

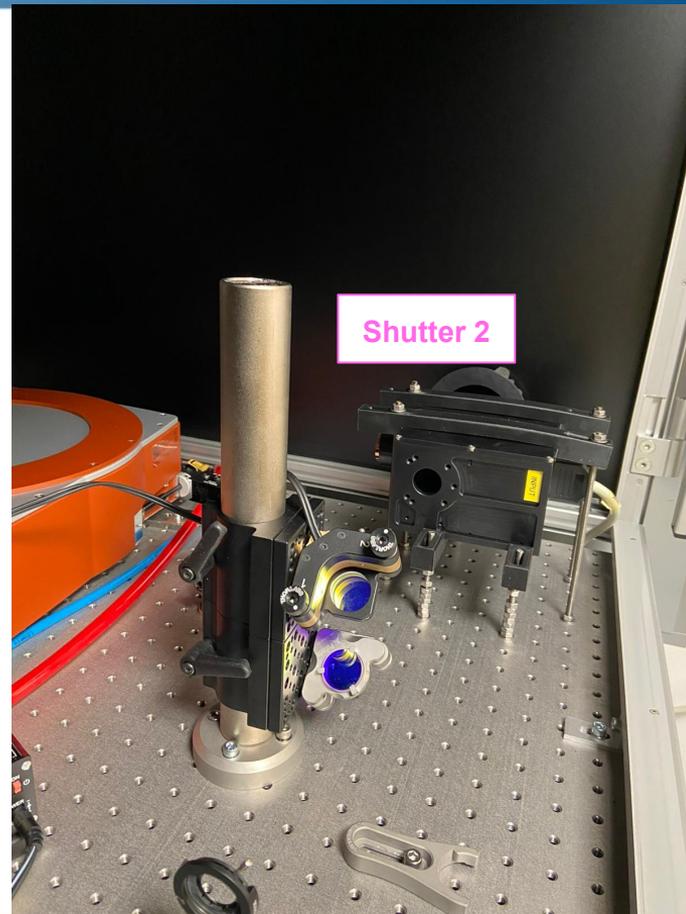
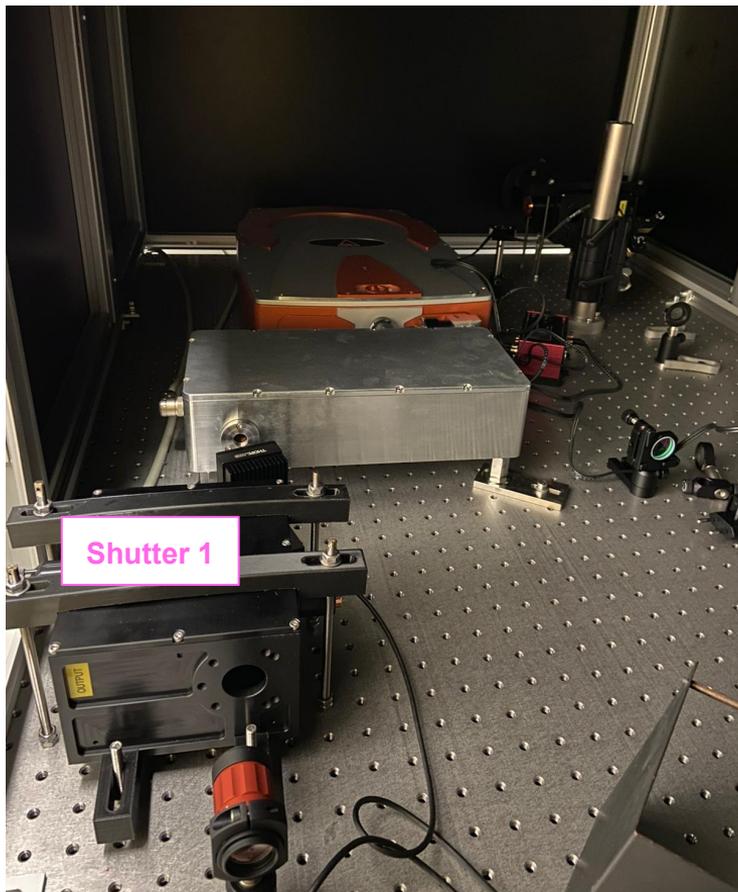


