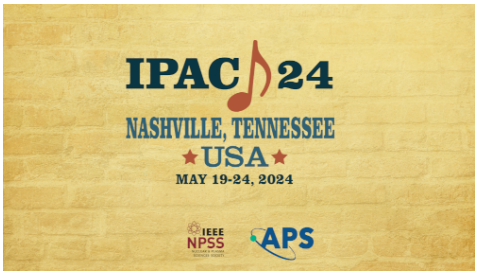

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Numerical investigation of beam loss scenarios and top-up safety for Elettra 2.0

Wednesday, 22 May 2024 16:00 (2 hours)

Elettra 2.0 is the 4th generation synchrotron light source that is going to replace Elettra, the 3rd generation light source operating since 30 years in Trieste Italy, giving light to the users in 2026. In this paper we present simulation results of the beam losses. Two different way of beam losses are studied namely beam decay, which mainly concentrates on the losses due to Touschek scattering and losses due to equipment such as RF and magnets failures. Based on this study the preliminary location of the scrapers has been defined. In addition the possibility for the injected beam to enter a front-end of a beam-line is investigated since this study is important for the top-up permission according to the radio-protection rules in Italy.

Footnotes

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Primary author: MANUKYAN, Koryun (Elettra-Sincrotrone Trieste S.C.p.A.)

Co-authors: KARANTZOULIS, Emanuel (Elettra-Sincrotrone Trieste S.C.p.A.); DASTAN, Sara (Elettra-Sincrotrone Trieste S.C.p.A.); KRECIC, Stefano (Elettra-Sincrotrone Trieste S.C.p.A.)

Presenter: KRECIC, Stefano (Elettra-Sincrotrone Trieste S.C.p.A.)

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