Welcome to the August 2023 Frontier Training Workshop

Chris Fuson
Group Lead, HPC User Support
Leadership Computing Facility
Oak Ridge National Laboratory

Office of Science User Facilities

28 world-leading facilities serving over 33,000 researchers annually
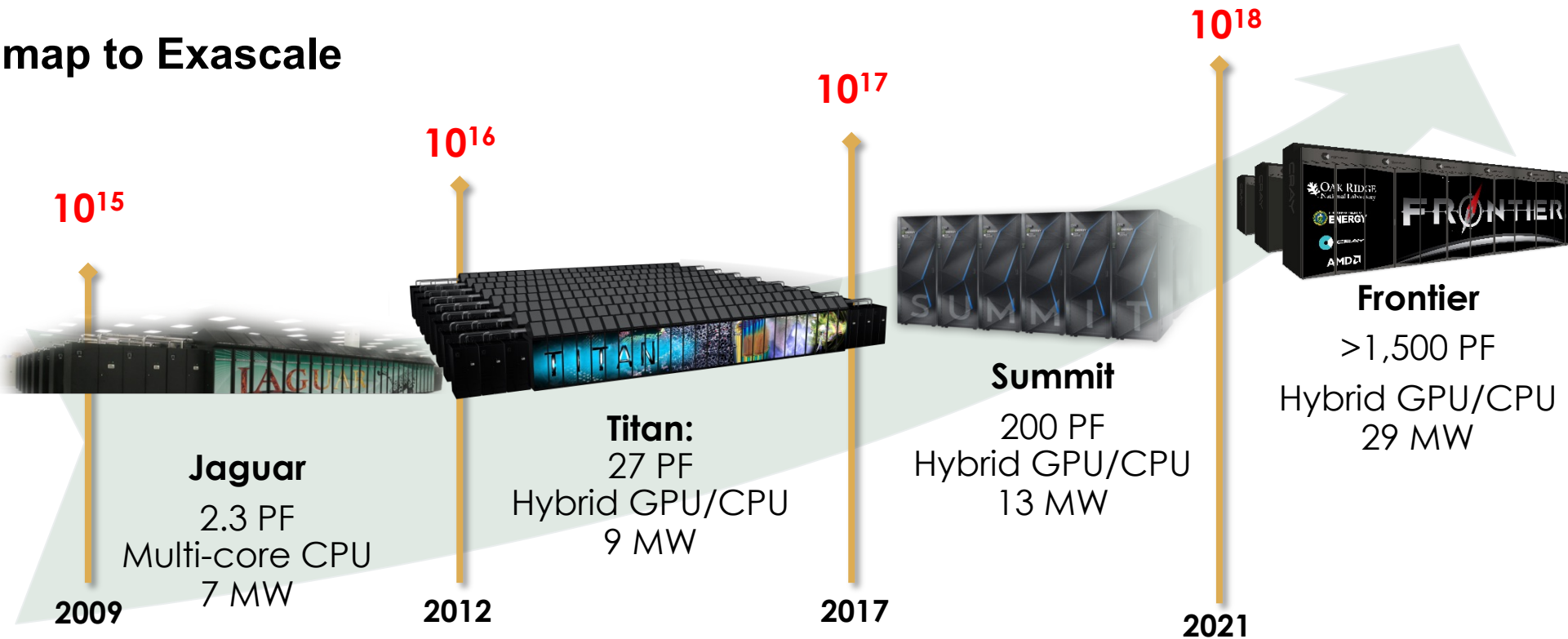
- supercomputers,
- high intensity x-ray, neutron, and electron sources,
- nanoscience facilities,
- genomic sequencing facilities,
- particle accelerators,
- fusion/plasma physics facilities, and
- atmospheric monitoring capabilities.

- **Open access; allocation determined through peer review of proposals**

- **Free for non-proprietary work published in the open literature**

- Full cost recovery for proprietary work

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http://science.energy.gov/user-facilities/user-facilities-at-a-glance/

