LHCC Referee Meeting

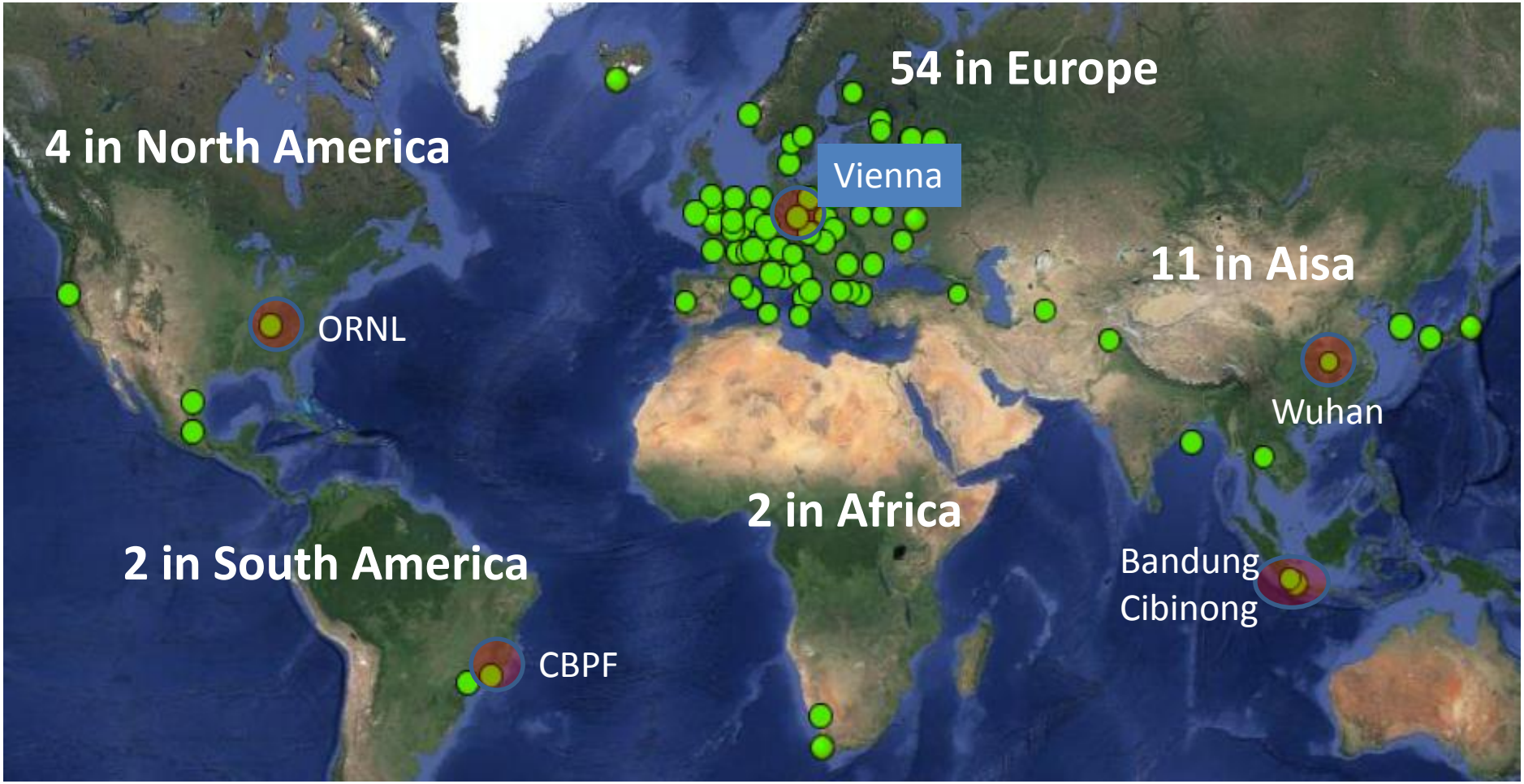
24/05/2015

ALICE Status Report

Predrag Buncic

CERN

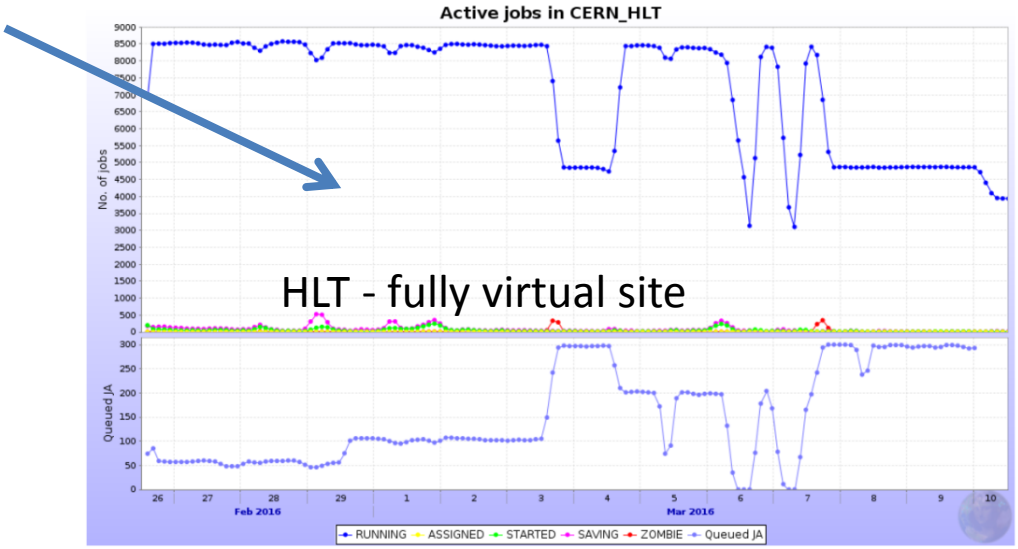
The ALICE Grid sites today



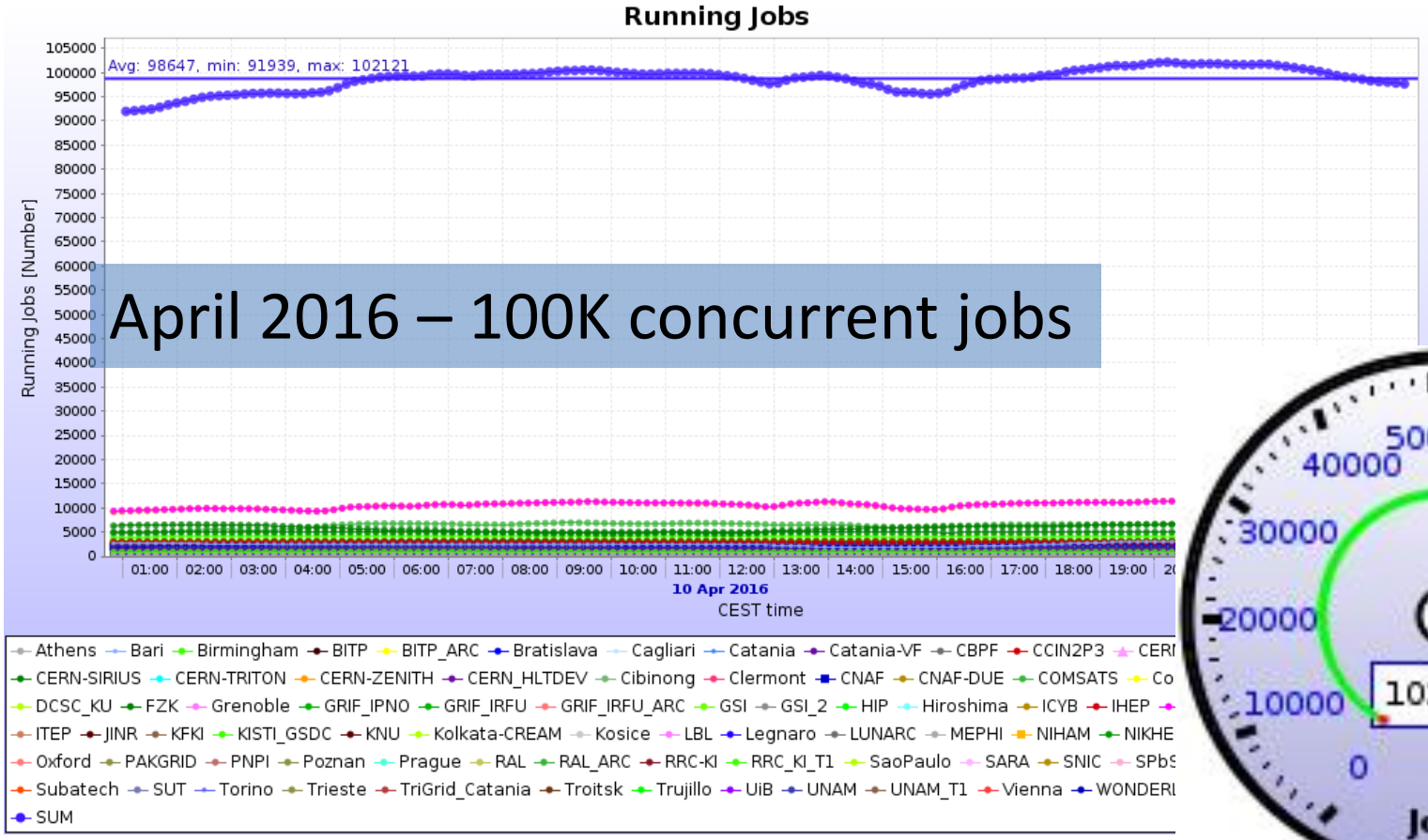
MoU signed with Azerbaijan, opening a door for possibly significant contribution to ALICE Grid

