



# *MC-Production and LCG*



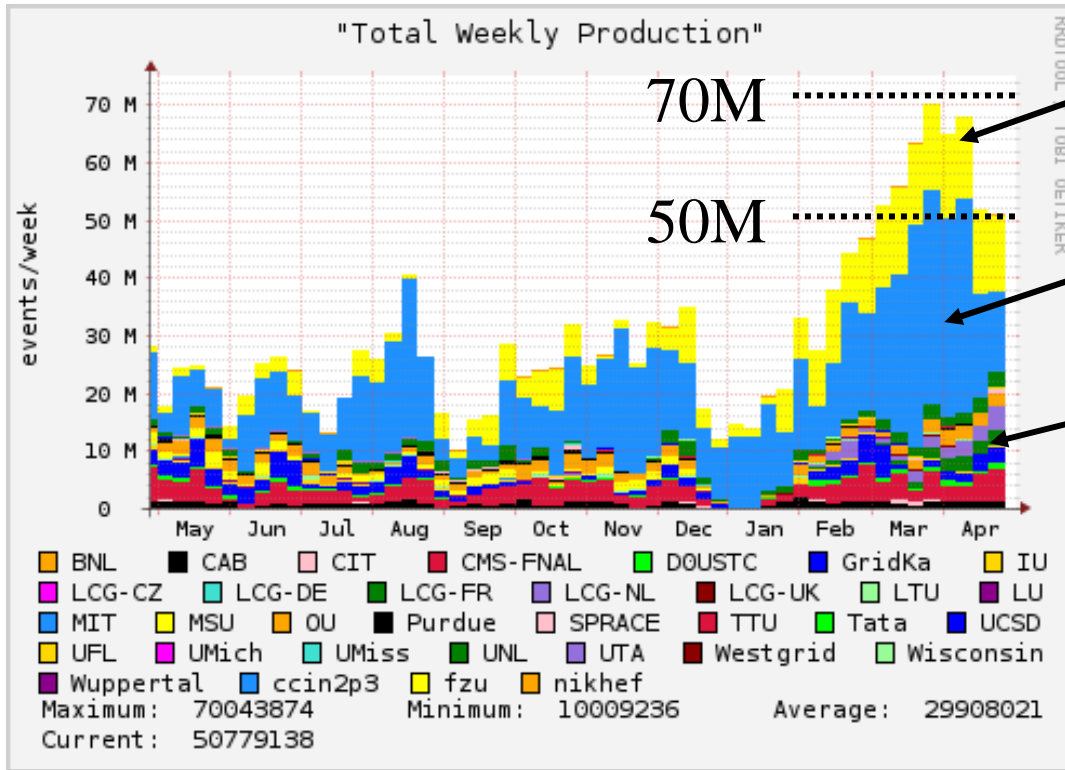
## *2010 Production Statistics Samgrid/LCG status Summary*

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Institut de Physique Nucléaire de Lyon*

