Science Priorities

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STAR

The Science

- From the upcoming Au run, run 7
  - Measurement of the relative contribution of beauty to electrons at high pt, in order to understand the parton flavor dependence of jet quenching and the surprisingly large quenching of charm and/or bottom quarks (i)
  - Direct measurement of D0 spectra, for flow and quenching of charm (ii)
  - First look at gamma-jet correlations at high pt in Au+Au, for quantitative measurement of jet quenching

10 months on a 2100 kSI2k farm …

- From past runs: Further analysis, including
  - Further analysis of multiparticle correlations, to understand the redistribution of lost energy within the flowing medium
  - Repass of Cu+Cu, in order to utilize the SVT+SSD for studies towards (i) and (ii) above

3 months on a 2100 kSI2k farm …

Need to offload resources to the Grid
Tier0 Data production

Timeline, activities

- Target for the summer
  - Migration of 80%+ of simulation to a Grid based operation
  - *Initial Milestone statement [1-18 months]*
    STAR: Migration of all (most) simulation to an OSG based operation, use of opportunistic resources with a combined software packaging and deployment and on-the-fly SRM deployment.
- Leading to (next 9 months?)
  - Performance / efficiency consolidation
  - Software Packaging
  - Data transfer mechanism solution – 2 TB / weeks (4 MB/sec) at most
    - SRM
    - How Xrootd+SRM prototype fits into it?
  - Fully operational sites (BHAM, UIC, …)
  - Acquire more experience on non-STAR dedicated sites for opportunistic use
- We also need to prepare for
  - Next level of simulation aka embedding on the Grid – 10 MB/sec need?
    - Planed for end of 2007, beginning of 2008
  - Root based analysis ; requirement study
  - User batch level analysis (although a 19-36 months target)
    - scaling jobs to 10k jobs/day
  - Thought - User analysis implies
    - Job tracking?
    - Troubleshooting?
    - Error recovery?
    - Other platforms? [MAC farm @ MIT experience]