

Lawrence Berkeley National Laboratory

Recent Work

Title

Coupled-Bunch Stability at the ALS

Permalink

<https://escholarship.org/uc/item/1dr108g3>

Authors

Byrd, J.M.
Corlett, J.N.

Publication Date

1992-12-01

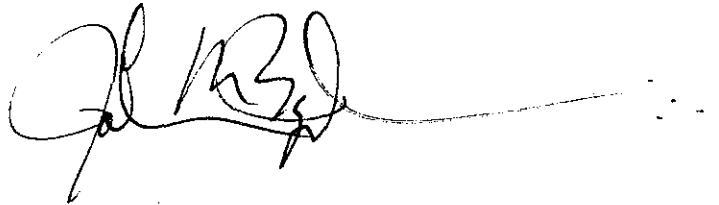
LBL-33270a
ESG-228

Coupled-bunch Stability at the ALS, J.M. BYRD, J. N. CORLETT, Lawrence Berkeley Laboratory — We present an overview of the longitudinal and transverse coupled-bunch collective effects using the measured RF cavity higher order mode (HOM) impedance for the Advanced Light Source (ALS), a 1.5 GeV electron storage ring for producing synchrotron radiation. 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 HOM frequency and Q, spread of HOM frequencies between cavity cells, and for determining the requirements of the multibunch feedback system.

* This work was supported by the Director, Office of Energy Research, Office of Basic Energy Sciences, Materials Sciences 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

A handwritten signature in black ink, appearing to read 'J. M. Byrd', with a long horizontal flourish extending to the right.

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