Oak Ridge Leadership Computing Facility

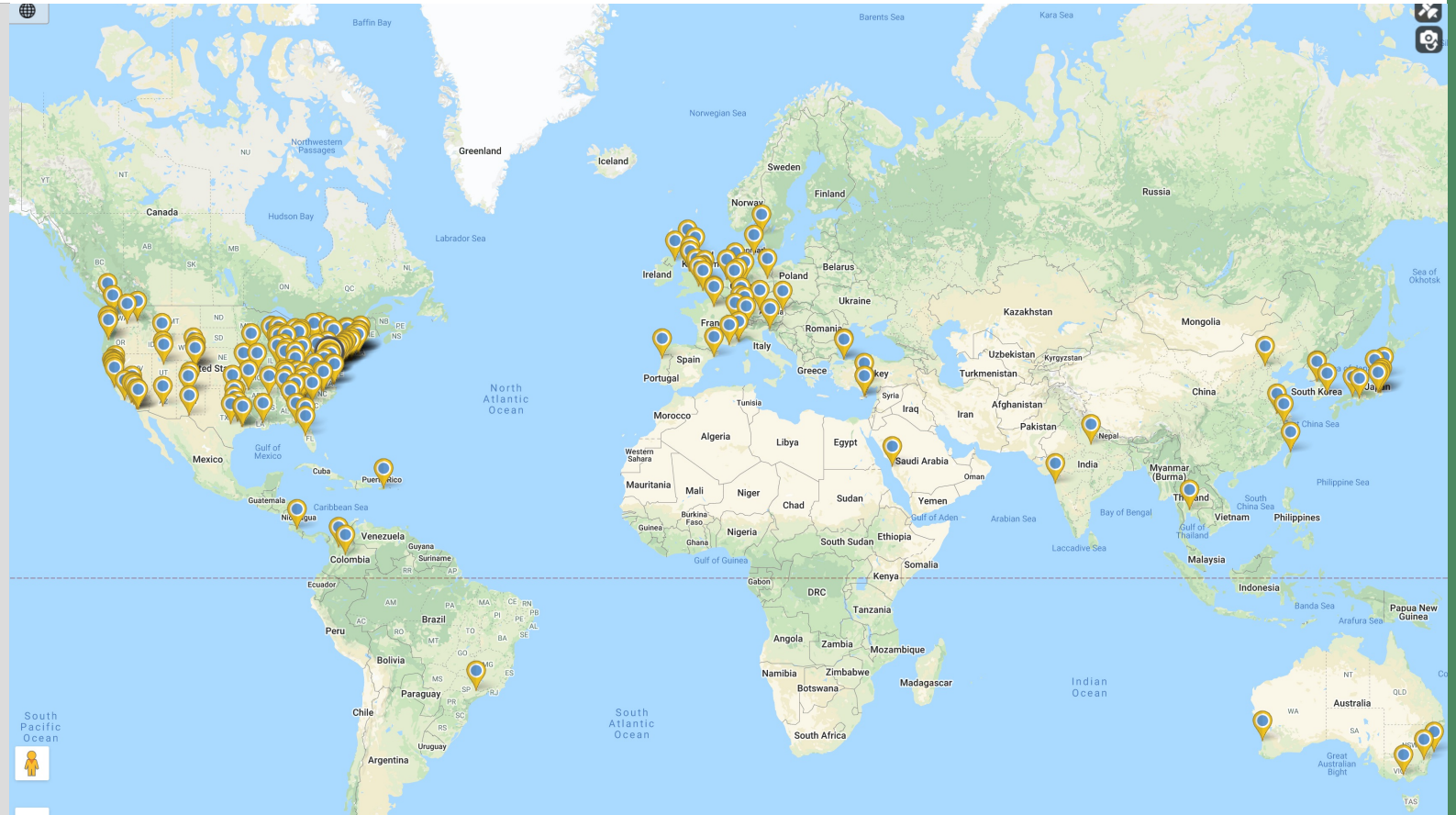| Mission: Providing world-class computational resources and specialized services for the most computationally intensive global challenges	Vision: Deliver transforming discoveries in energy technologies, materials, biology, environment, health, etc.

