ALICE summary 2012 Offline

LHCC
4/12/2012

Data taking
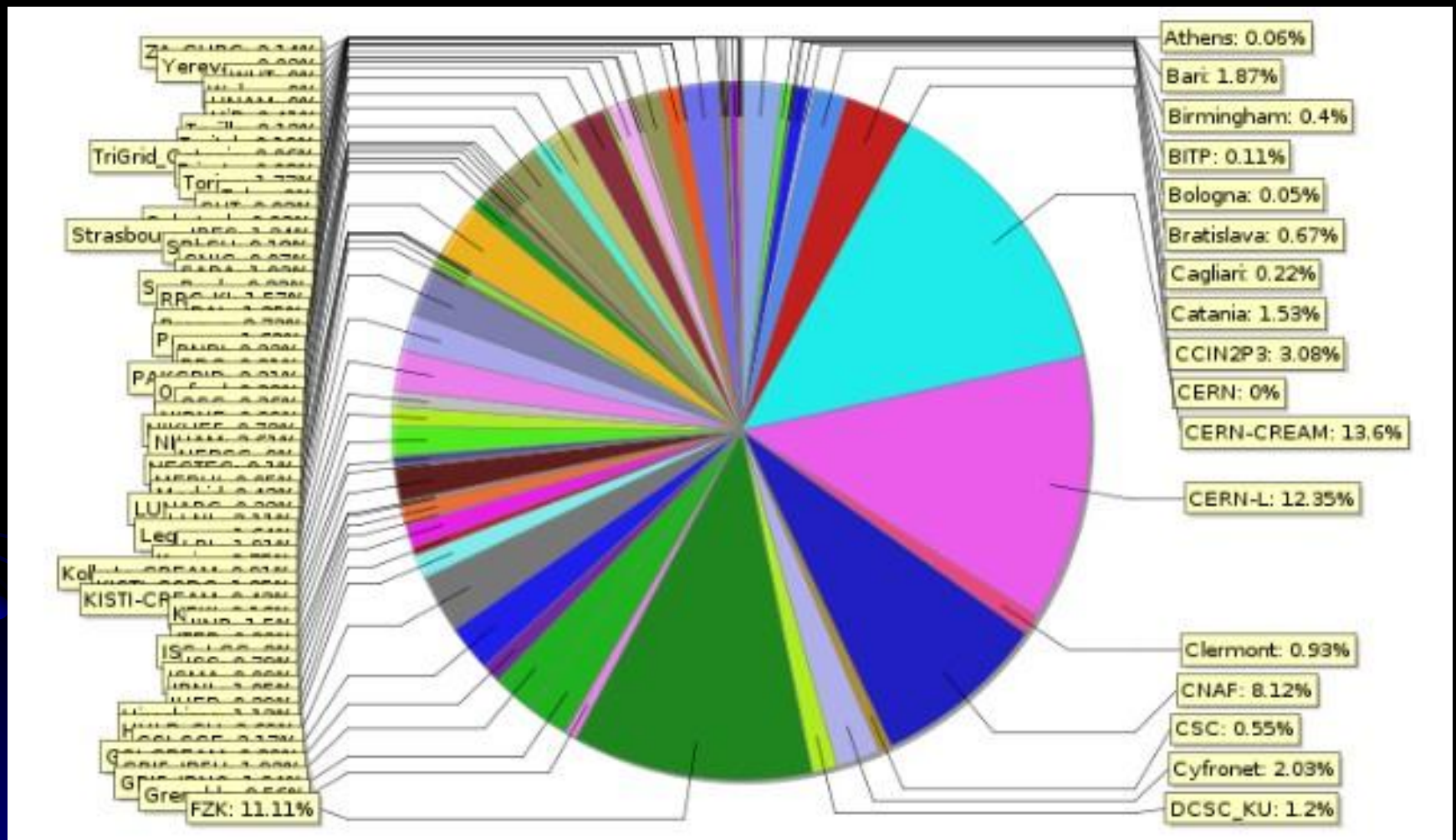

Total size of the files

1.3PB of RAW data
