

SuperB Tau Physics and Beam Polarization

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Work done on Tau Physics with Beam Polarization

tau LFV

- ◆ S.Banerjee has added two models of $\tau \rightarrow \mu\gamma$ production
(SUSY production with full beam polarization and spin correlation)
- ◆ R.Cenci updated PacTauUser to FastSim V0.1.1
- ◆ A.L. imported latest *BABAR* tau generators (working, not yet released)
 - ▶ kk2f V00-02-29 → V00-02-32
 - ▶ tauola V00-01-20 → V00-01-21
 - ▶ koralb V03-01-16 → V03-01-18
- ◆ A.Cervelli generated events to simulate beam polarization effects for LFV search $\tau \rightarrow \mu\gamma$
(see his plots)

Plans on Tau Physics with Beam Polarization

tau LFV

- ◆ quantify S/B improvements with beam polarization
 - ▶ $\tau \rightarrow \mu\gamma$ and $\tau \rightarrow 3\ell$
- ◆ test NP model discrimination with polarization
 - ▶ $\tau \rightarrow \mu\gamma$ and $\tau \rightarrow 3\ell$

tau $g-2$, EDM (lower priority)

- ◆ improve SuperB sensitivity estimate for tau $g-2$ using polarization (FastSim)
 - ▶ even lower priority: sensitivity estimates for tau EDM and some models of *CPV* in tau decay