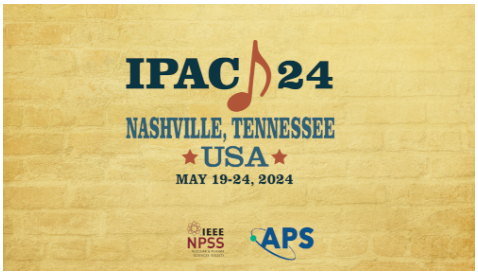

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Transverse instabilities in SOLEIL II storage ring in the presence of a harmonic cavity

Monday, 20 May 2024 16:00 (2 hours)

SOLEIL II is an upgrade project of the existing Synchrotron SOLEIL facility. It aims to reach fourth-generation light source parameters. This includes reductions of the transverse beam emittance, vacuum chamber dimensions and momentum compaction factor. A new impedance model of the SOLEIL II storage ring was developed. This paper demonstrates the evaluation of transverse single- and coupled-bunch instabilities with an up-to-date impedance model. Storage ring operation with a harmonic cavity is an essential component of the project. A harmonic cavity provides bunch lengthening and perturbs synchrotron motion. Its effects on transverse instabilities in SOLEIL II are reported in this contribution.

Footnotes

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