

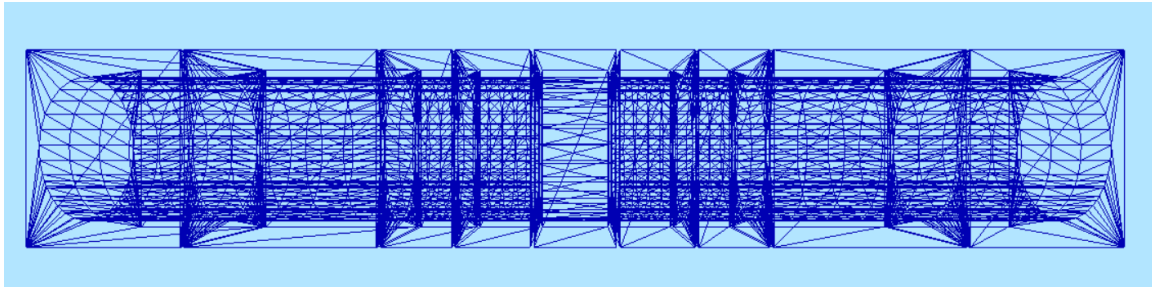
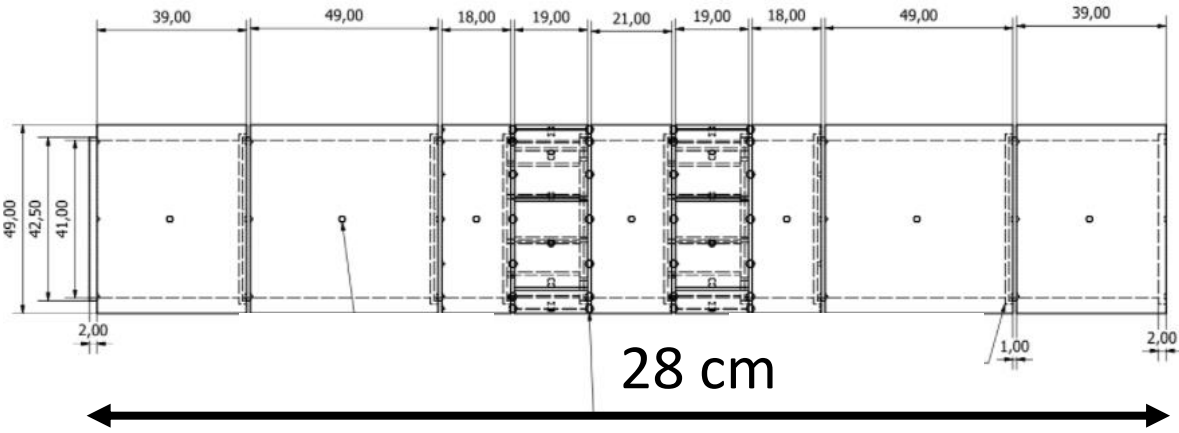
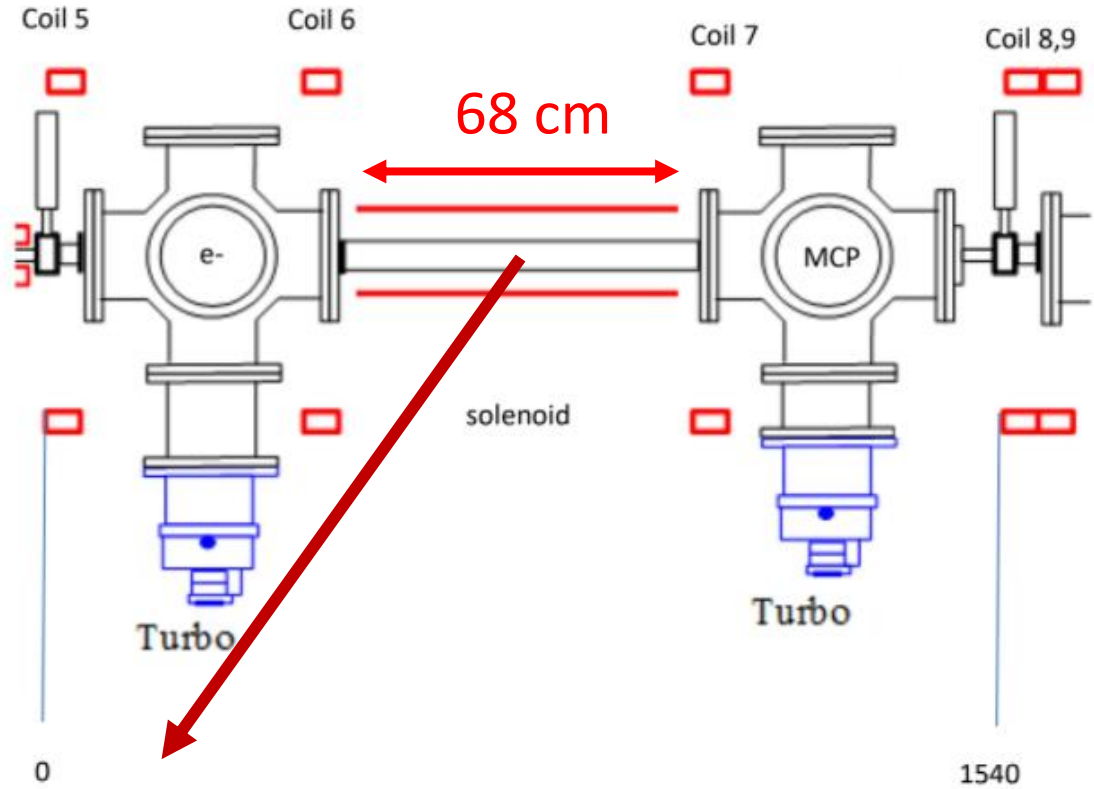
# LhARA Capture Meeting