New sites

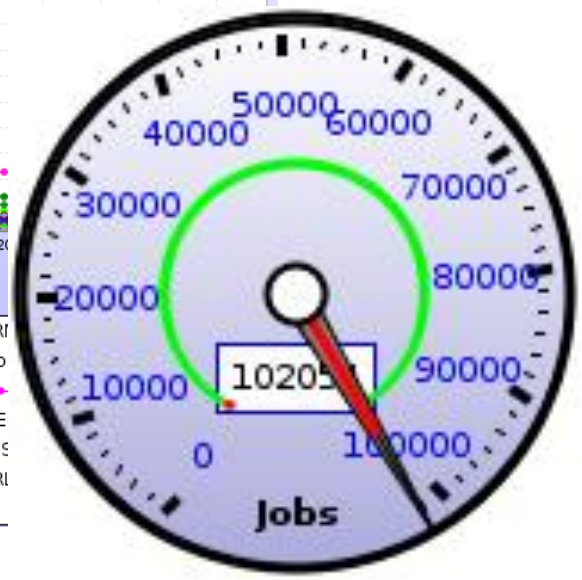
- ORNL – since August 2015 (replaces LLNL)
- Bandung and Cibinong – since August 2015
- CBPF – since December 2015
- Vienna – since April 2016
- Wuhan (back) – since September 2015
- ALICE HLT cluster