# Photocathode Laser

Anahi Segovia Miranda  
PERLE Progress Review

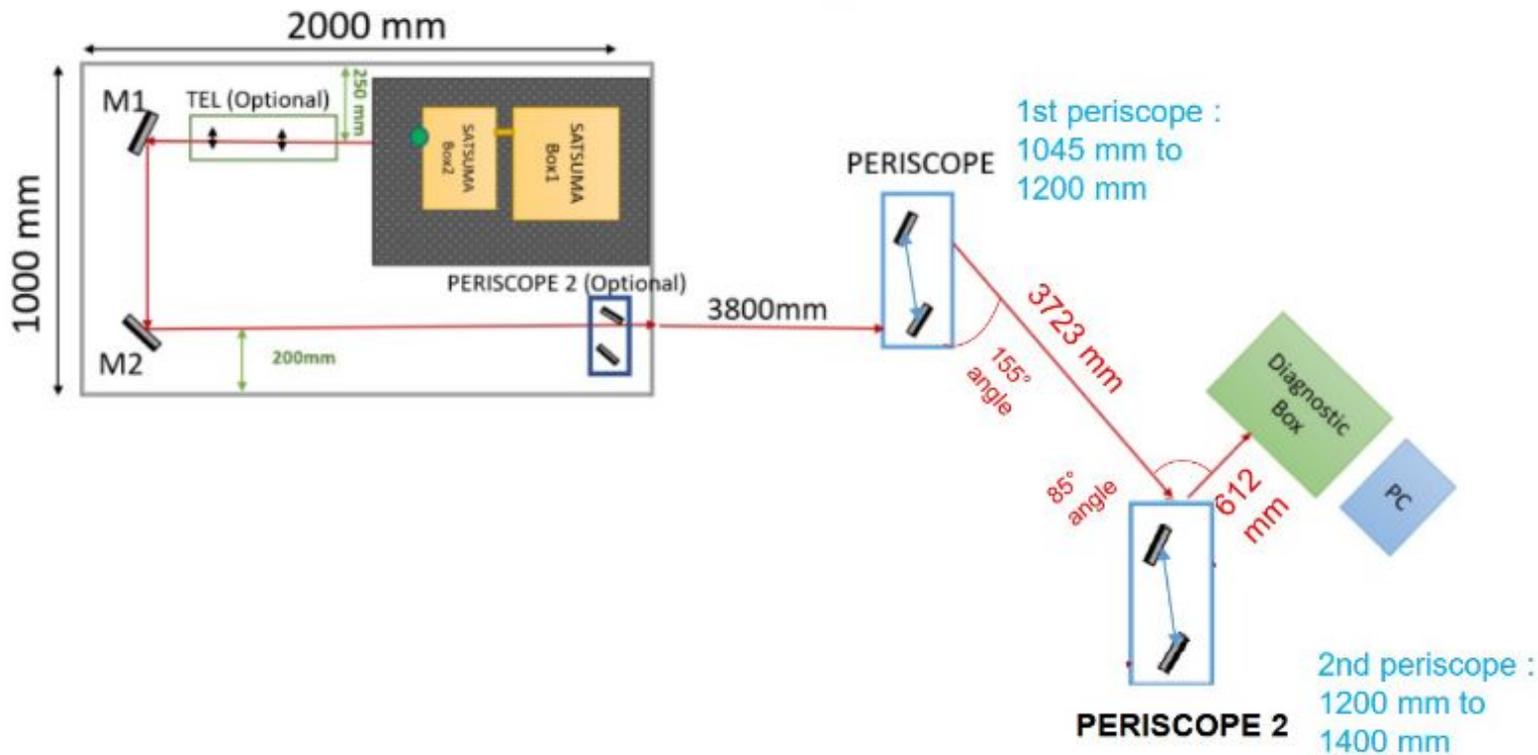


