

# Lawrence Berkeley National Laboratory

## Recent Work

### **Title**

Coupled-Bunch Stability at the PEP-II B-Factory

### **Permalink**

<https://escholarship.org/uc/item/14q7x0qg>

### **Author**

Byrd, J.M.

### **Publication Date**

1992-12-01

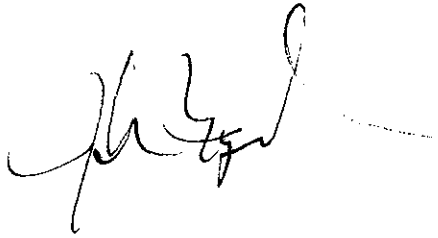
LBL-33272a  
ESG-230

Coupled-bunch Stability at the PEP-II B-Factory, J. M. BYRD,  
Lawrence Berkeley Laboratory — We present an overview of the longitudinal and transverse coupled-bunch collective effects using the measured RF cavity higher order mode impedance and estimated broadband impedance for the PEP-II B-Factory, a dual-ring electron-positron collider. We also describe a visual method of representing the effective beam impedance and corresponding growth rates which is especially useful for understanding the dependence of growth rate on higher order mode frequency and Q, spread of HOM frequencies between cells, and for determining the requirements of the multibunch feedback system.

- \* This work was supported by the Director, Office of Energy Research, Office of High Energy and Nuclear Physics, High Energy Physics Division, of the U.S. Department of Energy under Contract No. DE-AC03-76SF00098.

John M. Byrd  
Lawrence Berkeley Laboratory  
MS 71-259  
Berkeley, CA 94720

(510)486-6329 (phone)  
(510)486-7981 (fax)  
bitnet: jbyrd@lbl.gov



Class: 3.2.1 (Instabilities and Beam Breakup)  
Presentation Preference: Poster