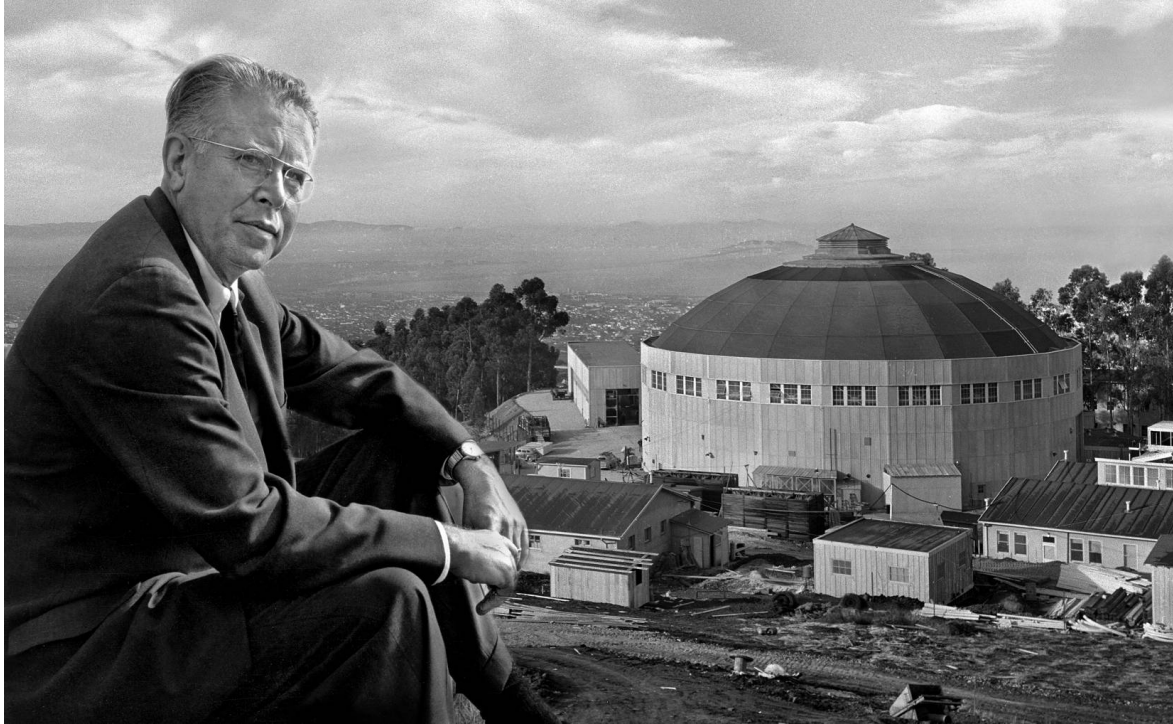


3rd Workshop on Direct Detection of Dark Matter LBNL, Dec. 5 – 6, 2016

Natalie Roe, LBNL Physics Division Director

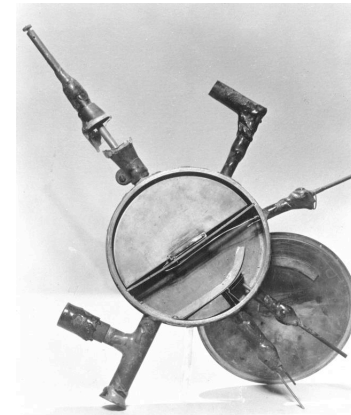


WELCOME TO BERKELEY LAB! ESTABLISHED IN 1931



E. O Lawrence and the 184" cyclotron (circa 1940).

The small seed from
which Big Science grew.



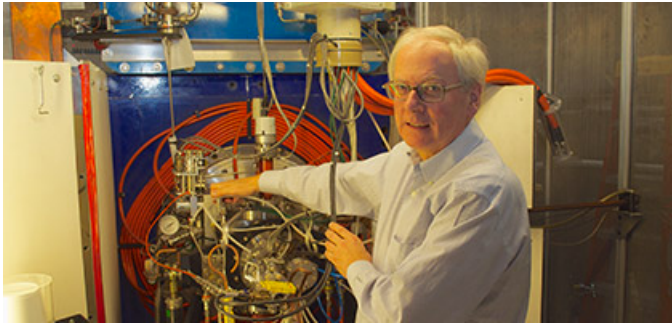
WELCOME TO BERKELEY LAB! ESTABLISHED IN 1931



