

May 7, 2012

Al Kellie, Director
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National Center for Atmospheric Research (NCAR)
Boulder, CO 80307-3000

Dear Al:

This is the customary letter to you following the semi-annual meeting on May 3rd of the CISL High-performance-computing Advisory Panel (CHAP). We were joined by the Wyoming Resource Allocation Panel (WRAP) prior to their meeting on May 4th; and we heard presentations from Anke Kamrath, Rich Loft, and Dave Hart. All of the presentations focused on bringing the Yellowstone computer and other key systems up to fully operational status for the atmospheric-science and Wyoming communities by the end of summer. In particular, we heard in the three talks about a somewhat delayed delivery of equipment from IBM and the transition of operations from the Mesa Lab to the NCAR-Wyoming Supercomputing Center (NWSC), the advance porting and testing of key applications using the Janus computer operated by the University of Colorado, and plans for Yellowstone allocations and job scheduling.

We regard CISL's focused HPC efforts as being exactly on target for bringing the Wyoming Center into fully operational status with a machine having about 30 times the capacity of the present Bluefire machine. We are optimistic that a smooth transition to a well-balanced and powerful system will occur by early August, with a two-month period devoted primarily to Accelerated Scientific Discovery (ASD), leading into general availability of the resources apportioned out to the communities of NCAR, universities, Wyoming, and the Climate Simulation Laboratory.

The CHAP dealt with university requests for Yellowstone usage totaling 143% of a maximum expected available 50 million core-hours. Careful reviewing resulted in a 72% university subscription amount of 36 million core-hours this time around, due in part to some of the largest requests already having ASD resources previously allocated by the CHAP. A lower echelon of quite small requests will undoubtedly be scaled up to the power of the new machine over the next six to twelve months. At the next CHAP meeting, there should be about 70 million core-hours available for allocation, with subsequent meetings each having as many as 85 million available for the university community. The CHAP expects to be able to allocate 100% of those available resources for university users from this point onward. CHAP will be allocating multi-year resources to many projects out to the end of their supporting NSF grants -- a standard CHAP procedure, except during the last two years of a severely oversubscribed Bluefire machine.

The CHAP reviewing process made it clear that some prospective users of Yellowstone are not prepared to use effectively the fully configured system, which includes the DAV, GLADE, and HPSS equipment. This time around, CISL will work with those users

whose GLADE or HPSS needs were excessive. At the next CHAP meeting, stronger guidelines now being formulated by CISL and CHAP will be applied to all requests. Proper usage of the full system in Wyoming will have to be proposed (and possibly demonstrated) before a computing request can receive final approval.

Following the reviews of computing requests, the CHAP and WRAP had ample time to discuss a number of topics in detail with CISL management; and the CHAP feels that CISL is very effectively managing the complex transition of high-performance computing from the NCAR Mesa Lab to the NWSC.

The next CHAP meeting is scheduled for October 18, 2012 and will take place in meeting space at the Wyoming Center. We look forward to meeting there shortly after the grand opening of the NWSC on Monday, October 15th.

Respectfully submitted on behalf of the CHAP,

Bert Semtner
CHAP Chair

cc: Anke Kamrath, Rich Loft, Dave Hart, Sarah Ruth, Roger Wakimoto, CHAP members, Bryan Schader