Current record



April 2016 – 100K concurrent jobs

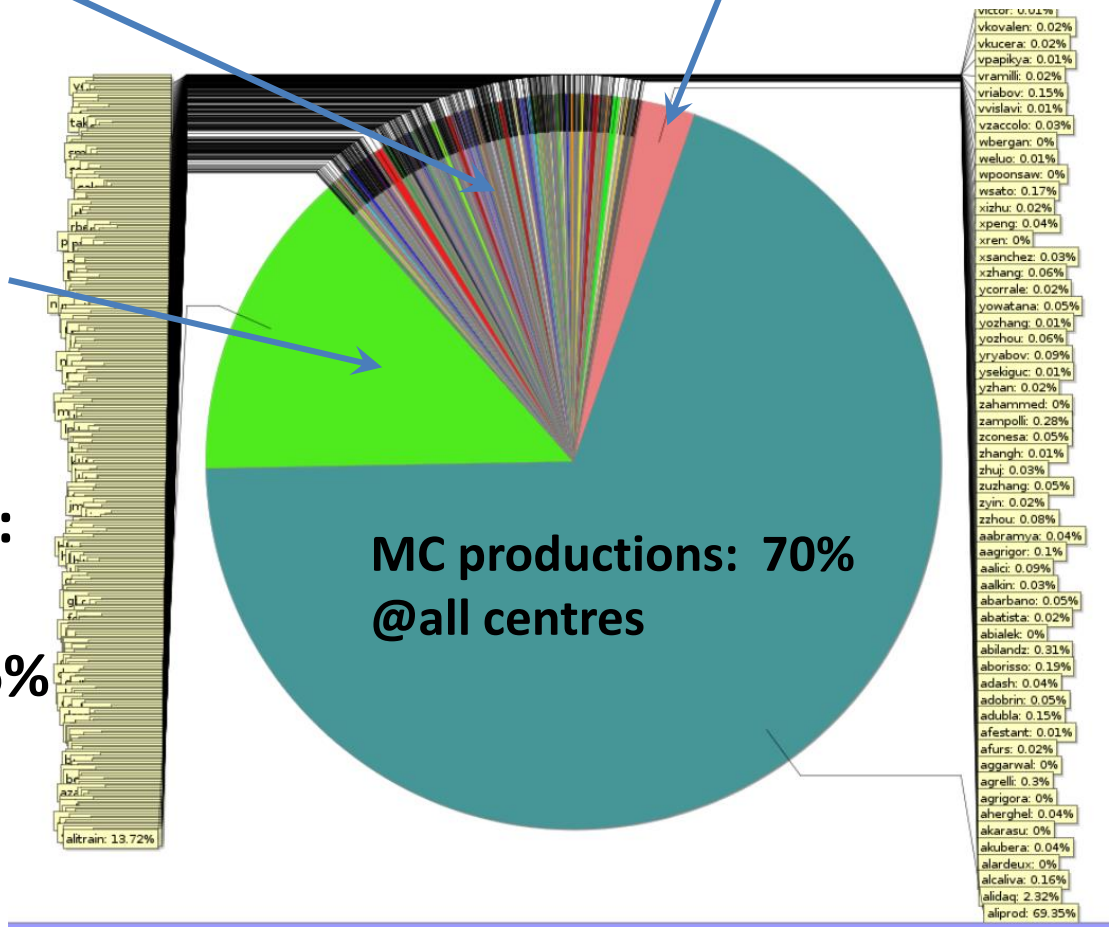


Wall time resources share 2016

Individual analysis: 6%
@all centres
460 users

RAW data processing: 9%
@ T0/T1s only

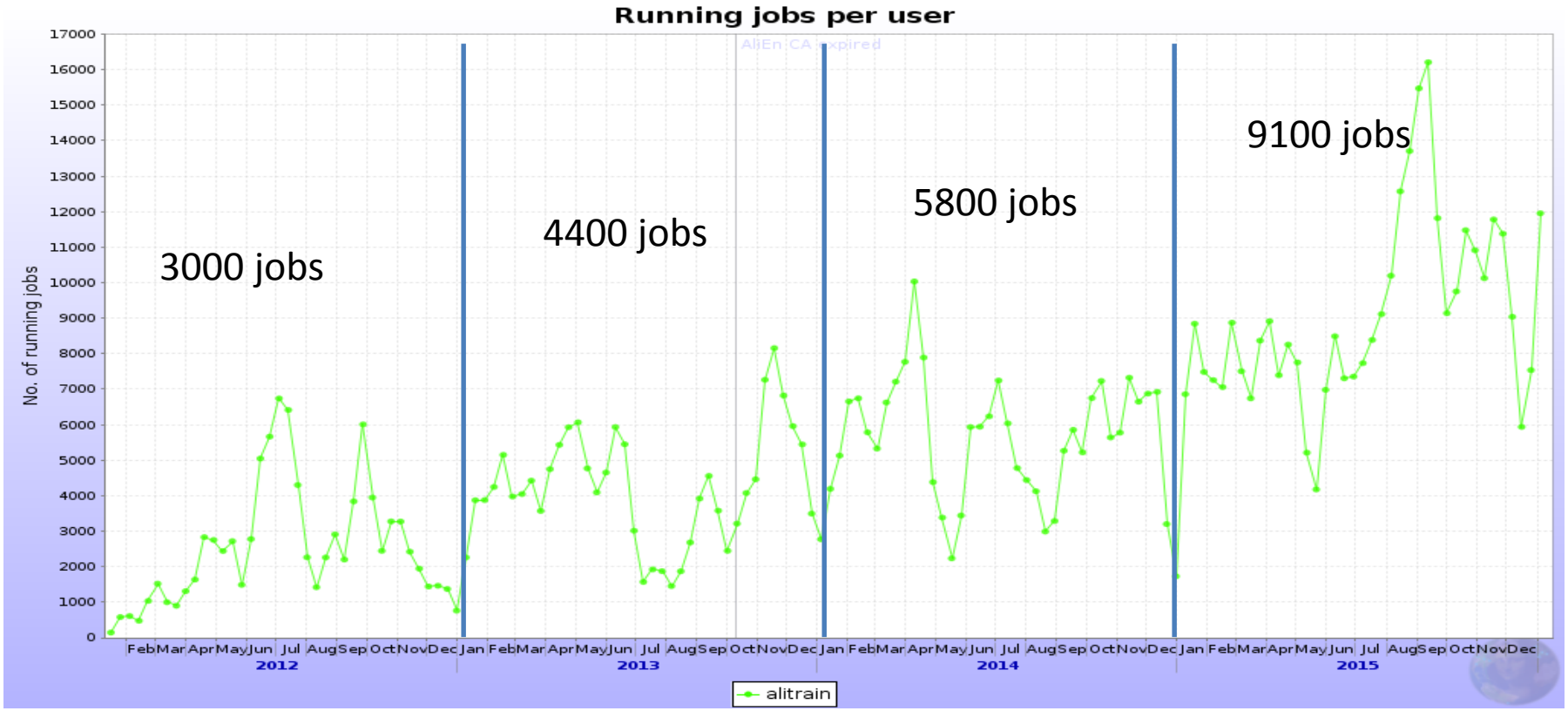
Organized analysis: 15%
@all centres



Share ~same as in 2015:

- **RAW 3->9%**
- **Ind.users-> 12->6%**

Organized analysis



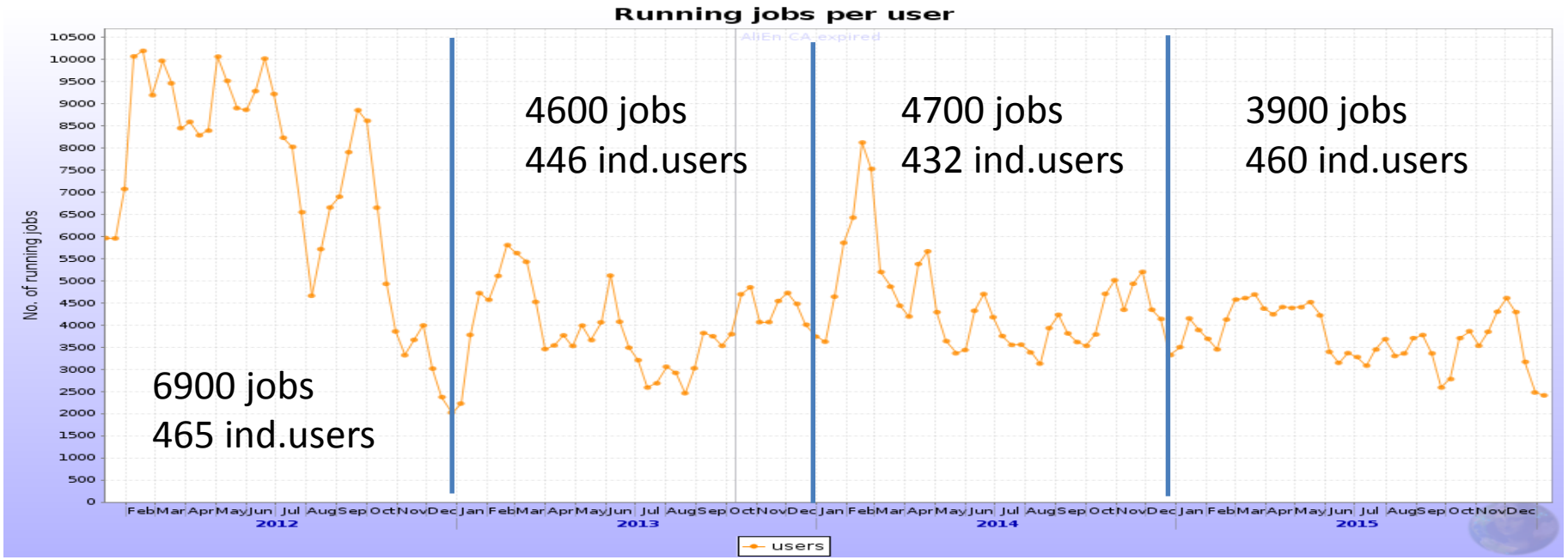
Year on year increase

+47%

+32%

+57%

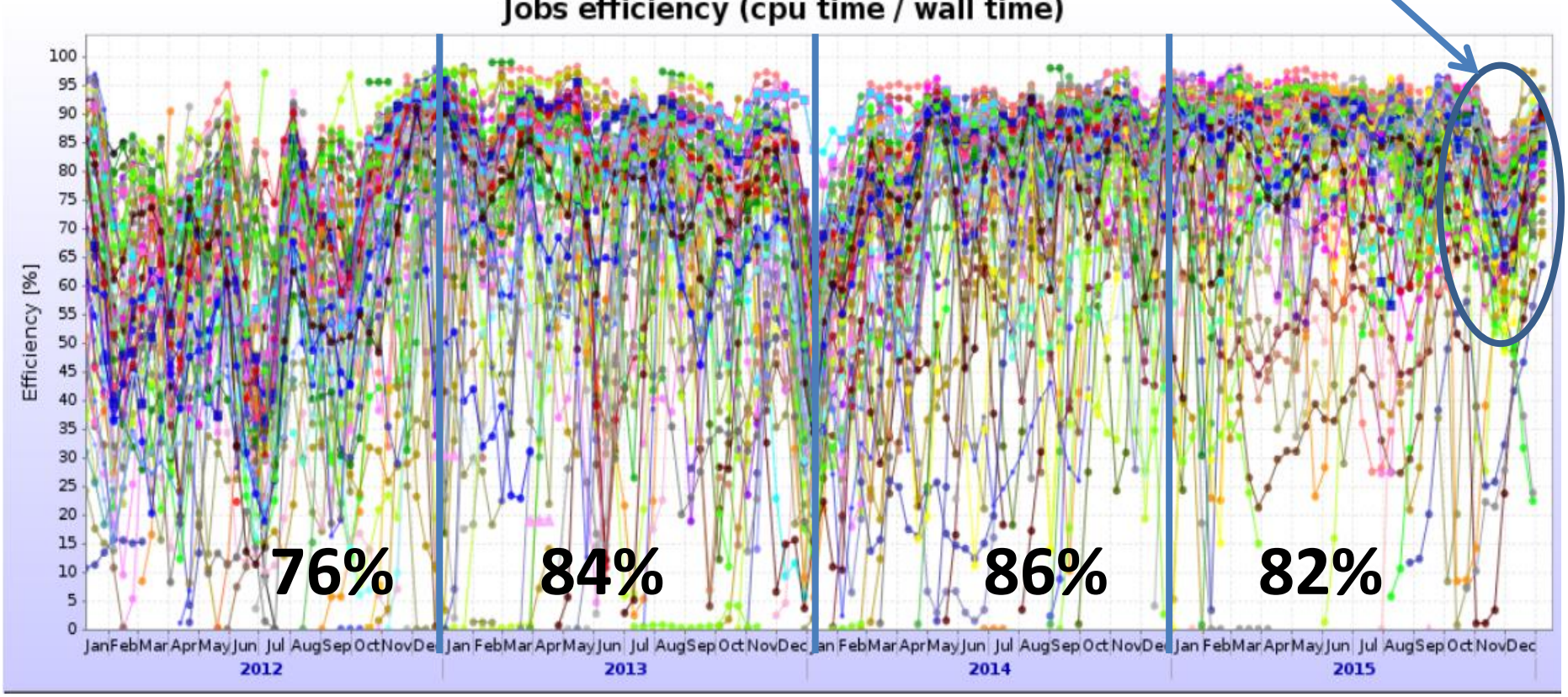
Individual analysis



Year on year increase Individual analysis	**-50%**	+3%	**-17%**
Year on year increase organized analysis	+47%	+32%	+57%