# Satsuma Laser



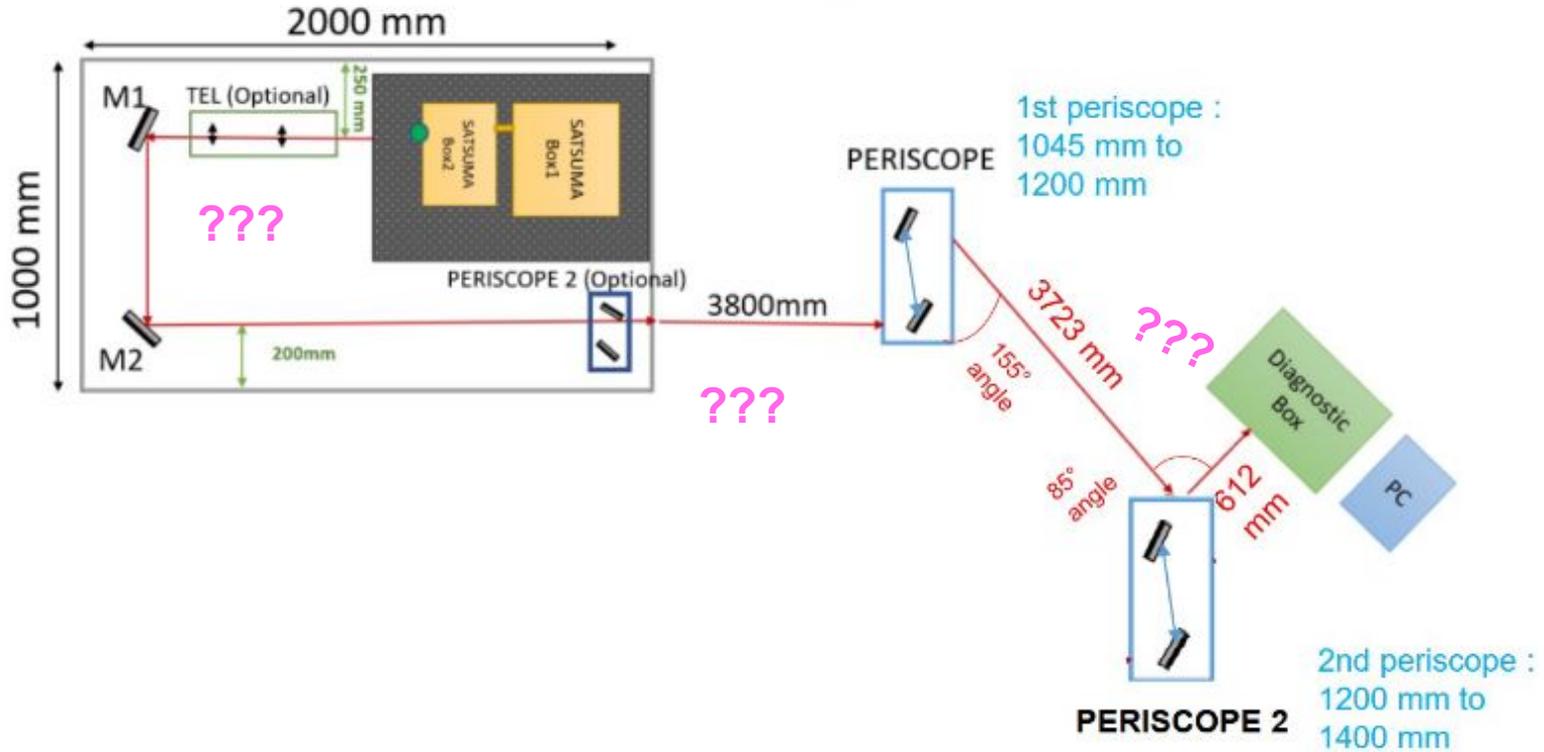


# Laser transport and alignment





# Laser