

4. 23 Meeting

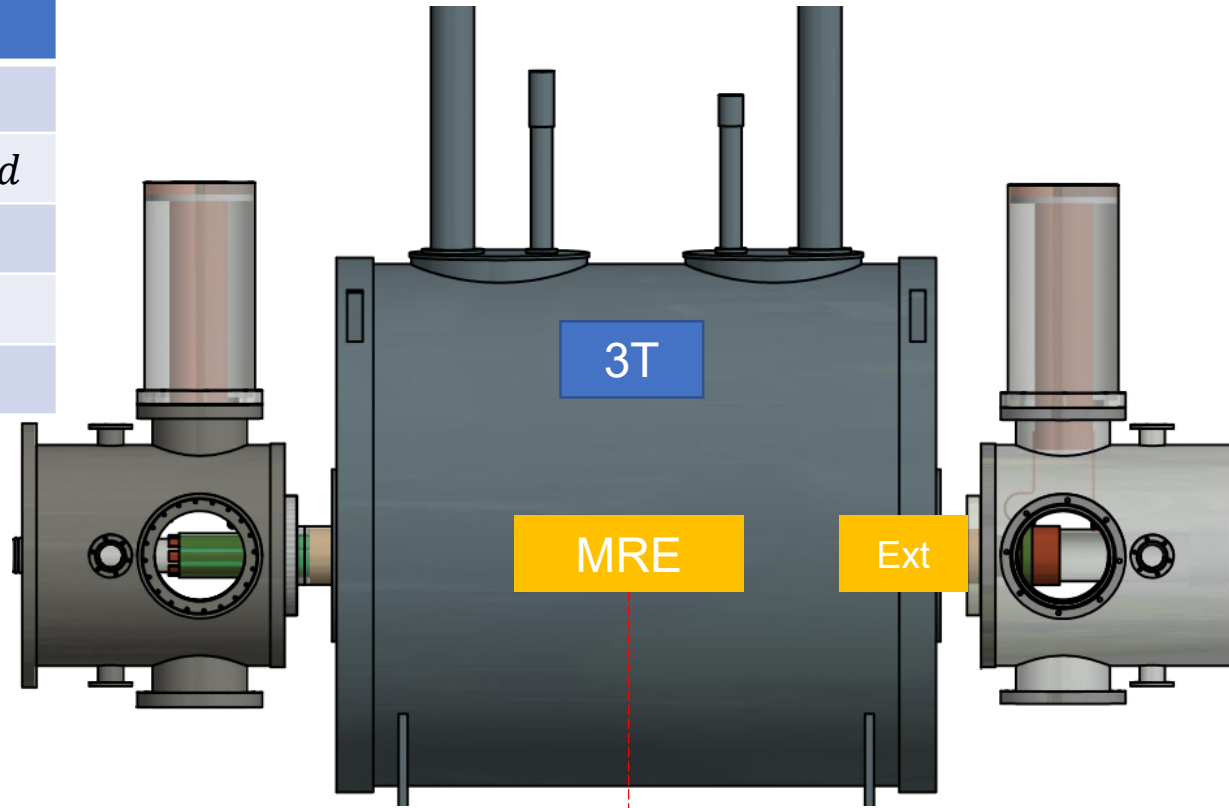
Kyoung-Hun Yoo

Injection Beam Parameter in Simulation

Parameter	Value
Transverse Size	$\sigma_x = 1.57 \text{ mm}$
Emittance	$\epsilon_x = 9.72 \text{ mm mrad}$
Bunch Length	$\sigma_t = 150 \text{ ns}$
Mean Energy	$E = 1.04 \text{ keV}$
Energy Spread	$\sigma_E = 124.5 \text{ eV}$

