Atlas Computing Infrastructure in Hamburg

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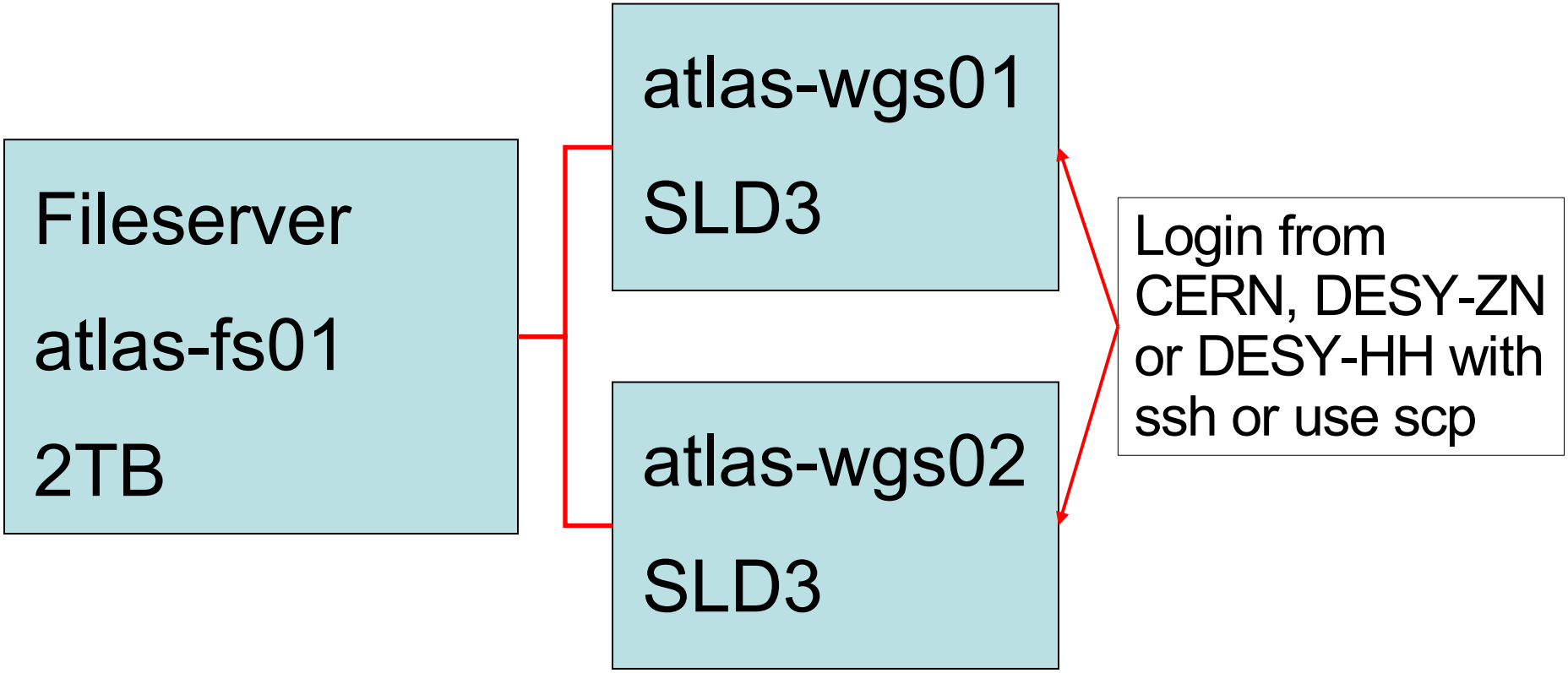
Hardware



- Root directory: /atlas is a shortcut to /afs/desy.de/group/atlas
- Discs on atlas-wgs01/2: /afs/desy.de/group/atlas/discs/pool01
- Directory name policy: username or project name

Software

Kit: plan to install all production releases

- Last stable version from old releases, at the moment 11.0.5
- All stable versions from current releases, at the moment 12.0.2 & 12.0.3

Grid Software:

- Dq2 tool (for transfer or administration between TIER01/02)
- Dq2 enduser tools (list and get files for analysis from local or global sites)

Source <atlasdir>/software/DQ2/enduser/setup.sh.DESY-HH
/setup.sh.CERN

Ganga (Gaudi/Athena and Grid Alliance):

- Grid Job submission and monitoring tool, more on next slide

Ganga

- Grid Job Submission
  - Start in test release
  - Sends user installed packages to Grid and compiles
  - Use Resource Broker to find data
  - Or choose site manually (e.g. -ce DESY-HH)
  - Does not check if files are really there!
- Output files to SE
- Split job to number of input files
- Jobs are safed in Job Repository for later use
- GUI for Job Monitoring
- Requirements: grid UI, dq2, framework and ganga
- See also : https://twiki.cern.ch/twiki/bin/view/Atlas/GangaTutorial420