**DØ-France**  
*May 3-4, 2010  
Lyon*



# Weekly MC-Production



**SAMGrid**  
FZU - Prague

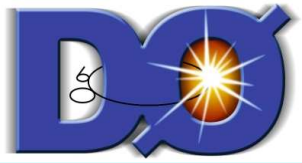
**CCIN2P3-Lyon**

**OSG**  
**SAMGrid/LCG**

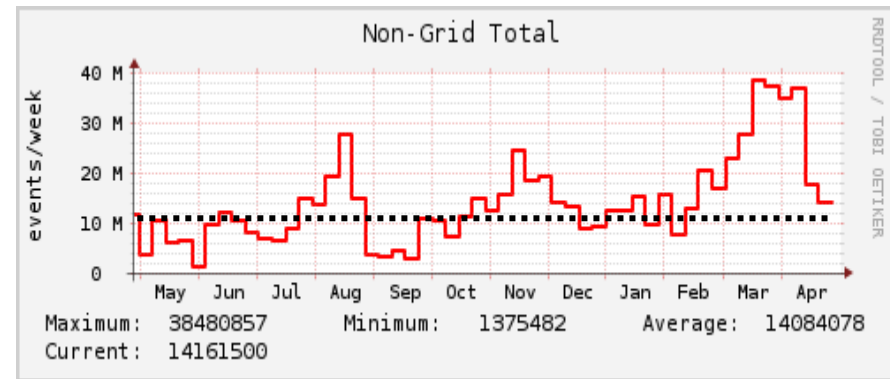
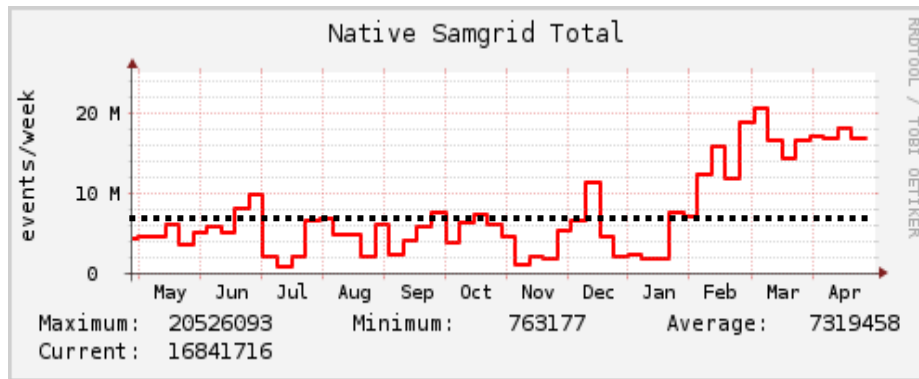
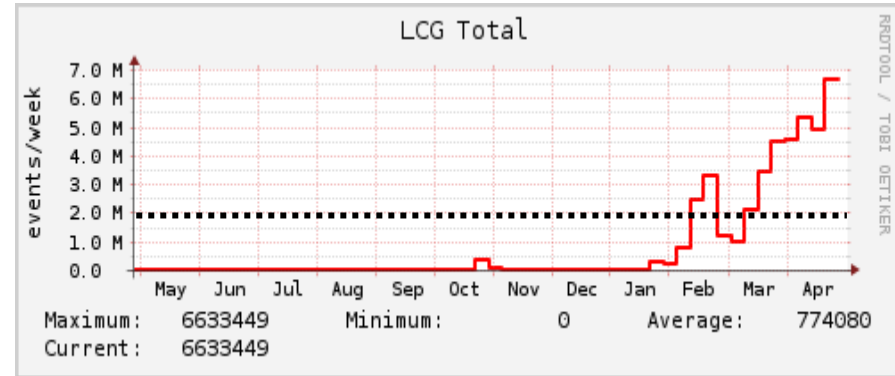
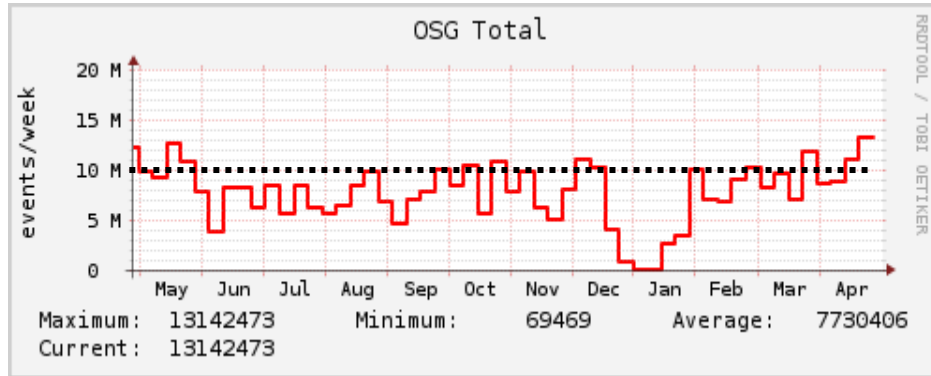
**Absolute records !!!**

**Average (Feb →): 50 M/w (record 70M/w, 38M IN2P3)**

**Sustained rate for 2010: 35 M/w ? → long term goal : 40 M/w ?**



# MC-Production Rates /week Sites



*Corrected average rates estimates for this year (?):*

**CC 16M + OSG 10M + SG 10M + LCG 4M = 40 M/week**



# SAM-Grid/LCG History



## ➤ *Motivation & Goals*

- *resources and manpower drifting towards LHC*
- *make LCG resources available to DØ via SAM-Grid*
- *integration project, no massive code changes*
- *It worked ! MC-production, reprocessing*

## ➤ *Limitations & Problems*

- *too much distributed (forwarding node Wuppertal/Lancaster, SE Imperial College, durable location Manchester, SAM station CCIN2P3)*
- *missing dedicated manpower + hardware problems*
- *Dec 2007 usage of LCG resources died out*

