Computer Evolution Through the PSAAP-3 Program

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Currently I am gathering information about your needs to help plan next systems

- You were sent a survey asking about estimates of cycles needed and code readiness for GPUs
  - This data will be mapped against possible machine timelines
  - Will help influence and guide our machine procurement and training decisions
- In addition I will other computer resource team calls with each of your teams
  - This includes the virtual site visits with more detailed talking points and time for Q&A in both directions.

We want to provide PSAAP with a good mix of various computer cycles to get your job done.

Machines Planning Timelines

Lassen

Corona

uElCap and/or EA systems

Quartz

Ruby

Today | Options Available Soon | Later Options | ~5 years from now

Current observations and questions

- Quartz will provide more than enough CPU cycles throughout the program
- Lassen does not have enough GPU cycles to satisfy projections after year 1
- Some codes are CUDA only and its likely towards the end of the program only AMD GPUs will be available in the largest GPU machine
- Would you be interested in:
  - support trainings and opportunities to learn about key technologies for performance portability: e.g. Kokkos, RAJA, OpenMP 5.0
  - A monthly lab virtual seminar series discussing GPU related work: e.g. Programming models, past and current COE efforts, Detailed code porting lessons learned, hardware training from vendor partners
  - Something else?

I'm here to help make sure we share the lessons we have learned getting ready for Sierra and help connect you to key ASC tools that might help you run well on Lassen and uElCap

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