N-tuple production in Hamburg

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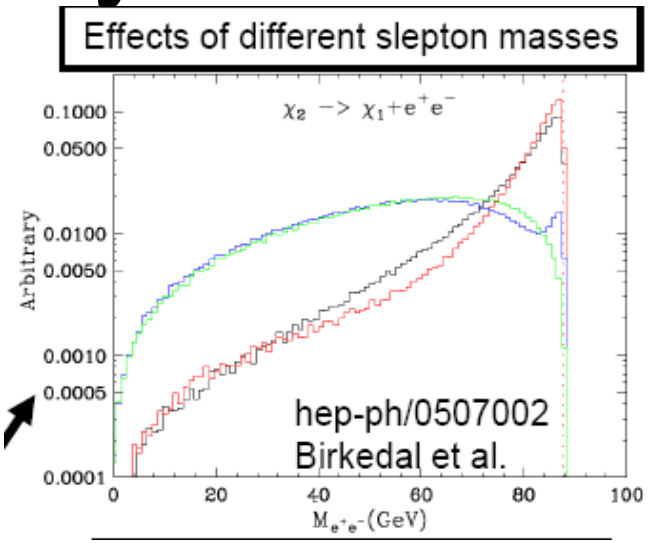
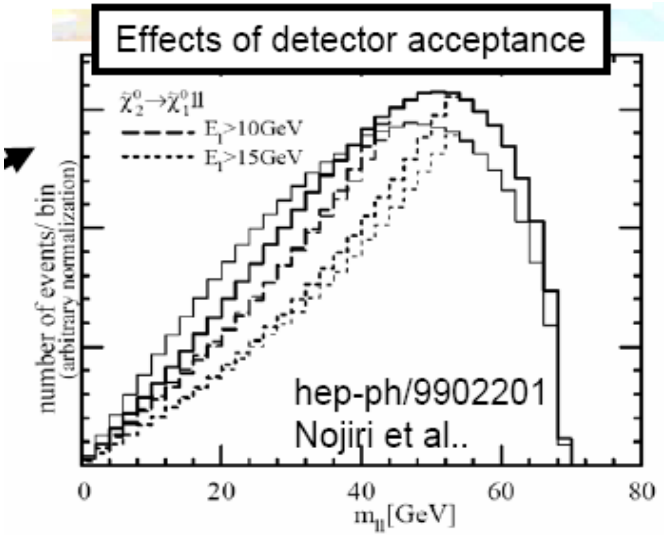
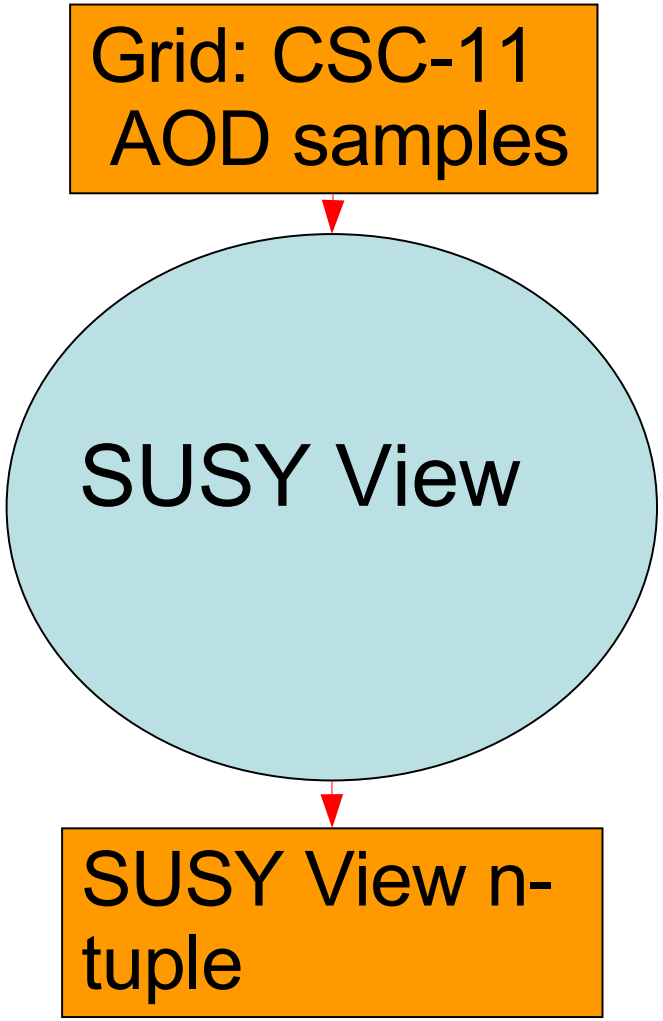
Idea for Analysis

- Di-Lepton signature in SUSY
- inv. Mass edge in l^-l^+ = mass difference of $X^0_2 X^0_1$
- Shape is sensitive to other SUSY parameters(e.g. Mass of slepton or spin)
- Idea: Unfolding of detector and trigger effects
- Test of many models (SUSY, ED..) without detector simulation
- Idea is to produce n-tuples usable for many High-p_T analyses





Production Idea



At CERN:

- Copy AOD's from CASTOR
- Run SUSYView on lxbatch
- Copy ntuples to DESY

Using the Grid:

- Use Ganga
- voms-proxy-init --atlas
- ganga –config-path=GangaAtlas/Atlas.ini --gui

Maybe you have to do this:

source <atlas>/etc/login.(c)sh

Technical steps

- Run the testrelease with SUSYView
  - Input: jobOption with inputfile
    - AOD datasets (output from dq2_ls csc11*AOD* | sort -n)
      - csc11.005001.pythia_minbias.recon.AOD.v11004103
      - csc11.005001.pythia_minbias.recon.AOD.v11004201
      - ...
    - Contents of global AOD catalog (output from dq2_ls -fg<filecatalog>)
      - csc11.005001.pythia_minbias.recon.AOD.v11004103._00001.pool.root.1
      - csc11.005001.pythia_minbias.recon.AOD.v11004103._00002.pool.root.1
      - ...
    - Local Catalog is displayed with dq2_ls –f <filecatalog>
  - Submit job to grid
- Where to store the output?
  - scp to desy: atlas fileserver
  - DESY Storage Element

Summary

- We plan to produce generic n-tuples at DESY-HH from all CSC11 AOD's.
- We already have the required hardware and software.
- SUSYView will be used for n-tuple production.
- Using the Grid will be simplified by using Ganga.
- Plan to look into di-leptonic signatures.