transport and alignment



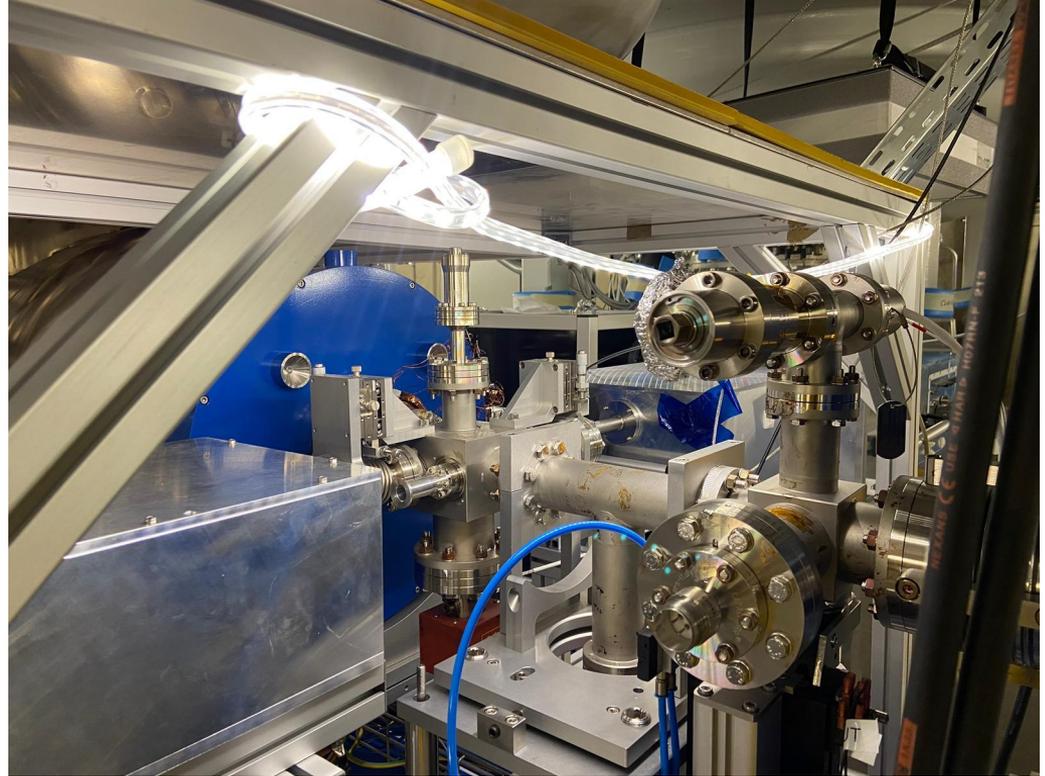
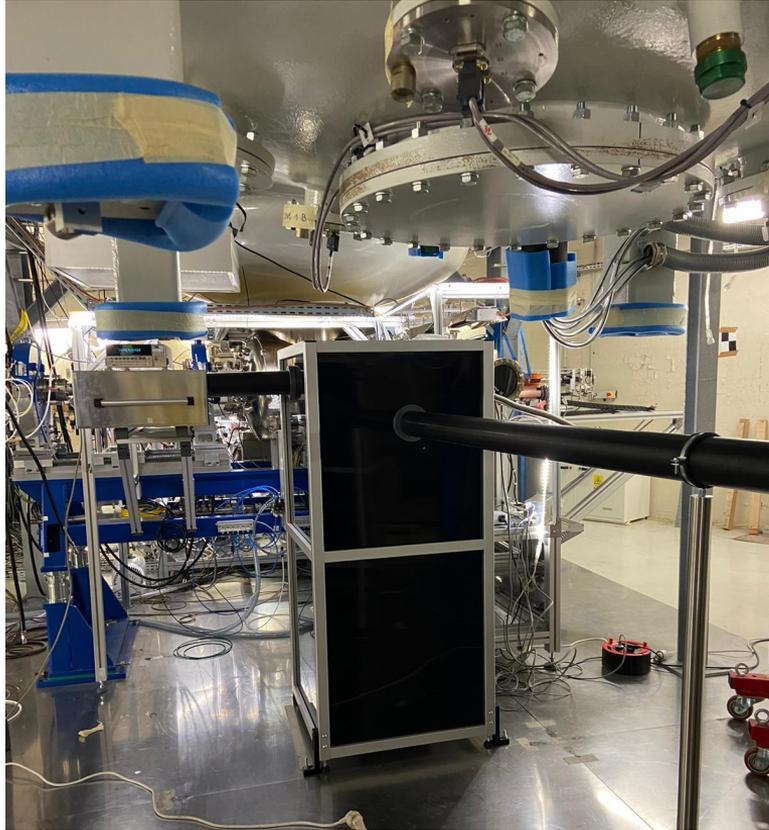


