
ATLAS Sites Jamboree

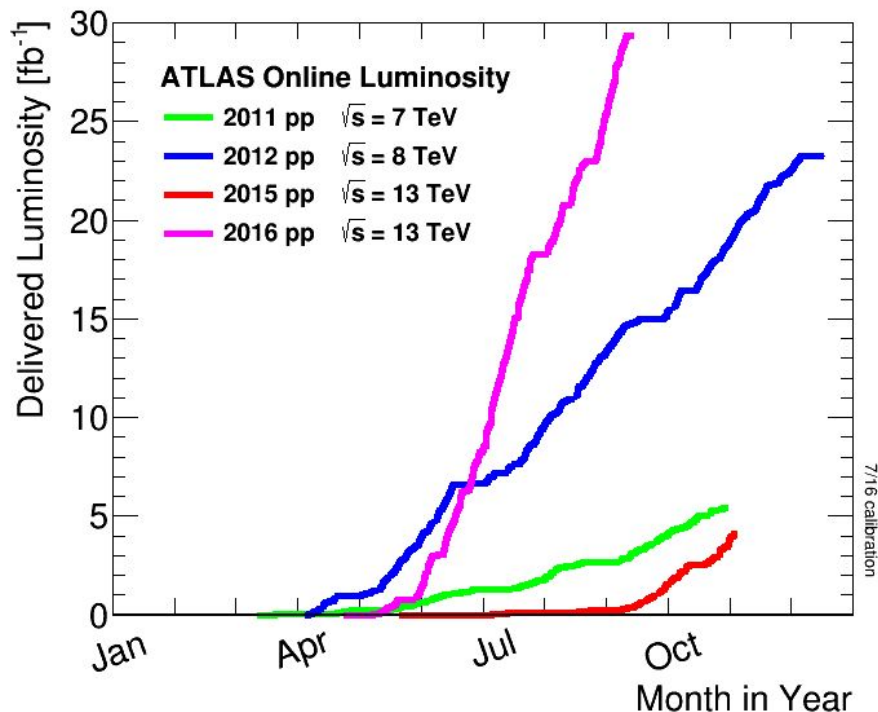
Introduction

— Andrej Filipcic —

2016 Data taking

- Extremely successful year
- LHC performed really well:
 - Duty cycle ~80%
 - Higher luminosity in 2016
 - 50% more data delivered than expected
- Sites provide more CPU power than requested
- New production framework developed during LS1 performs really well and efficiently exploit the resources

ATLAS computing works extremely well and provides the results on time for conferences



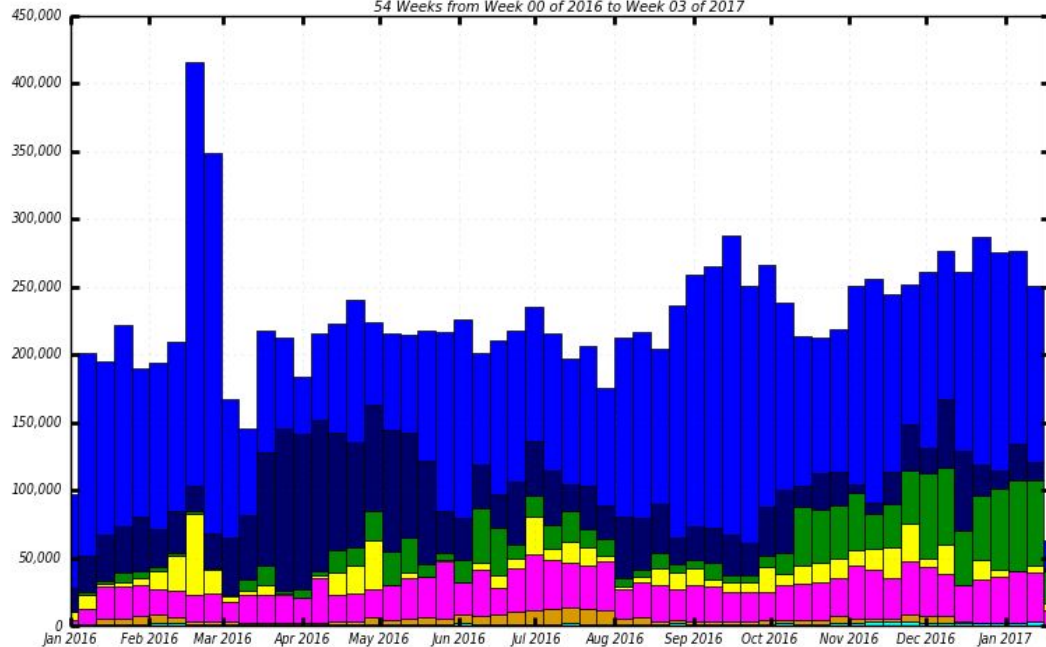
Production in 2016

- Approaching 300k cores
- Several big campaigns:
 - MC15 + MC16 simulation
 - MC15 digi+reco
 - Growing derivations production
- In the last week derivation+analysis uses >50% cores



