

Single and Multiple Touschek scattering in low emittance rings

A quick overview on the intra-beam scattering theory and conventional computations will be presented, as well as for the Touschek effect. A parallelized tracking code for the IBS has been recently developed in view of the SuperB project; benchmarking with measurements (at SLS), with theory and with other codes (SIRE-CLIC-DR) have been done. Touschek lifetime is evaluated in most 3rd generation light sources, high intensity machines and damping wigglers for linear colliders, being one of the major limits of the beam lifetime. The STAR code developed to study their effect in DAFNE and SuperB will be described. To conclude, some remarks on the IBS and Touschek effect for the USRs.

Primary author: Dr BOSCOLO, Manuela (INFN)

Presenter: Dr BOSCOLO, Manuela (INFN)