

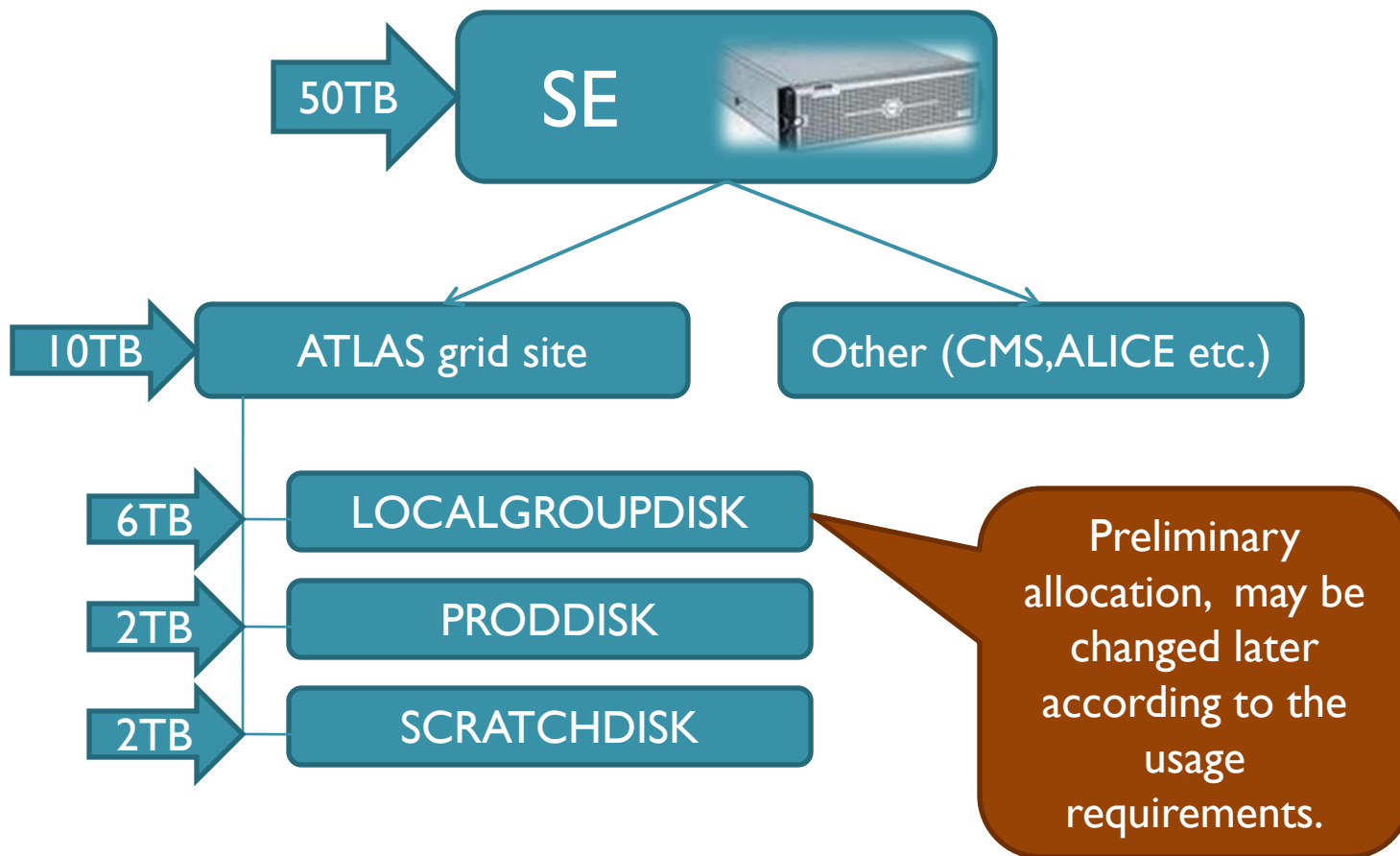
# Experience with analysis in Armenia

Gagik Vardanyan, YERPHI (ANSL)

# Brief Status of AM-04-YERPHI

- ❖ Successful setup of the new hardware: DELL POWERVAULT MD1000 Storage Server
- ❖ Allocation of 10TB space(out of 50TB) to AM-04-YERPHI Tier-3 site
- ❖ Production jobs running successfully
- ❖ Correct configuration of the software
- ❖ Critical issues are now fixed
- ❖ **Ready for analysis jobs**

