Model Calibration and Symmetry Restoration of the Advanced Light Source[*], H. NISHIMURA, G. PORTMANN, D. ROBIN, LBNL; J. SAFRANEK, BNL - The symmetry of the ALS magnetic lattice is crucial in suppressing many nonlinear structural resonances. We measured the degree of symmetry breaking in two ways: by measuring the change in tune with quadrupole field changes and by measuring the orbit response matrix. Both methods revealed large vertical beta function beating. Using the orbit response matrix we calibrated the gradients of the storage ring magnets. We then adjusted the quadrupole strengths to restore the lattice symmetry.

[*] Work supported by the Director, Office of Energy Research, Office of Basic Energy Sciences, Material Sciences Division, U.S. Department of Energy, under Contract No. DE-AC03-76SF00098.