



WP2 report. Extending the scope

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ALPGEN

- ◆ Finalized ALPGEN setup on Titan@ORNL
 - ◆ ATLAS input parameters for Zjet process generation
 - ◆ Random seeds management
 - ◆ Python wrapper runs both ALPGEN generation steps in one MPI process
 - ◆ Ran large scale ALPGEN simulations on Titan (~2000 jobs)
 - ◆ Tested optimal aprun parameters for ALPGEN job allocation on Titan
 - ◆ FPU contention



CVMFS on Titan

- ◆ Cvmfs on parrot can be run on login nodes on Titan
- ◆ Current ATLAS software default version on cvmfs is SL6 – segfaults even on login nodes
- ◆ Fall back to SL5 releases behaves better
 - ◆ System compatibility (Titan uses Cray SUSE Linuxes)
 - ◆ Simlinks for missing libraries to take care of some incompatibilities
 - ◆ EMI and DQ2 work – can generate voms proxy
 - ◆ setupATLAS and asetup work allowing ATLAS software configuration
 - ◆ Simple Athena example from ATLAS Workbook runs on login nodes
 - ◆ More complex examples do not run
- ◆ Titan admins copied ALICE cvmfs to the common file system on Titan
- ◆ Copy of the ATLAS cvmfs started last week
- ◆ Will continue with tests of ATLAS software on worker nodes after cvmfs is available

The background image shows the interior of the ALICE detector at CERN, featuring a complex network of metal structures, pipes, and a large circular opening on the left side. The word "ALICE" is overlaid in large white letters on the right side of the image.

ALICE

- ◆ Discussed with Ken Read possible ALICE workloads for tests on Titan
- ◆ GEANT4 v10 (multithreaded) is ported to csc108
- ◆ Simple GEANT4 examples are running in batch on Titan worker nodes
- ◆ MPI wrapper is developed for GEANT4 and tested on Titan
- ◆ Can run multi-node GEANT4 simulations with every GEANT4 job running in multithreaded mode
 - ◆ Year 3 deliverable (multi core/node batch slots, inter-core coordination)
- ◆ Ready to work with ALICE on more complex examples (from cvmfs)

The background image shows the interior of a large particle accelerator facility, likely the eRHIC at BNL. It features a complex network of metal structures, pipes, and machinery. A large circular opening is visible on the left side, and the overall lighting is dim and industrial. The text 'eRHIC' is overlaid in white on the right side of the image.

eRHIC

- ◆ Talked to Alexander Kiselev from eRHIC group at BNL
 - ◆ He has expressed interest in tests on Titan
 - ◆ I will work on FairRoot installation on Titan this week



Miscellaneous

- ◆ Prepared paperwork for project extension on Titan (current allocation expires in May)
- ◆ Got access to the newest machine at ORNL - EOS (Cray XC-30)
 - ◆ Deployed recently
 - ◆ Similar to Edison at NERSC
 - ◆ Somewhat different software setup than on Titan
- ◆ Technical writer from ORNL wants to write a story about PanDA on Titan. Phone conference this week.
- ◆ Ongoing problems with globus-url-copy on Titan (see more in Danila's talk)
 - ◆ Support contacted a while ago.
 - ◆ Globus-url-copy works on Titan's DT nodes