# Laser transport and alignment



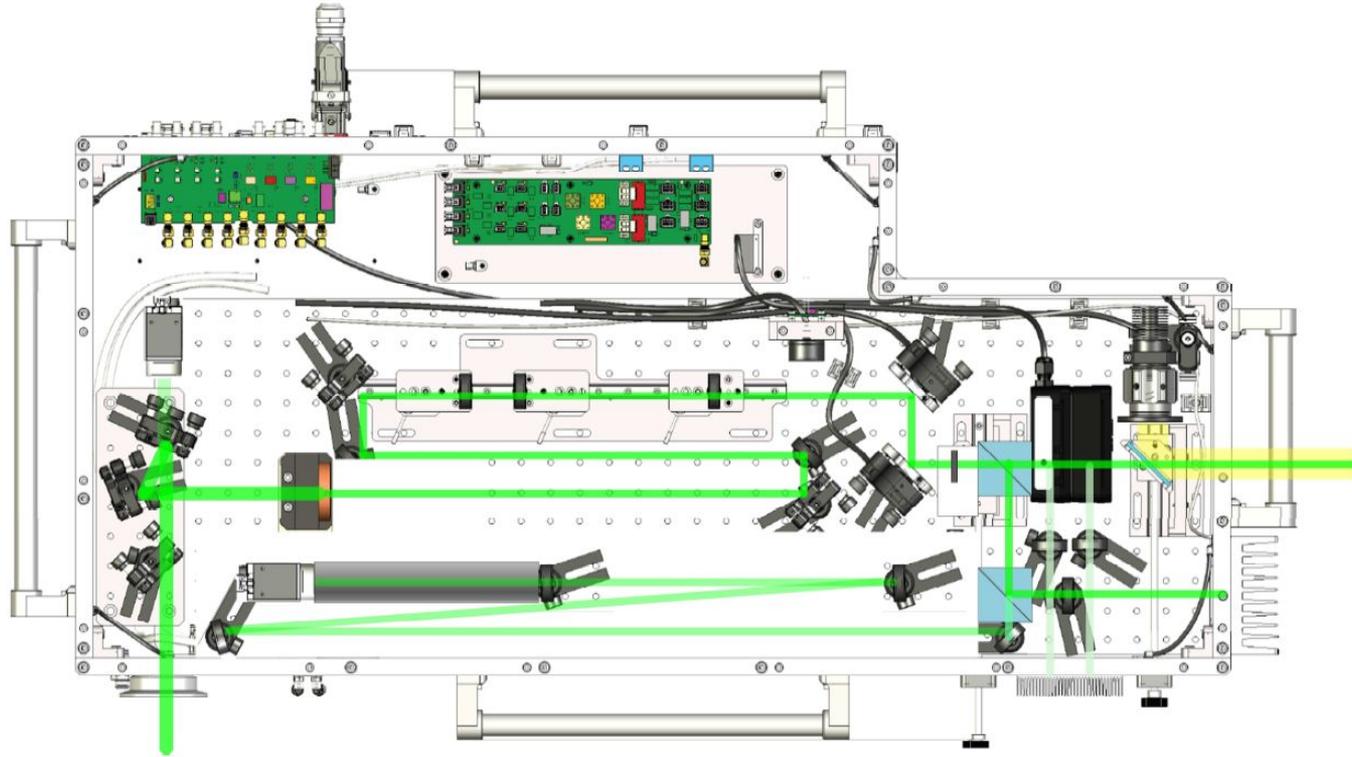


# Laser transport and alignment



