



Contribution ID: 34

Type: **Oral Presentation**

Diagnostics for beam and plasma

Tuesday, 8 April 2025 09:00 (1 hour)

Plasma-based acceleration is a promising technology for next-generation particle accelerators, enabling high-gradient acceleration over compact distances. However, accurate diagnostics are crucial to fully exploit its potential.

In this talk, we will explore the diagnostics of both particle beams used to drive plasma acceleration and those accelerated within plasma structures. We will present practical examples and discuss the key characteristics required for effective diagnostics in these extreme conditions.

A particular focus will be given to plasma density measurement, as it represents a fundamental parameter for the control and optimization of plasma acceleration experiments.

Primary author: Prof. CIANCHI, Alessandro (Tor Vergata University and INFN)

Presenter: Prof. CIANCHI, Alessandro (Tor Vergata University and INFN)