ATLAS Activities

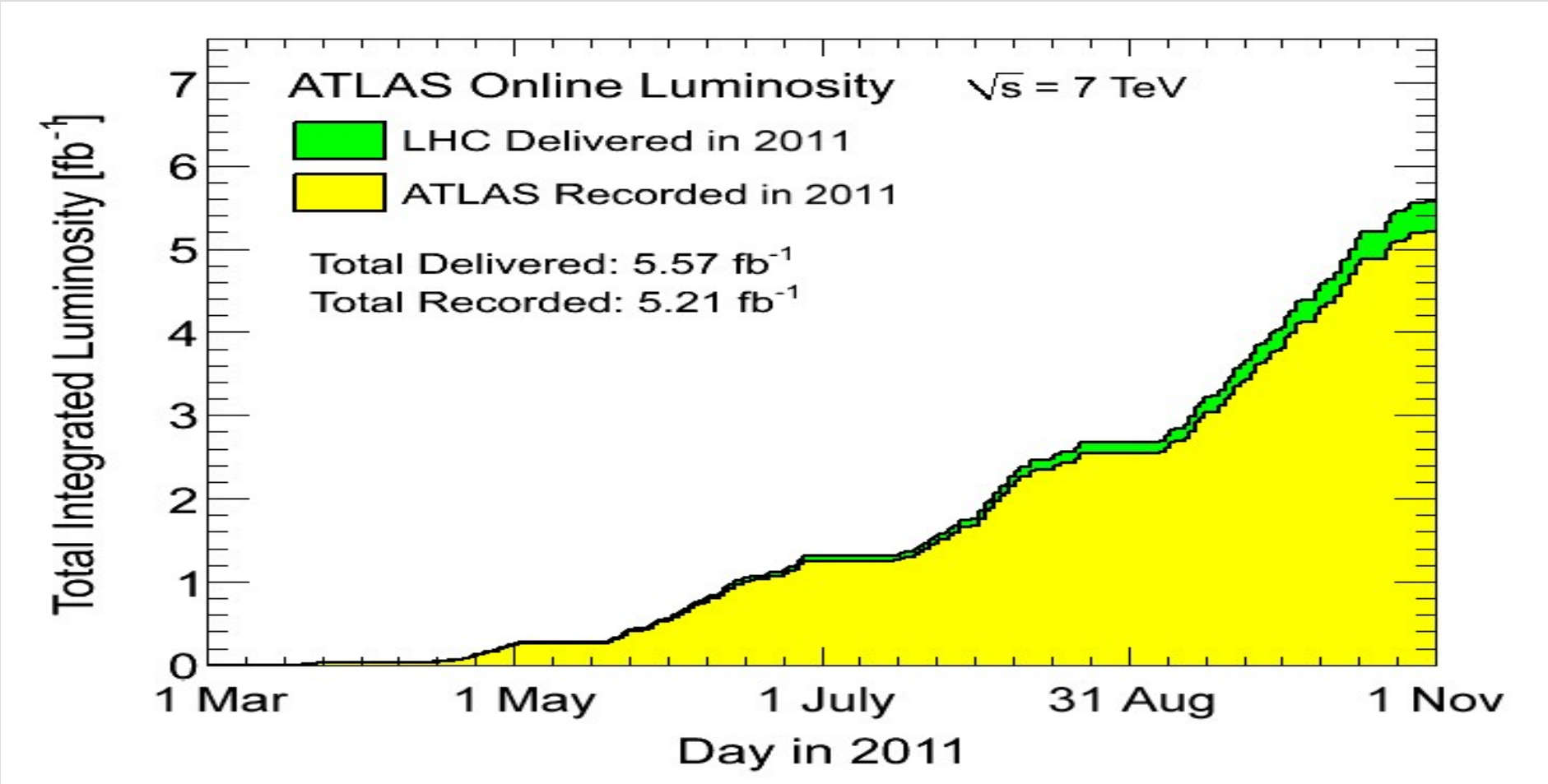
E. Le Guirriec

with help of CAF colleagues

- News from physicists
- FR Cloud activities
- Squad activities

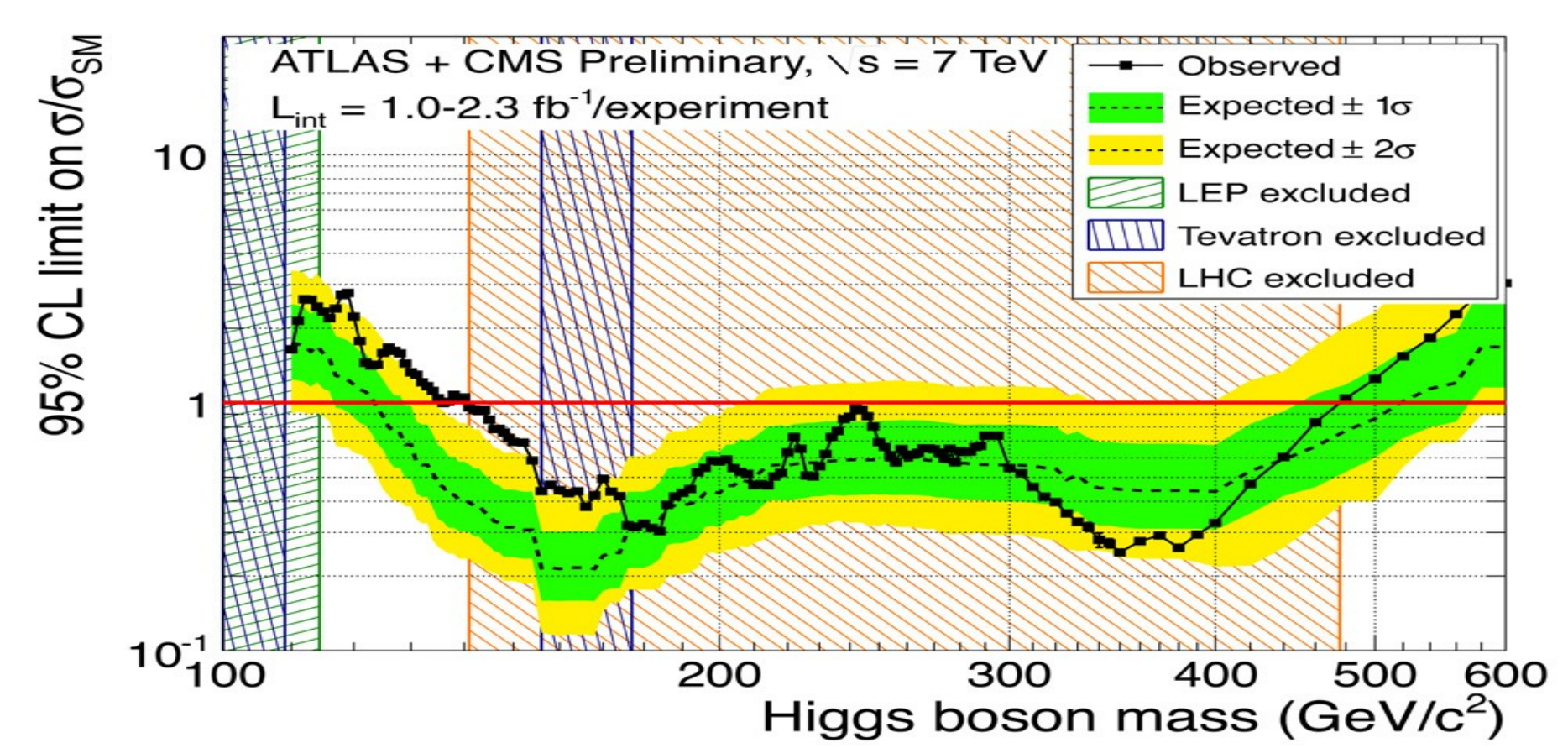
News from physicists:
5 Inverse Femtobarns of Data!