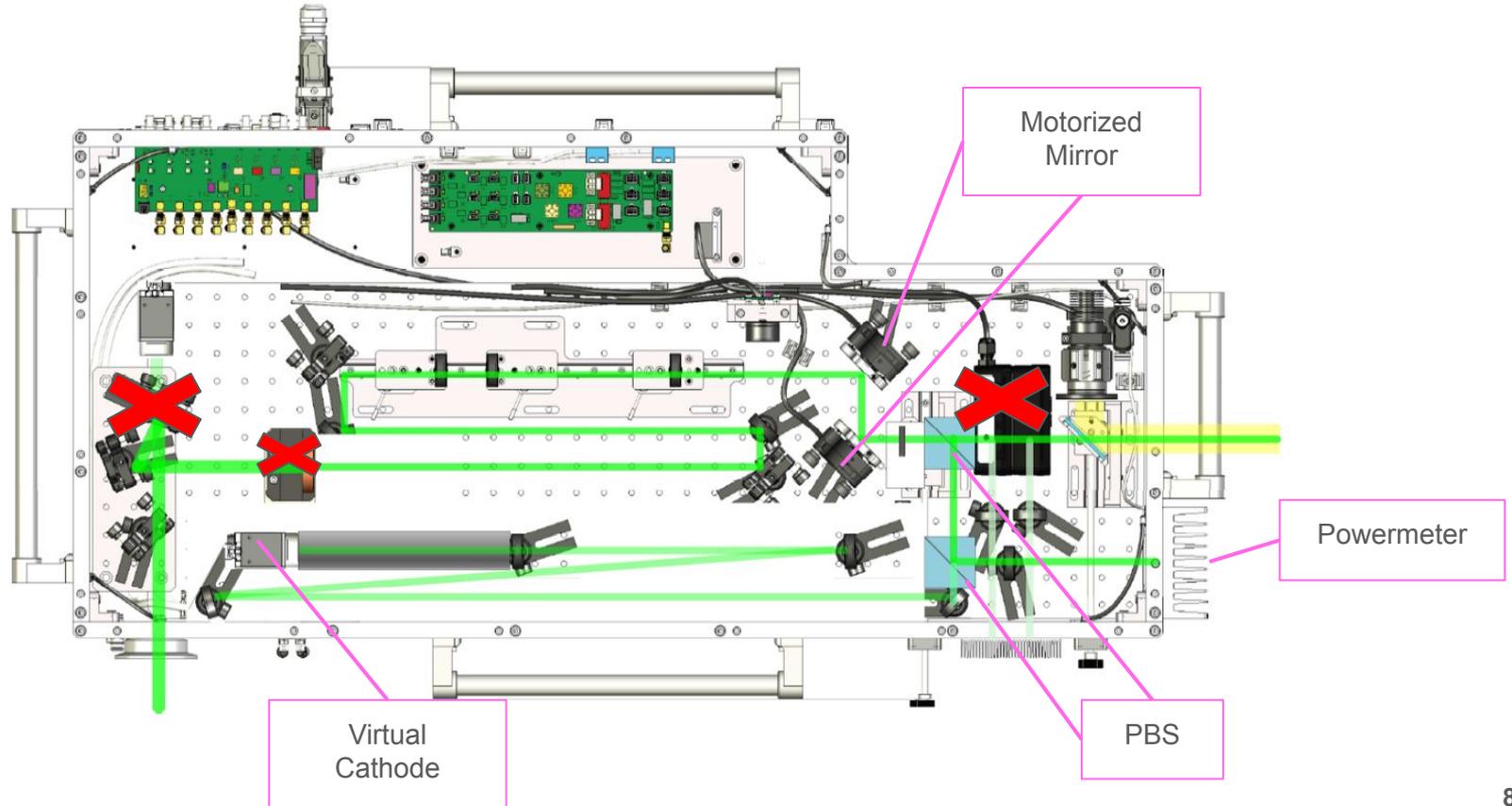


# Diagnostics box



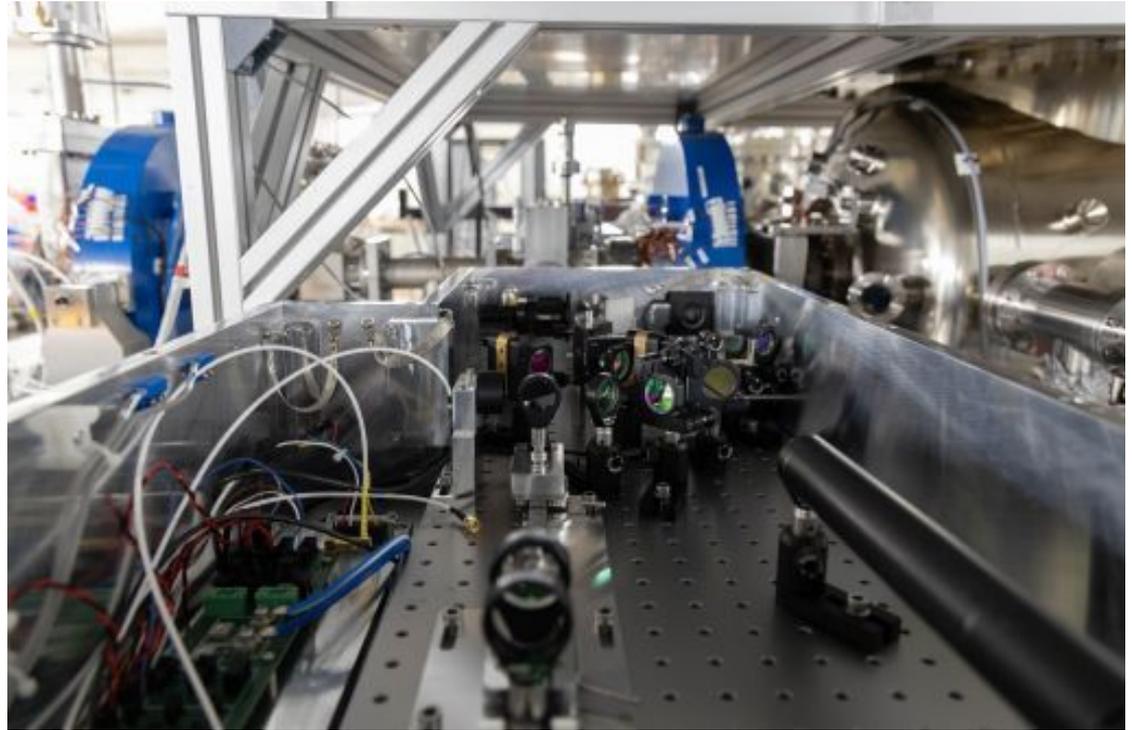
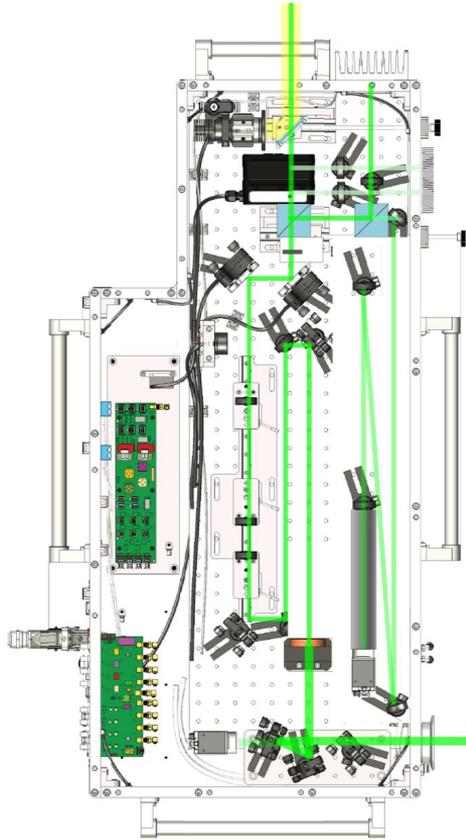


