**12 GeV Experimental Computing Review Committee Charge**

The committee is asked to review the state of software and computing developments for the 12 GeV program at Jefferson Lab, with particular emphasis upon

* Computing plans, including projections for cores, disk, and tape for the next five years
* Performance of the Scientific Computing Systems and planning for future needs
* Software and Computing considerations for Physics Readiness

1. Offline Software: Detector Simulation and Analysis
   1. Are the event reconstructions and physics analysis appropriate for publication quality physics results for the foreseen experimental program over the next five years? Are the halls producing appropriate levels of simulated events?
   2. Has each hall developed multi-year estimates consistent with CEBAF operations of 34 weeks/year for offline computing resources that appropriately support physics analysis and timely publication of results? Are those estimates consistent with the experience gained to date for data rates, processing time and need for simulation to support analysis?
   3. Are there any identifiable gaps in computing resources that would impede the timely production of publishable results? Are there any bottlenecks to doing user level analysis? If so, what are the plans towards addressing them?
   4. What opportunities exist for common tools and approaches with the broader HEP/NP community that can be utilized by Jefferson Lab? How can Jefferson Lab collaborations increase the utilization of new approaches and tools, such as machine learning?
   5. Are there functionality gaps with respect to the deployed tools?
   6. What, if any, steps have been taken to support distributed computing, either for processing or for analysis?
2. Management
   1. Did the halls respond appropriately to the recommendations of the last review?
   2. What lessons have been learned in transitioning from a development phase into physics?
   3. Please comment on the organizational model and expertise considering the need to simultaneously support operations, algorithmic and infrastructure enhancements and to deliver timely physics results.
3. Computing and Networking
4. Are the computing and networking plans of the laboratory well matched to the requirements, including CEBAF operations of 34 weeks/year? Are they cost effective, and are budgets appropriate for these plans?
5. Is the implemented scientific computing architecture at JLab appropriate for the needs of the physics program? (Balance of tape vs. disk, networking to the halls, proposed online and trigger farms, onsite computing farms). Are there plans for achieving sufficient robustness and reliability for online and offline systems?
6. Is the role of distributed computing appropriate and achievable? What is the experience with distributed computing to date? Are there barriers to scaling out the use of distributed computing?
7. Over all, is the plan for provision computing using local and distributed resources consistent with a target of publication within a year for key measurements?