Equivalent to 340 million million collisions



Next year: 20 inverse Femtobarns

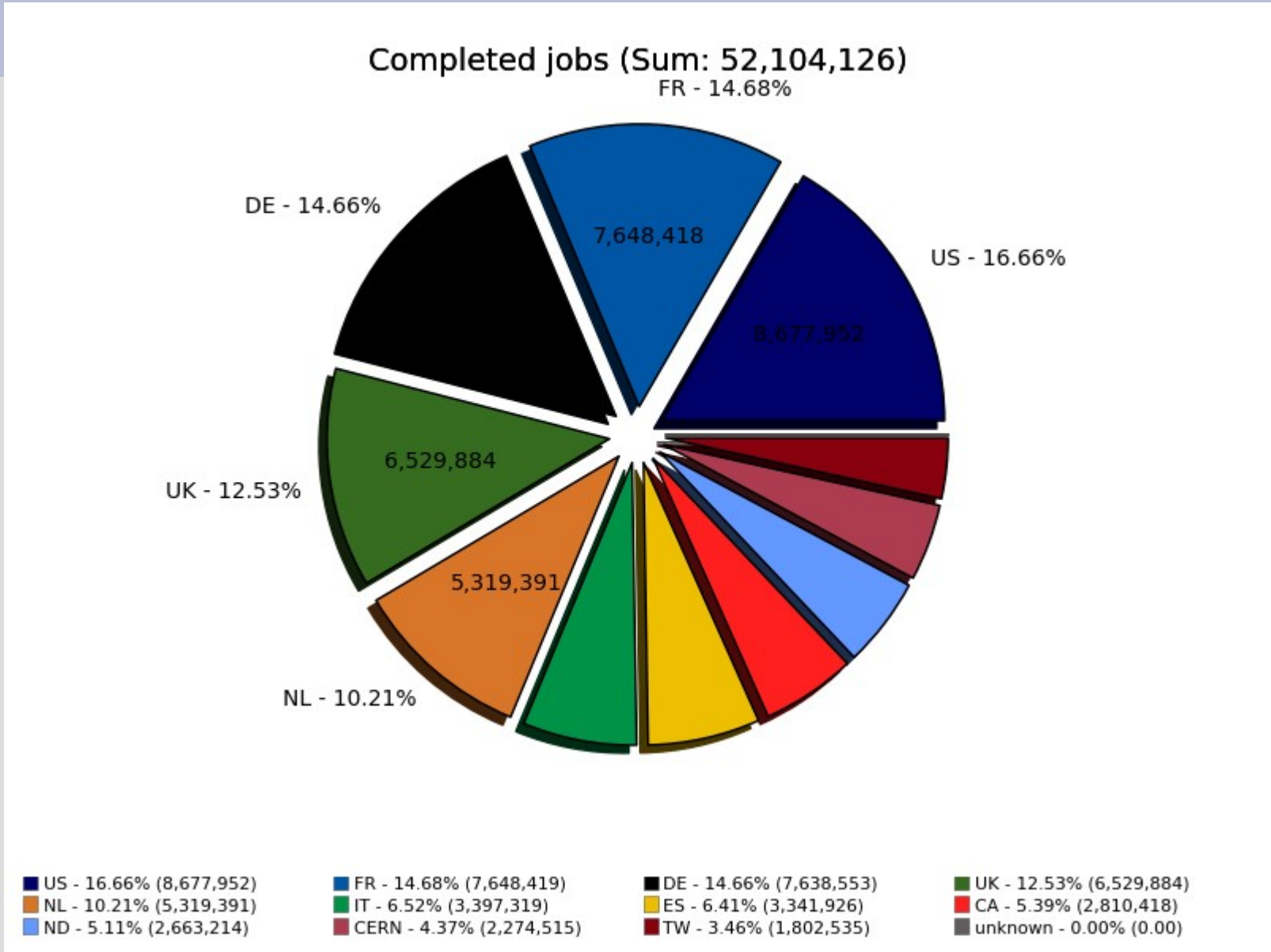
News from physicists:
CMS and ATLAS combined search



Presence of the Standard Model Higgs in the mass range 141-476 GeV is excluded at 95% confidence level

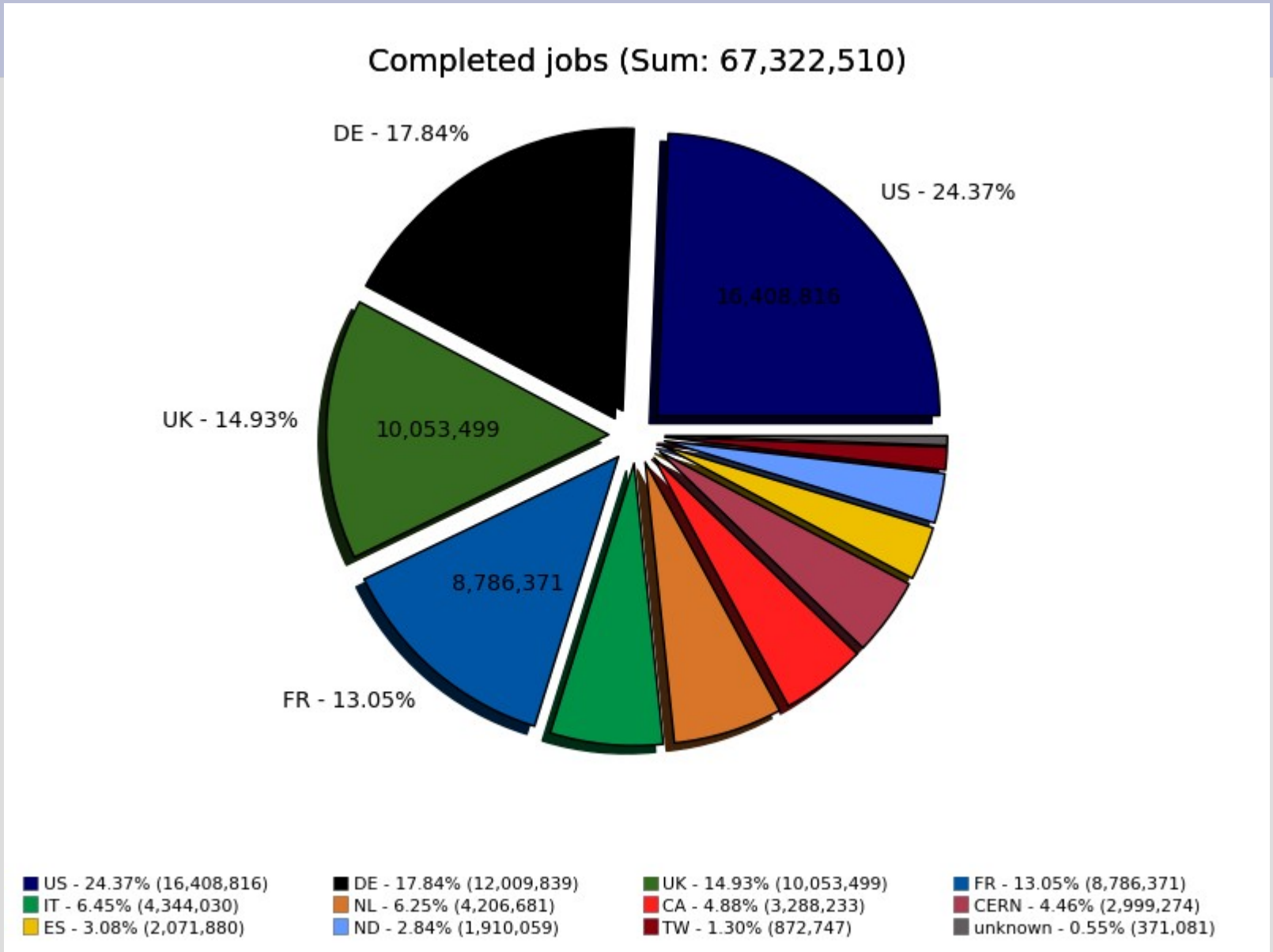
Clouds Activity: production

June - November 2011



Clouds Activity: analysis

June - November 2011



FR sites

- T2: all
- T2D: T2s that can transfer any size of files from and to any of the T1s
  - BEIJING, GRIF-LAL, GRIF-LPNHE, LAPP, LPC, LPSC
  - Candidates: TOKYO, CPPM
  - Not yet: IRFU, RO-*
- T2PRR: T2s that are classified as primary replica repositories
  - GRIF-LAL, GRIF-LPNHE

T2s sites availability & ranking (1)

- For data pre-placement at T2s
  - Algorithm in place to evaluate site Availability
  - Monthly re-evaluated based on HC tests
- T2s ranked in 4 categories a/b/c/d
  - a T2Ds: availability >90%
  - b T2s: availability > 90%
  - c T2s: availability > 80%
  - d T2s: availability < 80%

T2s sites availability & ranking (2)

- Many discussions
  - Include or not scheduled downtime?
  - Handling of missing files
  - Algorithm under scrutiny by Intern. Comput. Board
- Criteria used
  - Scheduled downtime accounted for
  - Unavailability due to “cloud offline” subtracted
    - All clouds due to panda/DDM problem on 31 Oct
    - FR cloud due to T1 SDT
    - FR sites due to missing input datasets or DBR

T2s sites availability & ranking (3)