# Space Distribution in SE

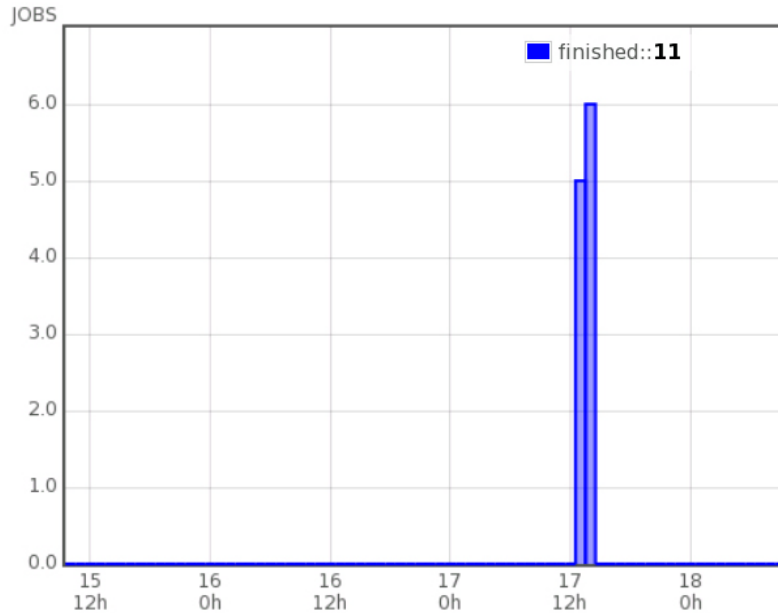


# Overview of the Usage of YerPhl Cluster

- ❖ Local PBS batch system
  - ❖ No user at the moment
  - ❖ Though requested the UI setup and access for testing purposes and for future users
- ❖ Production jobs
  - ❖ In a good shape, stable performance
- ❖ Analysis on GRID Tier-3 site AM-04-YERPHI
  - ❖ **Finally worked with success (October 17, 2012)**
  - ❖ **Recorded the first ATLAS GRID analysis jobs running successfully in South Caucasus Region**
  - ❖ Athena and panda are working fine, ganga not tested yet

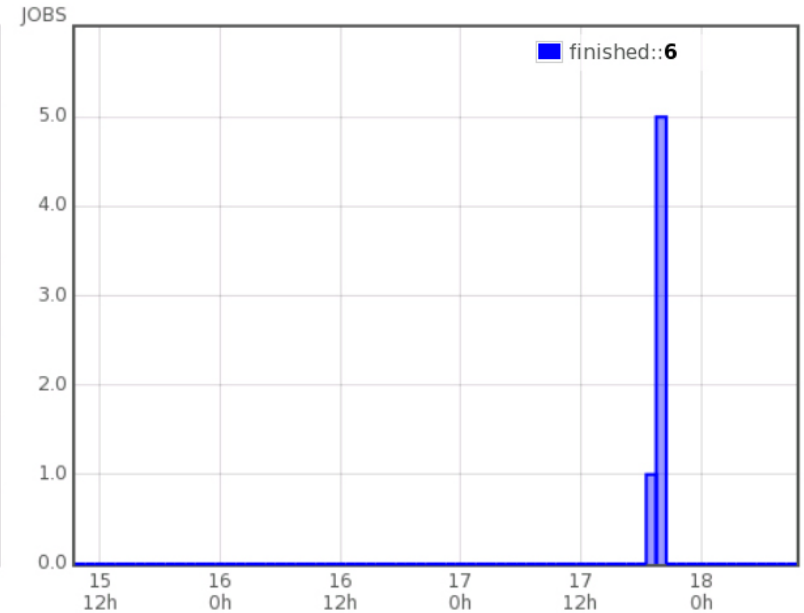
# Succeeded GRID Analysis Jobs on AM-04-YERPHI

Jobsetid 4735 jobs/hour for all sites progress



2012/10

Jobsetid 4846 jobs/hour for all sites progress



2012/10

Recent plots from panda monitor, example job links:

[http://panda.cern.ch/server/pandamon/query?job=\\*&jobsetID=4846&user=Gagik%20Vardanyan](http://panda.cern.ch/server/pandamon/query?job=*&jobsetID=4846&user=Gagik%20Vardanyan)

[http://panda.cern.ch/server/pandamon/query?job=\\*&jobsetID=4735&user=Gagik%20Vardanyan](http://panda.cern.ch/server/pandamon/query?job=*&jobsetID=4735&user=Gagik%20Vardanyan)

[http://panda.cern.ch/server/pandamon/query?job=\\*&jobsetID=448&user=Laura%20Sargsyan](http://panda.cern.ch/server/pandamon/query?job=*&jobsetID=448&user=Laura%20Sargsyan)

