

Databases in the ATLAS experiment

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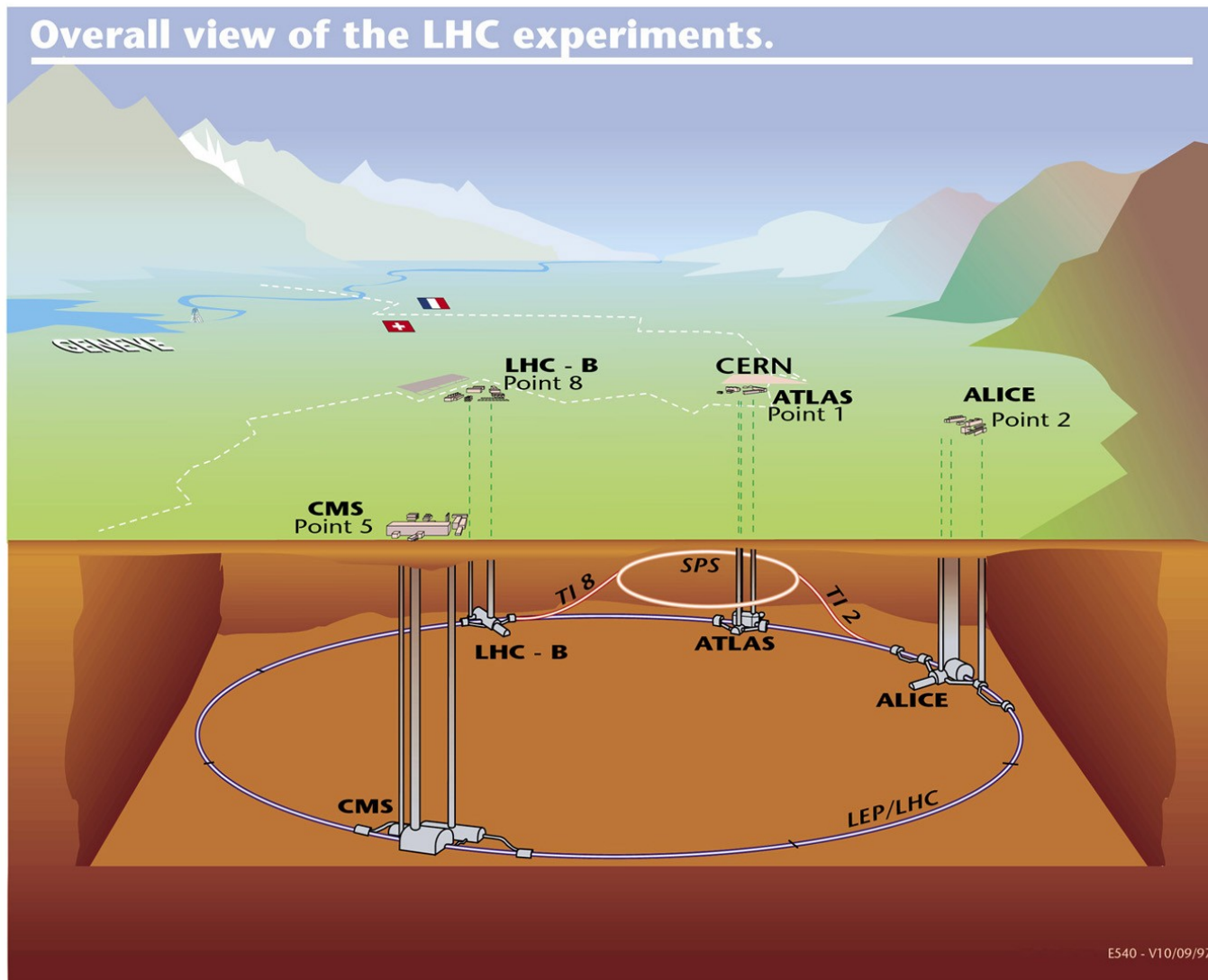
Department of Radiation Sciences

