



Contribution ID: 327

Type: Oral presentation (by invitation only)

Code development status

Thursday, 8 June 2023 13:30 (20 minutes)

With the increasing complexity of colliders, it is crucial to consider many physical phenomena in accelerator simulation studies, including complex effects such as radiation, beam-beam, and impedance. However, existing simulation tools are often outdated or focus on a single aspect. To address this challenge, the CHART collaboration is developing a software framework that integrates different existing tools and actively contributes to the development of new modern simulation tools in collaboration with external colleagues. These tools can also be included in the framework. The tools enable studies of beam stability, luminosity, and lifetime, incorporating multiple effects simultaneously. This talk will provide an overview of the collaboration's work on simulation tools and present first beam dynamics studies obtained using these tools.

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Session Classification: FCC-ee accelerator (FCCIS WP2)

Track Classification: FCC-ee accelerator