## ➤ *New LCG strategy* : *fwd node at FNAL, use OSG/LCG gateway, use Glidein-WMS*

## ➤ *After 2 years resuscitating this production channel ....*

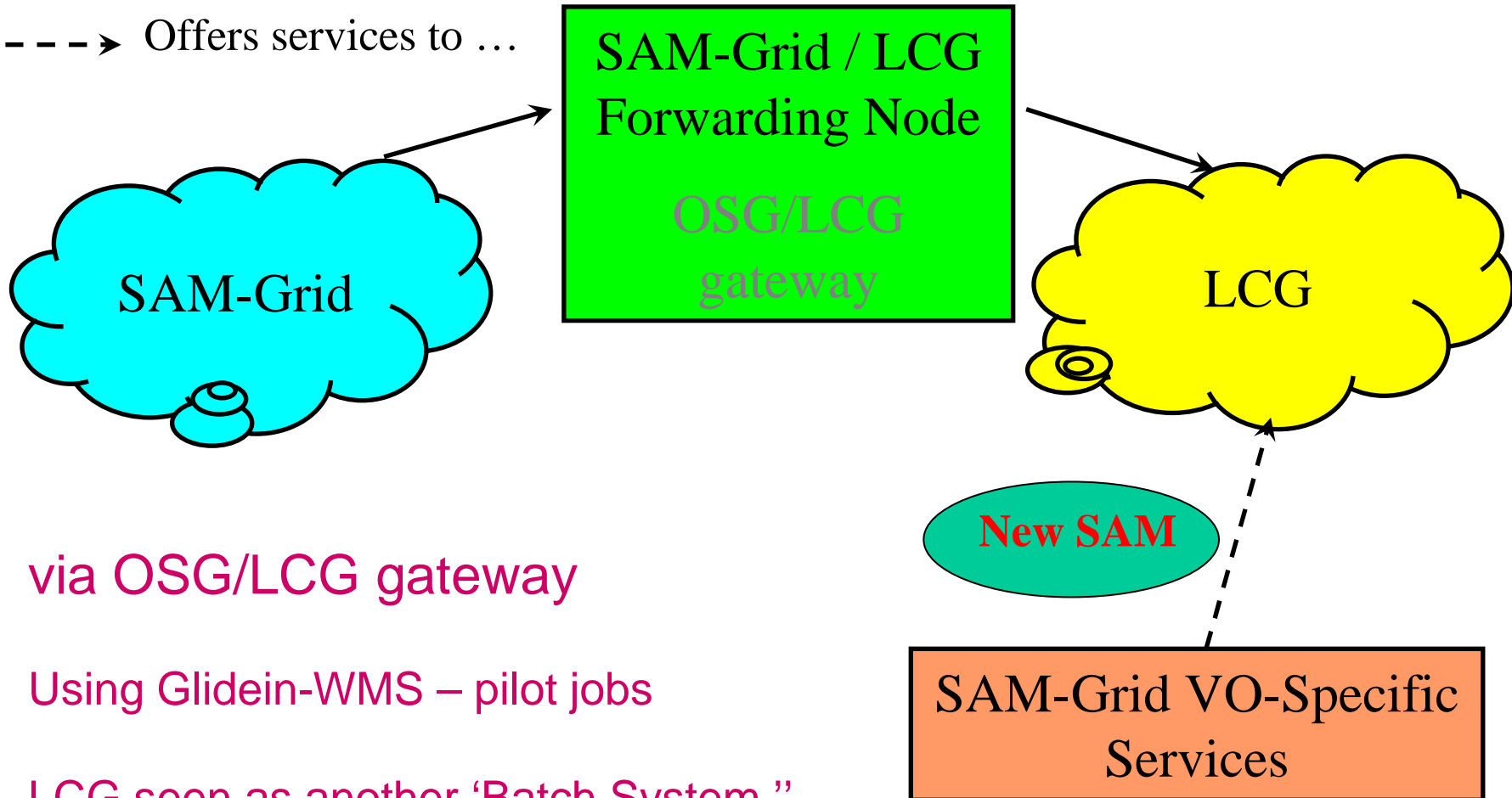


# SAMGrid/LCG - Interoperability



→ Flow of Job Submission

--- → Offers services to ...