UPPMAX databasdag 2005-12-09

CERN

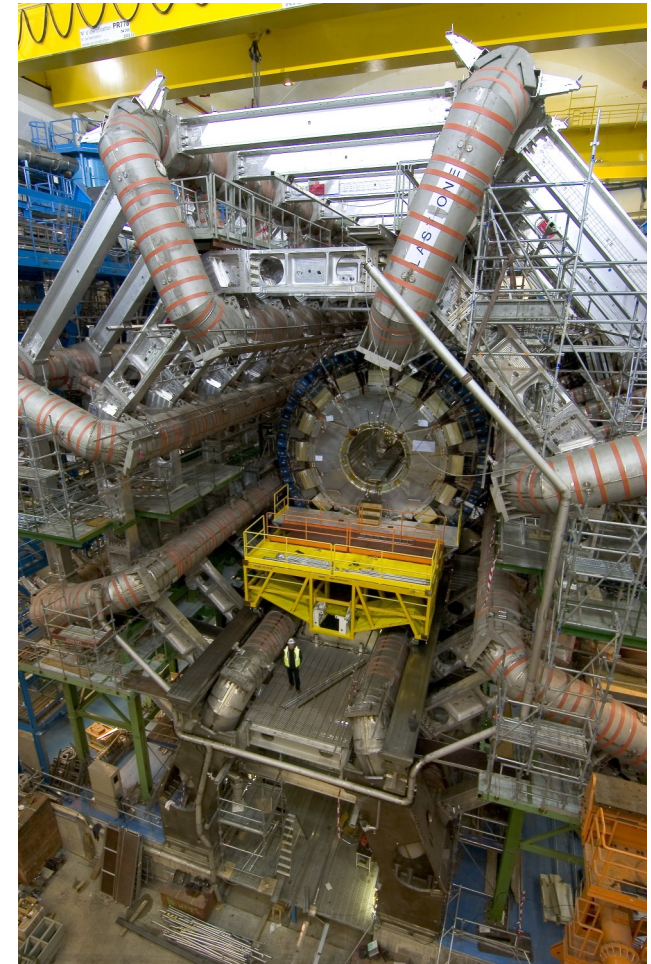
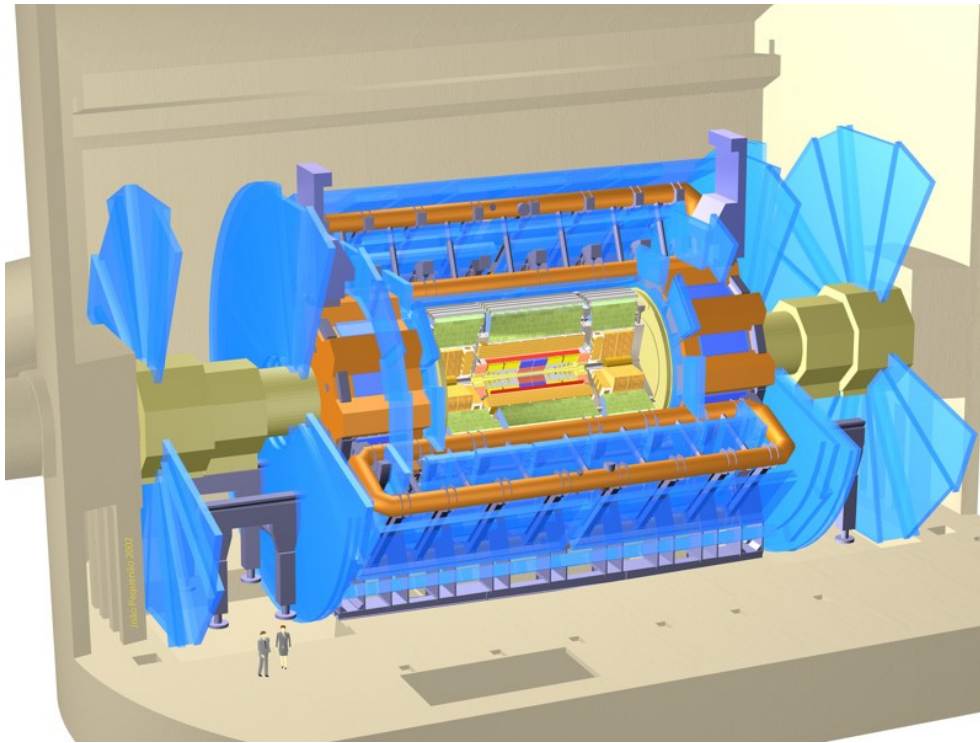