# Succeeded GRID Analysis Jobs on AM-04-YERPHI

Step-by-step towards stable working point

Showing 8 jobsets modified from 2012-10-17 20:19 to 2012-10-18 09:32

Job Sets:

User:jobID	Created	Latest	Jobs	Pre-run	Running	Holding	Finished	Failed	Cancelled	Merging	buildJob	Site
<a href="#">Gagik Vardanyan:4735</a>	2012-10-17 10:04	2012-10-17 10:04	11		end		11			3		ANALY_AM-04-YERPHI
In: <a href="#">data11_7TeV.00189602.physics_JetTauEtmis.merge.NTUP_JETMET.f405_m985_p766/</a> Out: <a href="#">user.gvardany.MJB.AM_00189602_171012/</a>												
<a href="#">Gagik Vardanyan:4846</a>	2012-10-17 17:27	2012-10-17 17:27	6		end		6			3		ANALY_AM-04-YERPHI
In: <a href="#">mc12_8TeV.147913.Pythia8_AU2CT10_jetjet_JZ3W.merge.NTUP_JETMET.e1126_s1469_s1470_r3542_r3549_p1109/</a> Out: <a href="#">user.gvardany.mjb12_8TeV.MC-V11_EM6_A8_AM_171019_00147913_171019/</a>												
<a href="#">Laura Sargsyan:448</a>	2012-10-17 10:13	2012-10-17 10:13	20		end		20				1627517519 libDS	ANALY_AM-04-YERPHI
In: <a href="#">data11_7TeV.00189602.physics_JetTauEtmis.merge.NTUP_JETMET.f405_m985_p766_tid543560_00</a> Out: <a href="#">user.lsargsya.cb3a57d8-d1ac-4e34-af3a-eed9faf89ecb/</a>												
<a href="#">Laura Sargsyan:446</a>	2012-10-17 00:18	2012-10-17 00:18	20		end		9	11			1627258694 libDS	ANALY_AM-04-YERPHI
In: <a href="#">data11_7TeV.00189602.physics_JetTauEtmis.merge.NTUP_JETMET.f405_m985_p766_tid543560_00</a> Out: <a href="#">user.lsargsya.3d2e96bd-d99e-4212-970f-2c5afaa0dfe9/</a>												
<a href="#">Laura Sargsyan:444</a>	2012-10-16 22:27	2012-10-16 22:27	20		end		17	3			1627210662 libDS	ANALY_AM-04-YERPHI
In: <a href="#">data11_7TeV.00189602.physics_JetTauEtmis.merge.NTUP_JETMET.f405_m985_p766_tid543560_00</a> Out: <a href="#">user.lsargsya.b721dd73-c5aa-4a10-b76b-89a90f71e15a/</a>												
<a href="#">Gagik Vardanyan:4686</a>	2012-10-16 08:41	2012-10-16 08:41	4		end		2	2		1		ANALY_AM-04-YERPHI
In: <a href="#">mc12_8TeV.147913.Pythia8_AU2CT10_jetjet_JZ3W.merge.NTUP_JETMET.e1126_s1469_s1470_r3542_r3549_p1109/</a> Out: <a href="#">user.gvardany.mjb12_8TeV.MC-V10_EM4_AM_00147913_161010/</a>												
<a href="#">Laura Sargsyan:442</a>	2012-10-15 19:26	2012-10-15 19:26	20		end		20				1626127811 libDS	ANALY_AM-04-YERPHI
In: <a href="#">data11_7TeV.00189602.physics_JetTauEtmis.merge.NTUP_JETMET.f405_m985_p766_tid543560_00</a> Out: <a href="#">user.lsargsya.dbde3a40-b350-440e-a367-7dd25df2213f/</a>												
<a href="#">Laura Sargsyan:440</a>	2012-10-15 17:41	2012-10-15 17:41	20		end		18	2			1626075278 libDS	ANALY_AM-04-YERPHI
In: <a href="#">data11_7TeV.00189602.physics_JetTauEtmis.merge.NTUP_JETMET.f405_m985_p766_tid543560_00</a> Out: <a href="#">user.lsargsya.304df113-7abb-4d54-9ba5-7c7600e56e80/</a>												

# Dataset Replication

- ❖ Initiated transfer of the following datasets to AM-04-YERPHI\_LOCALGROUPDISK:
  - ❖ mc12\_8TeV.147913.Pythia8\_AU2CT10\_jetjet\_JZ3W.merge.NTUP\_JETMET.e1126\_s1469\_s1470\_r3542\_r3549\_p1109/
  - ❖ data11\_7TeV.00189602.physics\_JetTauEtmis.merge.NTUP\_JETMET.f405\_m985\_p766/