- To follow site availability
  - http://dashb-atlas-ssb.cern.ch/dashboard/request.py/siteviewhistorywithstatistics?columnid=562
  - Select Clouds: FR and choose time period

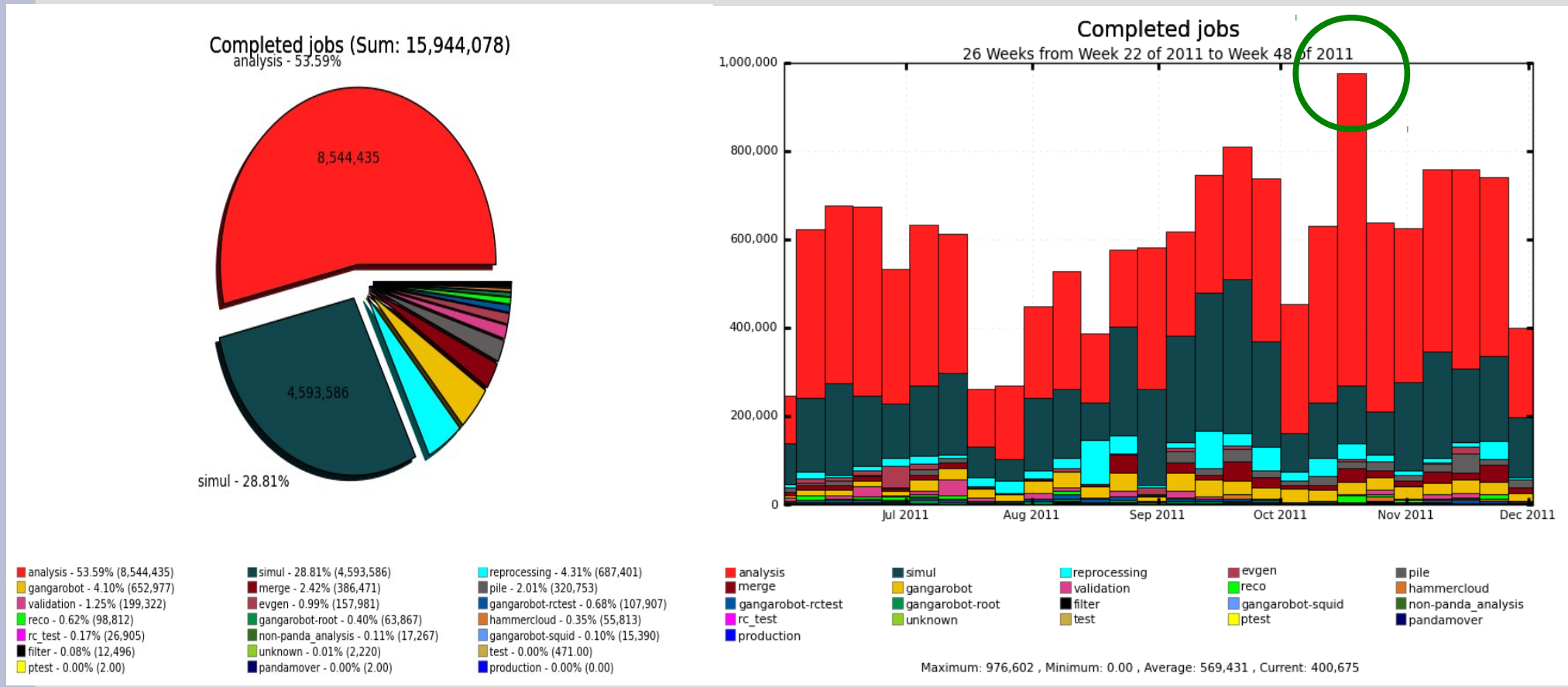
SITE Name	TIER	CLOUD	History plot time bin = 60 hours	offline		brokeroff		online	
				%	count	%	count	%	count
BEIJING-LCG2	T2D	FR		1.74	1	4.17	2	94.1	3
IN2P3-CPPM	T2	FR		10.6	2	9.95	3	79.44	5
GRIF-IRFU	T2	FR		1.74	1	4.31	3	93.96	4
GRIF-LAL	T2D	FR		42.94	2	4.3	2	52.76	3
GRIF-LPNHE	T2D	FR		1.74	1	3.75	5	94.51	7