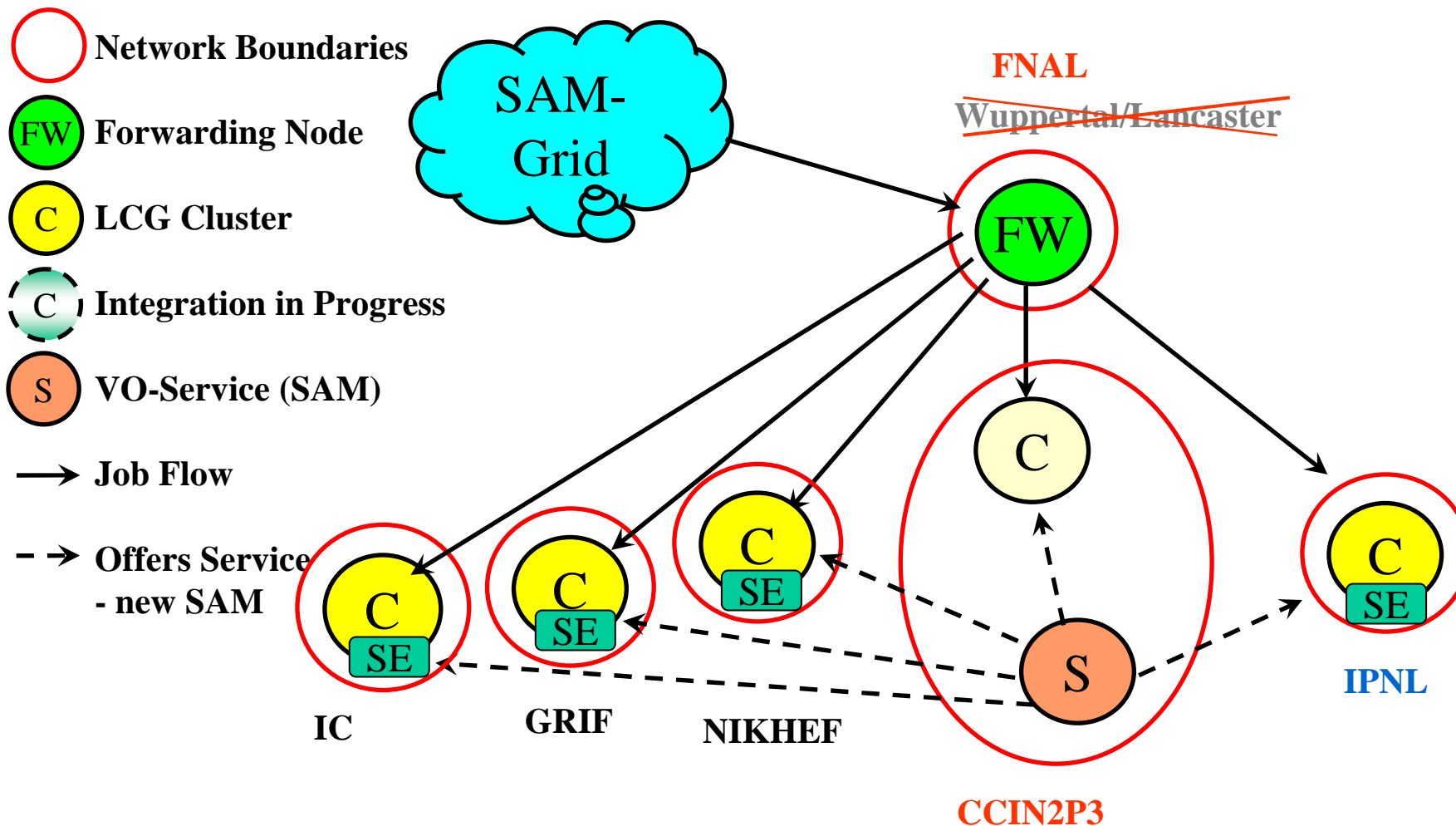
via OSG/LCG gateway

Using Glidein-WMS – pilot jobs

LCG seen as another ‘Batch System ’



