Argonne NATIONAL LABORATORY

Welcome to Early Science Program Investigators Meeting

Timothy J. Williams

Argonne Leadership Computing Facility

U.S. DEPARTMENT OF ENERGY

At Argonne, Safety is First!

- **In case of an emergency or injury, dial 911 from the building phones, or dial 630-252-1911 from cell phones.**

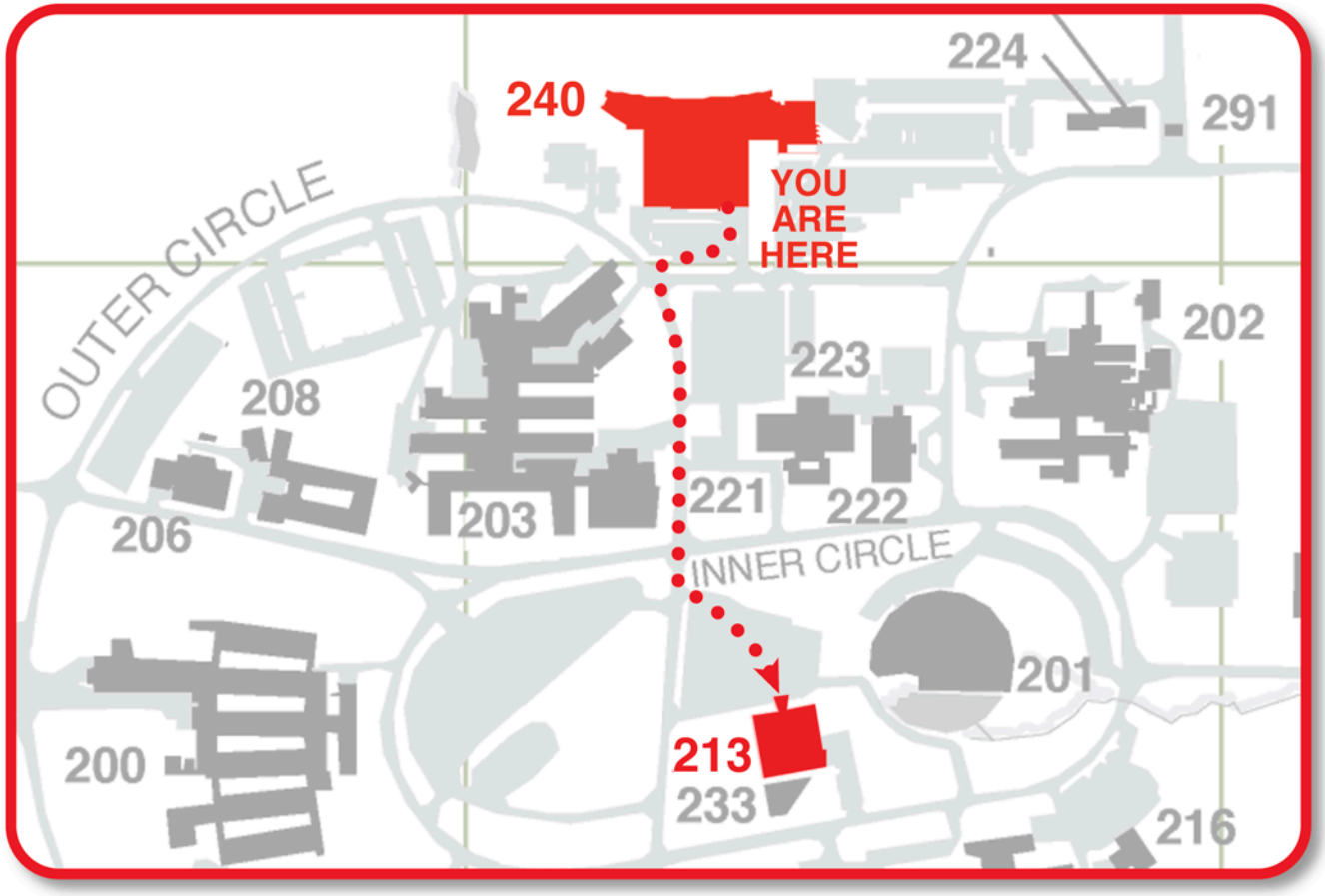
- **Fire: Always be aware of the nearest exit.**
  - If the building alarms sound, evacuate the building and proceed to the relocation area (building 213).
  - If a site-wide alarm sounds, follow the directions issued over the public announcement system.

- **Tornado: In the event of a tornado, a tone and announcement will come from the public announcement system. Seek shelter immediately in the nearest stairwell.**

- **Smoking in not permitted in building 240. Smoking is permitted only in the designated area outside the Conference Center.**

At Argonne, Safety is First!

