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LaserFusion
education - training

Innovative Education & Training
in Laser Inertial Fusion Energy

Co-funded by
the European Union

ERASMUS+ KA220-HED-13A477C3

"Innovative Education & Training in Laser Inertial Fusion Energy"

3-7 November 2025

5-day bootcamp on

"Physics and technology of Inertial Fusion Energy" with focus on Diagnostics

CNR-INO
ISTITUTO NAZIONALE DI OTTICA
CONSIGLIO NAZIONALE DELLE RICERCHE

Istituto Nazionale di Ottica - CNR - PISA - Italy - INTENSE LASER IRRADIATION LABORATORY

Pisa, Italy

The event consists of a training course for postgraduate students (PhD & MSc) with focus on diagnostics for Inertial Fusion Energy experiments. It includes lectures and seminars on theoretical aspects and practical schemes of plasma, particle and radiation diagnostics, as well as hands-on exercises in laboratory.

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3-7 November 2025, Pisa, Italy

Lectures topics: (by CNR-INO)

- Laser plasma interaction — M. Salvadori
- TNSA for proton probe — A. Macchi
- X-ray diagnostics — P. Koester
- Parametric instabilities — G. Cristoforetti
- Laser diagnostics — L. Labate
- Interferometry — F. Brandi

Hands-on practice: (by CNR-INO)

- Wavefront reconstruction of He-Ne laser, Phase plates: lab measurements + python script
- OAP alignment with He-Ne laser + Lab-tour
- Mounting optics: Wavefront changes due to stress on mirrors (focusing + interferometry)

+ 7 seminars by researchers from partners (UBx/FR, HMU/GR, UoY/UK, ELI/CZ, IPParis/FR, UPM/SP, FSU/DE)

Preliminary program:

	Mon 3/11	Tue 4/11	Wed 5/11	Thu 6/11	Fri 7/11
AM	Arrival	8:30-10:00 Lecture 1 10:00-11:30 Lecture 2 11:30-12:15 Seminar 1 12:15-13:00 Seminar 2	8:30-10:00 Lecture 3 10:00-11:30 Lecture 4 11:30-12:15 Seminar 3 12:15-13:00 Seminar 4	8:30-10:00 Lecture 5 10:00-11:30 Lecture 6 11:30-12:15 Seminar 5 12:15-13:00 Seminar 6	8:30-12:15 Wavefront reconstruction 12:15-13:00 Seminar7
PM	Arrival 18:00 Welcome and introduction to the bootcamp 19:00-20:00 Evaluation Test	Split in 3 groups 14:30-15:30 Introduction to hands-on experience 15:30-18:30 Hands-on experience	Split in 3 groups 14:30-15:30 Introduction to hands-on experience 15:30-18:30 Hands-on experience	Split in 3 groups 14:30-15:30 Introduction to hands-on experience 15:30-18:30 Hands-on experience	15:00-16:00 Evaluation test 16:00 Closure Departure

More info at the Erasmus+ LaserFusion website: https://laserfusion.hmu.gr/