Contribution ID: **178** Type: **talk**

A plasma-based accelerator beamline for ultra-low energy spread beams in the 1 GeV range

Wednesday, September 18, 2019 4:20 PM (20 minutes)

A new multi-stage concept for plasma-based accelerators which could achieve unprecedented performance in terms of energy spread has recently been proposed. This concept considers splitting the acceleration process into two identical plasma stages joined by a magnetic chicane in which the beam chirp is inverted. So far, this concept has been explored in the context of the EuPRAXIA project for the production of 5 GeV beams. Here, we present an extension of this accelerating scheme towards the 1 GeV range, where the requirements on the laser system are less stringent and could be realized with current technology.

Primary author: FERRAN POUSA, Ángel (DESY)

Co-authors: MARTINEZ DE LA OSSA, Alberto (DESY); BRINKMANN, Reinhard (DESY); ASSMANN, Ralph (DESY)

Presenter: FERRAN POUSA, Ángel (DESY)

Session Classification: WG6-WG8 Joint Session

Track Classification: WG6-WG8 Joint Session