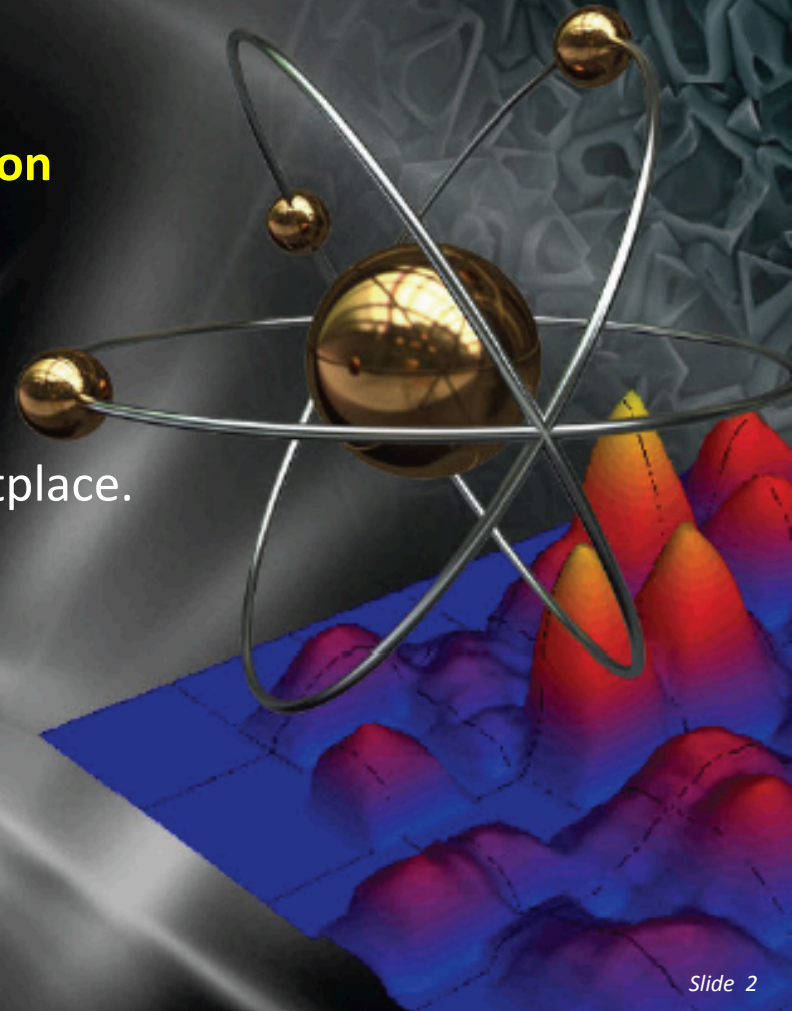


Innovative Devices and Systems

*John Carlstrom (U. of Chicago)
Marcel Demarteau (ANL-HEP)
Andreas Roelofs (ANL-NST)*

Laboratory Mission

- **Focused, mission-driven research**
Conduct research that advances America's scientific excellence and leadership and helps pave the way to a secure nation.
- **Visionary science, game-changing innovation**
Pursue groundbreaking discoveries to push the boundaries of fundamental science, applied science and engineering to solve complex challenges and develop useful technologies that can transform the marketplace.
- **Unmatched scientific facilities**
15 scientific divisions, 14 centers, and six national user facilities.



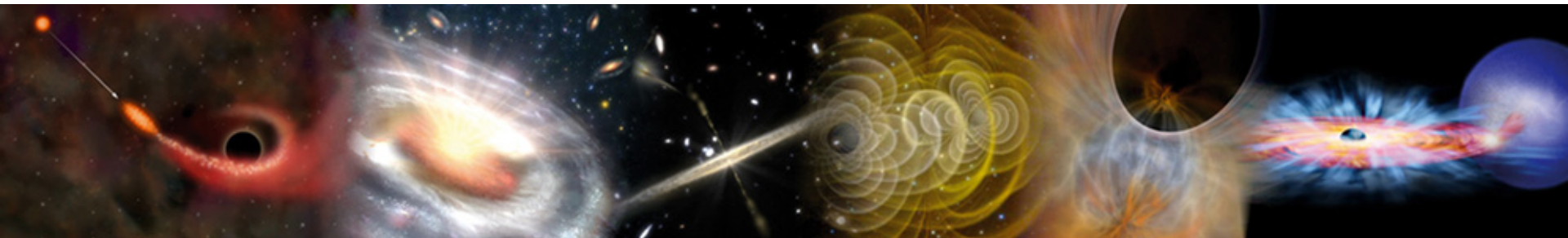
Argonne in the 21st Century

- **Moving into the 21st century, the problems that a premier multi-disciplinary science laboratory such as Argonne will tackle:**
 - Are large scale, complex, and high impact;
 - Require multidisciplinary science, technology, and engineering;
 - Utilize unique, multifaceted, or large experimental facilities;
 - Depend on fundamental research and development; and
 - Development of technology that is highly complex, and sensitive.