2012-10-18 08:59:03	mc12_8TeV.147913.Pythia8_AU2CT10_jetjet_JZ3W.merge.NTUP_JETMET.e1126_s1469_s1470_r3542_r3549_p1109_tid00884144_00	QUEUED
2012-10-18 08:58:59	mc12_8TeV.147913.Pythia8_AU2CT10_jetjet_JZ3W.merge.NTUP_JETMET.e1126_s1469_s1470_r3542_r3549_p1109_tid00884145_00	QUEUED
2012-10-03 09:11:04	data11_7TeV.00189602.physics_JetTauEtmis.merge.NTUP_JETMET.f405_m985_p766_tid543560_00	COMPLETE
2012-06-18 15:12:58	mc11_7TeV.105012.J3_pythia_jetjet.merge.NTUP_JETMET.e815_s1273_s1274_r2923_r2900_p832_tid610184_00	CANCELED
2012-06-18 15:12:54	mc11_7TeV.105012.J3_pythia_jetjet.merge.NTUP_JETMET.e815_s1273_s1274_r2923_r2900_p832_tid610183_00	CANCELED

Which are JetEtMiss D3PD ntuples of data 2011 and default Monte Carlo 2012, only one run of data and one channel of MC, to be able to test the analysis jobs.

First one is still in progress (~60% completed), second one is completed.



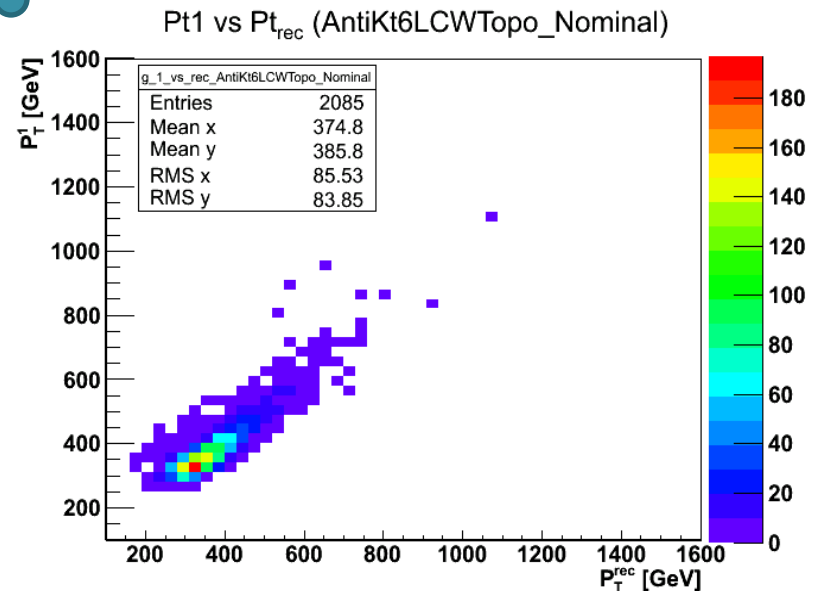
# Succeeded Jobs' Entity

- ❖ Type: panda/athena
- ❖ Code: C++, ROOT, SFrame
- ❖ Athena Tag: I7.0.6
- ❖ Input: NTUP\_JETMET  
D3PD(data/MC)
- ❖ Aim: In-situ jet energy scale calibration via multi-jet balance technique

One run - little input for the full statistics study.

This is just the beginning...

