



Contribution ID: 134

Type: **Invited talk**

Self-matching in a quasilinear wakefield

Monday, September 19, 2022 6:10 PM (20 minutes)

Particle acceleration in a quasilinear plasma wake provides access to high acceleration gradients while avoiding self-trapping of the background electrons. However, this regime is highly nonlinear, with the focussing field acting on an externally injected witness bunch strongly dependent on the plasma response to the witness itself. Here we discuss matching of the witness bunch to the plasma, and show how the unique physics of the quasilinear wake gives rise to broad tolerances for the witness bunch radius at the injection point.

Primary author: FARMER, John (Max Planck Institute for Physics)

Presenter: FARMER, John (Max Planck Institute for Physics)

Session Classification: Special Topic