

Monoenergetic ion acceleration in laser-plasma peeler regime

mercoledì 20 settembre 2023 17:25 (20 minuti)

We discuss relativistic laser interaction with overdense plasmas, where the laser pulse is incident parallel to the plasma surface, the so-called “peeler” regime [1]. The laser pulse impinges on an edge of a tape. The edge allows for an efficient conversion of the laser pulse into a surface plasma wave (SPW). The SPW peels off and accelerates electrons (tens of nC) from the target skin layer. They emit bright betatron radiation and lead to monoenergetic ion acceleration.

[1] X. F. Shen, A. Pukhov, B. Qiao Phys. Rev. X 11 041002

Autori principali: PUKHOV, Alexander (uni duesseldorf); Dr. SHEN, Xiaofei (MPI for Nuclear Physics)

Relatore: PUKHOV, Alexander (uni duesseldorf)

Classifica Sessioni: WG6: Ion acceleration and developments towards fusion

Classificazione della track: WG6: Ion acceleration and developments towards fusion