Roadmap to Exascale

10^{18}

10^{17}

10^{16}

10^{15}

Jaguar

2.3 PF
Multi-core CPU
7 MW

2009

Titan:
27 PF
Hybrid GPU/CPU
9 MW

2012

Summit
200 PF
Hybrid GPU/CPU
13 MW

2017

Frontier
>1,500 PF
Hybrid GPU/CPU
29 MW

2021

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*Large part of success has been strong vendor and user **partnerships** to scale & refactor codes/methods*
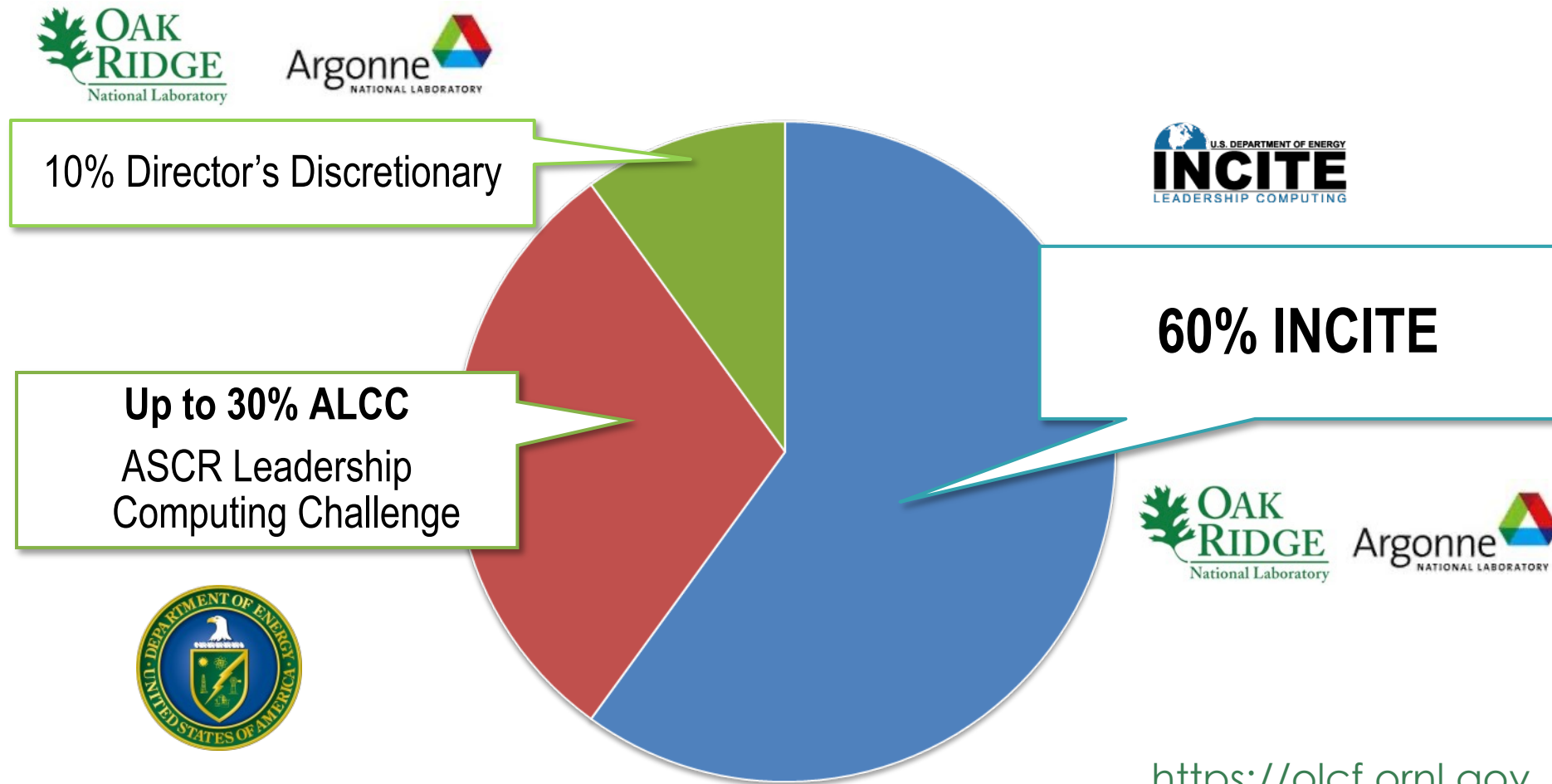
OLCF User Community

- The OLCF averages about 1,500 unique users who are located around the world

- OLCF users come from academia, industry, and govt institutions

- Users are attached to projects which run up to 3 years in duration. We average about 250 research projects per year.

- OLCF resources are allocated through three highly competitive allocation programs requiring peer reviewed proposals

OLCF - Primary Allocation Programs

10% Director's Discretionary

Up to 30% ALCC
ASCR Leadership Computing Challenge

60% INCITE

https://olcf.ornl.gov

OLCF Upcoming Events

- User Meeting (October 17, 18)
  - Attendance in-person and online
  - We would enjoy seeing you in person
  - Poster session (Oct 17)
  - Registration now open (deadline Sep 15)
  - https://www.olcf.ornl.gov/calendar/2023-olcf-user-meeting/

- Virtual Career Fair
  - October 17 from 1:00 – 4:30 PM
  - Registration required
  - https://www.olcf.ornl.gov/calendar/virtual-career-fair/

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Thank you