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Measurement of Beam Polarization at an e^+e^- B-Factory with New Tau Polarimetry Technique

Friday, 8 July 2022 18:00 (15 minutes)

Belle II is considering upgrading SuperKEKB with a polarized electron beam. The introduction of beam polarization to the experiment would significantly expand the physics program of Belle II in the electroweak, dark, and lepton flavor universality sectors. For all of these future measurements a robust method of determining the average beam polarization is required to maximize the level of precision. The $BABAR$ experiment has developed a new beam polarimetry technique, Tau Polarimetry, capable of measuring the average beam polarization to better than half a percent. Tau Polarimetry strongly motivates the addition of beam polarization to SuperKEKB and could also be used at future e^+e^- colliders such as the ILC.

In-person participation

Yes

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