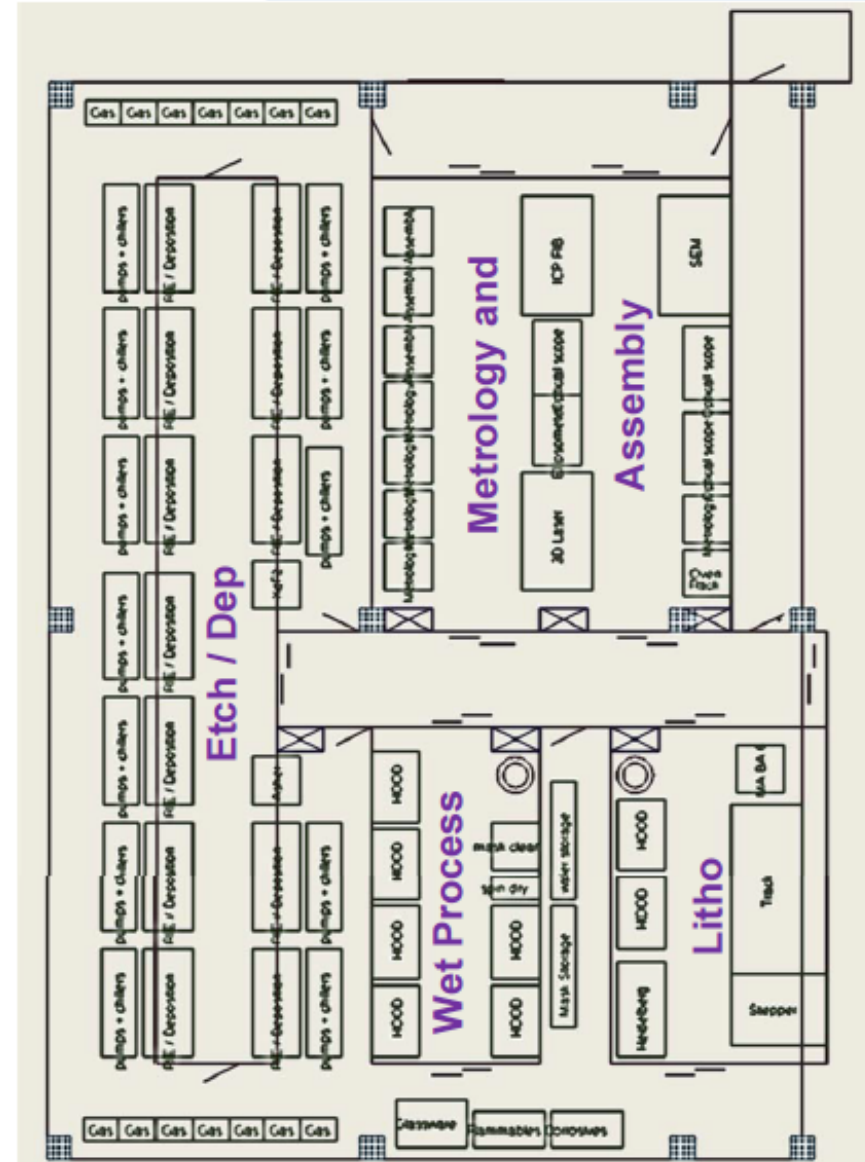
Argonne in the 21st Century

- Argonne in collaboration with the University of Chicago, is investing in Strategic Centers to underpin our science and engineering:
 - Necessary focus, laboratory wide, on strategically important areas of ST&E that span areas of expertise beyond that residing in any single management structure (multi-disciplinary and multi-program research).
 - External visibility and sustained excellence in a strategic area is needed and requires a single laboratory voice.
 - Catalyst for developing and enabling emerging, cutting edge science and engineering.
 - The education of present and future scientists and engineers is required to maintain competency, and
 - When recruitment or retention of technical talent is a priority



Concrete Steps: Cleanroom Extension

- Design Proposal completed for an extension of the cleanroom of the Center for Nanoscale Materials.
- Construction to start Fiscal Year 2015; completion within 18 months.



Joint Strategic Center

- **People: students & postdocs**
 - Attract the best and the brightest
 - Mentorship & freedom to work on new ideas
 - Support “center postdoctoral fellowships”
- **Connections: visitors**
 - Members from different fields & institutions
 - Foster full spectrum of relationships & expertise for end-to-end delivery
 - Coordination with UChicago in multidisciplinary detector efforts
- **Ideas: meetings & workshops**
 - broaden exposure beyond traditional disciplines
 - new opportunities/technologies
- **Investments: equipment & seed funds**
 - Unique tools to complement Argonne resources for large detector fabrication
 - Coordination with UChicago in IME clean room capabilities
 - Small seed to launch new efforts and win new grants