Director Mike Witherell

Today Berkeley Lab has 20 scientific divisions organized in 6 areas

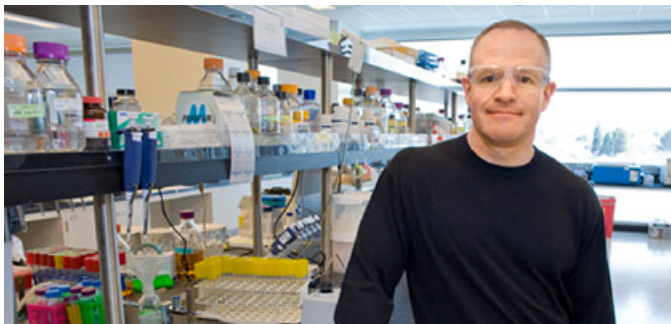
Berkeley Lab Research Areas



Physical Sciences



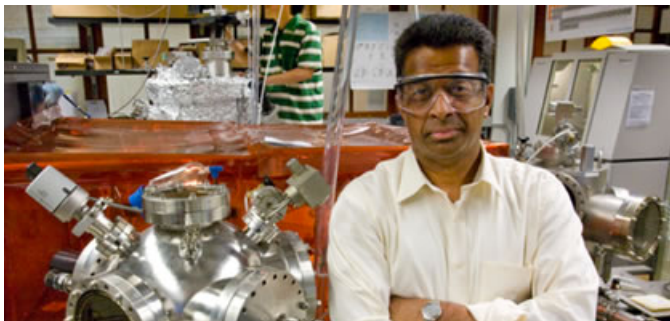
Computing Sciences



Biosciences



Energy Sciences



Energy Technologies



Earth and Environmental Sciences

Berkeley Lab User Facilities



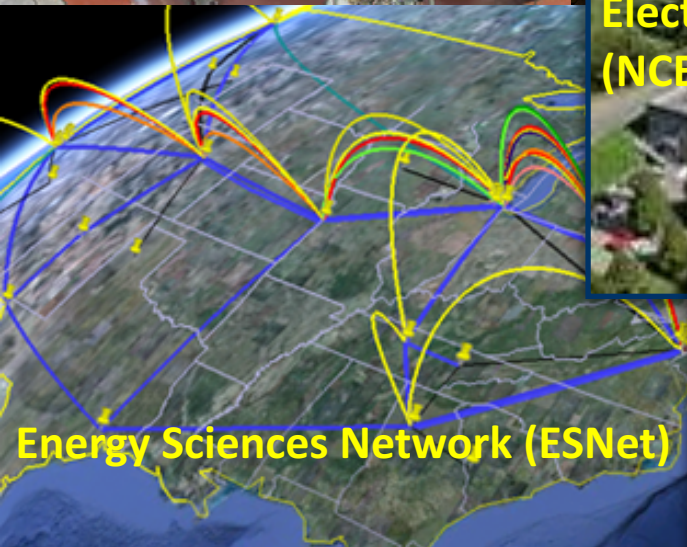
Advanced Light Source



Joint Genomics Institute



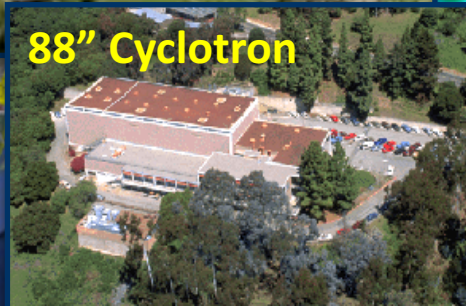
Molecular Foundry



Energy Sciences Network (ESNet)



National Center for Electron Microscopy (NCEM)



88" Cyclotron



National Energy Research Scientific Computing Center (NERSC)

Thirteen Nobel Laureates



Luis W. Alvarez



Melvin Calvin



Owen Chamberlain



Steven Chu



Donald A. Glaser



Ernest Orlando Lawrence



Intergovernmental Panel on Climate Change (IPCC)



Yuan T. Lee



Edwin M. McMillan



Saul Perlmutter



Glenn T. Seaborg



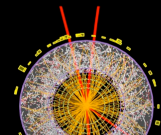
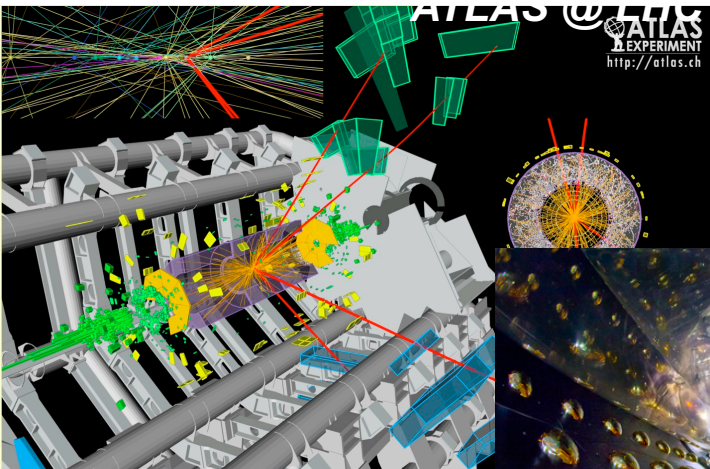
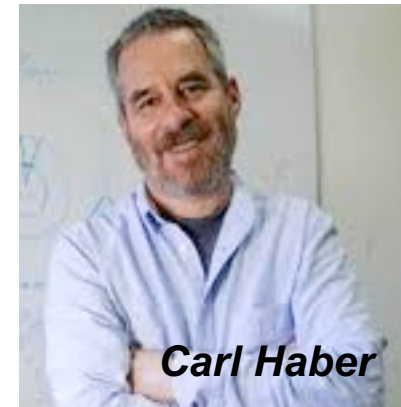
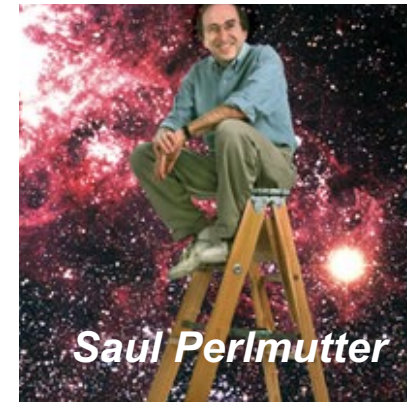
Emilio G. Segrè



