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## Status of the Super-B factory Design

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The SuperB international team continues to optimize the design of an electron-positron collider, which will allow the enhanced study of the origins of flavor physics. The project combines the best features of a linear collider (high single-collision luminosity) and a storage-ring collider (high repetition rate), bringing together all accelerator physics aspects to make a very high luminosity of  $10^{36} \text{ cm}^{-2} \text{ sec}^{-1}$ . This asymmetric-energy collider with a polarized electron beam will produce hundreds of millions of B-mesons at the  $\Upsilon(4S)$  resonance. The present design is based on extremely low emittance beams colliding at a large Piwinski angle to allow very low  $\beta_y^*$  without the need for ultra short bunches. Use of crab-waist sextupoles will enhance the luminosity, suppressing dangerous resonances and allowing for a higher beam-beam parameter. The project has flexible beam parameters, improved dynamic aperture, and spin-rotators in the Low Energy Ring for longitudinal polarization of the electron beam at the Interaction Point. Optimized for best colliding-beam performance, the facility may also provide high-brightness photon beams for synchrotron radiation applications.

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