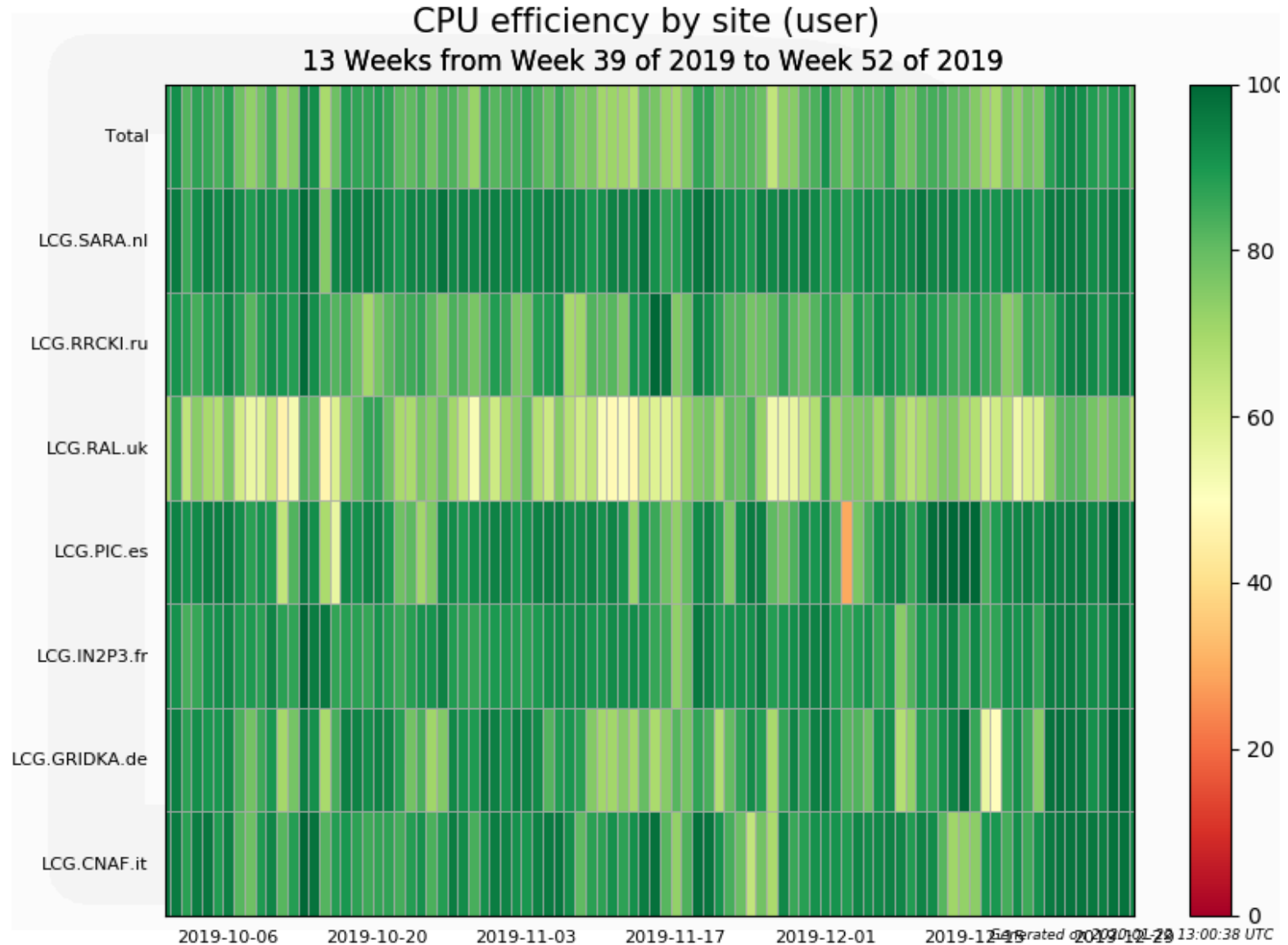
RAL still the worst but about the same as other sites by quarter end



