



Contribution ID: 716 Contribution code: MOPR62

Type: **Poster Presentation**

First results from the EuPRAXIA doctoral network: paving the way for next-generation particle accelerators

Monday, 20 May 2024 16:00 (2 hours)

This contribution presents the initial findings from the 3.2 Million Euro EuPRAXIA Doctoral Network. European Plasma Research Accelerator with eXcellence In Applications (EuPRAXIA) is at the forefront of advanced particle accelerator research, focusing on the development of plasma-based accelerator technologies.

The EuPRAXIA Doctoral Network, a collaborative effort among leading research institutions, is dedicated to exploring and advancing the frontiers of plasma-based particle acceleration. The network's research involves a wide range of topics, from beam diagnostics and optimization techniques to new applications. Here, we present the innovative approaches and methodologies employed to achieve very high acceleration gradients, improve the energy sharpness and overall beam quality. Some of the early results of this new network are discussed, showcasing the progress made across the network's three scientific work packages. The contribution also gives an overview of the initial training provided to the network's Fellows.

Footnotes

Funding Agency

This project has received funding from the European Union's Horizon Europe research and innovation programme under grant agreement no. 101073480 and the UKRI Guarantee Funds.

Paper preparation format

Word

Region represented

Europe

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Session Classification: Monday Poster Session

Track Classification: MC3: Novel Particle Sources and Acceleration Techniques: MC3.A22 Plasma Wakefield Acceleration