

NUCLEAR PHYSICS UNDER THE LOW-ENERGY, HIGH INTENSITY FRONTIER

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ECT* - Villa Tambosi, Villazzano

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TOPICS

1. Nuclear physics under dense conditions:

- Neutron stars and/or other dense astrophysical environments.
- Nucleosynthesis in Lab with plasmas generated by HPLS.

1. Nuclear physics under intense time-dependent fields:

- Efficient photo- or electro-pumping/de-excitations of nuclear isomers.
- Optimization toward tailored HPLS-based beams for nuclear photonics.
- Novel neutron sources with focused beams and/or a high-repetition cycle of HPLS production.

1. New physics/phenomena/applications to be unveiled under intense or un-conventional beams:

- Probing beyond standard model (BSM) physics with intense condition.
- Vortex beams (beams carry additional angular momenta) and their applications.

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