

9th Summer School

Plasmas in super-intense laser fields



Erice, Sicily, Italy 1-11 July 2022



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Laser-driven nuclear physics

The series of lectures will cover different aspects of laser-driven nuclear physics in plasmas. Fundamental processes of nuclear physics will be introduced with the aim to provide the basic tools to grasp the core part of the course which will be focused on nuclear processes occurring in laser-generated plasmas. Novel approaches used to enhance the yield of nuclear reactions in plasmas, including non-conventional fusion reactions, will be widely discussed. An overview of current diagnostic techniques used to characterize the products of nuclear reactions occurring in harsh laser-plasma environment will be presented. Potential multidisciplinary applications of laser-driven nuclear fusion, beyond inertial confinement fusion, will also be reviewed.