2 replicas: 1 copy @T0, distributed copy @T1

Legend: aldaqpc030.cern.ch aldaqpc031.cern.ch
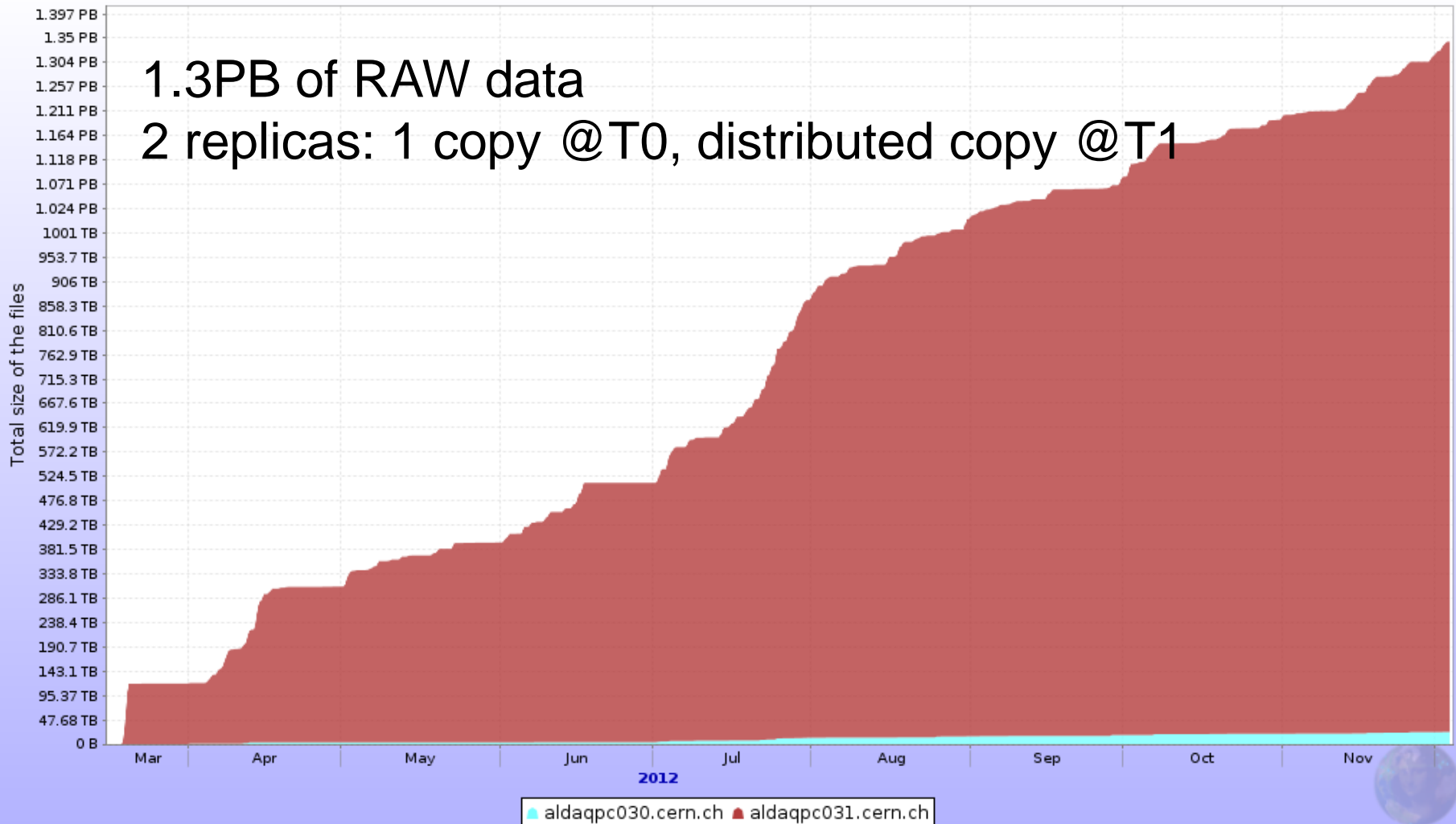
RAW activities

