

# Publications of G. Fauvel

June 13, 2025

Main work :

- **FJFI affiliation** : Fauvel, G.; Tangtartharakul, K.; et al. Compact in-vacuum gamma-ray spectrometer for high-repetition rate PW-class laser-matter interaction. Review of Scientific Instruments, volume 96, no. 2, 2025, publisher: AIP Publishing. Available from: <https://pubs.aip.org/aip/rsi/article/96/2/023102/3334207>

Subject : Paper on the design of the vacuum spectrometer used in this work.

Contribution : Design, calibration, simulations, experiment, writing, reviewing.

- Tangtartharakul, K.; Fauvel, G.; et al. Collimated  $\gamma$ -ray emission enabled by efficient direct laser acceleration. New Journal of Physics, volume 27, no. 2, Feb. 2025: p. 023024, ISSN 1367-2630, doi:10.1088/1367-2630/adb3c1, publisher: IOP Publishing. Available from: <https://dx.doi.org/10.1088/1367-2630/adb3c1>

Subject : Study on the apparition of the characteristic two lobes of DLA at higher target density.

Contribution : Discussion, reviewing.

- Forsman, A.; Do, M.; et al. High repetition-rate foam targetry for laser plasma interaction experiments: Concept and preliminary results. Review of Scientific Instruments, volume 95, no. 6, June 2024: p. 063505, ISSN 0034-6748, doi:10.1063/5.0197995. Available from: <https://doi.org/10.1063/5.0197995>

Subject : Fabrication of foam targets on copper ribbon for tape target high repetition rate experiments.

Contribution : Experiment, reviewing.

Other subjects worked on:

- Wasser, F.; Zähler, .; et al. Full aperture backscatter diagnostics for characterization of laser plasma instabilities at the extreme light infrastructure (ELI) beamlines. Review of Scientific Instruments, volume 94,

no. 9, Sept. 2023: p. 093503, ISSN 0034-6748, doi: 10.1063/5.0153874.  
Available from: <https://doi.org/10.1063/5.0153874>

Subject : Setup of back scattered diagnostics for instabilities studies with L4n.

Contribution : Participation on the setup of the diagnostics, experiment, reviewing.

- Wasser, F.; Zähler, .; et al. Investigation of laser plasma instabilities driven by 527nm laser pulses relevant for direct drive inertial confinement fusion. *Physics of Plasmas*, volume 31, no. 2, Feb. 2024: p. 022107, ISSN 1070-664X, doi:10.1063/5.0188693. Available from: <https://doi.org/10.1063/5.0188693>

Subject : Study of back-scattered Raman and Brillouin with the new high repetition rate capabilities of L4n.

Contribution : Experiment, reviewing.

- Condamine, F. P.; Jourdain, N.; et al. Commissioning results from the high-repetition rate nanosecond-kilojoule laser beamline at the extreme light infrastructure. *Plasma Physics and Controlled Fusion*, volume 65, no. 1, Nov. 2022: p. 015004, ISSN 0741-3335, doi: 10.1088/1361-6587/aca35d, publisher: IOP Publishing. Available from: <https://dx.doi.org/10.1088/1361-6587/aca35d>

Subject : Commissioning of the L4n laser system.

Contribution : Experiment, reviewing.