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Exploring the current filamentation/Weibel instability in laboratory scenarios with relativistic beams

Wednesday, 12 January 2022 12:45 (30 minutes)

I will present some recent analytical and numerical results on the current filamentation instability/Weibel instability, with a focus on conditions relevant for planned/future experiments with relativistic beams. Results on the long time behavior of the instability will also be discussed with a focus on observables (such as beam/cloud slowdown) and expected magnetization. Astrophysical scenarios where these findings can be of relevance will also be discussed.

Presenter: SILVA, Luis (Instituto Superior Tecnico, Universidade de Lisboa)

Session Classification: Laboratory astroplasma physics