

03 March 2021

I.FAST meeting

WP6 NPACT-Novel particle accelerators concepts and technologies

WP6.2 - Lasers for Plasma Acceleration (LASPLA)



THALES



L.A. Gizzi (Task Leader)

Istituto Nazionale di Ottica

*Consiglio nazionale delle
Ricerche (CNR)*

With CNR, CERN, INFN, CNRS,
DESY, THALES and AMPLITUDE
Technologies



Task 6.2 Lasers for Plasma Acceleration

Currently reviewing the programme in view of the COVID19 restrictions;

- Establish a roadmap to foster delivery of advanced industrial laser drivers with high-repetition rate and higher efficiency, for the first user plasma-based accelerator.
- Establish a coordination activity with networking and training of main laser labs, focused on laser-driver R&D.

D6.2 : LASPLA Strategy [M46] - Strategy for laser drivers for plasma accelerators

MS22 - LASPLA Workshop/School [M30] – Report

Topics for participation to WP6.2



Towards the **STRATEGY** for laser drivers for plasma accelerators:

Rapidly evolving scenario for laser technologies relevant for plasma acceleration:

- Ultrashort pulses (large bandwidth)
- High Repetition rate (100 Hz – 10 kHz)
- High average power (kW -10 kW)
- High wall-plug efficiency

Enabling technologies, components and capabilities: gain media (crystals, ceramics, fibers ...), pumping sources (diode lasers), cryo technology, optical coatings, materials characterization (optical, thermo-mechanical), modelling capabilities, opto-mechanics integration ...

Growing links with many more key LPA actors and Laser and Optics Industry

Send names of contact person for WP6.2 to la.gizzi@ino.cnr.it