- p+p @8TeV
  - Data sample with enhanced high multiplicity and calorimeter triggers
- Pilot run p-Pb @5.02TeV in preparation for p-A period in February 2013
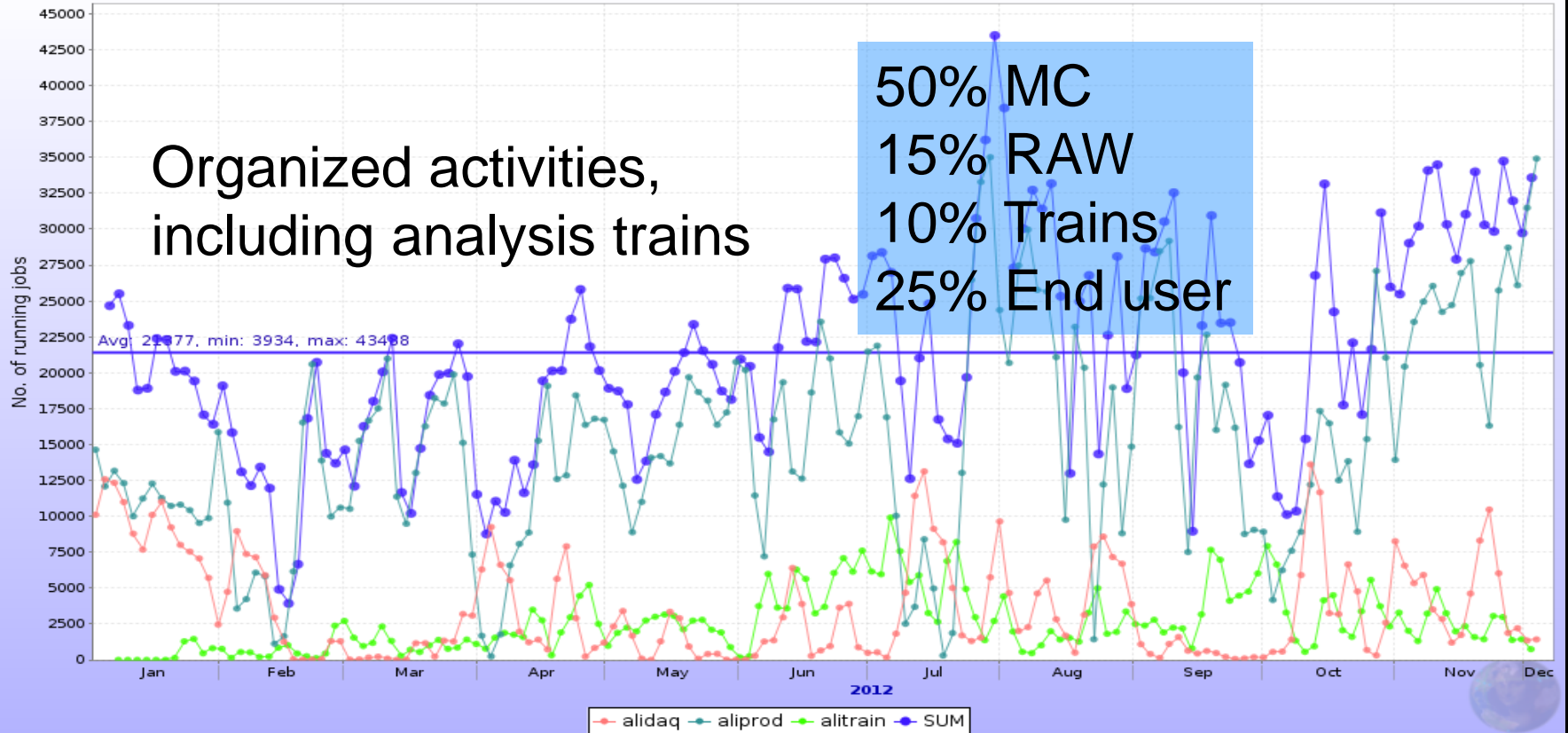 - 5Mio events cycles