# SAMGrid/LCG – Today

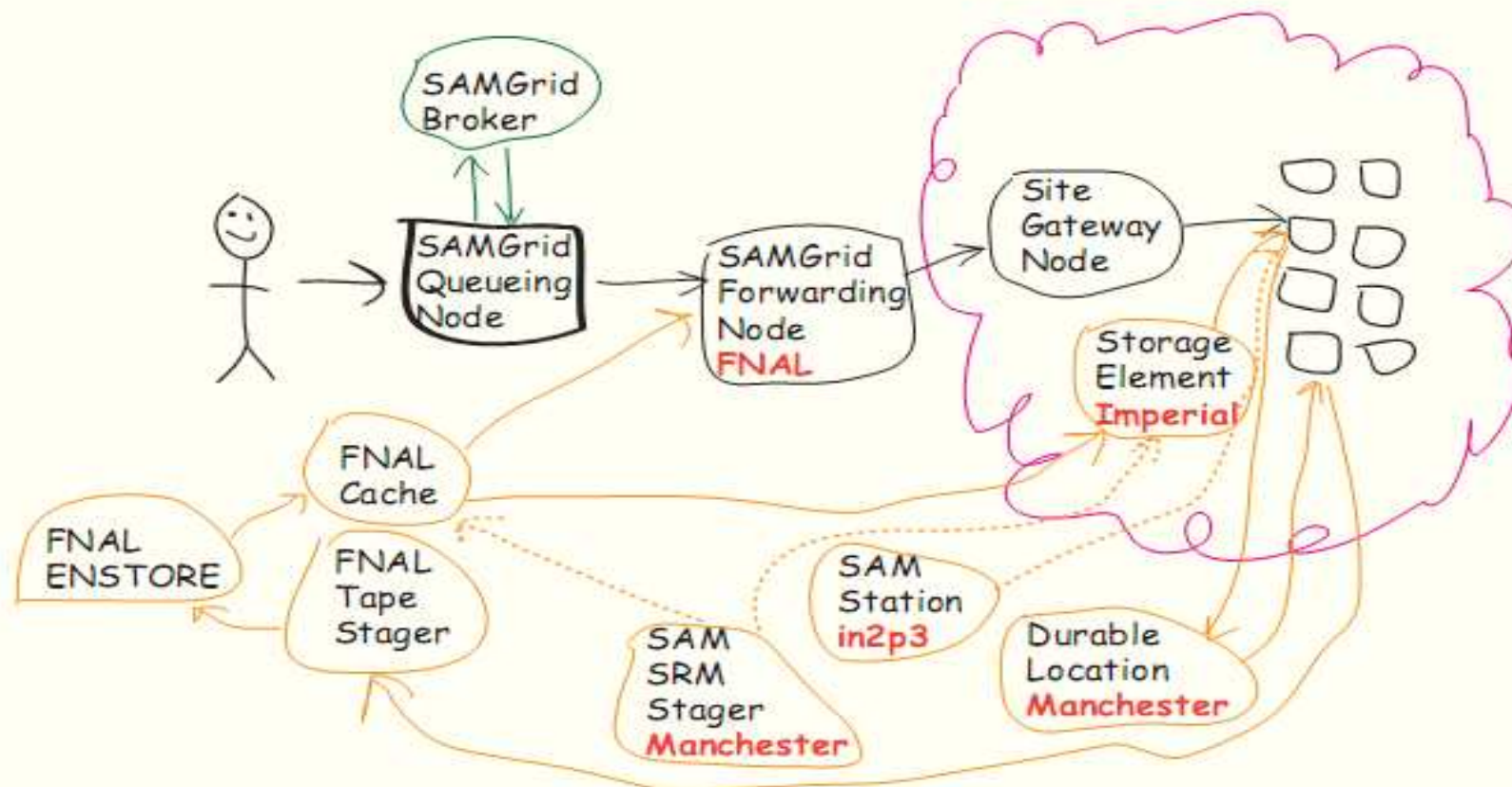




# SAMGrid/LCG – Another view



## MC on LCG, the new way



Adam Lyon / Fermilab CD DØ / 2010.02.03



# DØ Computing Requirements



- *accept VO-Dzero*
- *Opportunistic usage of CPU*
  - *only production jobs (no user analysis)*  
→ *submitted by a very few people*
- *Storage space*
  - 1-2 TB on SE for input files*  
*d0release tarballs + ZeroBias files*
- *No specific software installation needed*





# The SAM-Grid/LCG Status



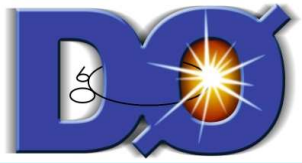
## ➤ *Working sites*

- *IPN Lyon*
- *Lal (Orsay)*
- *Nikhef, Sara (Netherlands)*
- *Imperial College*
- *4 with working local storage (IPNL, Nikhef, Imperial, Orsay)*  
→ *local storage is a key to success*

