

National Energy Research Scientific Computing Center



NUFO 2015 Annual Meeting

***Oak Ridge
National Laboratory***

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NERSC Mission

Accelerate scientific discovery at the DOE Office of Science through high performance computing and data analysis

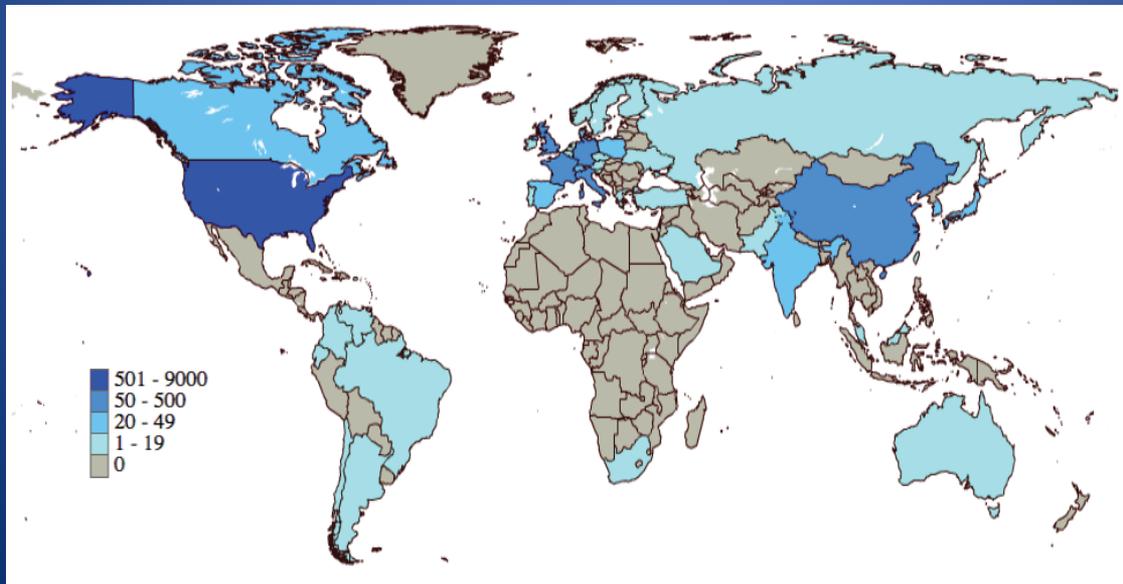
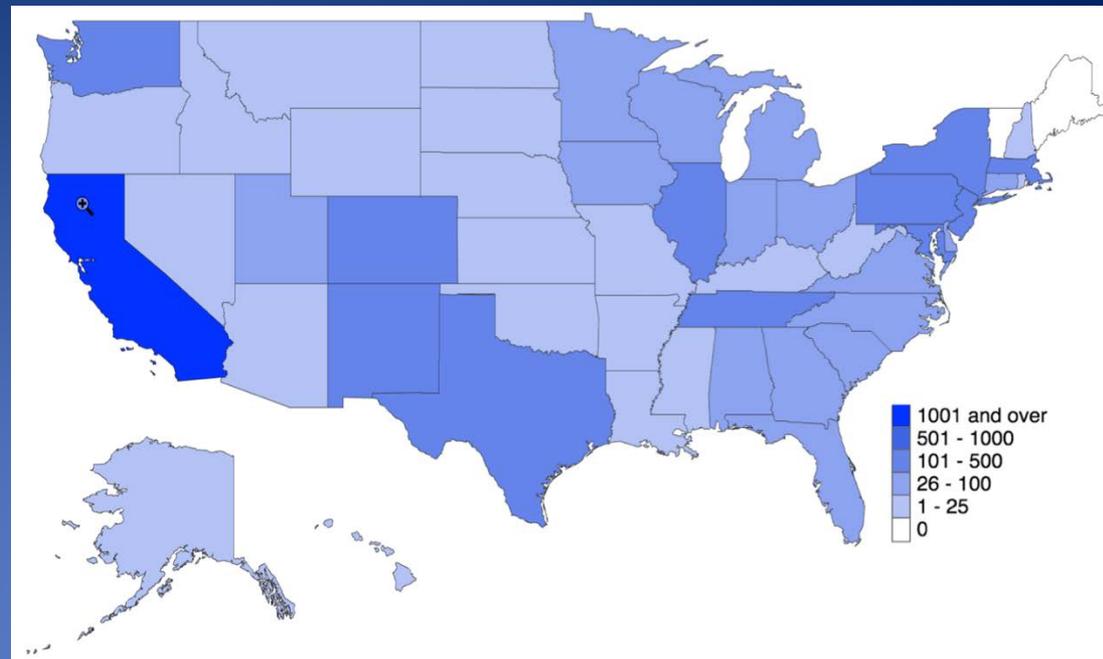


National Energy Research Scientific Computing Center (NERSC) at Berkeley Lab

- A national supercomputing and data center funded by the U.S. DOE Office of Science (SC)
- The production HPC center for SC; supports the entirety of its research mission
- Expert HPC consulting and account support services



6,000 users
600 projects
60% universities
35% national labs



NERSC is the world-leader in

Usable supercomputers and data systems

User support

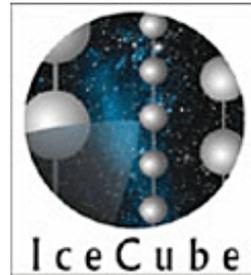
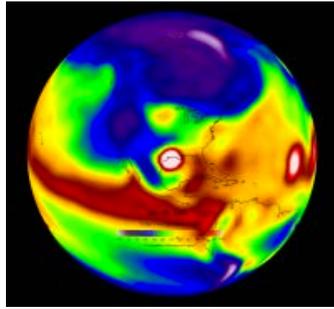
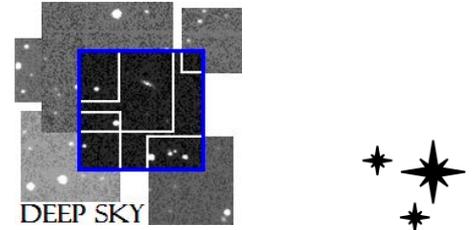
Enabling scientific discovery through HPC



NERSC Cross Facilities Collaborations

- Computation and data cut across all fields of science and engineering
- NERSC interacts with many facilities at many different levels
 - Individual users from different facilities
 - Formal MOU with JGI to provide computing, data storage, support
 - Developing relationships with other experimental facilities: ALS, LCLS, ...
 - Many data analysis pipelines (next slide)





LCLS

Cross-Facility DOE HPC Collaborations

- Training collaborations
 - NERSC, ANL, ORNL, LANL, Sandia, LLNL; workshops at SC conference
- Procurements
 - APEX: NERSC, LANL, Sandia
- Requirements gathering workshops with science teams
 - NERSC, ANL, ORNL
- Best practices workshops
 - NERSC, ANL, ORNL, Sandia, LLNL, LANL, DOD, NSF Centers
- Application portability
 - NERSC, ANL, ORNL



Opportunities for Collaborations

- Best practices for user support
- Problem tracking software
- Remote collaboration and training software
- Data storage and curation
- What else?

