

DESY Seminar

9 November 2004, 17:00, DESY Hörsaal

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B Physics at a Super B Factory:

Part I: The Detector and Physics Capability

Part II: The Collider

The present generation of B Factories at SLAC and KEK have now accumulated between them more than 0.5 ab^{-1} of e^+e^- to $Y(4S)$ events or about 500 million B-anti-B meson pairs. These samples have been used to establish CP violation in the B meson system and to study rare B decays with unprecedented sensitivity, both within the context of the Standard Model and as a window for new physics. There may even be hints for new physics in b to s penguin modes in present data, which is, in any event, an important example for the future. Building on the successful foundation of KEKB and PEP-II, including an understanding of the capabilities for both the colliders and detectors, the B Factory community is now looking at the physics case and technical requirements for extrapolating present day luminosities another factor of 20-50 at so-called Super B Factories. These talks will examine the physics case for the Super B Factory, the technical requirements and parameters for the collider, and the implications for an upgraded detector that have emerged at SLAC and KEK.

- Tea and cookies will be served at 16:45 in the lobby.
- After the seminar there is a chance for private discussions with the speaker over wine and pretzels also in the lobby.