Progress on CEPC Plasma Injector

Abstract：

we have made some important progress on CEPC Plasma Injector (CPI) this year. In this presentation, we will show our studies on:

1) Electron PWFA simulation studies with detailed error analysis and theoretical analysis on the transformer ratio limit.

2) Preliminary simulation results on e- PWFA with the transformer ratio around 1.5

2) New e+ PWFA scheme and its advantages

3) Experimental results external injection, plasma dechirper, etc.

4) Updated linac design for CPI

In addition, we will introduce our future schedule based on the simulation results and discuss how to improve the current design of CPI.