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Type: **Poster Presentation**

Multiple Interaction Points in Ghost collisions

The Ghost Collider makes use of unique “ghost” bunches, which are electrically neutral combinations of electrons and positrons within the same RF bucket, eliminates the beam-beam effects typically present at the interaction point (IP) in conventional colliders. This allows for the novel possibility of placing multiple interaction regions in series, achieving additive luminosity without introducing significant disruption. However, to get higher luminosity, the beta functions at the IP reaches millimeter scale, which in turn adds significant chromatic contribution to the collider. Correcting these chromatic effects is essential to maintain beam stability and ensure high luminosity during collider operation. By carefully adjusting the phase advance between two IRs that are placed in series, it becomes possible to cancel chromaticity globally, enabling stable collider operation while preserving high luminosity. In this paper we discuss the design of such IR/IRs to be used in a ghost collider.

Please consider my poster for contributed oral presentation

No

Would you like to submit this poster in student poster session on Sunday (August 10th)

No

Footnotes

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I have read and accept the Privacy Policy Statement

Yes

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