Grid efficiency

RAW calibration
Muon+calo reco



Year on year change

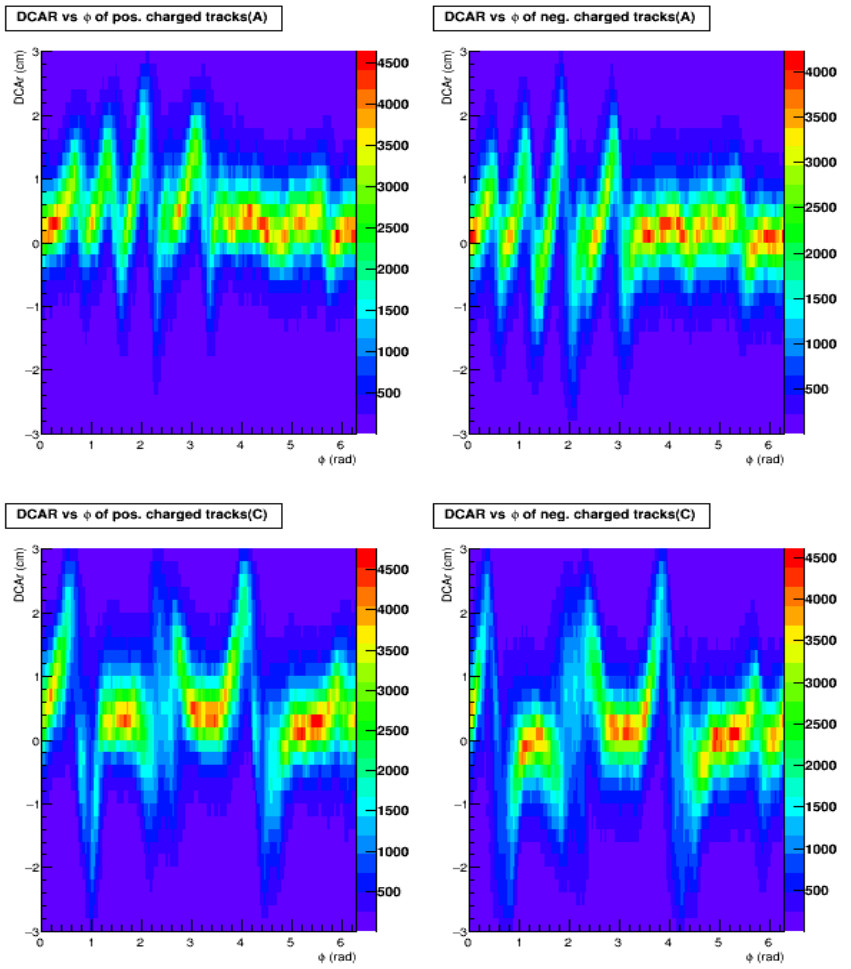
+8%

+2%

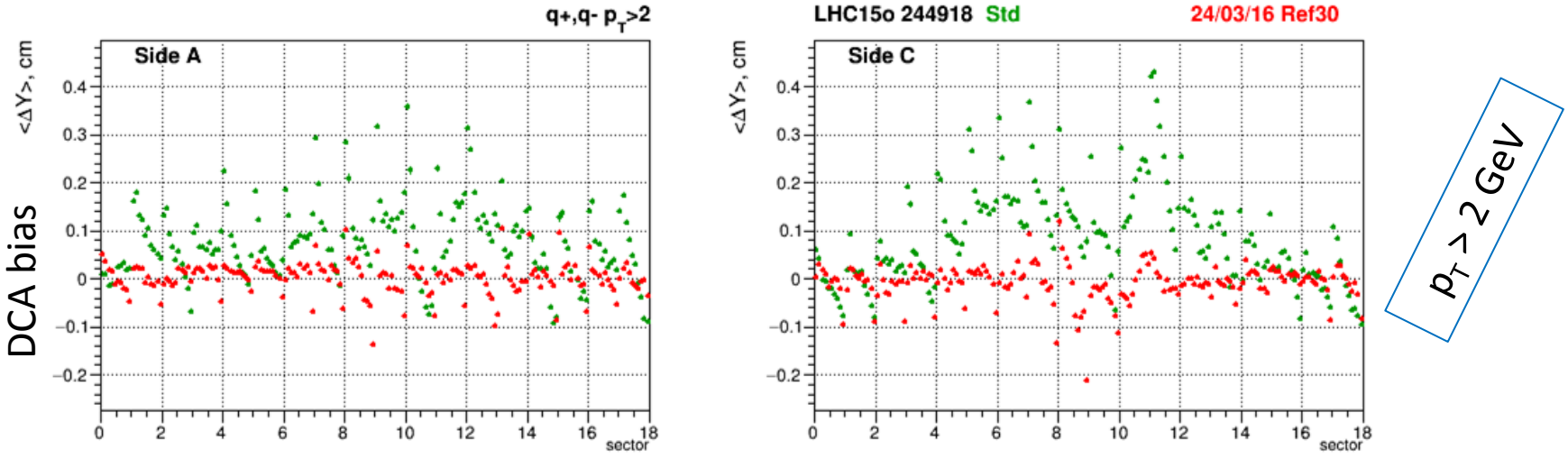
-4%

Status of 2015 data processing

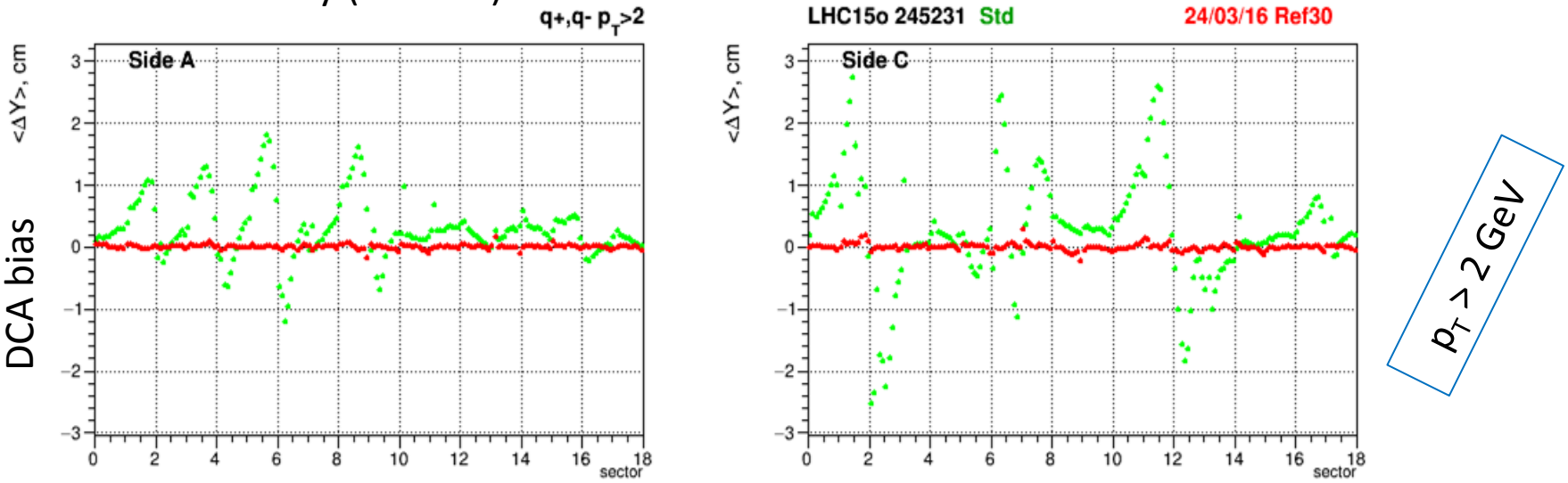
- Substantial IR-induced distortions in the TPC
  - Affect both p-p and Pb-Pb data
- Sophisticated correction algorithms development in the past 6 months
- Data reconstructed partially (first physics, lower IR runs)