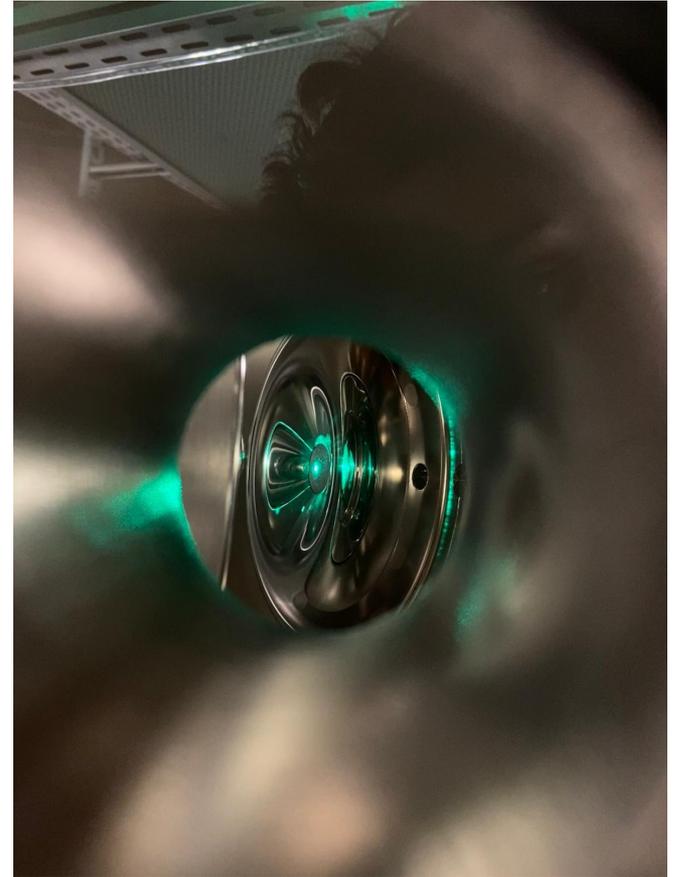
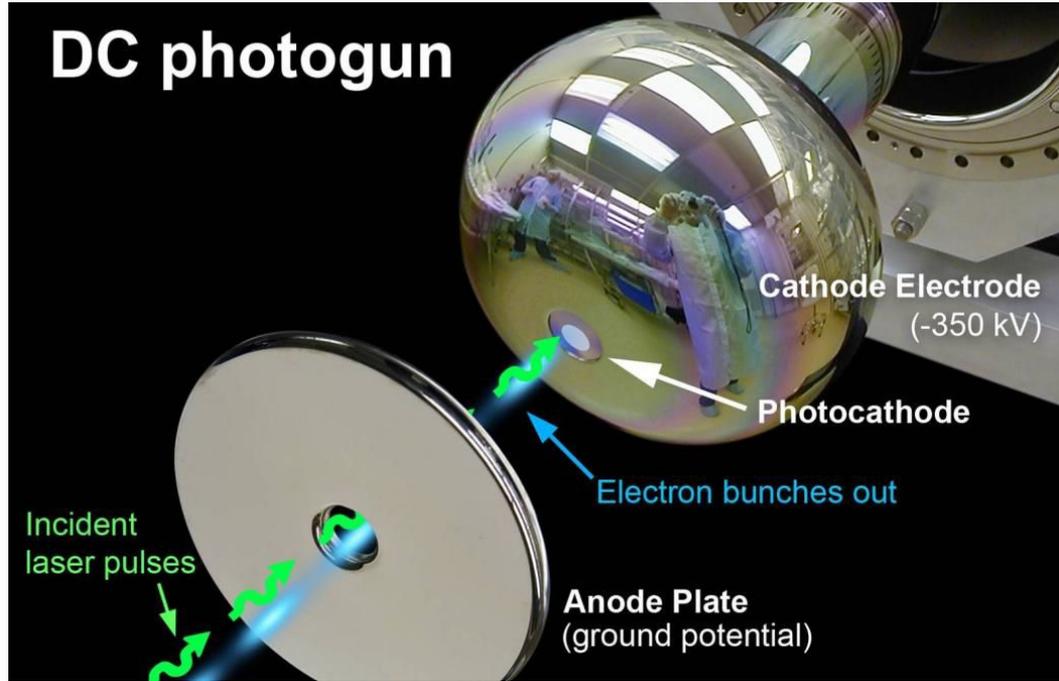
# Diagnostics box