## ➤ *Want to use additional site*

- *Saclay (GRIF), Clermont-Ferrand*

## ➤ *complementary resources for Dzero*

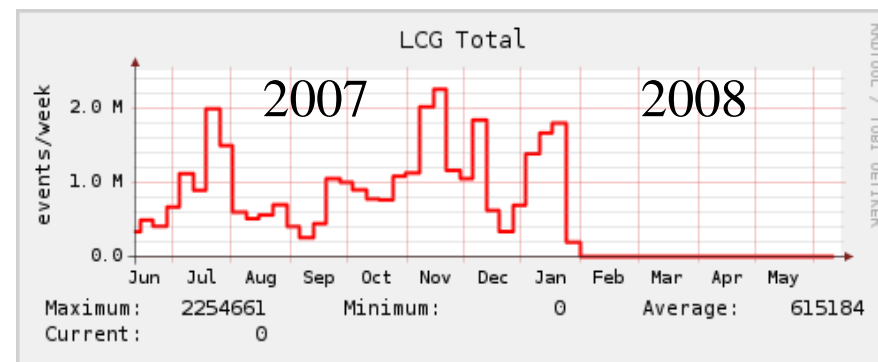
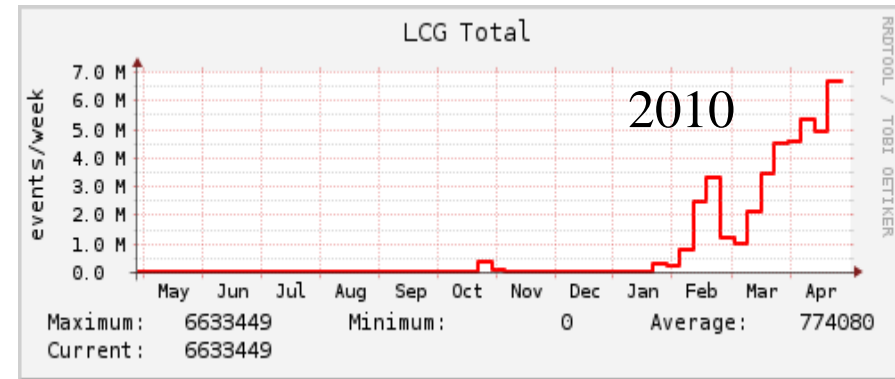
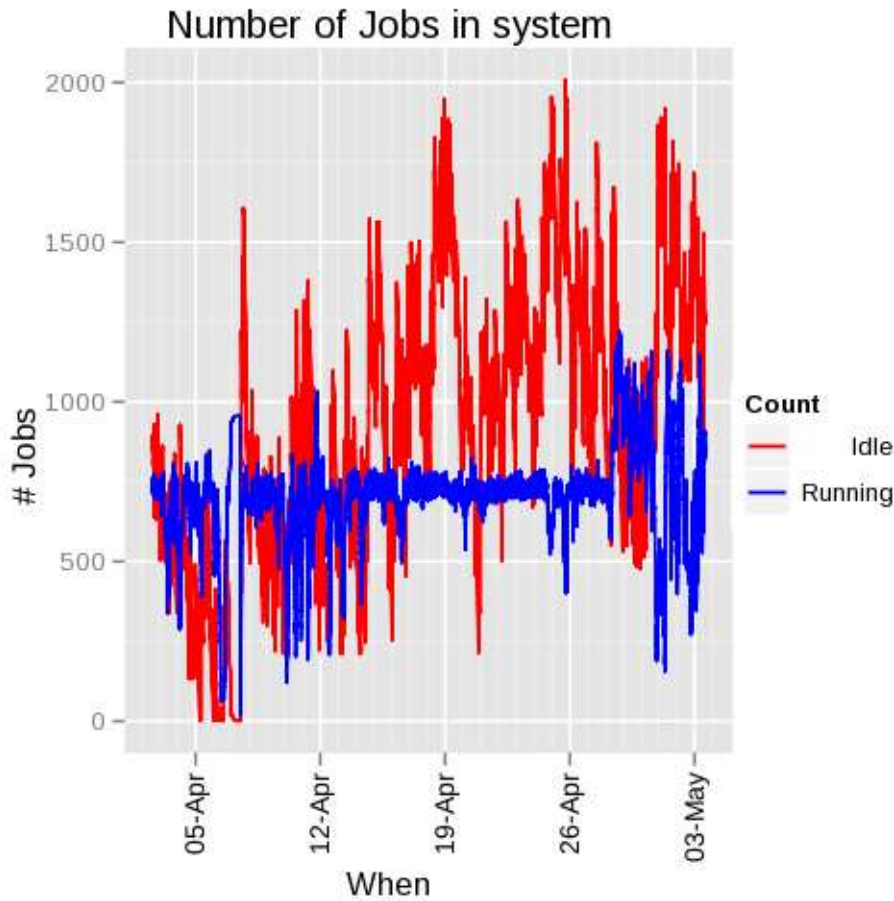