Slots of Running Jobs

54 Weeks from Week 00 of 2016 to Week 03 of 2017



MC Simulation
TO Processing

MC Reconstruction
Others

Group Production
unknown

Data Processing

Analysis

Maximum: 415,666 , Minimum: 0.00 , Average: 222,646 , Current: 62,490

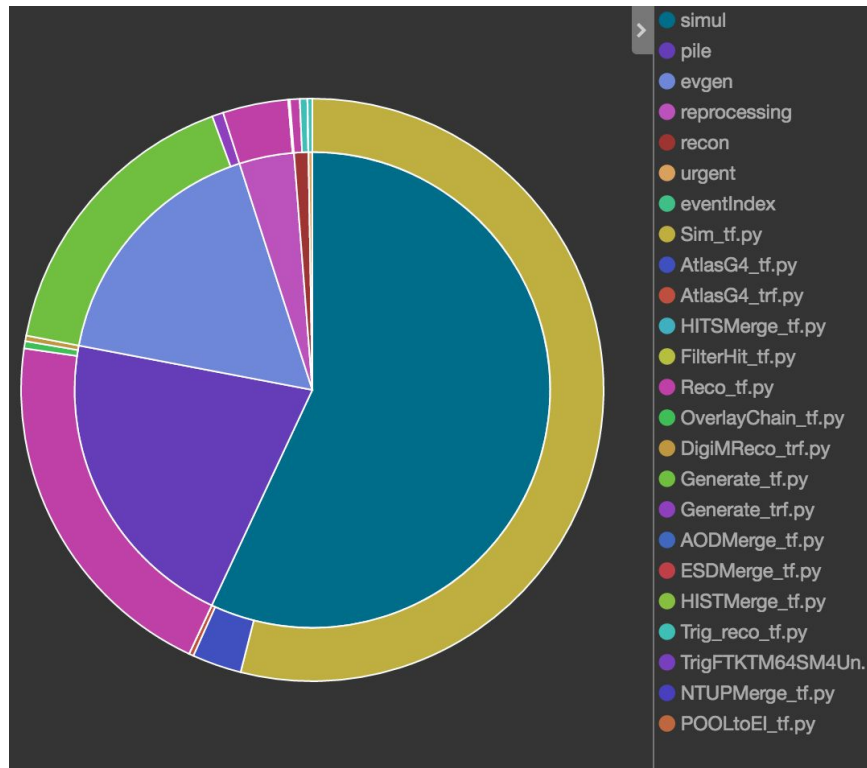
Christmas break

- Almost 3 weeks of “unattended” production
- **For the 1st time, ATLAS production and data management system worked on it's own**
 - Only a short glitch when new DBRelease was installed without the setup.sh file in cvfms
- No intervention was required from either central systems or from production managers
 - No reprocessing was running
 - But derivation campaign is of the same order of complexity
- **No serious issues with sites. Big Thanks!!!**