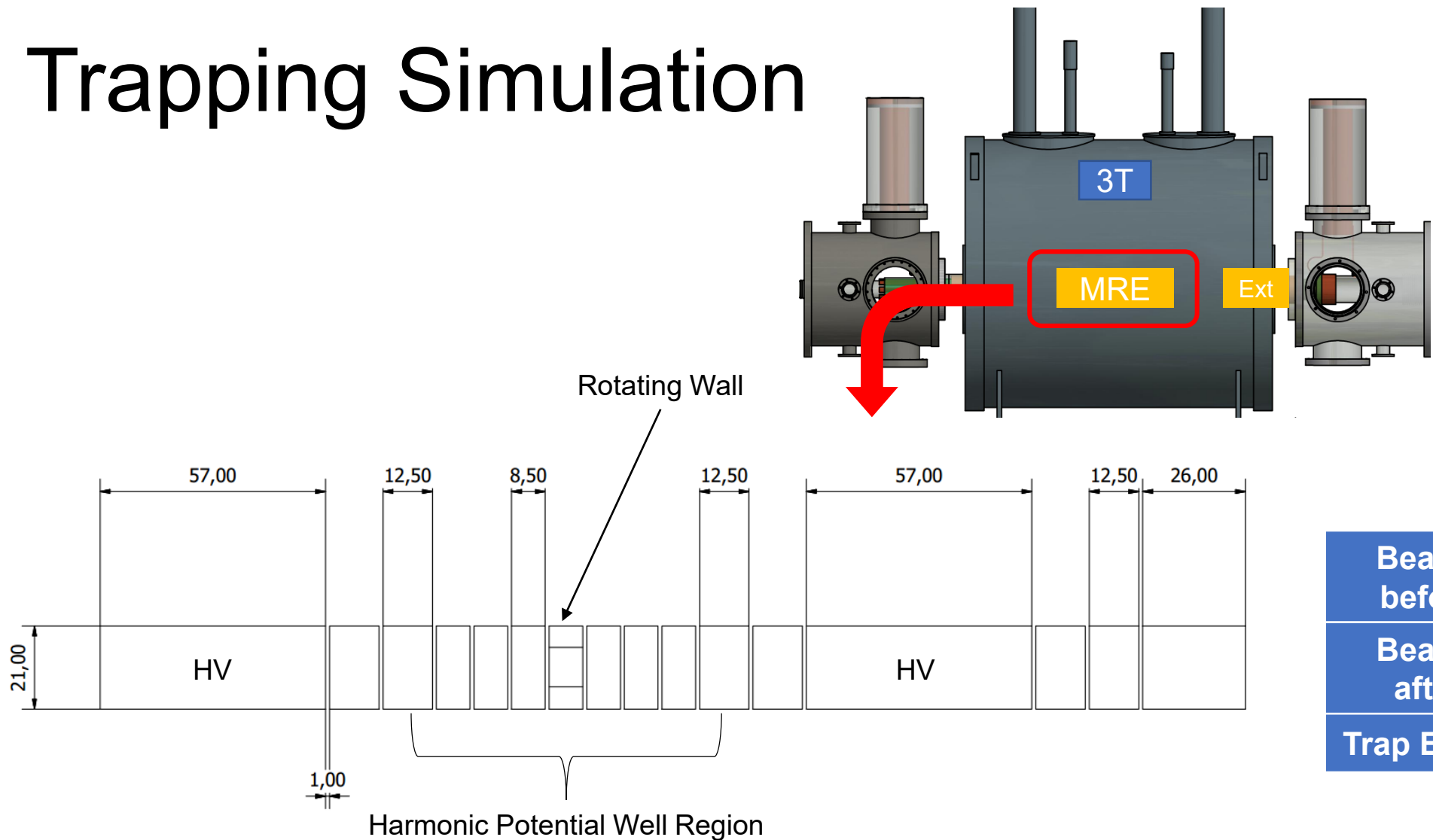


$z = -1 \text{ m}$



$z = 0$

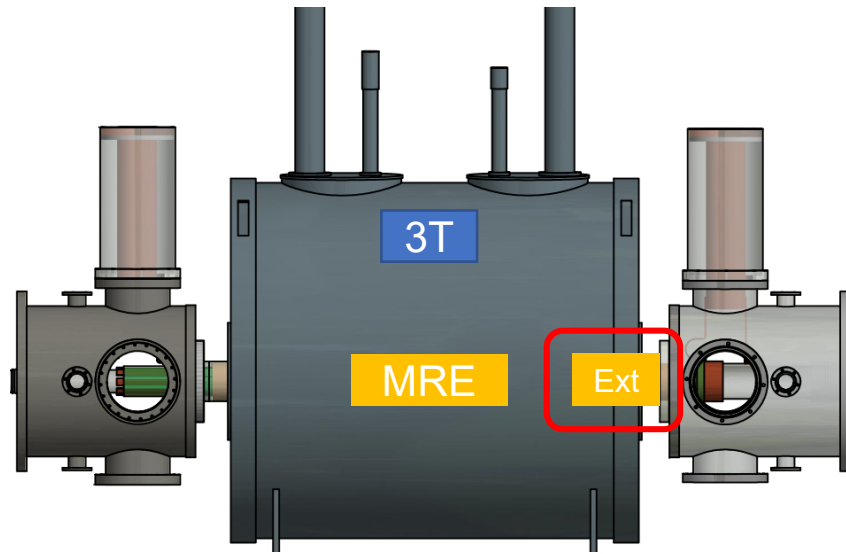
Trapping Simulation



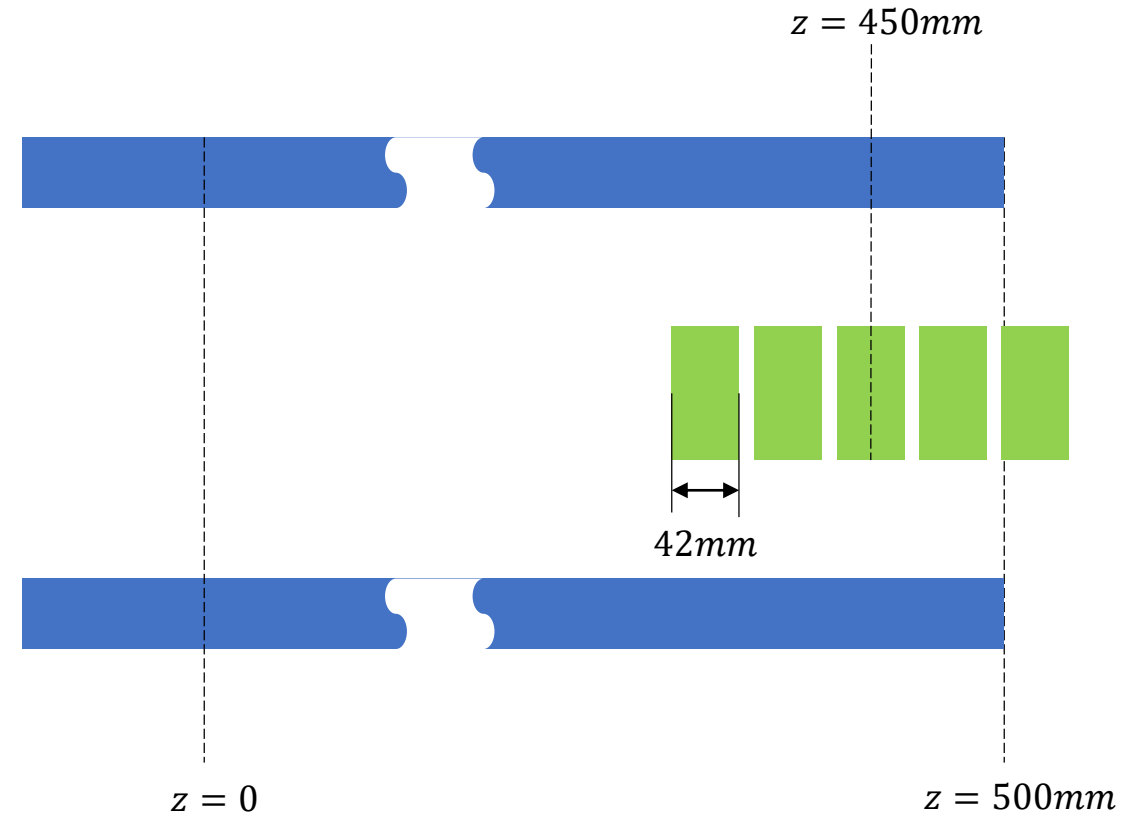
Beam Size before Inj.	$\sigma_x = 1.57 \text{ mm}$
Beam Size after Inj.	$\sigma_x = 1.02 \text{ mm}$
Trap Efficiency	$\sim 86 \%$

Trap Length	Harmonic Potential Well Length	Inner Diameter	Total Length
$\sim 150 \text{ mm}$	$\sim 80 \text{ mm}$	21 mm	287.5 mm