George F. Smoot

Award Winning Science

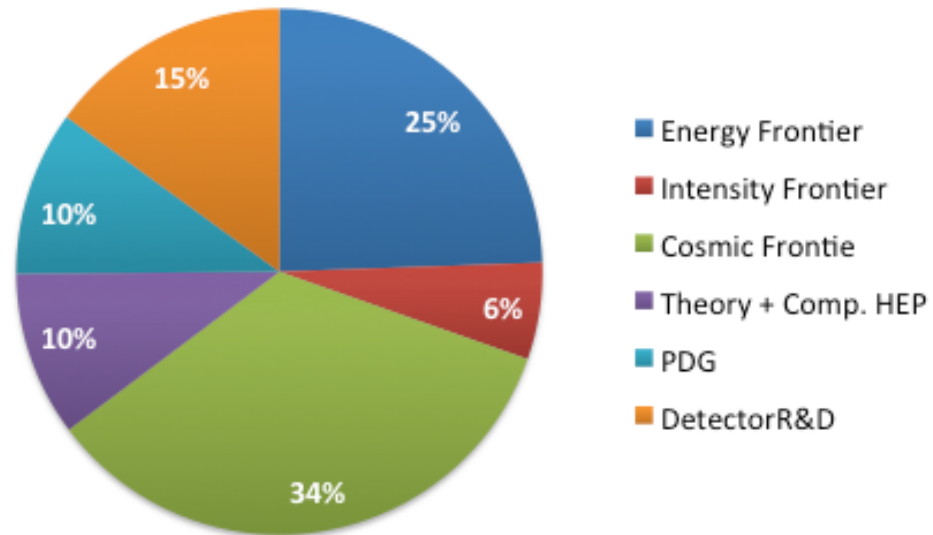
- Nobel prizes: Smoot (2006) and Perlmutter (2011)
- Breakthrough Prize: Perlmutter (2015), Luk (2016)
- Lawrence Award: David Schlegel in (2015)
- Panofsky Prize: Kam-Biu Luk (2014)
- MacArthur Award: Carl Haber (2013)
- Contributions to Nobel for Higgs (2012)
- Sakurai Prize: Ian Hinchliffe (2011)



LBLN HEP Program

- Balanced Program aligned with P5 priorities
 - Energy Frontier: ATLAS
 - Intensity Frontier: Mu2e; Daya Bay => DUNE
 - Cosmic Frontier: LUX/LZ, DESI, SNe, CMB S4
 - Theory, PDG, Computational HEP
 - Detector R&D, MicroSystems Lab
- Connections to Accelerators, Engineering, Computing

Physics Division Research Funding
FY16 Plan



LBLN is playing a key role in P5 implementation.

Tradition of Innovation

- Responsible for many “game-changers”: TPC detector, silicon vertex detectors/SVX readout, asymmetric B Factory, pixel detectors, COBE, Type Ia SNe, red-sensitive CCDs,.....



- Innovations that enable science...

DOE Small Project Portfolio

- Recommended by P5
- May provide an opportunity to support small (<\$10M) Dark Matter Experiments
- Workshop in March 2017 timeframe under discussion => White Paper => DOE FOA?
- Stay tuned: Talk by Anwar Bhatti at 4 pm today will have more details

Safety at LBNL



Pedestrian Safety

- Stay on the sidewalk
- Cross at crosswalks
- Do not attempt to touch any wild animals onsite



Traffic Safety

- Speed limit is 25 mph unless posted lower
- Follow traffic, parking and pedestrian signs and markings
- Obey all security, construction workers and police officers



Earthquake Response



Drop down on the floor



Cover under a sturdy desk, table or other furniture



Hold onto it and be prepared to move with the furniture



Evacuate to assembly area (usually in parking lot). Take personal items.

Follow Directions from the Building Emergency Team