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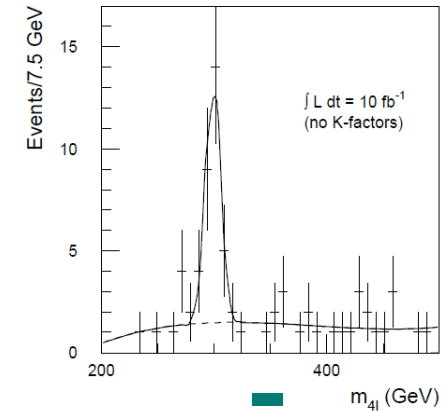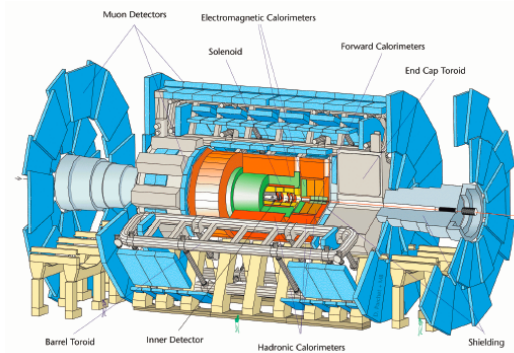

Perspective from the US ATLAS Community

Al Goshaw

Tier2/Tier3 Workshop
University of Michigan
May 28, 2008

PRL

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- In this session we would like to discuss data analysis from the perspective of a physicist based at a US University/Lab or at CERN. How can we optimize the productivity for physics analyses?

- Some boundary conditions are:

  - ➢ Most physicists are not computing/grid expert.
  - ➢ Most institutions can not afford a local computer professional
  - ➢ We currently do not have a dedicated source of funding for Tier 3 computing. Most groups will have very modest local computing facilities.

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- Some questions:

  ➢ What computing support can be expected for physics analyses from the US Tier 1 and 2 US?

  ➢ Specifically, will there be CAF-like capabilities for accessing large data files and data/MC processing?

  ➢ What are the requirements of the "last mile" in data analyses at local Tier 3 sites?

  ➢ Will there be US ATLAS User Support for Tier 3 technical questions?

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- One example of ATLAS-like University physics requirements based upon experience from CDF. Use Duke as a typical case (~ 6/4 senior physicists/students doing research on typically 4 different analyses in parallel).

  ➢ Use the FNAL Central Analysis Facility for all MC and data access from large primary data sets ("AOD's).

  ➢ Make use of standard "DPD's" made during production whenever possible (stNtuple and topNtuple).

  ➢ Bring small data sets to a modest "Tier 3" cluster for final analyses (26 cores on 10 machines, 15 TB Raid disk.)

  ➢ The hardare cost to Duke to support the above is ~$20K/year. With this we produce 2-3 publications/year.

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- The rest of the morning is devoted to hearing from people who will articulate these issues much better than I can.

  - ➢ Review of the Atlas Computing Model   Ian Hinchliffe

  - ➢ Tier 3's and Analysis   Amir Farbin

  - ➢ A Week in the Life of University X Analysis Group
                                          Jim Cochran

  - ➢ Then a review of the status of the FDR   Ian Hinchliffe