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## **Transient beam loading study in the storage ring of CEPC**

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During the on-axis injection process under the Higgs model, the transient beam loading in the CEPC storage ring will cause a phase shift between the head and the tail of one beam. Since the missing bunches are only extracted from one of the beams at a time, there will be a misalignment between the colliding bunches at the IP. In this paper, we presented the results of the study on this transient beam loading under different initial and extraction patterns and gave the preliminary analysis of the average luminosity loss due to this effect.

### **Funding Agency**

### **Footnotes**

### **I have read and accept the Privacy Policy Statement**

Yes

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