FR Cloud Activities

June - November 2011

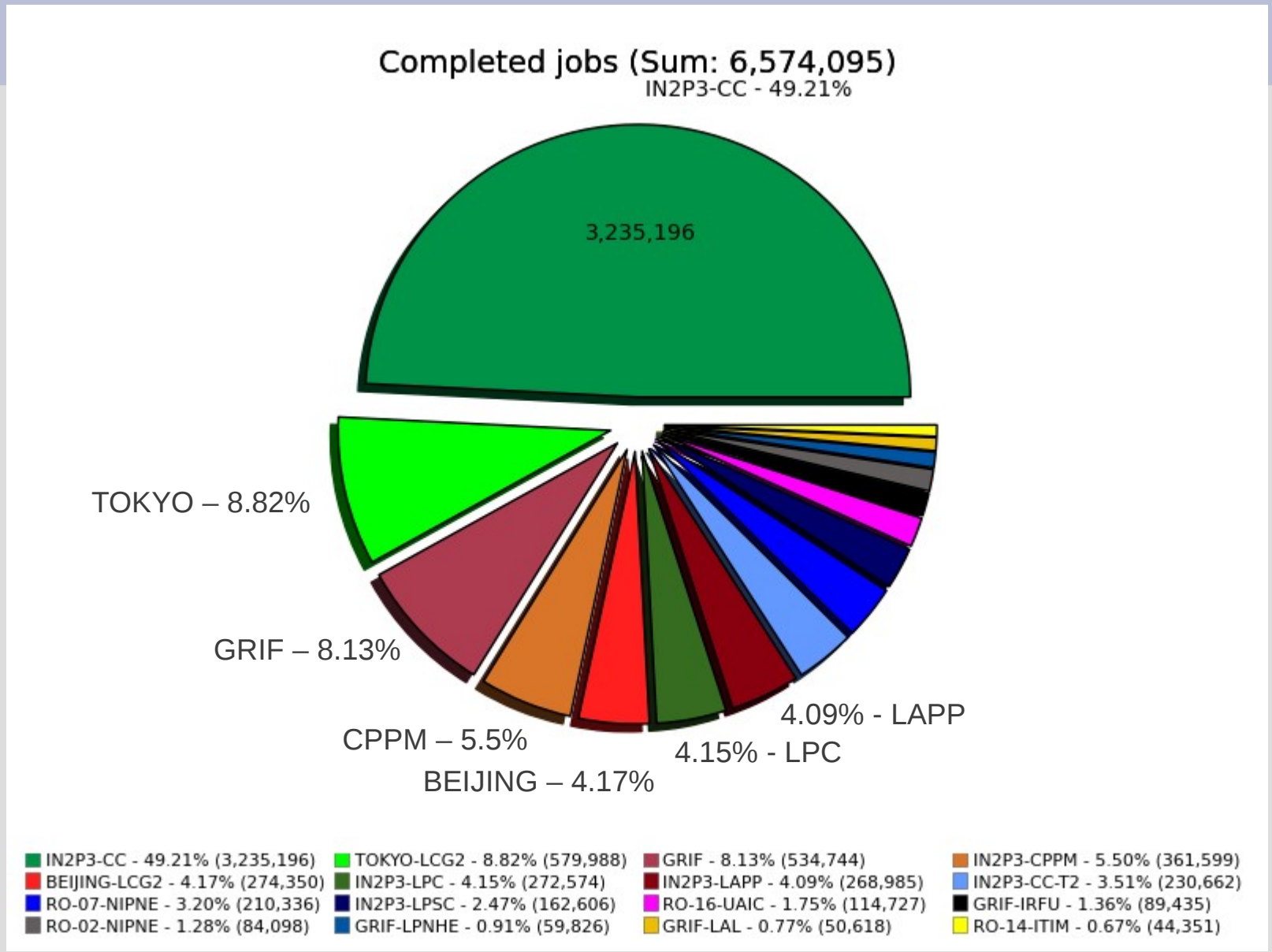
16 millions jobs = 88 200 jobs/day

54% Analysis - 40% Production - 6% Test



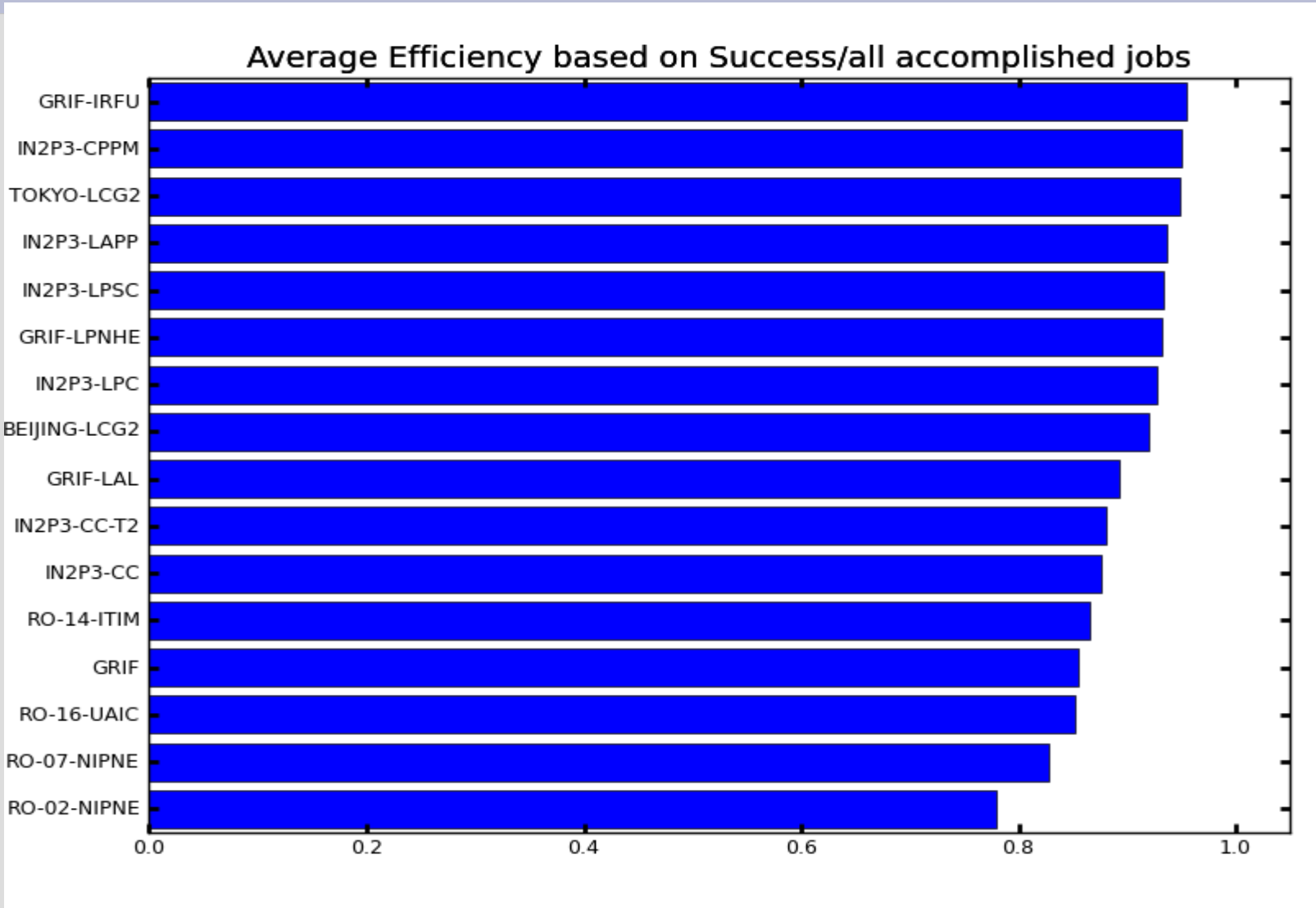
FR Cloud Activity: production

June - November 2011



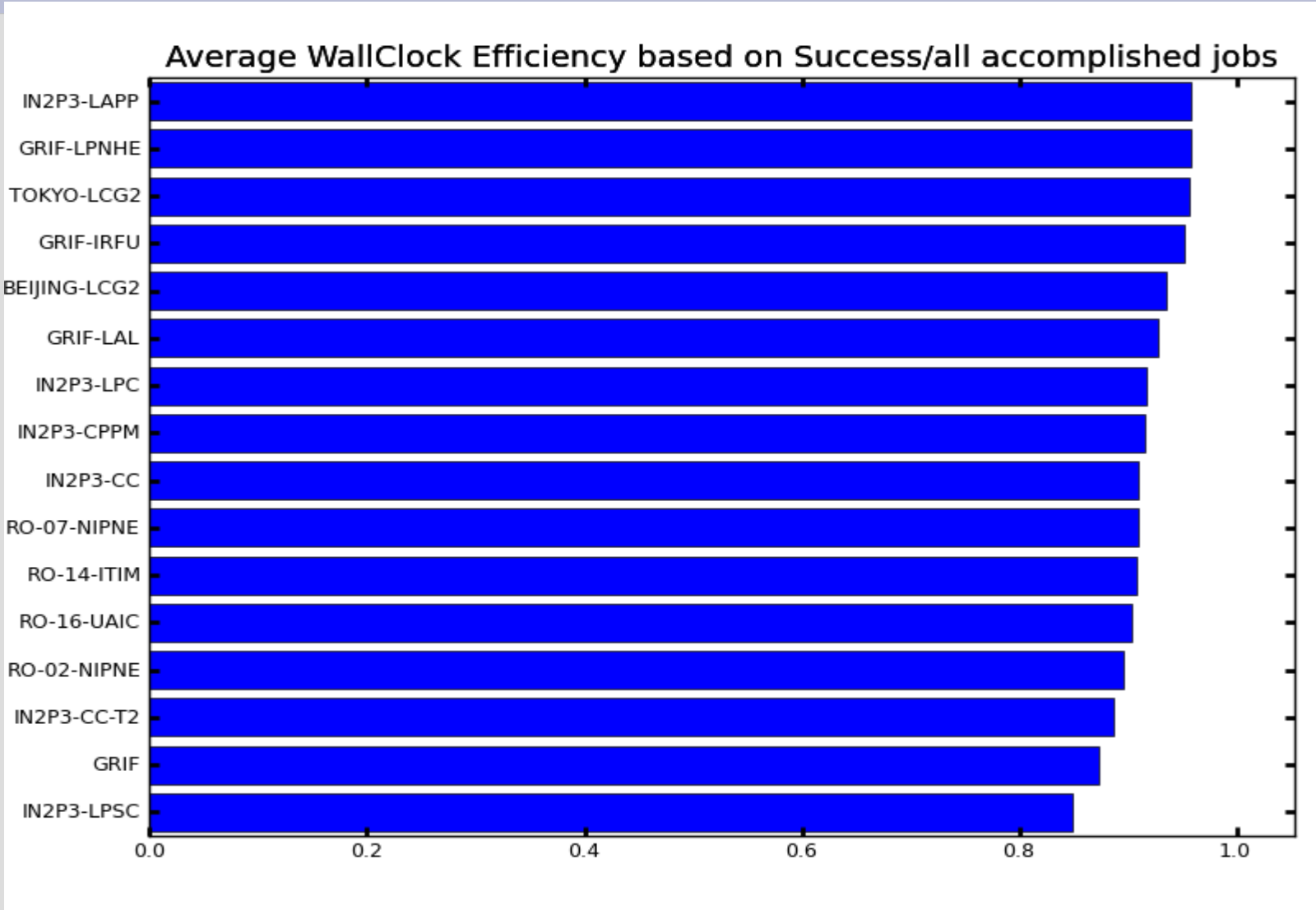
Production: average efficiency

June - November 2011



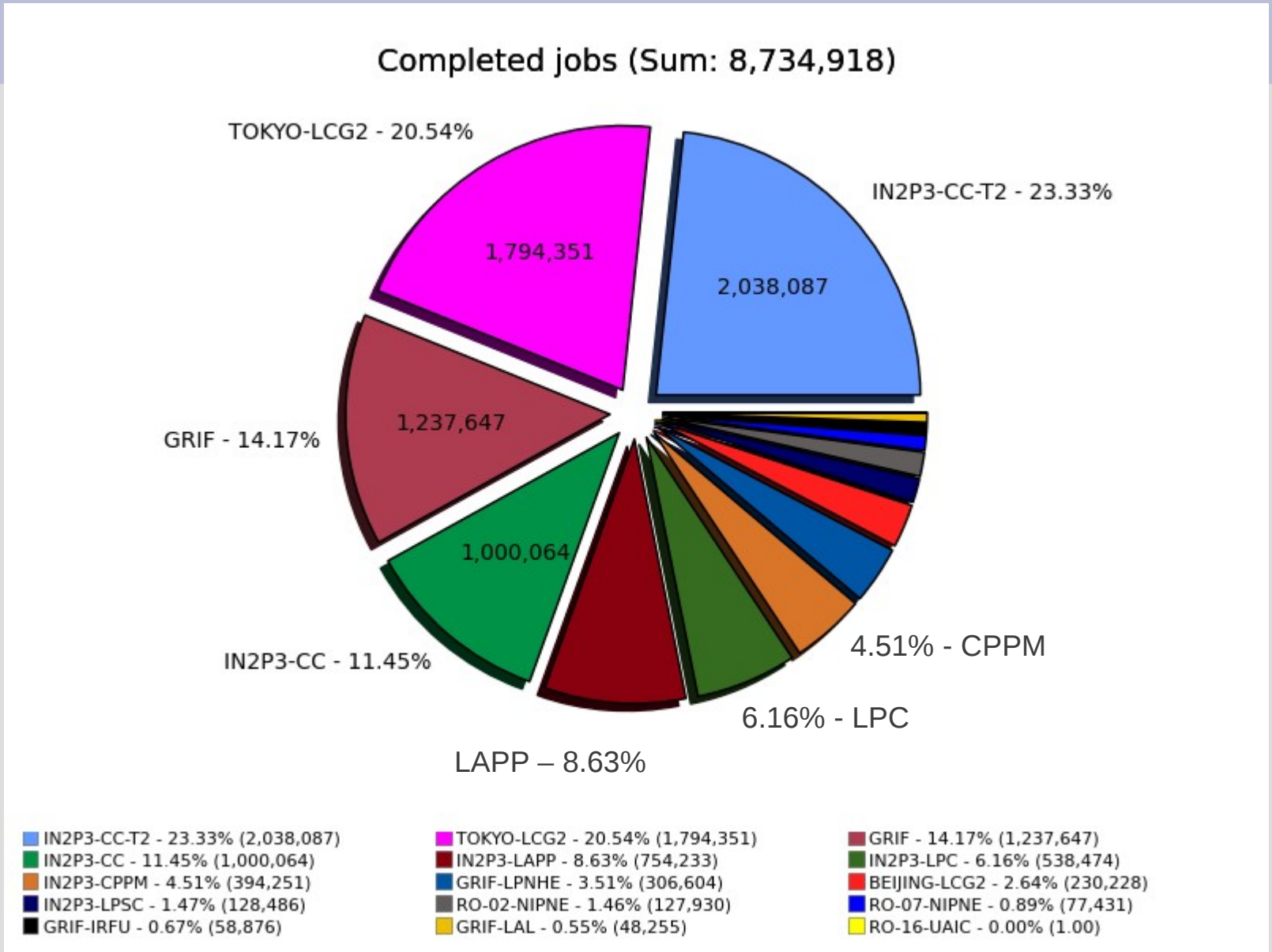
Prod.: Average WallClock efficiency

June - November 2011



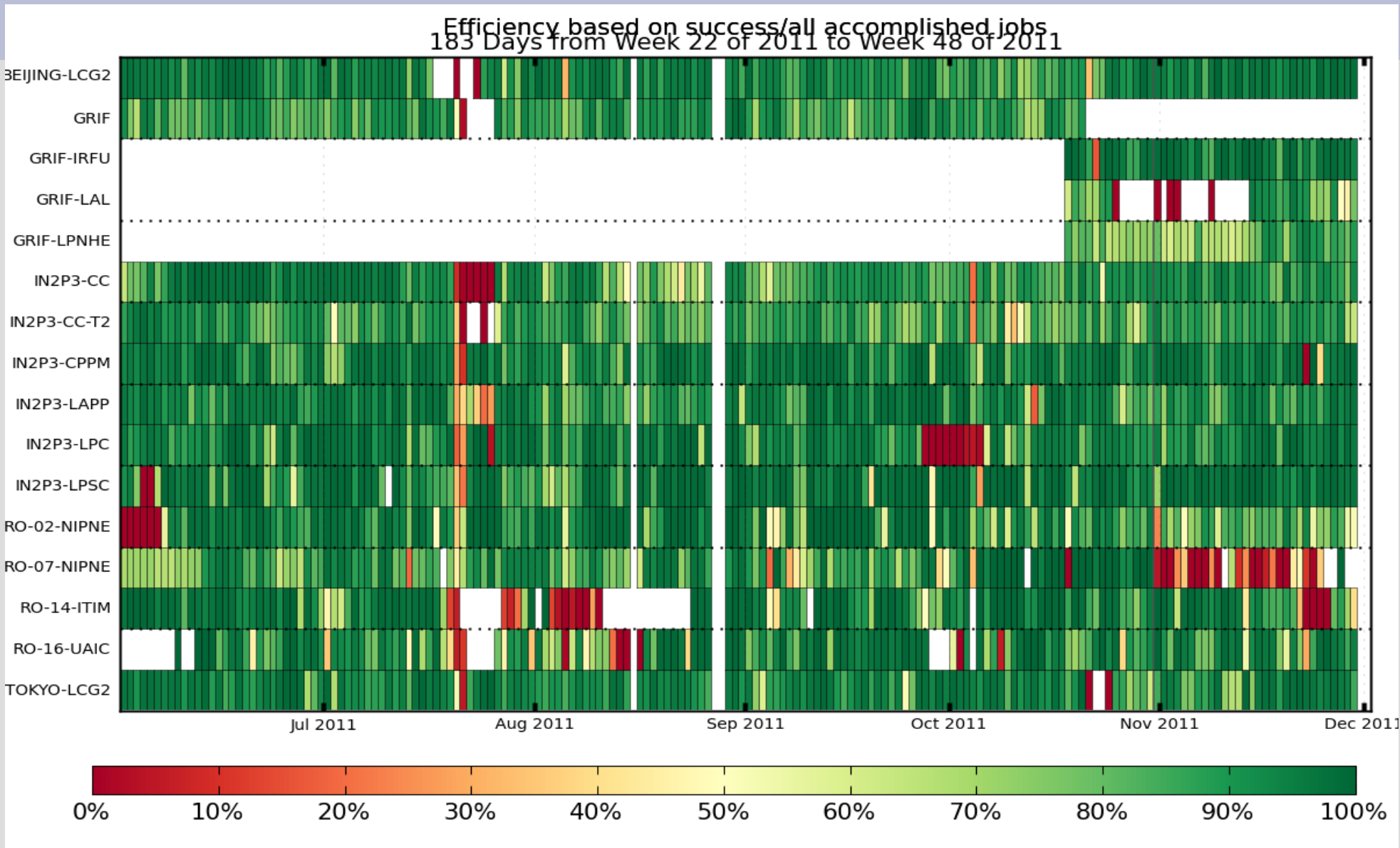