LHC – Large Hadron Collider



ATLAS under construction

November 2005



Many databases

- Production and Testing of Detector Components
- Detector Geometry and Alignment
- Run Conditions
- Dataset Metadata
- Monte Carlo Production
- File Replica Catalogs
- The event files themselves

Detector Module Production and Testing

ATLAS at Uppsala University - Mozilla Firefox

File Edit View Go Bookmarks Tools Help

http://www4.tsl.uu.se/%7EAtlas/Electrical/Production.html

Red Hat, Inc. Red Hat Network Support Shop Products Training

Results from Detector Module Production

Modules built in the Scandinavian Cluster

Module	Next Step	Location	Comment
20220330200050	Shipped	Oxford	
20220330200100	Fail	Uppsala	HOLD high I,exhibition module
20220330200116	Shipped	Oxford	Onset@430V
20220330200117	Shipped	Oxford	
20220330200118	Shipped	Oxford	Onset@390V (high IV)
20220330200119	Shipped	Oxford	
20220330200120	Shipped	Oxford	Onset@370V (high IV)
20220330200122	Shipped	Oxford	
20220330200123	Shipped	Oxford	
20220330200124	Shipped	Oxford	Onset@410V
20220330200125	Shipped	Oxford	
20220330200126	Shipped	Oxford	
20220330200127	Shipped	Oxford	
20220330200128	Shipped	Oxford	
20220330200129	Shipped	Oxford	Onset@450V
20220330200130	Shipped	Oxford	
20220330200136	Shipped	Oxford	Onset@470V
20220330200137	Shipped	Oxford	
20220330200138	Shipped	Oxford	
20220330200139	Shipped	Oxford	

Done

Detector Geometry and Alignment

ATLAS DD Database

Node [TRTBarrelStrawCoord](#) (show [column descriptions](#)), tag [TRTBarrelStrawCoord-01](#)

TRTBARRELSTRAWCOORD_DATA_ID	STRAWXPOSITION	STRAWYPOSITION
long	float	float
1642	93.1465	-.0002
1643	86.4934	0
1644	79.8401	0
1645	73.1867	0
1646	66.5334	0
1647	59.88	0
1648	53.2267	0
1649	46.5734	0
1650	39.92	0
1651	33.2667	0
1652	26.6134	0
1653	19.96	0
1654	13.3067	0

http://atlas-php.web.cern.ch/atlas-php/DDDB/show_tagged_node.php?node_id=MzAwOA==&tag_id=MTA2MTcw&user=QVRMQVNERF9SRUFERVI=

Run Conditions

Conditions Database Web Browser - Mozilla Firefox

File Edit View Go Bookmarks Tools Help

http://atlobk02.cern.ch/

Red Hat, Inc. Red Hat Network Support Shop Products Training

Selected folder: /Pixel/CTB/Table_510448_dead

Browse with tag Browse at point Browse history

Tag: HEAD

Point: 2005 12 09 10 19 06

Since: 2004 12 09 10 19 45

Till: 2005 12 09 10 19 45

Submit Display Keys as run/event Browse last 5 minutes

Found 2 row(s).