2012 – site contribution

74 sites, ~240Mio CPU hours, ~50% T2 contribution

Productions

- RAW data in 2012
  - 90% calibrated (new offline calibration schema)
  - 65% reconstructed
  - Expected complete reconstruction by mid-Janyary 2013
  - p-A sample fully reconstructed (several passes) and analyzed
- MC in 2012
  - Several large samples for 2011 Pb-Pb data
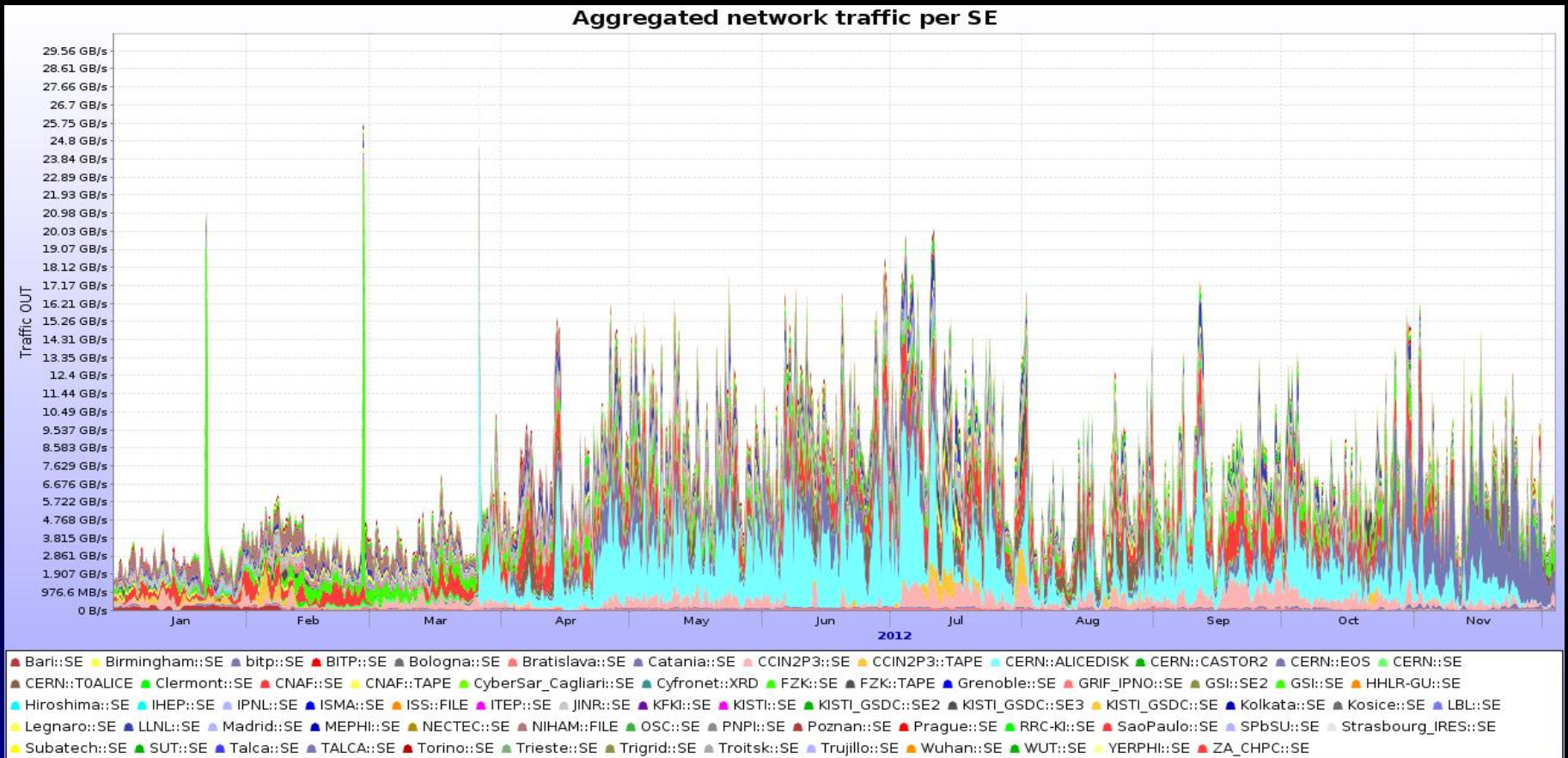 - In total 101 different production cycles ~20% of the RAW data events

Workload

Running jobs per user

Organized activities, including analysis trains

50% MC
15% RAW
10% Trains
25% End user

Avg: 21377, min: 3934, max: 43488

— alidaq —•— aliprod —•— alitrain —•— SUM

Avg: 7892, min: 2350, max: 14377

End-user

Data access in analysis

- Average 8.6 GB/s, total read 212PB


Aggregated network traffic per SE

Interactive analysis support

- 3 common PROOF-enabled analysis facilities
  - CAF (CERN) – 300 cores, 160TB
  - KIAF (KISTI, Korea) – 350 cores, 200TB
  - SKAF (Kosice, Slovakia) – 30 cores, 50TB
- 3 local PROOF-enabled analysis facilities
  - LAF (CCIN2P3, Lyon), SAF (Subatech, Nantes), JRAF (JINR, Dubna)
- Used for interactive analysis of limited data sets, tuning of cuts and analysis algorithms, fast RAW data reconstruction, calibration

CPU efficiency

• Gradual improvement – due to increase of trains share over end-user analysis, analysis tools quality, data buffering

