CESR: Steps toward a B Factory*, D. RICE†, Cornell Univ. - CESR has provided colliding beams for the study of the B meson since 1979. The luminosity has increased by a factor of 300 since the first year of operation through a series of innovative upgrades in the storage ring configuration. The present layout, utilizing trains of bunches and a horizontal crossing angle at the interaction point, with the addition of super-conducting RF cavities to be installed in the storage ring, will reach luminosities well above 10³³cm⁻²-sec⁻¹. Studies of single beam stability, parasitic beam-beam interactions, vacuum system characteristics, and the performance of a superconducting RF cavity in the storage ring are in progress.

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- † Representing the CESR staff.