  - Bulk of reconstruction still pending
- More details in today's meeting with referees:
  - https://indico.cern.ch/event/469079/



Use TPC track DCA to vertex as a figure of merit for reconstructed kinematics quality



Low-intensity (30Hz IR) LHC15o run 244918: **no SC related distortions**



Typical high-IR (5kHz) LHC15o run (245231)

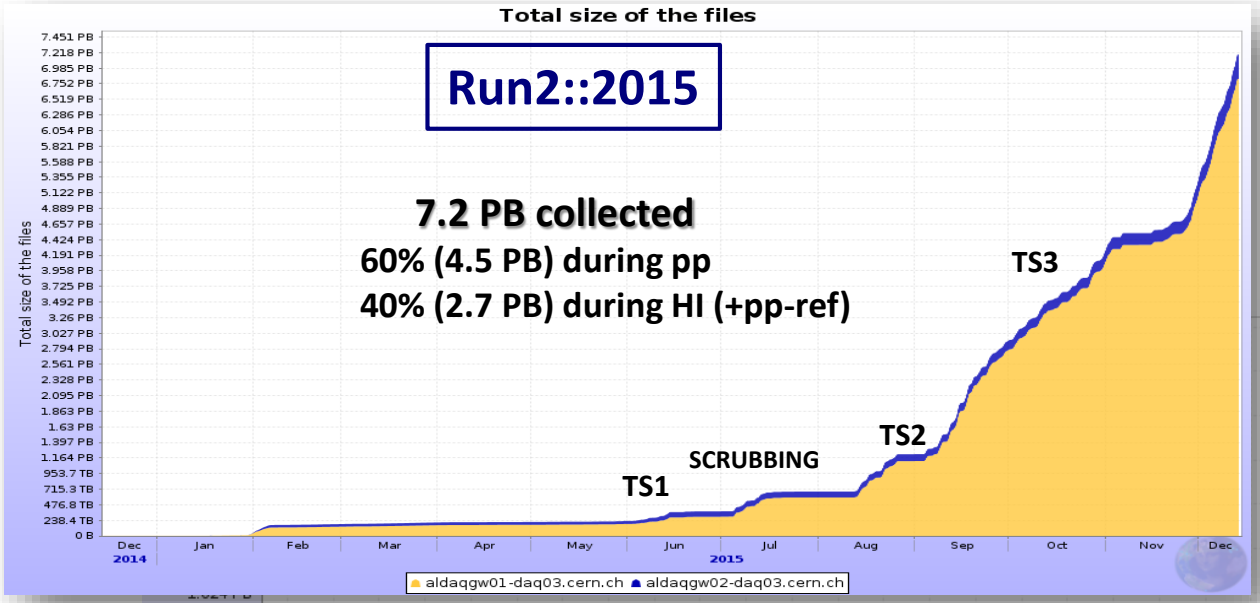
Reconstruction with **standard settings, old calibration (a la Run1)** and with distortions corrections