FR Cloud Activity: analysis

June - November 2011



FR Cloud Efficiency

June - November 2011



FR Cloud Activity: reprocessing (1)

- Phase I: Start 12/08 – End 27/08
  - Software installation issues
  - WNs overloaded for reconstruction jobs (first step repro.)
  - No stagein during 22h: jobs were waiting
  - File access by dccp affected merging jobs (in: N, out 1)
  - File unavailable
  - Bad communication: to many channels

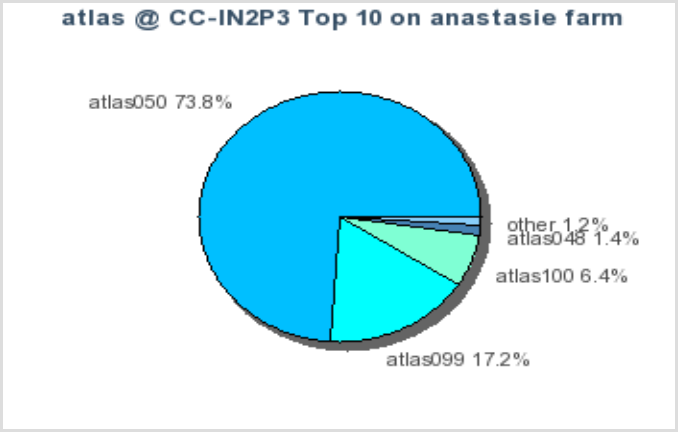
T1 instabilities doubled the reprocessing duration