- **If the building alarms sound, evacuate the building and follow Argonne staff to the relocation area (building 213).**



Overview of the ALCF Early Science Program

Timothy J. Williams

Argonne Leadership Computing Facility

Early Science Program Investigators Meeting

Wednesday 3/15/2013

Session: 1:00-5:00pm

First on *Mira*: Early Science Program

- **Dedicated access between *Mira* acceptance and start of production**
- **Motivations**
  - Prepare key applications for the architecture and scale of *Mira*
  - Solidify libraries and infrastructure
  - Identify system problems
- **16 projects chosen**
  - Computational review
  - Scientific review
- **Head start**
  - Awarded 2010
  - Postdoc per project
  - Time on *Intrepid* (BG/P)
  - Access to VEAS, a 1-rack BG/Q Test & Development system
  - 4 ALCF workshops (plus this one)

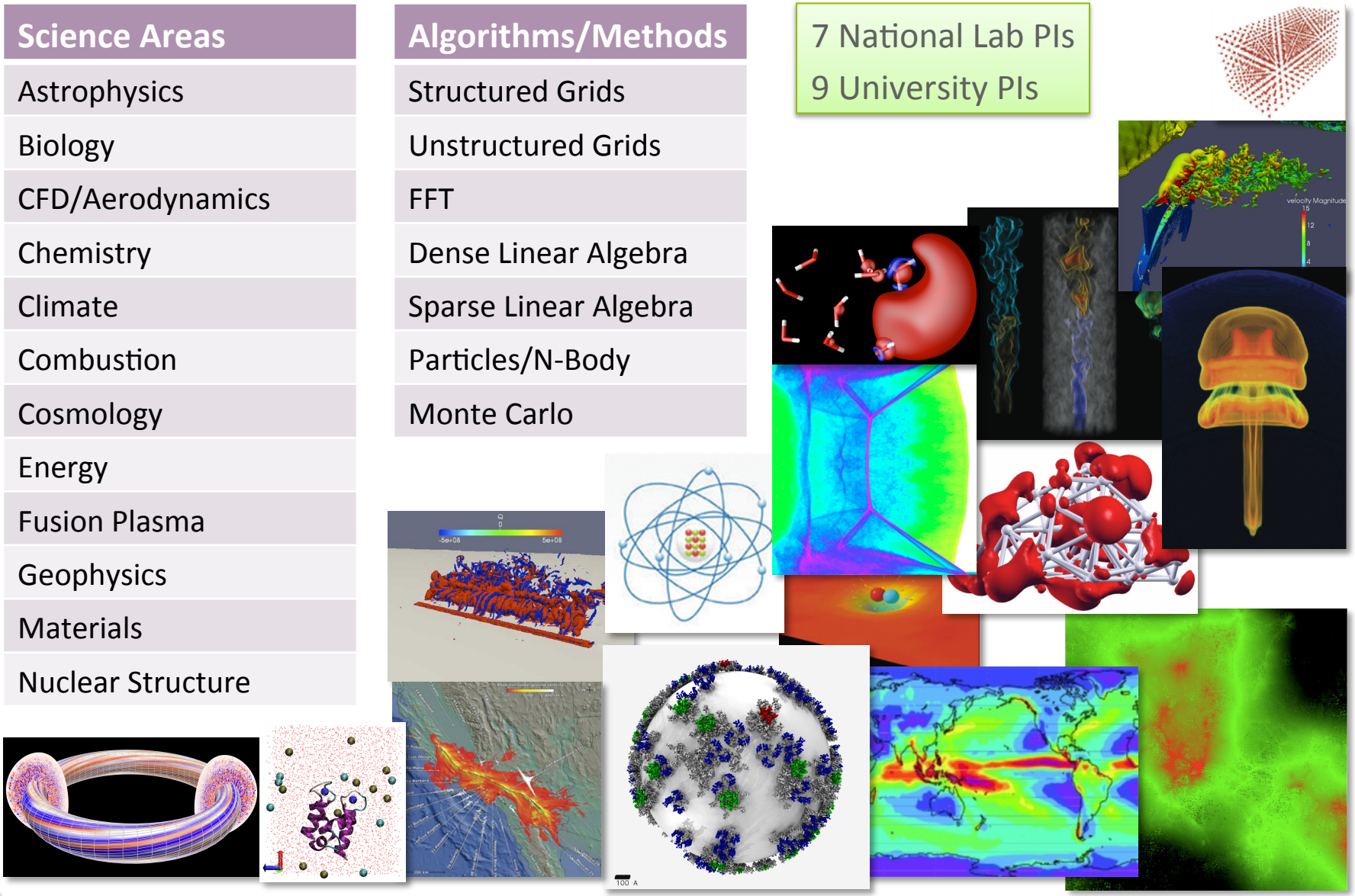
Deliver 2 billion core-hours on *Mira*

16 ESP Projects

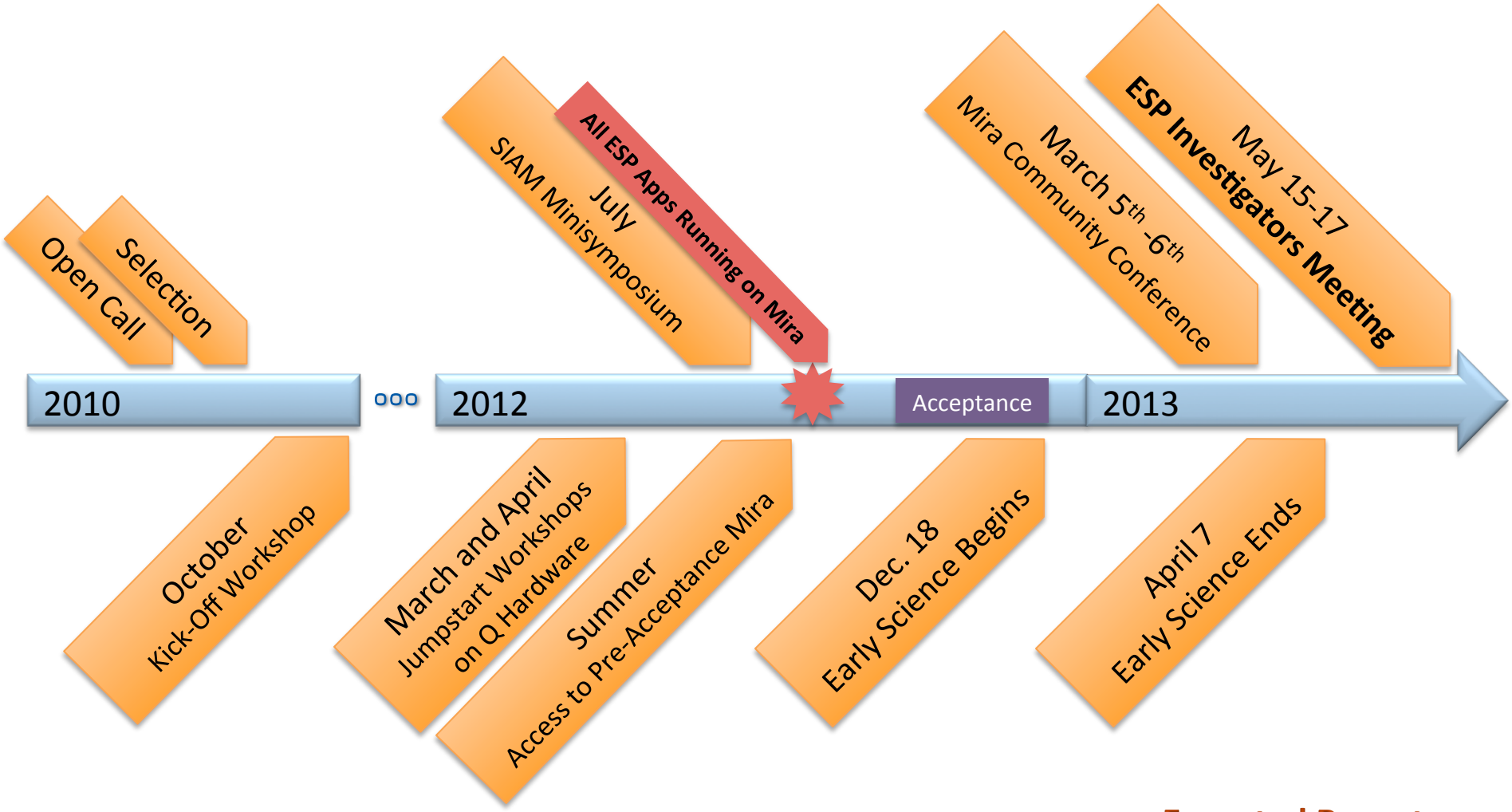
Science Areas
Astrophysics
Biology
CFD/Aerodynamics
Chemistry
Climate
Combustion
Cosmology
Energy
Fusion Plasma
Geophysics
Materials
Nuclear Structure

Algorithms/Methods
Structured Grids
Unstructured Grids
FFT
Dense Linear Algebra
Sparse Linear Algebra
Particles/N-Body
Monte Carlo

7 National Lab PIs
9 University PIs



ESP Timeline



Expected Reports

Technical Reports	Spring 2013
Science Report	Winter 2013

Structure of This Meeting

- **Early Science Program Investigators Meeting**
- **30-minute presentation per project**
  - Science enabled by ESP and access to *Mira*
  - Status of completed and ongoing run campaigns
  - Preliminary results

alcf.anl.gov/workshops/early-science-program-investigators-meeting

http://esp.alcf.anl.gov