

Potential Berkeley Lab interests in ELENA Construction

Hardware:

- Low-level RF controls
- Schottky diagnostics
- H- ion source

Beam physics:

- Cooling
- S2E Simulations

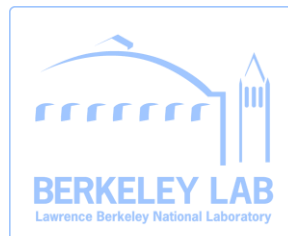
All contributions contingent upon additional funding from DOE.



U.S. DEPARTMENT OF
ENERGY



**UNIVERSITY OF
CALIFORNIA**



The Center for Beam Physics

- CBP (cbp.lbl.gov) is a program with the Berkeley Lab Accelerator and Fusion Research Division for advancing innovative concepts in accelerator physics, design, and technology.
- CBP consists of accelerator physicists and engineers with projects ranging from beam theory and modeling to RF systems and beam diagnostics.

Recent CBP accomplishments

- Accelerator Technology
 - Femtosecond timing distribution for the Linear Coherent Light Source and Fermi@Elettra Free Electron Laser facilities
 - Design of the Project X Front end systems (Ion source, LEBT and RFQ)
 - Low level RF controls for the Advanced Photon Source crab cavities, Fermi@Elettra linac, and Spallation Neutron Source.
 - LHC luminosity monitor
 - Electron cloud diagnostics for the CESR Test Accelerator
- Accelerator Physics Theory and Modeling
 - Modeling of strong-strong beam-beam effects in LHC with crab cavities.
 - Development of “boosted-frame” method in modeling beam/plasma physics.
 - Collective effects study for the CERN PS2 upgrade.

Selected Personnel

- John Byrd
- Jonathan Wurtele
- Joel Fajans
- Andy Sessler
- Max Zolotorev
- Gregg Penn
- Alex Ratti
- Larry Doolittle
- Stefano DeSantis
- John Staples