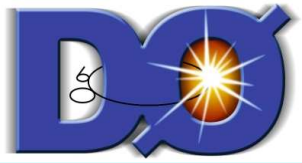
# SAMGrid/LCG Jobs - Events



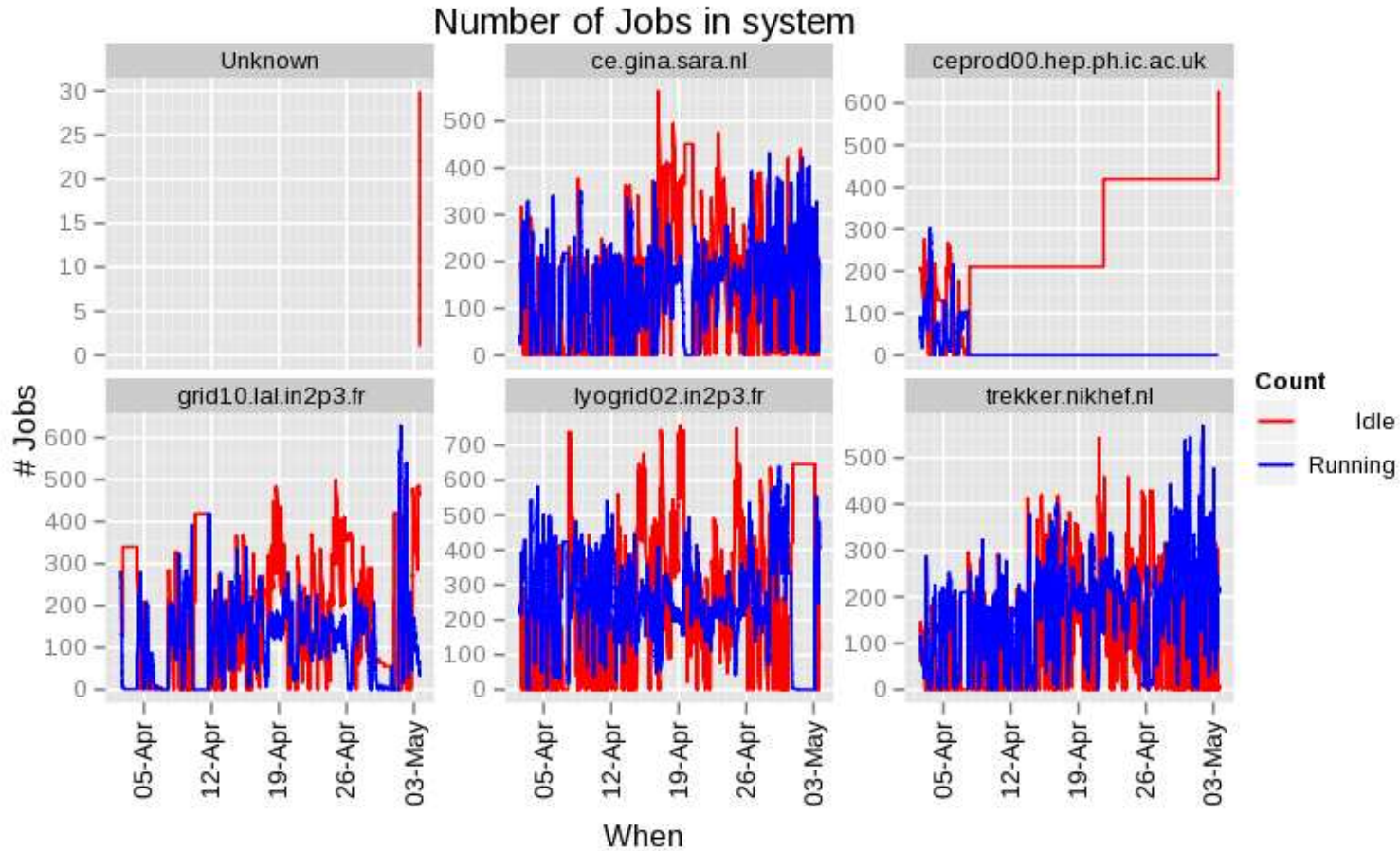
Current limit on number of jobs :  
700 → 1000

