

LhARA in-vitro facility parameter list

This document defines the parameters of the LARA facility being studied within the CCAP. The document will be re-issued as required.

Table 1: Table of parameters of the LARA in-vitro facility.

Parameter	Value or range	Unit	Comment
Laser-driven proton and ion source Contact: O. Ettlenger			
Laser power	~ 30	TW	
Laser Energy	1	J	
Laser pulse length	30	fs	
Laser rep. rate	10	Hz	
Proton energy	15	MeV	
Proton energy spread	100	%	Due to sheath acceleration mechanism chosen for
Proton beam divergence	~ 30	Degrees	
Contaminant radiation	-	-	Electrons, Carbon, Oxygen, Neutrons, X-rays
Capture Contact: J. Pozimski			
Gabor lens 1	Length (end-flange to end-flange)		
Beam transport Contact: J. Pasternak			
Configuration			
Beam/end-station interface Contact: A. Kurup			
Vacuum window	0.075	mm	
Scintillating fibre layer	0.25	mm	
Air gap	5	mm	
Sample container base	1.15	mm	
Cell layer	0.03	mm	
Cell nutrient solution	15	mm	
Endstation Contact: H.T. Lau, S. Gruber			
Configuration			

Version history

30Oct18 K. Long Draft 0 Zeroth draft for discussion.