



# Polarization and Energy Calibration points raised in discussions

1. Beam polarization
  - is the effect of  $Q_s$  being so small generate excessive depolarization  
 $\xi_s \propto (\sigma_E a\gamma)/Q_s \ll 1$  (see S. Mane's paper)
2. running scheme
  - are the two hours rise time at beginning of fill affecting run efficiency too much?
  - should we desing to reduce this further with stronger or more wigglers? fix # wigglers
  - what length of fill should be assumed?
  - can we shorten this if polarization measurement is more precise?
3. pilot bunch Touschek live-time (TLT) is short
  - what intensity is needed to obtain TLT to about 10 hours?
  - can we measure polarization well enough with this bunch intensity?
4. what is the layout of the polarimeters in the accelerator ?  
(whom to ask for lab, location, infrastructure etc..)
5. what is the physics case for having all Z pole data with the precise energy calibration all the time?



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6. how do we measure the energy spread? → experiments !
7. compatibility physics conditions (high L) and energy calibration.
8. (need to layout an iterative machine corrections strategy (beta-beat, dispersion, coupling, high orders)
9. Estimate of vertical dispersion at the IP to estimate how critical CM shift could be (from diff dispersion of  $e^+$  and  $e^-$ ).
10. Bmad simulations? Longer term effort?