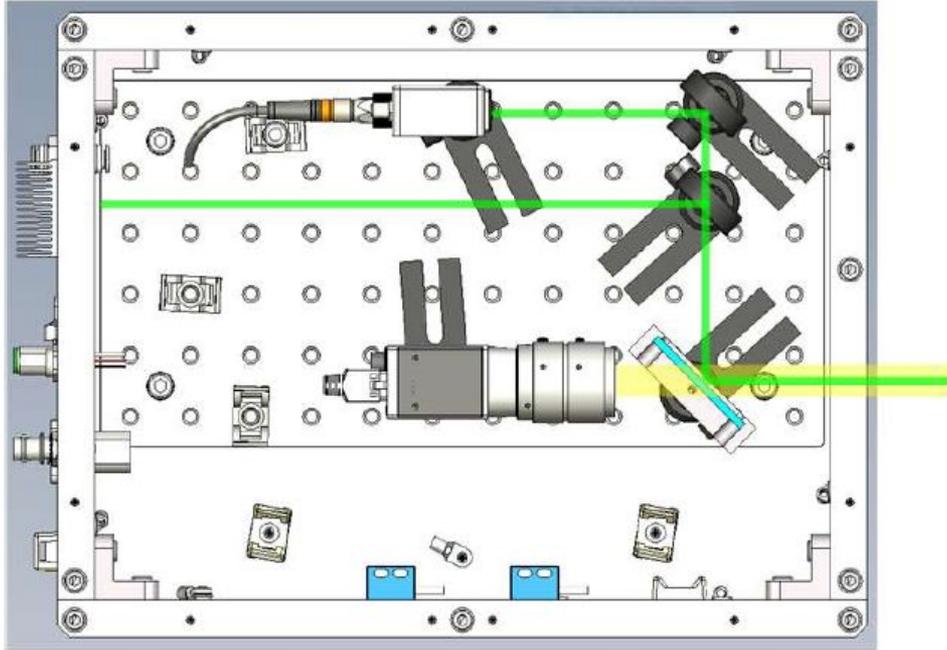
# Diagnostics box



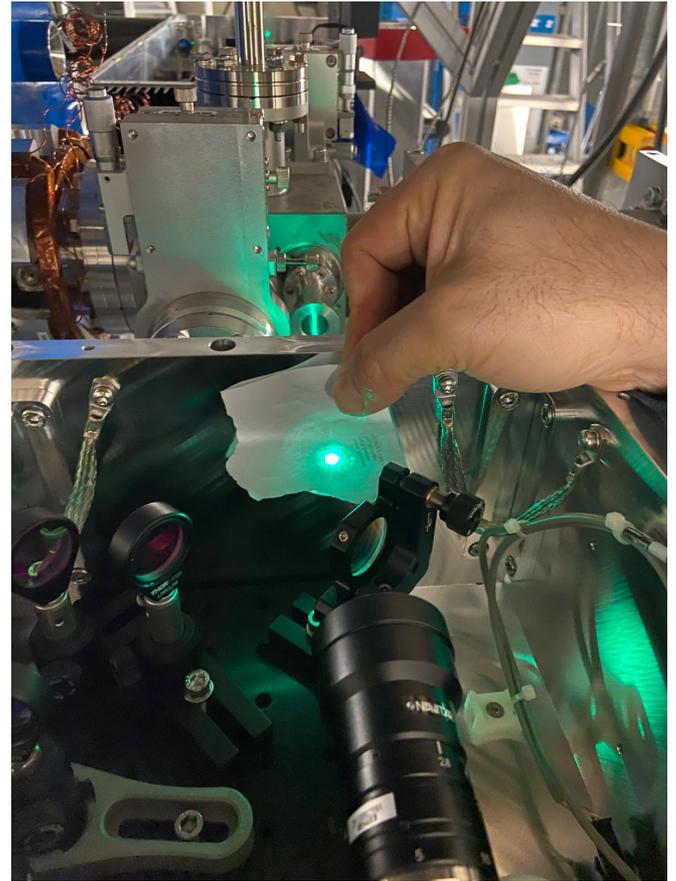




# Box 2 "Dump"



Laser not yet aligned inside box 2





# Transmission

Position	Power (W)	Transmission (%)
Laser output	1.06	
After shutter 2	1.02	96
Diagnostics box entry	0.92	90.2
Before db telescope	0.88	95.6
After PBS	0.815	95.8
Before viewport Photogun	0.79	97

Transmission global: **74.5 %**

\*Transmission =  $P_{\text{avant}}/P_{\text{après}}$  en %



# Summary

- ★ Shutters and security system installed
- ★ Periscopes and diagnostics box in place
- ★ First alignment into the photocathode



## The critical issues (now)

- ★ Diode of the Amplitude laser degrading too fast



- ★ Laser pointing and power stability





# Future work and possible upgrades

- ★ Fully operation of the diagnostic box
  - Cables to feed voltage
  - Control system for motorized mirrors, cameras and powermeter.
  - Box 2
- ★ Waiting for response of Amplitude
  - Characterization of laser after amplitude intervention
- ★ Synchronization
  - Around 90 k€