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Titus Dascalu

03 June 2021

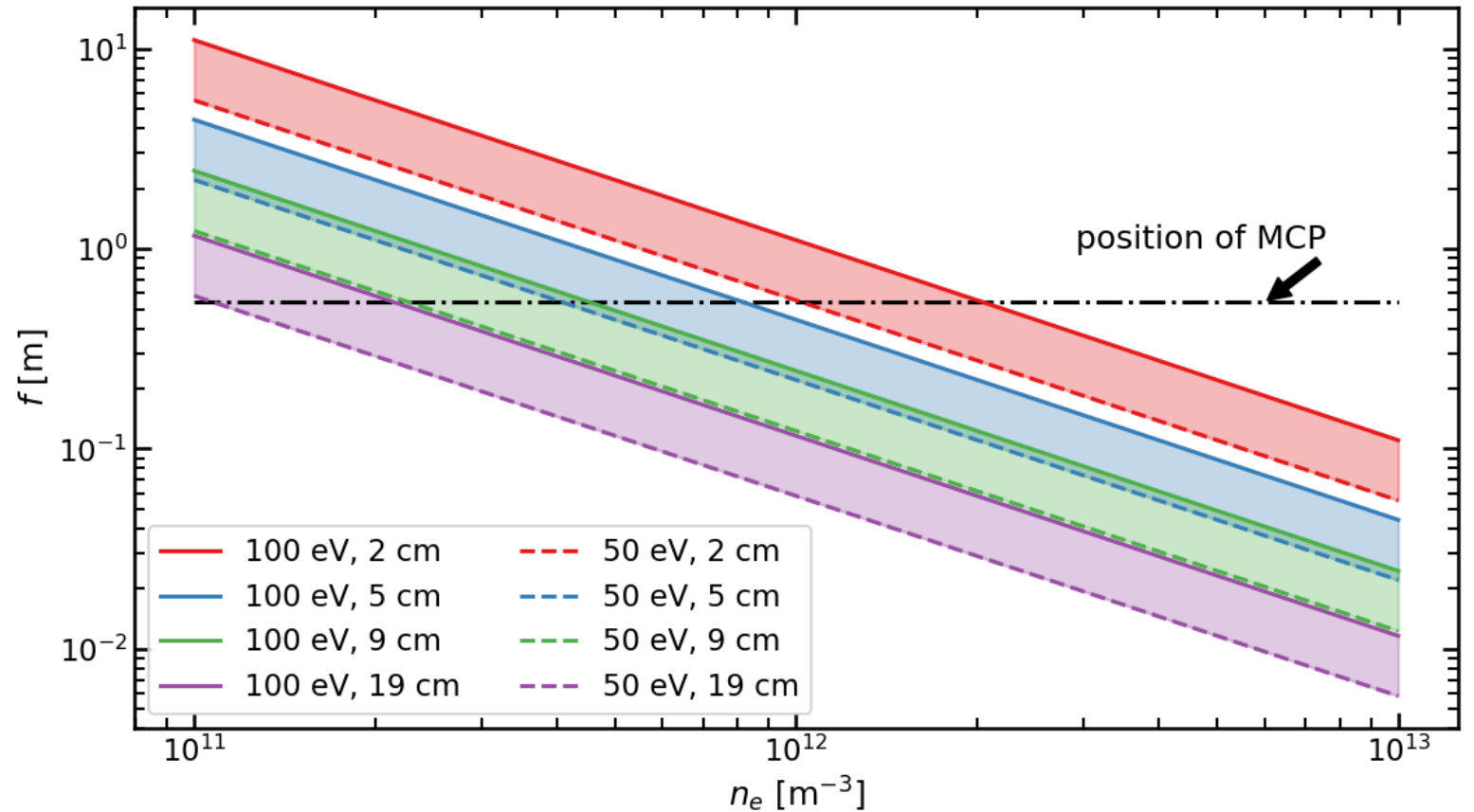
# Swansea system



Electrodes in VSim

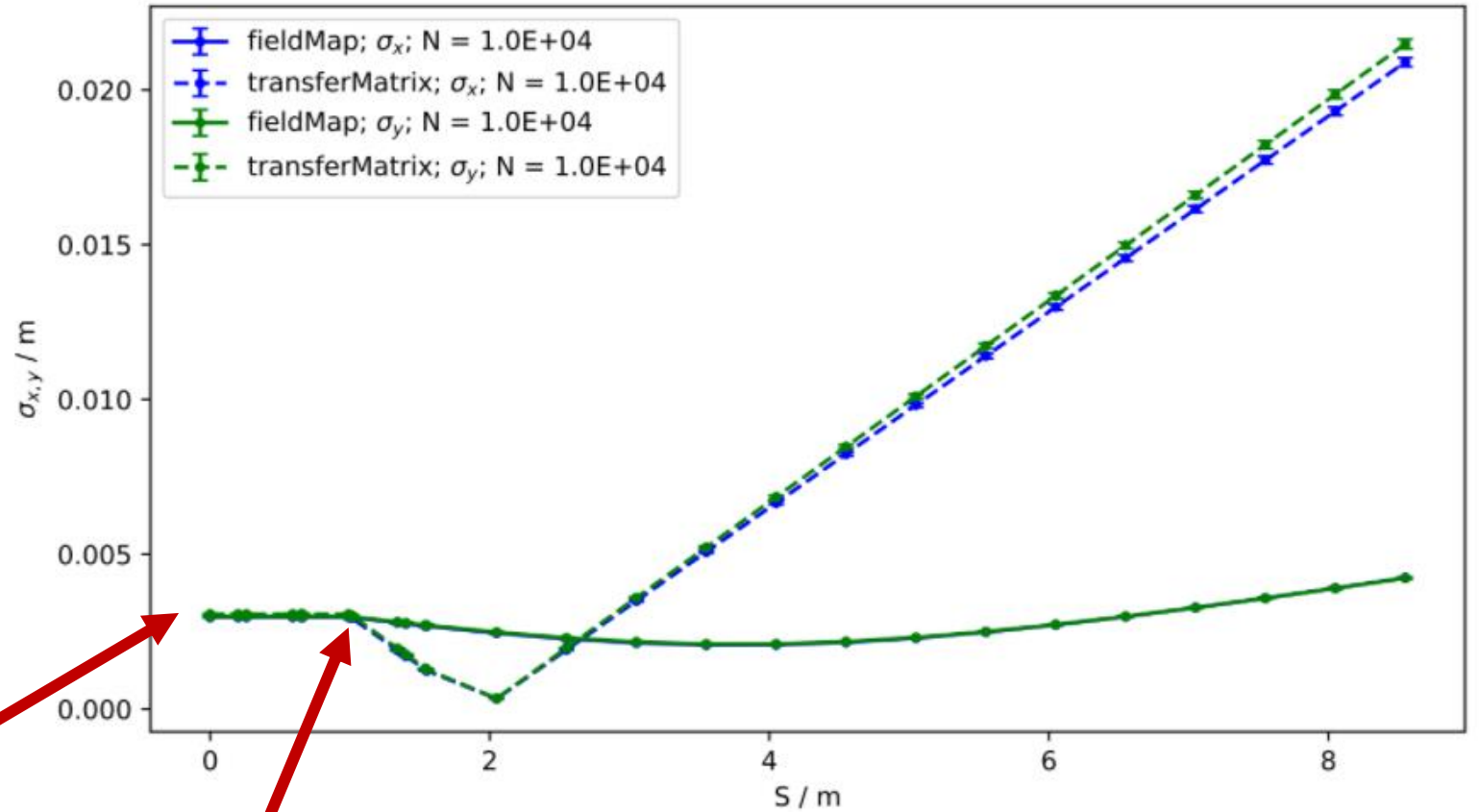
# Positron focusing

- approximate electron cloud as a **thin lens** with focal length  $f$
- uniform  $n_e$
- $e^+$  energy: 50-100eV
- Plasma lengths: 2cm, 5cm, 9cm, 19cm



# Positron focusing

- Is a **thin lens** a good approximation?



parallel  $e^+$  beam  
KE = 85 eV

2 cm long plasma  
 $n_e = 1 \times 10^{12} \text{ m}^{-3}$