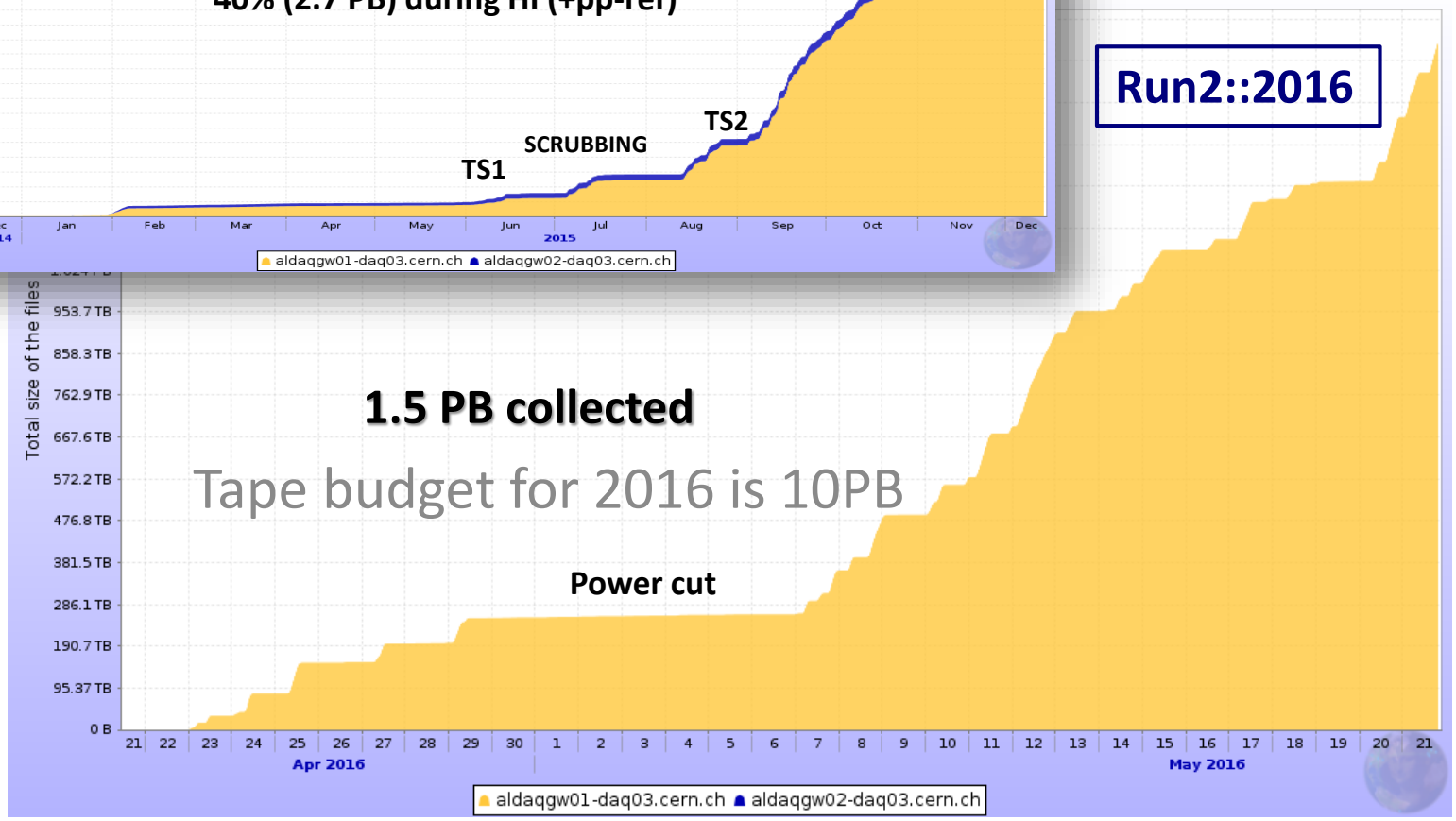
Production status

- Low IR (<500 Hz) data reprocessing (pass2) with new calibration procedure
  - Finished on May 15
  - Preliminary QA confirms improvement wrt pass1

