



Contribution ID: 182

Type: **Invited Oral**

Laser-Driven Ion Acceleration and Multidisciplinary Applications at ELI

Monday, September 20, 2021 9:20 AM (30 minutes)

Recently the ELIMAIA (ELI Multidisciplinary Applications of laser-Ion Acceleration) beamline has been installed at ELI-Beamlines in the Czech Republic. The main goal of ELIMAIA is to offer short ion bunches accelerated by lasers with high repetition rate to users from different fields (physics, biology, material science, medicine, chemistry, archaeology) and, at the same time, to demonstrate that this source can be delivered through innovative and compact approaches. In fact, ELIMAIA will provide stable, fully characterized and tuneable particle beams accelerated by PW-class lasers and will offer them to a broad community of users for multidisciplinary applied research, as well as fundamental science investigations.

ELIMAIA will also enable to use laser-driven proton/ion beams for medical research thanks to the reliability and accuracy of its particle beam transport and dose monitoring devices. The current status of commissioning of the ELIMAIA beamline, along with experimental results on innovative targetry and diagnostics for laser-driven particle acceleration is presented and discussed, including preliminary tests carried out during the ramp up phase of the HAPLS (L3), PW-class, 10 Hz laser system at ELI-beamlines.

E-mail for contact person

daniele.margarone@eli-beams.eu

Funding Information

Author: MARGARONE, Daniele (Institute of Physics of the Czech Academy of Sciences)

Presenter: MARGARONE, Daniele (Institute of Physics of the Czech Academy of Sciences)

Track Classification: Production of high intensity ion beams