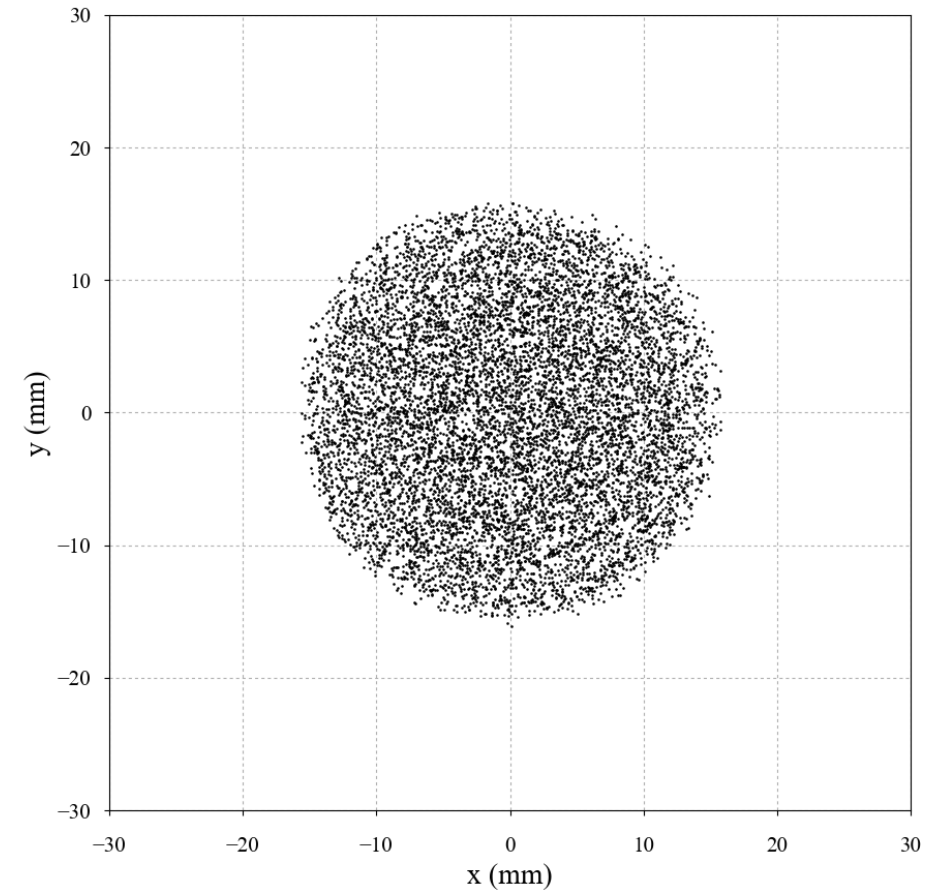
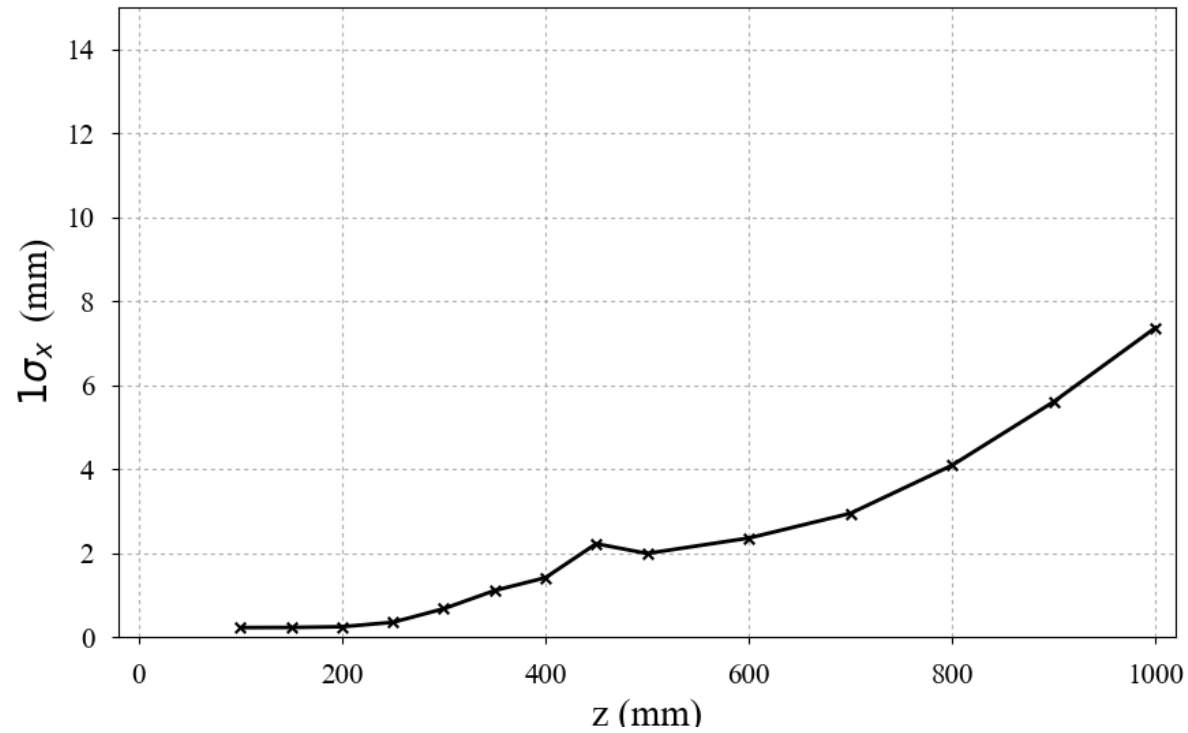
Extracting Simulation