From derived data to physics plot via  
AM-04-YERPHI





# Performance At First Glance

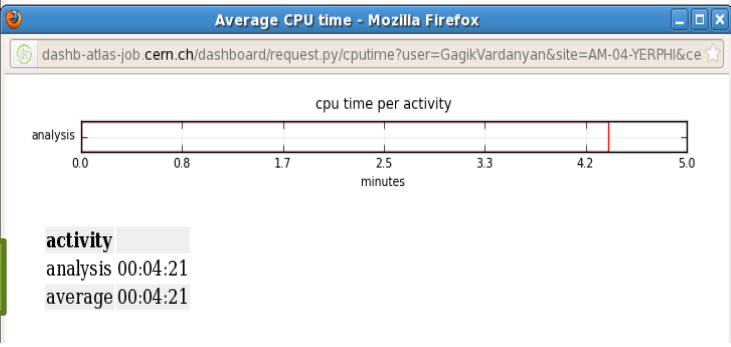
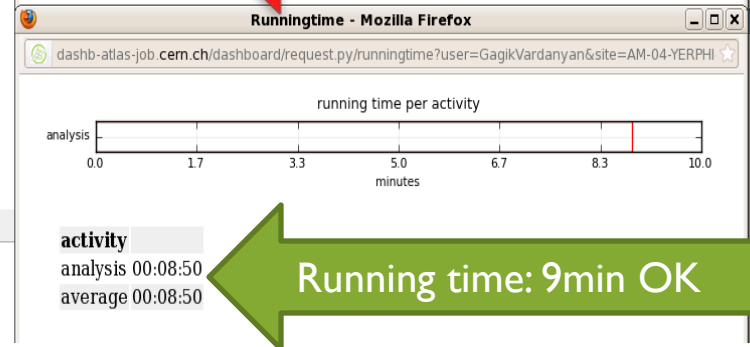
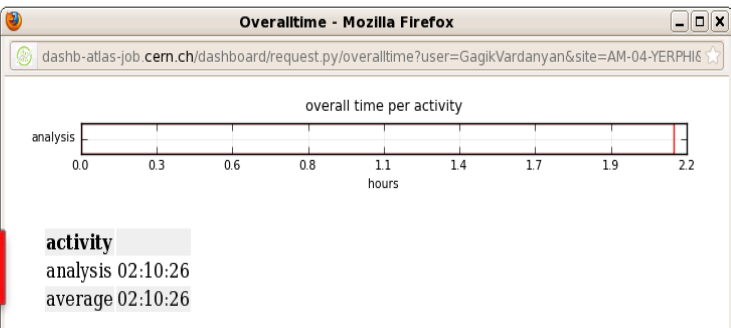
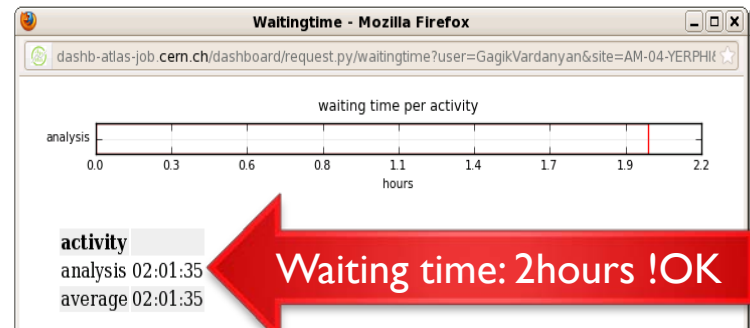
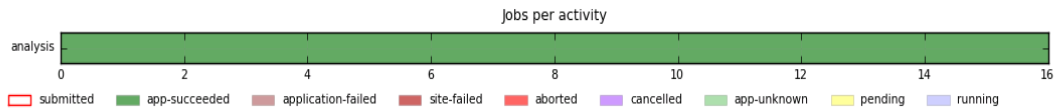


JOB SUMMARY

Waiting time   Running time   Overall time   CPU time   Job Wrapper time   Efficiency

Search a job using the GridJobId

- GagikVardanyan
- AM-04-YERPHI
- any ce
- any submissiontool
- any application
- any rb
- analysis
- any grid
- any jobtype
- 3.0
- unk  pend  run  term
- done  canc  abort  g-unk
- succ  site-fail  app-fail
- all-fail  a-unk  donesuccess
- submitted
- terminated
- from UTC
- 
- to UTC
- 
- sort by activity
- bars in the plot
- linear  log
- 



G.Vardanyan, Experience with analysis in Armenia

SCSWT, Oct 23-26 2012, TBILISI



# Recently Fixed Issues

- ❖ Critical issues recently fixed
  - ❖ SRM authentication configuration errors
  - ❖ Spacetoken configuration errors
  - ❖ Pilot type put errors
- ❖ Things, that still need an attention
  - ❖ Some individual files failed to transfer (under investigation at the moment)
  - ❖ Too long stage-in time for analysis jobs (~2hours)

# Summary and Near Future

- ✓ Big progress to have grid analysis jobs running successfully
- ✓ 10TB storage - ability to store valuable complete datasets
  - ✓ Fix failing transfer issue
  - ✓ Investigate more the long waiting time reasons
  - ✓ Replicate more full datasets
  - ✓ Test ganga jobs
  - ✓ Test PBS batch jobs
  - ✓ Run more jobs to have enough statistics to assess the average performance and compare with other sites

**Made important steps towards full functionality and in a good shape to reach stable performance.**

The image features a classic Looney Tunes ending screen. It consists of a series of concentric circles in shades of red and black, creating a tunnel-like effect. In the center, the text "That's all Folks!" is written in a white, elegant cursive font. The text is positioned diagonally across the center of the circles.

*That's all Folks!*