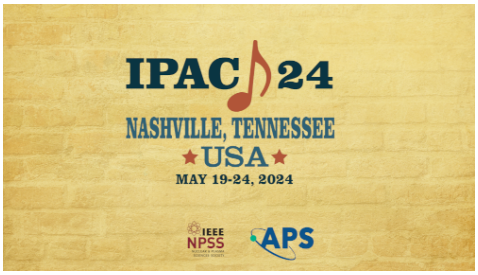

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Impedance database for the Diamond-II booster

Thursday, 23 May 2024 16:00 (2 hours)

Boosters in synchrotron injector systems have traditionally had more relaxed designs than storage rings, and consequently impedance has not been considered an important factor in their designs. In 4th generation light sources like Diamond-II, it is desirable to increase the extracted charge per shot to reduce filling times and enable advanced injection schemes. As such, the vacuum chamber impedance becomes a significant design parameter. An impedance database has been created for the Diamond-II booster, using the same AT-style lattice concept as for the storage ring, to be used as input into particle tracking and other simulations. We present here an overview of the database, including details of significant components and current progress on engineering designs.

Footnotes

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