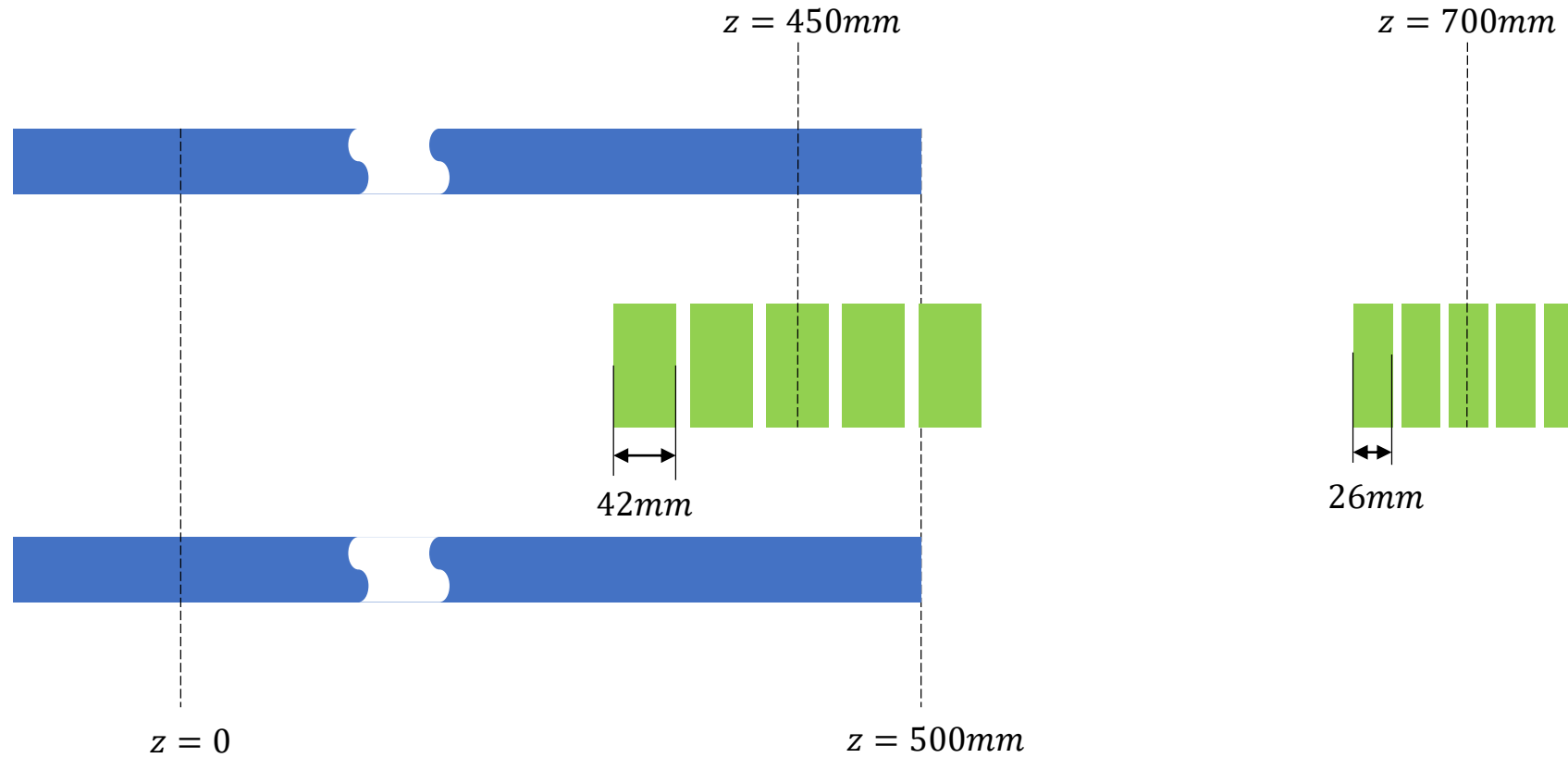
Beam Radius	0.22 mm
Intensity	1×10^7
Extracted Energy	~ 300 eV



Extracting Simulation



Extracting Simulation; additional lens



Extracting Simulation; additional lens