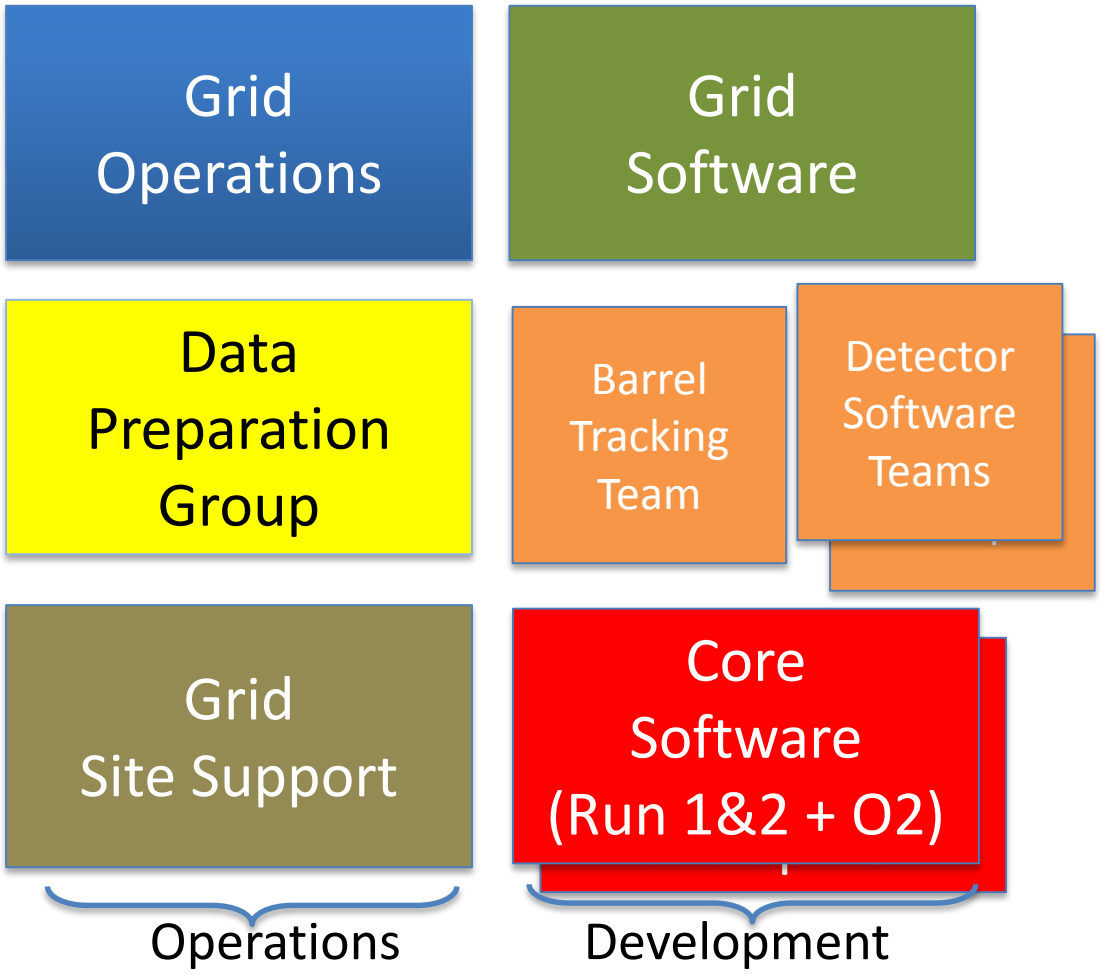
- High ID (<IR> ~ 5kHz) data first production
  - Started, currently at the stage of reconstruction for calibration
    (with rescaled default distortions correction to cover full range of distortions)

Status of 2016 data taking



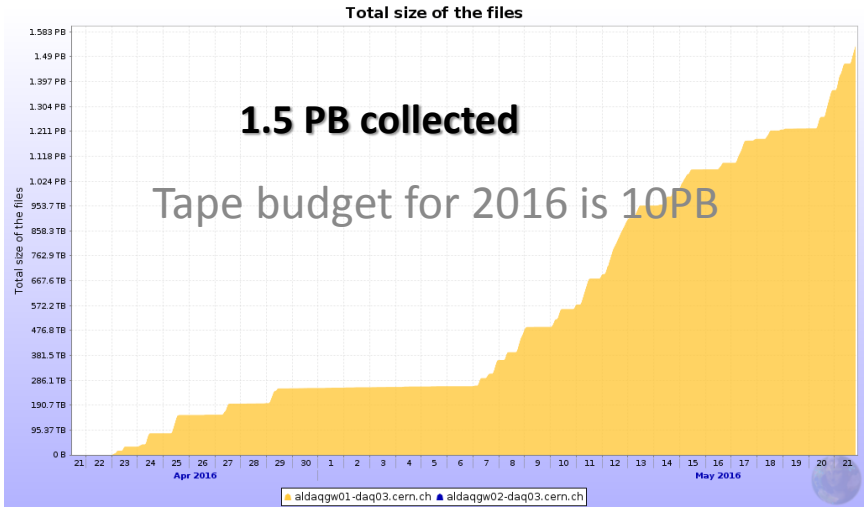


New organization of the ALICE Offline Project



ALICE Summary

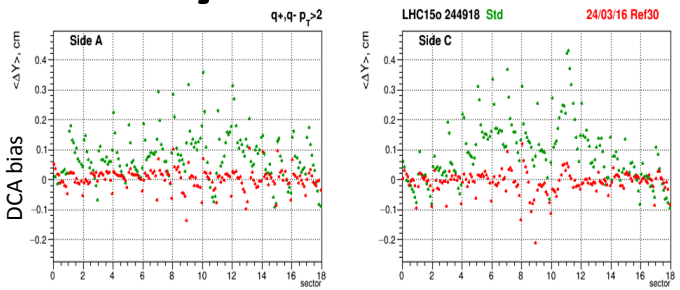
- ALICE Grid is still growing beyond 20% year on year
  - Adding new sites
    - Austria, USA, Indonesia, Brazil, CBPF
    - HLT
  - MoU signed with Azerbaijan, expected to join ALICE grid by the end of 2016
- Crossed psychological barrier of 100k concurrently running jobs
  - Demonstrates scalability of ALICE distributed computing
  - We need only x2 to fulfill the upgrade needs
- Increased share of raw data processing
- Healthy decrease of share of individual analysis in favour of organized one resulting on reasonable job efficiency
- Run 2 data taking progressing well



ALICE Summary

- Substantial IR-induced distortions in the TPC
  - Affect both p-p and Pb-Pb data
  - Sophisticated correction algorithms development in the past 6 months
  - Completed low IR (<500 Hz) data reprocessing (pass2) with new calibration procedure, High IR (<IR> ~ 5kHz) production just started

- New organization has been put in place aiming to streamline data preparation and processing



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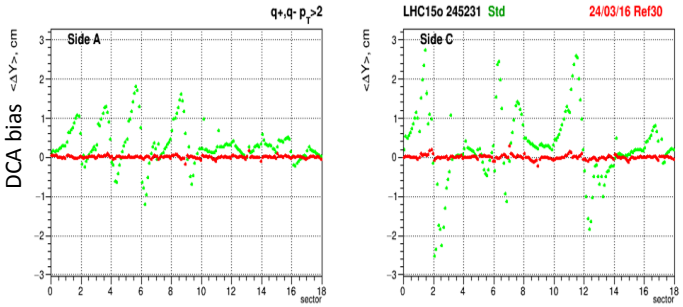

Typical high-IR (5kHz) LHC15o run (245231)