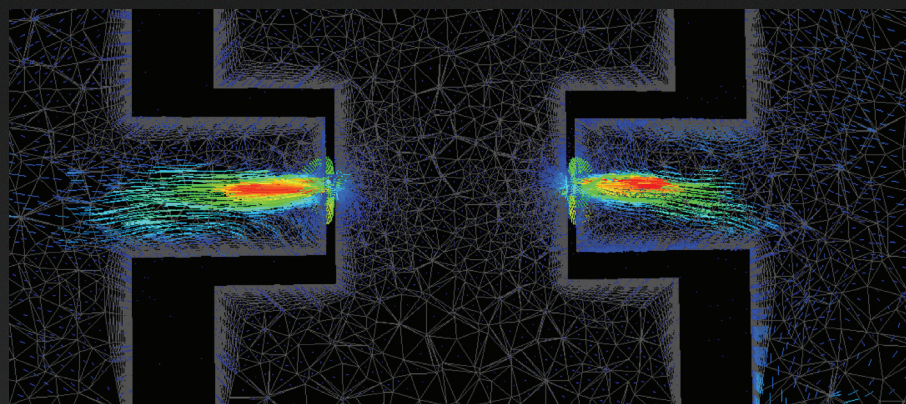


Source **LAB**

Targetry Products

SL-ALC

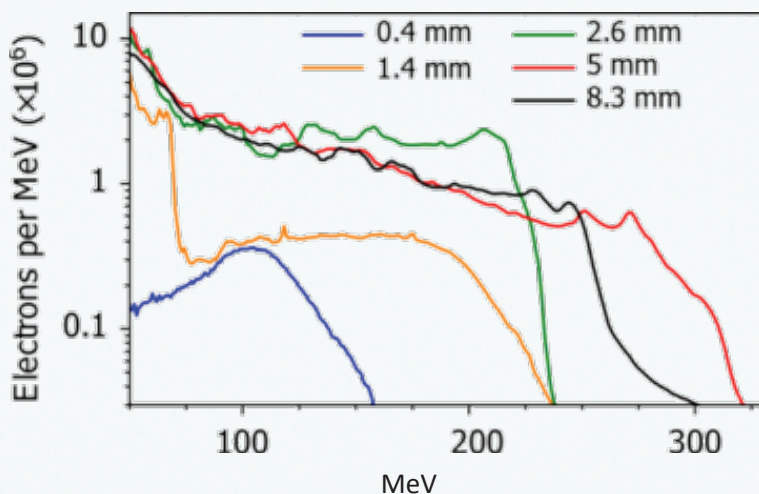
**Long-length adjustable gas cell for
versatile electron injection**



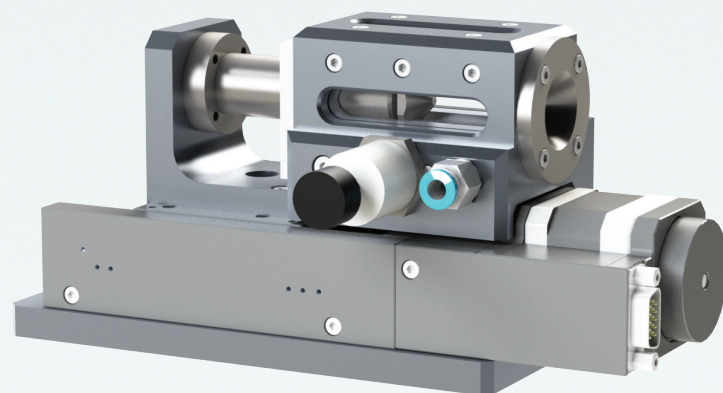
Your tool to control electron acceleration

The SL-ALC-HI system is a motorized cell of adjustable length, conceived for laser-plasma interaction experiments at underdense regime, requiring mm-to-cm long stable medium in general (e^- acceleration and diffraction, inverse Compton scattering, γ -ray generation, X-ray laser, high harmonic generation), and Laser Wakefield Acceleration (LWFA) at high repetition rate in particular.

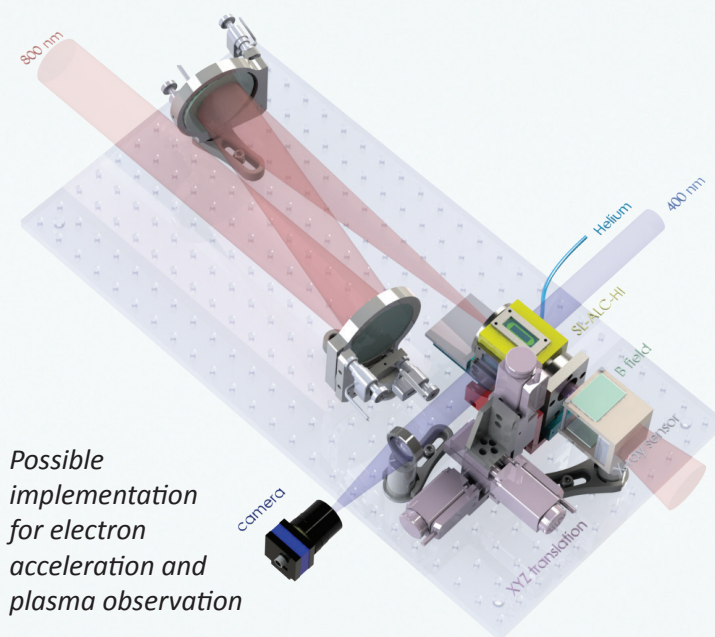
- ▶ high precision monitoring
- ▶ optimal plasma imaging conditions
- ▶ fully motorized and easy to align
- ▶ record lifetime



Typical electron spectra for different SL-ALC length configuration with a 40 TW laser system

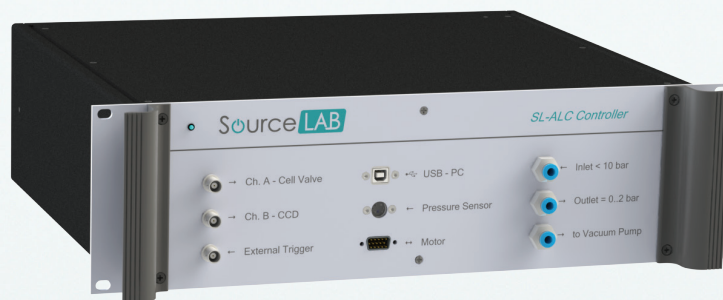


The SL-ALC comes fully motorized and interfaced



Possible implementation for electron acceleration and plasma observation

Specifications	
Performances	Stable gaseous medium up to 50 mm length
Stepper motor minimal increment / rectitude	0.5 μm / 5 μm
Vacuum compatibility	10^{-6} torr
Inlet pressure	Up to 4 bar
Nozzles diameter	From 100 μm to 2 mm
Pulsed flow mode	Optional
Dimensions / mass	196 x 99 x 80 mm / 1.5 kg



Optionally, the SL-ALC can be operated in pulsed gas and regulated pressure mode with our dedicated digital controller

Unique instrument to fine-study the physics of laser-plasma interaction in underdense regime