	Since (GMT):	Till (GMT):	Chip_no	Column_no	Row_no
[0]	-Inf	2005-May-19 10:50:15.0	NULL	NULL	NULL
[1]	2005-May-19 10:50:15.0	+Inf	3	0	59

Done

Dataset metadata

Project : MC11
Process : production

Showing rows 0 to 5
Total number of results for this query : 5

dataset.AtlasRelease	dataset.createdBy	dataset.datasetGUID	dataset.datasetNumber	dataset.dataType	dataset.logicalDatasetName
11.0.2	hinchliffe	0	005100	EVGEN	MC11.005100.JimmyWenu.evgen.EVGI
11.0.2	hinchliffe	0	005100	NTUP	MC11.005100.JimmyWenu.evgen.NTU
11.0.2	hinchliffe	0	005100	HISTO	MC11.005100.JimmyWenu.evgen.HIST
11.0.2	nevski	0	003006	HITS	MC11.003006.M1_minbias.simul.HIT
11.0.2	nevski	0	003006	RDO	MC11.003006.M1_minbias.digit.RDO.v

First row :
Step :

Done atlastagcollector.in2p3.fr:8443

Monte Carlo Production

The screenshot shows a web browser window titled "phpORAdmin - Mozilla Firefox". The address bar contains the URL "http://atlas-php.web.cern.ch/atlas-php/DbAdmin/Ora/php4.3.4/general/front1.php". The browser's bookmark bar shows "Red Hat, Inc.", "Red Hat Network", "Support", "Shop", "Products", and "Training".

The main content area displays the title "User atlas_ps table EJOBDEF on database atlas_prodsys". Below the title, there are controls for "Exec", "Showing 50 records starting from 1", and a "Next" button. A "Sql Query:" box contains the following SQL query:

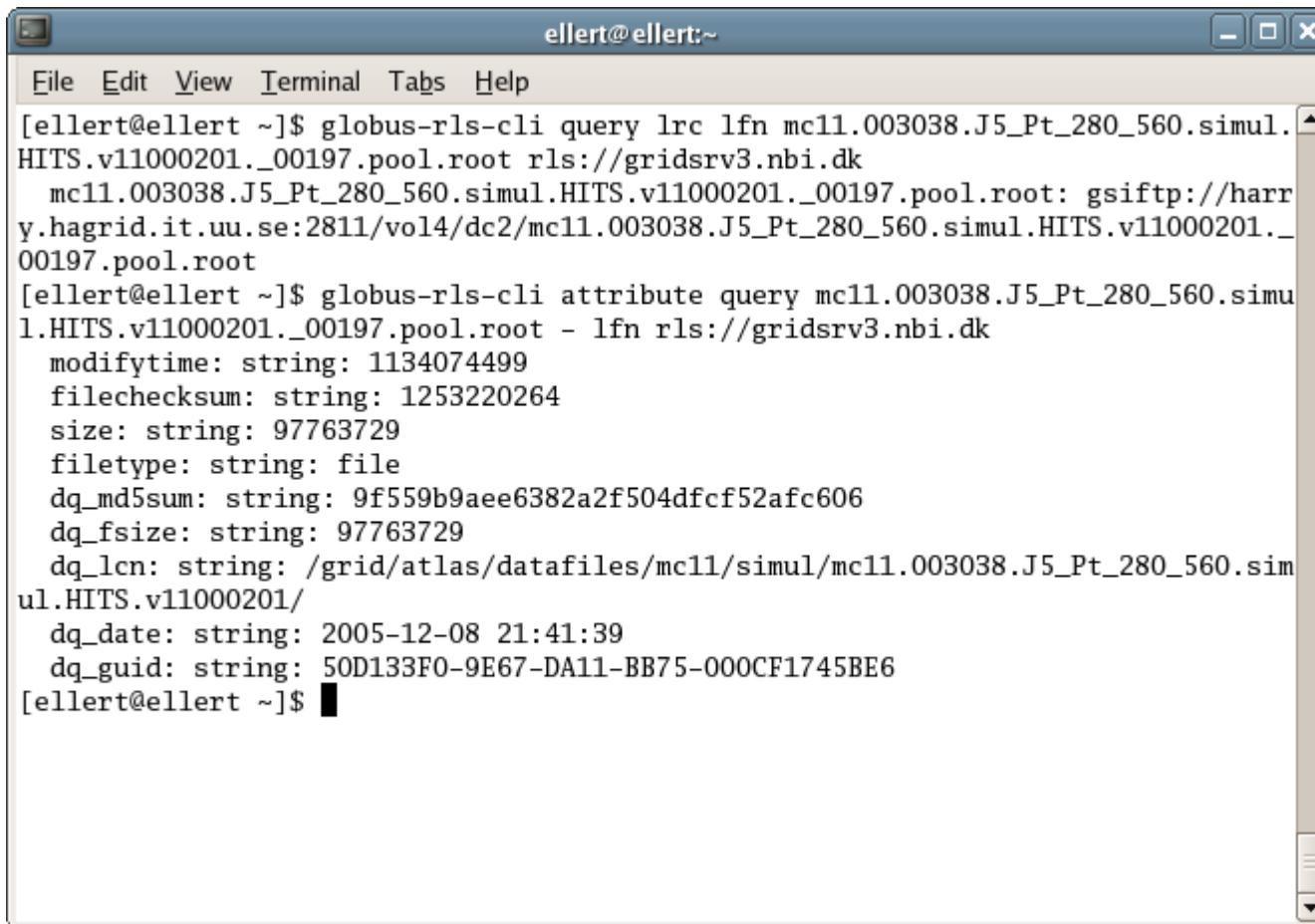
```
select * from EJOBDEF where rowid in(select rowid from EJOBDEF where rownum < 51 minus select rowid from EJOBDEF where rownum < 1)
```