LHCb job CPU efficiency: user

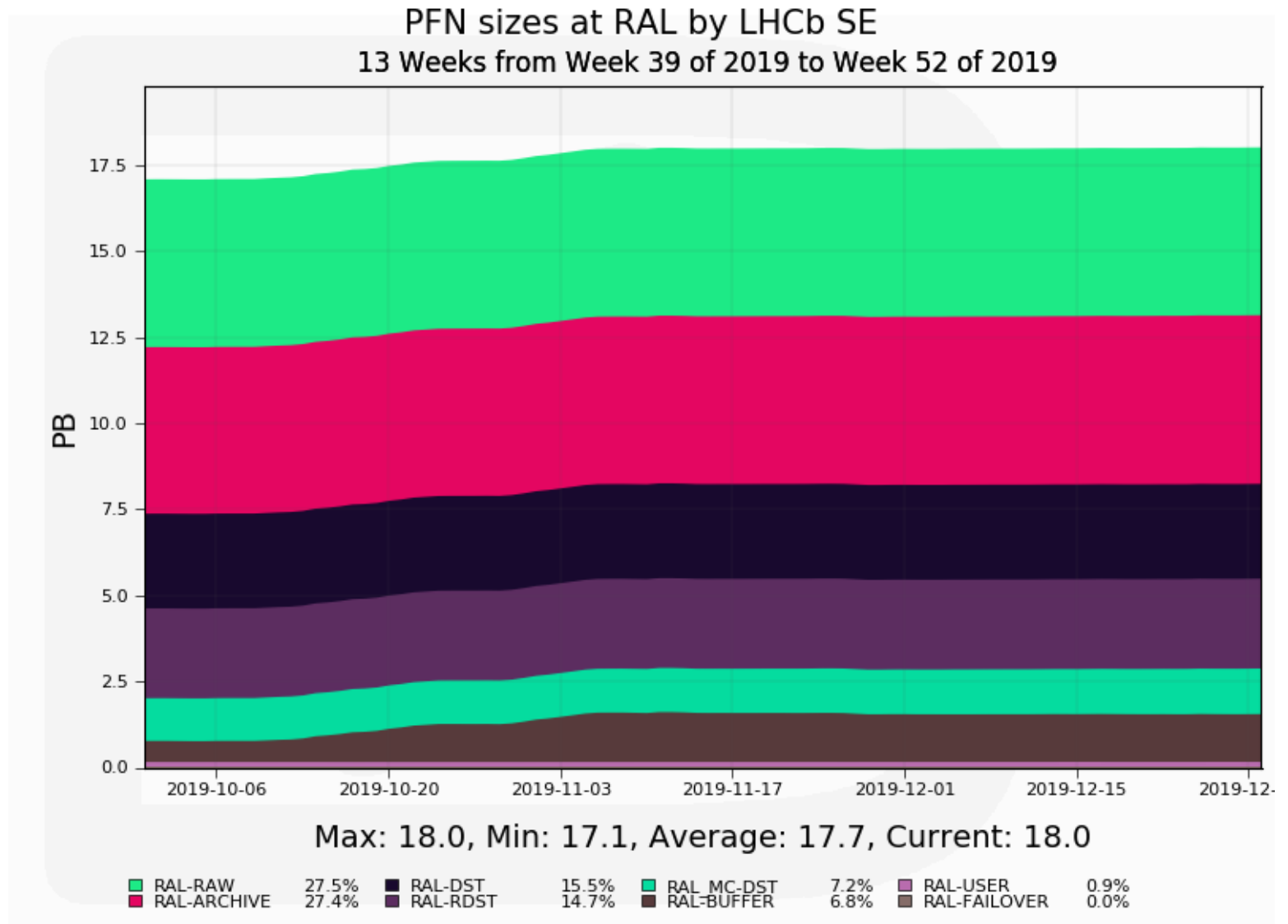
CPU efficiency just for user jobs

RAL significantly worse than other sites



LHCb storage usage

Size of physical files managed by DIRAC at RAL



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