Oct

November – average 86%
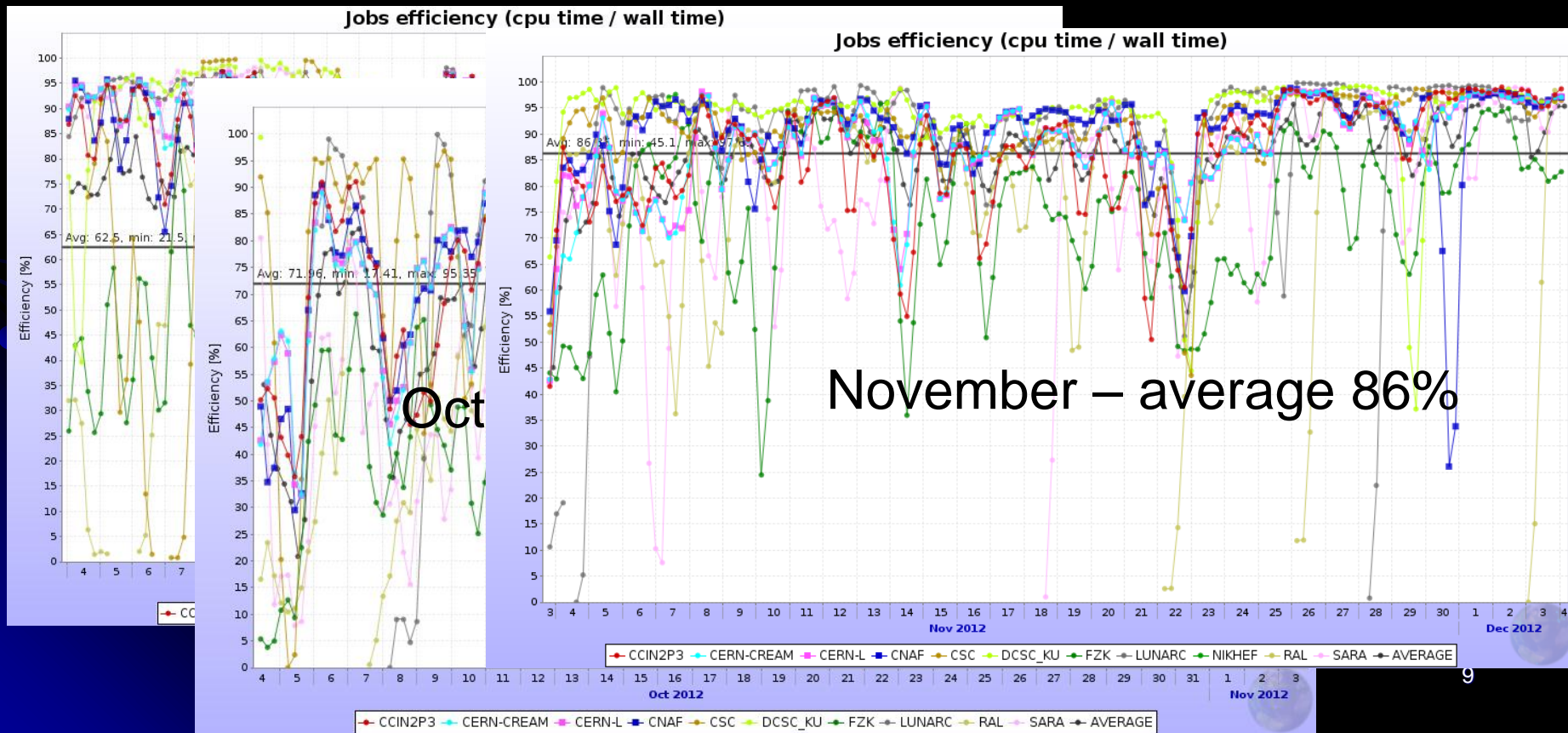
Storage status

- Several data cleanup cycles in 2012
  - Reduction of replicas for old and rarely accessed data, move to tape if feasible
- Reduce ESD replicas overall – move to AODs for all types of analysis
- Disk and tapes storage is sufficient for reconstruction, MC and analysis of 2012 data, including p-A sample
- Further cleanup and new strategies will be exploited during LS1

Site performances

• In general – mature and stable site fabric and support

• Very good performance of T0/T1/T2, both storage (tapes/disk) and CPU

• Network provision is excellent, LHCone is further diluting the 'Tier' boundaries

• **New in ALICE – soon a T1 in Korea (KISTI), good progress toward T1 in Mexico (UNAM)**