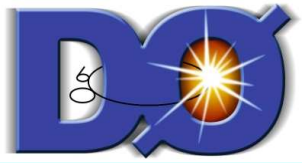
Events /week : max 6.6 M  
2M → 7M



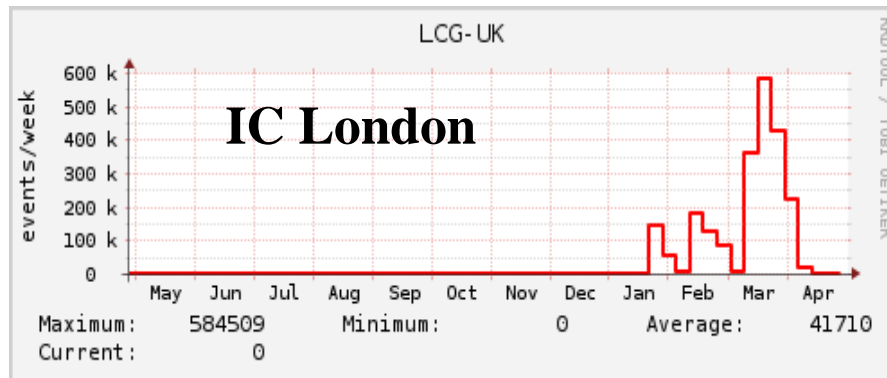
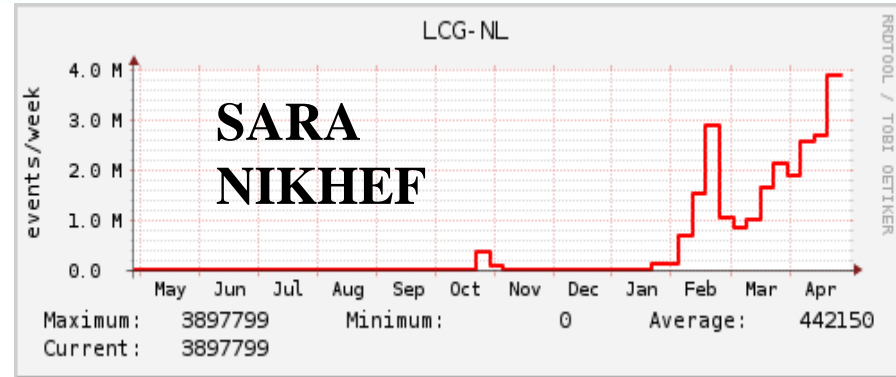
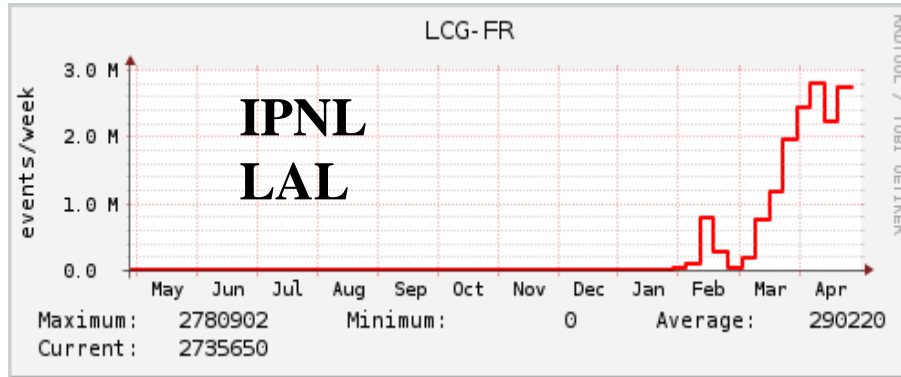


# MC-jobs SAMGrid/LCG





# MC-Production Rates /week SAMGrid/LCG



Current limit :  
~1000 jobs running  
Plans: add new sites  
→ 1000 jobs

Double (triple) ? 2010 expectation : 2M events/week  
→ 4 – 6 M ?



# Summary



- *Excellent production rates (last 3 Months)*
- *Current rates - will be difficult to keep*
- *Correction: production rate 2010 expectation*
  - *30 M/week → 35-40M/week*
- *Production on LCG is back*
- *Important that we have different independent CPU resources → complementarity*
- *Physics groups, analyzers:*
  - provide lists of processes & wanted statistics*
- *Important long term planning, enough requests in pipe*