



Contribution ID: 151

Type: talk

Innovative single shot diagnostics for electrons from laser-plasma interaction at SPARC_LAB

Monday, 25 September 2017 17:15 (15 minutes)

Plasma wakefield acceleration is the most promising acceleration technique known nowadays, able to provide very high accelerating fields (> 100 GV/m), enabling acceleration of electrons to GeV energy in few centimeters. Due to the instabilities occurring during the process, single shot diagnostics are essential to properly characterize it.

In this work, an overview of the single shot diagnostics for electrons from laser-plasma interaction developed at SPARC_LAB will be given: Electro Optic Sampling (EOS) for temporal measurement on fast electrons and Optical Transition Radiation (OTR) for an innovative one shot emittance measurements.

Primary author: BISESTO, Fabrizio Giuseppe (LNF)

Co-authors: CIANCHI, Alessandro (ROMA2); CURCIO, Alessandro (LNF); ZIGLER, Arie (LNF); CHIADRONI, Enrica (LNF); ANANIA, Maria Pia (LNF); FERRARIO, Massimo (LNF); Dr POMPILI, Riccardo (LNF); SHPAKOV, Vladimir (LNF)

Presenter: BISESTO, Fabrizio Giuseppe (LNF)

Session Classification: WG5_Parallel

Track Classification: WG5 - High-Gradient Plasma Structures/Advanced Beam Diagnostics