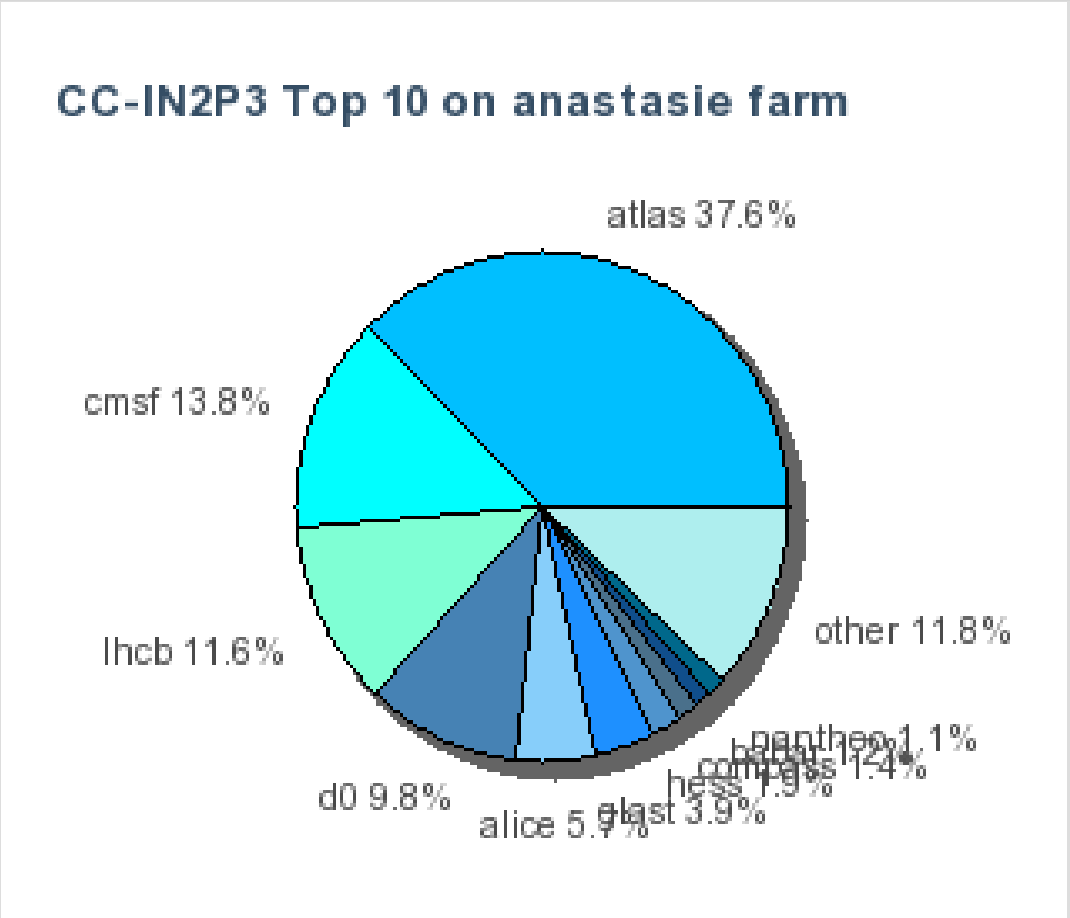
FR Cloud Activity: reprocessing (2)

- Preparation before start
  - CVMFS used
  - Data downloaded from tape on disk in advance
  - Procedure to kill hanging dccp connexions
- Phase II: Start 12/09 (Monday!) - End 16/09
  - post-mortem : http://indico.in2p3.fr/conferenceDisplay.py?confId=5887
  - Big effort from CC teams!
  - Good communication (Jabber, dedicated Elog,..)
  - Lyon did it on time!

Atlas@CC in 2011

- 37.6% of CPU
- T1: 73.8%
- Analysis: 18.6%
- Production T2: 6.4%
- Other: 1%





ATLAS@CC

- Atlas support:
  - Thank you Eric COGNERAS
  - Welcome Emmanouil VAMVAKOPOULOS
- Panda queues
  - All on SGE (BQS dropped)
  - Simplification ongoing: to many queues
- dCache issue
  - Memory upgrade of file system but still failing
- Analysis at T1 since July as all other T1s
- PROOF: Disk (100TB) will be removed soon

Squad activities (1)

Sabine, Wenjing, Irena, Luc, Emmanuel

- T3 share part implementation
- T2D implementation
- Factory/SchedConfigs/voboxes
- Interplay, VL queues & T1/T2 at Lyon
- Multi-core per WN
- Follow-up on Romanian sites
- Follow-up on production tasks
- Follow-up on analysis tasks (HammerCloud tests)
- Communication: visits to foreign T2s
- Meetings with PAF

Squad activities (2)

Sabine, Wenjing, Irena, Emmanuel, Luc

- CVMFS
- Network performance
- Follow-up LHCONE deployment
- Monitoring improvement
- Chirp test server (Nabil Ghodbane)

CVMFS installation

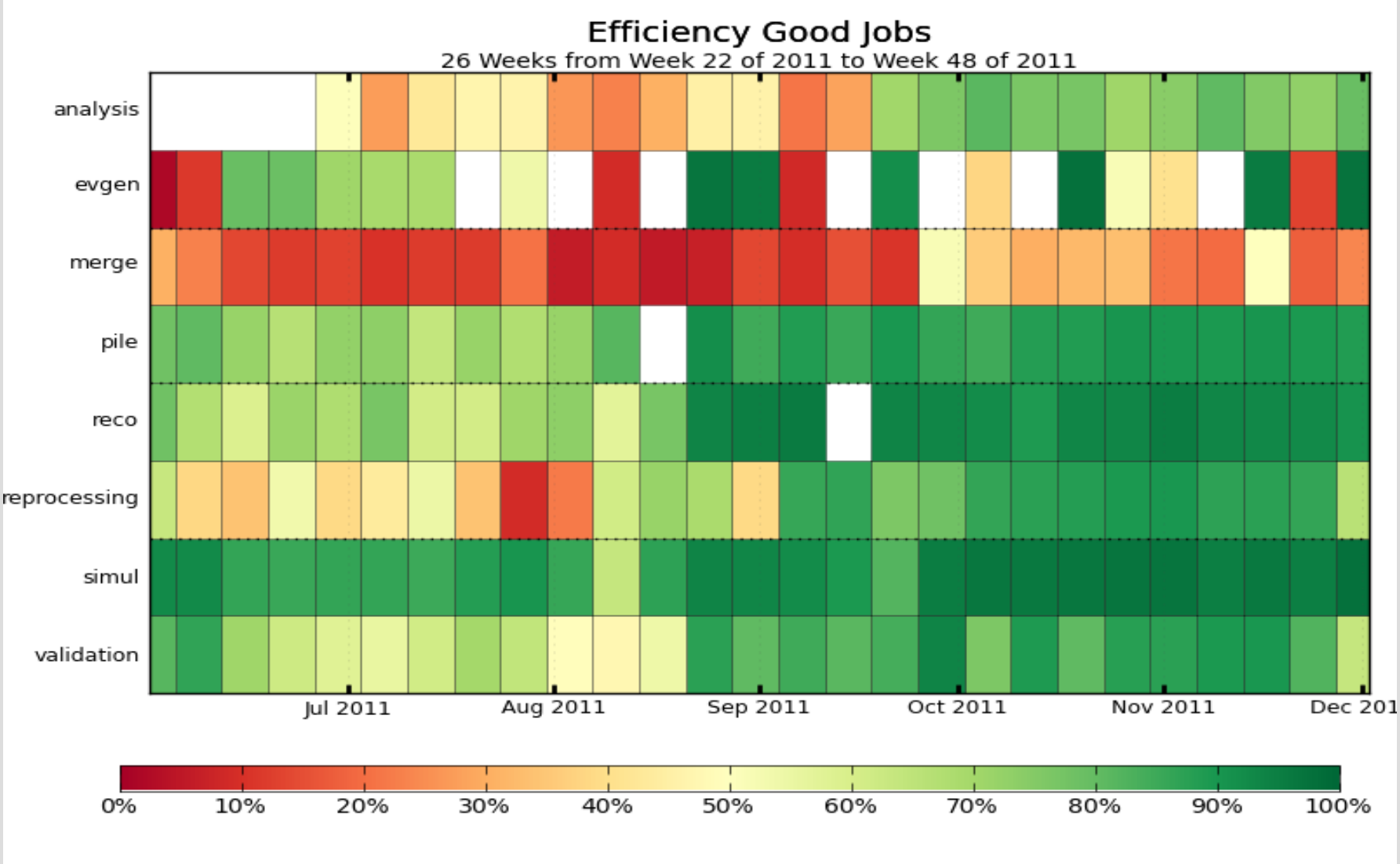
- Cern Virtual Machine – FS
  - Provides access to the ATLAS software
  - Saves disks space
  - Is much faster than AFS
- Improvements
  - In setup time
  - In Athena release installation
  - In DB release installation (not on Hotdisk anymore)
  - In support with standard installation (FR Squad and deSalvo)