Below the query, a table displays the data. The table has five columns: "Actions", "JOBDEFID NUMBER(9)", "CREATIONTIME DATE", "MODIFICATIONTIME DATE", and "JOBNAME VARCHAR(128)". The table contains three rows of data, each with "edit" and "delete" links in the "Actions" column.

Actions	JOBDEFID NUMBER(9)	CREATIONTIME DATE	MODIFICATIONTIME DATE	JOBNAME VARCHAR(128)
edit delete	38	28-OCT-05, 02:15 A.M.	02-DEC-05, 10:55 A.M.	mc11test.004201.JimmyZee.evgen.v110000._00001.job
edit delete	39	28-OCT-05, 02:15 A.M.	02-DEC-05, 10:55 A.M.	mc11test.004201.JimmyZee.evgen.v110000._00002.job
edit delete	40	28-OCT-05, 02:15 A.M.	02-DEC-05, 10:55 A.M.	mc11test.004201.JimmyZee.evgen.v110000._00003.job

On the left side of the interface, there is a sidebar with a "checking for tables" status and a list of table names: ". LOGGING", ". EJOBEXE", ". EJOBDEF", ". JOBTRANS", ". ETASK", ". DATASET", ". TASKOUTPUTS", ". TASKINPUTS", and ". ERRORCODE". Below this list, it says "9 Records Selected". At the bottom of the sidebar, there is a "SQL Query Execute" button. The status bar at the bottom of the browser window shows "Done".

File Replica Catalogs



```
ellert@ellert:~  
File Edit View Terminal Tabs Help  
[ellert@ellert ~]$ globus-rls-cli query lrc lfn mc11.003038.J5_Pt_280_560.simul.  
HITS.v11000201._00197.pool.root rls://gridsrv3.nbi.dk  
mc11.003038.J5_Pt_280_560.simul.HITS.v11000201._00197.pool.root: gsiftp://harr  
y.hagrid.it.uu.se:2811/vol4/dc2/mc11.003038.J5_Pt_280_560.simul.HITS.v11000201._  
00197.pool.root  
[ellert@ellert ~]$ globus-rls-cli attribute query mc11.003038.J5_Pt_280_560.simu  
l.HITS.v11000201._00197.pool.root - lfn rls://gridsrv3.nbi.dk  
modifytime: string: 1134074499  
filechecksum: string: 1253220264  
size: string: 97763729  
filetype: string: file  
dq_md5sum: string: 9f559b9aee6382a2f504dfcf52afc606  
dq_fsize: string: 97763729  
dq_lcn: string: /grid/atlas/datafiles/mc11/simul/mc11.003038.J5_Pt_280_560.sim  
ul.HITS.v11000201/  
dq_date: string: 2005-12-08 21:41:39  
dq_guid: string: 50D133F0-9E67-DA11-BB75-000CF1745BE6  
[ellert@ellert ~]$
```

ATLAS data flow