Production activities in 2016

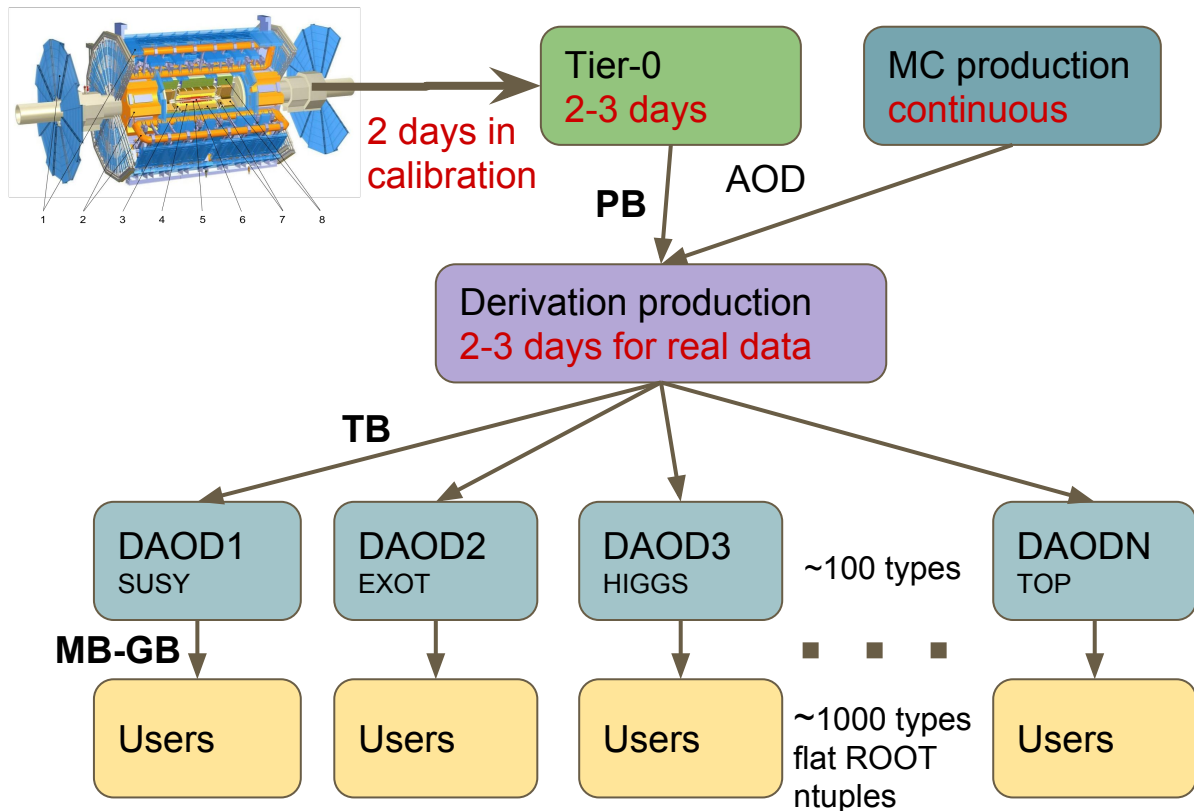
- MC15c campaign (94%)
 - Produce ~5B of full simulation events
 - Reconstruction with 2016 data-taking conditions
- Processing of 2015 Heavy-Ion data and partial pp reprocessing (4%)
- Several derivation production campaigns during 2016
 - Full processing of MC15c, 2015 and 2016 data
 - 2-3 weeks for a full campaign
- But the picture is changing in 2017!!!

CPU usage by processing type



Derivations production

- Centrally managed production of analysis specific DAOD datasets (reduced data format from main AOD format)
- Real data:
 - Available ~1 week after data taking
- Several campaigns with improved analysis code on data and MC
 - 2-3 weeks to process



Expected production in 2017

- Analysis will stay at the same level, ~25% of CPU
- Derivation production campaigns will be more frequent
 - Expect to use up to 50% of cpu in periods of a couple of weeks
- MC16 Simulation - 3 campaigns
 - Before data taking, with release 21 - estimated conditions
 - Shortly after data taking restart - tuned conditions
 - 2nd half of the year - adjusted to 2017 data taking conditions and 2018 expected conditions
 - Samples will be independent and will match all Run-2 data taking periods
- data16 reprocessing with release 21
 - Starting in February
 - Will run from tape, copies in DATADISK will not be done in advance

ADC-US ATLAS meeting in BNL

- The 1st meeting of this kind, BNL, Dec 6.-8.
- Main outcomes:
 - There are several differences in configuration and using the sites, eg USERDISK, different APF proxy configuration, site settings..
 - Those differences will be consolidated so that every site behaves in a uniform way for ATLAS
 - US ATLAS sites are doing very interesting development at several fronts (eg analytics, site monitoring, virtualization, advanced storage solutions) - this should be brought to ATLAS and ADC
- Dedicated meetings between ADC and clouds/sites are beneficial
 - We had some with FR and NDGF cloud
 - We should encourage similar meetings in the future with others as well

Jamboree schedule

- Wednesday
 - Overviews, site reports, site configuration
- Thursday
 - Monitoring and Storage, future software and networking
- Friday - in Salle Curie
 - Benchmarking, accounting, site recommendations, shifts, contacts

- Note: not too many talks, allocated time includes time for discussion

Jamboree dinner

- Thursday evening in Le Nant d'Avril
- Expected cost ~55CHF
- Please fill the doodle in indico
 - <http://doodle.com/poll/2xhpnqa3tyatzf6g>
 - Choose your preferred dish
 - Note if you need a ride or if you have a car