CVMFS installation: status

Yes	No	Plan
• GRIF-IRFU	• BEIJING-LCG2	Before Xmas
• GRIF-LPNHE	• GRIF-LAL	Before Xmas
• IN2P3-CC	• IN2P3-LPSC	Before Xmas
• IN2P3-CC-T2	• RO-02-NIPNE	Before Xmas
• IN2P3-CPPM	• RO-07-NIPNE	After Xmas
• IN2P3-LAPP	• RO-14-ITIM	After Xmas
• IN2P3-LPC	• RO-16-UAIC	Before Xmas
	• TOKYO-LCG2	After Xmas

CVMFS at CC: Better efficiency

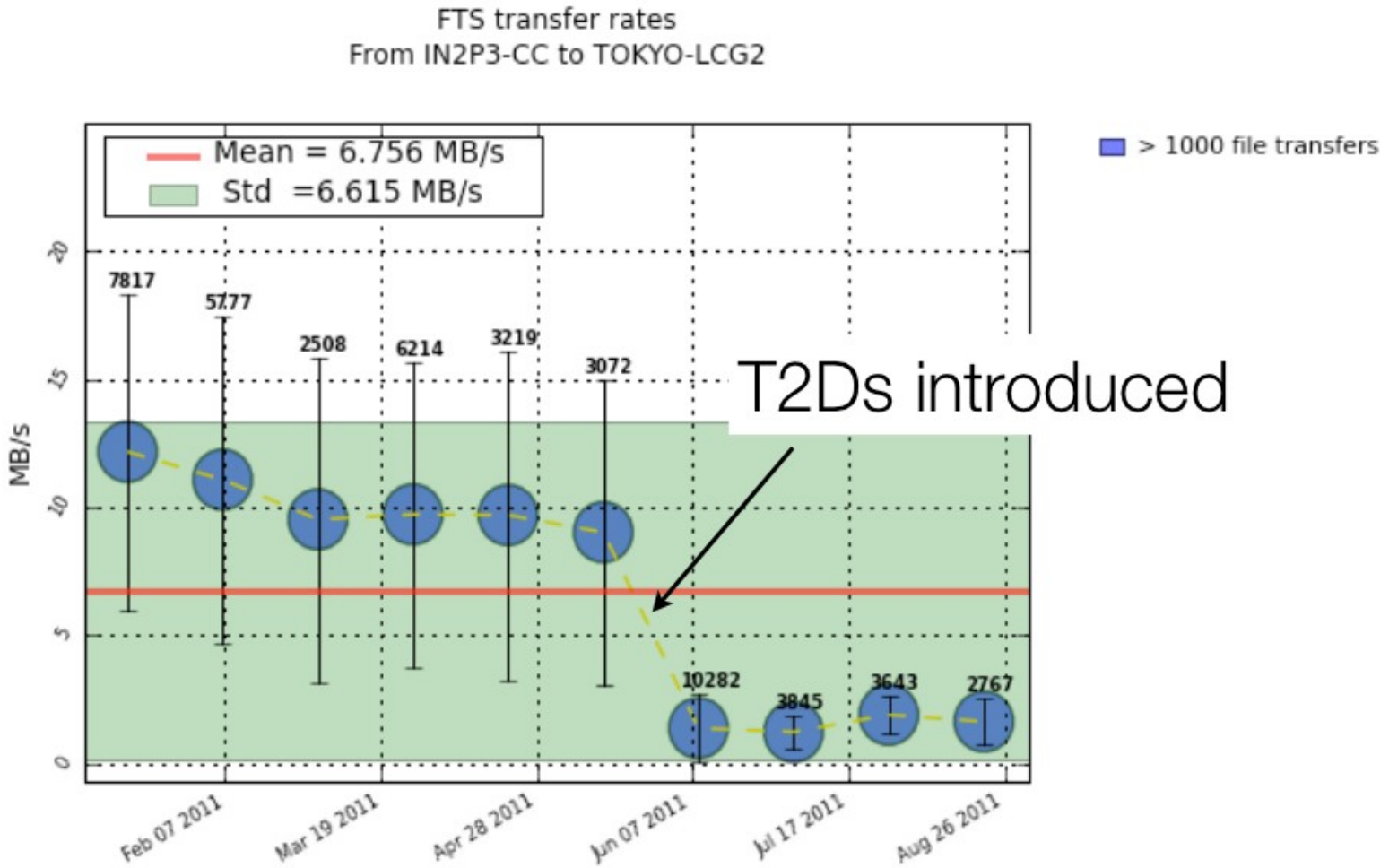
Thank you Xavier



LHCONE

- Goal: To build a global unified network service platform for the LHC community
- Slides Xavier Jeannin (yesterday afternoon)
- Monitoring: perfSONAR
  - perfsonar-ps toolkit (at Lyon & Tokyo)
- Candidate sites for Atlas
  - CC-IN2P3
  - GRIF-LAL
  - TOKYO

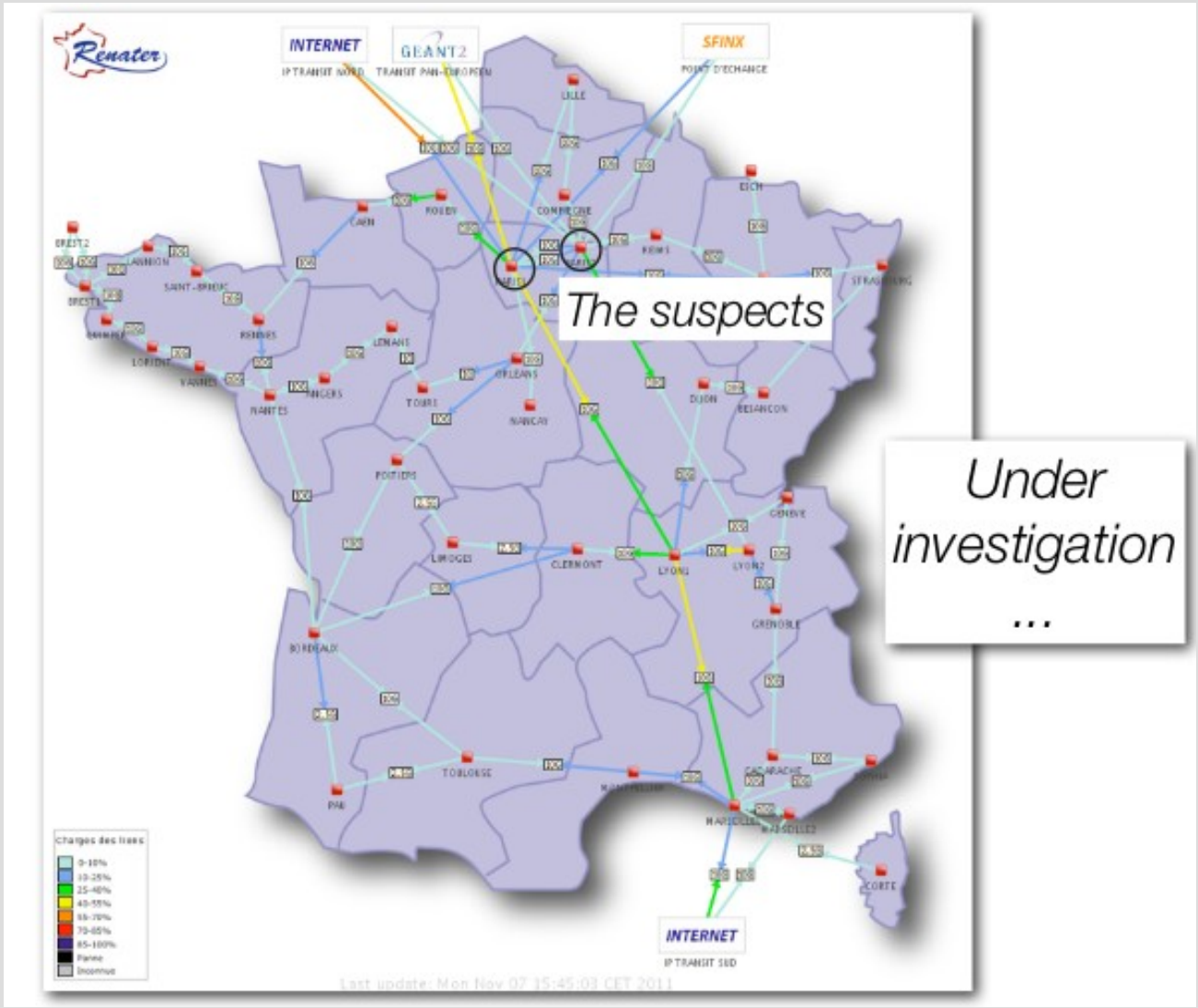
Symptom: transfer to Tokyo since May



Temporary Conclusions

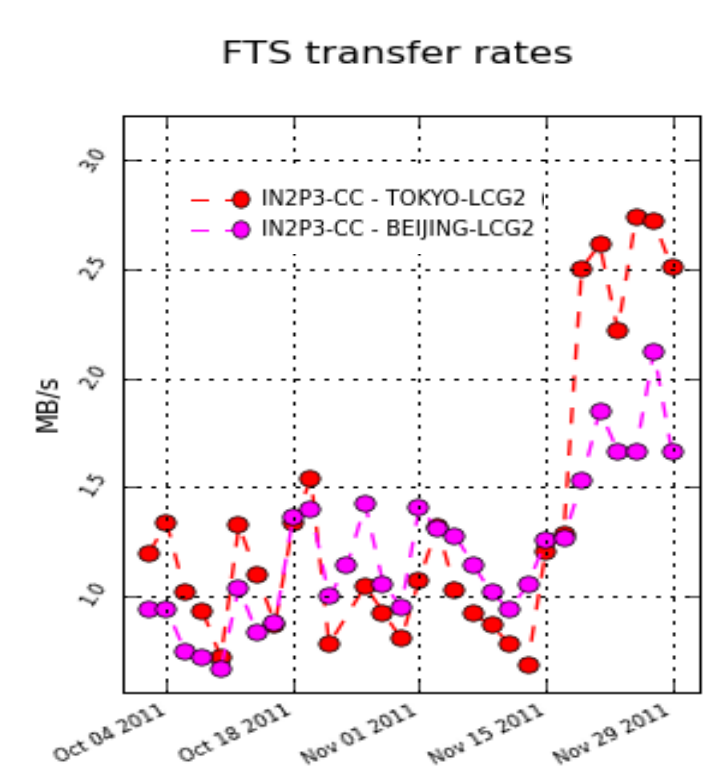
- BEIJING also affected
- One way effect
- FR T2's not affected
- Transfers to most T2s of US, CA, UK, DE, IT, ES, NL have been checked and have the same symptom
- CMS also observes similar effects...

Suspects: NREN - GEANT interface in Paris

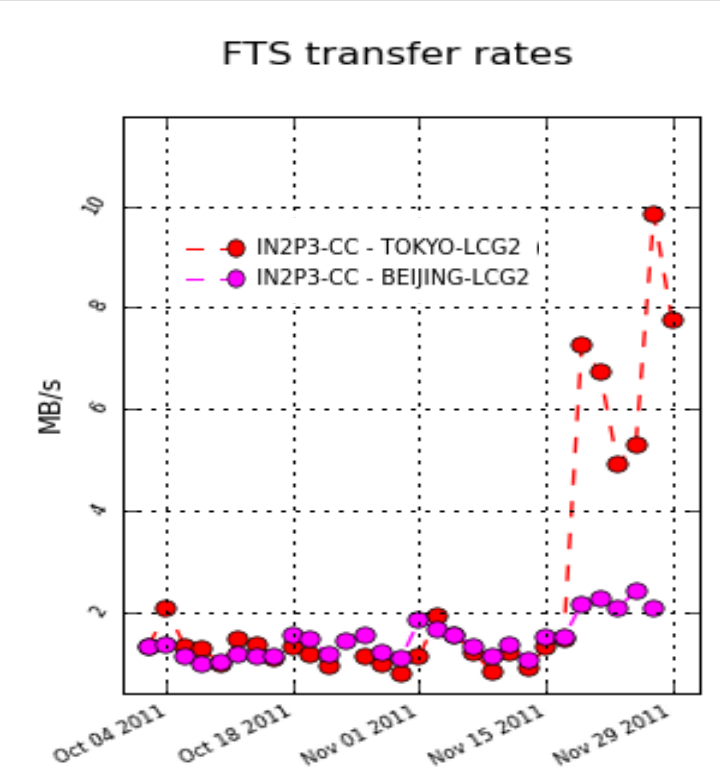


Rate transfer improvement?

Medium files (100 MB to 1 GB)

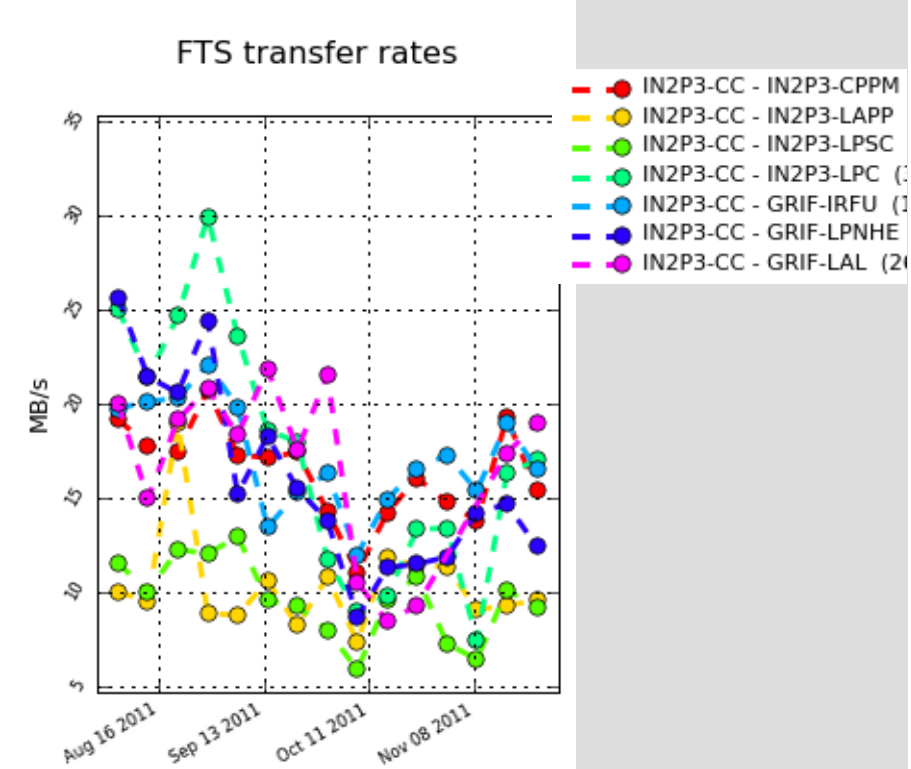


Large files (1 GB to infinity)



FTS statistics

Medium files (100 MB to 1 GB)



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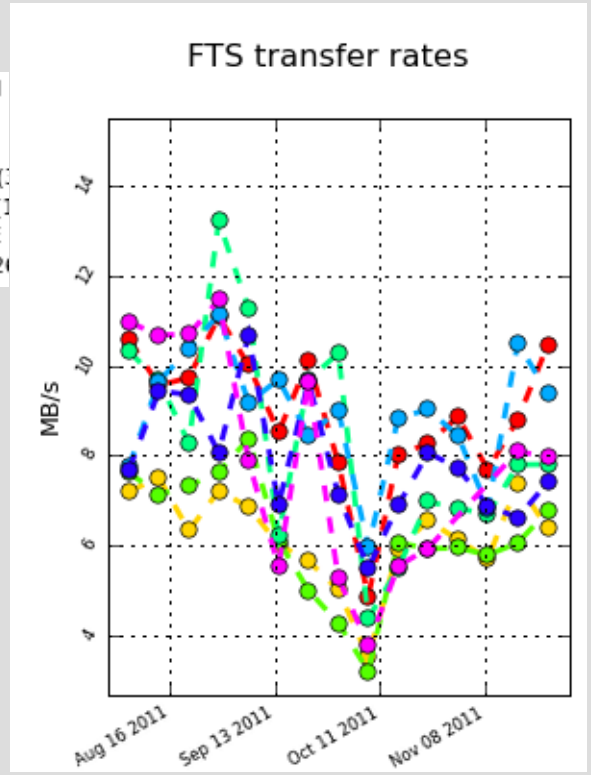

LPSC and LAPP: lower rate then other FR T2s

Monitoring

- Atlas side: big improvement this year
  - http://adc-monitoring.cern.ch/
- CC side:
  - Meeting in July to present our requirements
  - No other channel to get informations
  - Monitoring pages must be open (cf. FZK, BNL)
  - Still waiting for even if a link exists

http://monicc.in2p3.fr/monitoring/?q=filtre_experience&group=atlas

Chirp for user output

- Chirp server installed at CC (P. Girard)
- Grid jobs output stored on chirp server
  - pathena,prun with --UserChirpServer option
  - output up to 200 MB
- User accesses them directly
  - Using fuse to mount the chirp file system
  - Parrot for simple command (ls, cp,..)
  - Chirp client
- Tests done by N. Ghodbane: Good feedback