Collection system 4MV/m vs 1 MV/m

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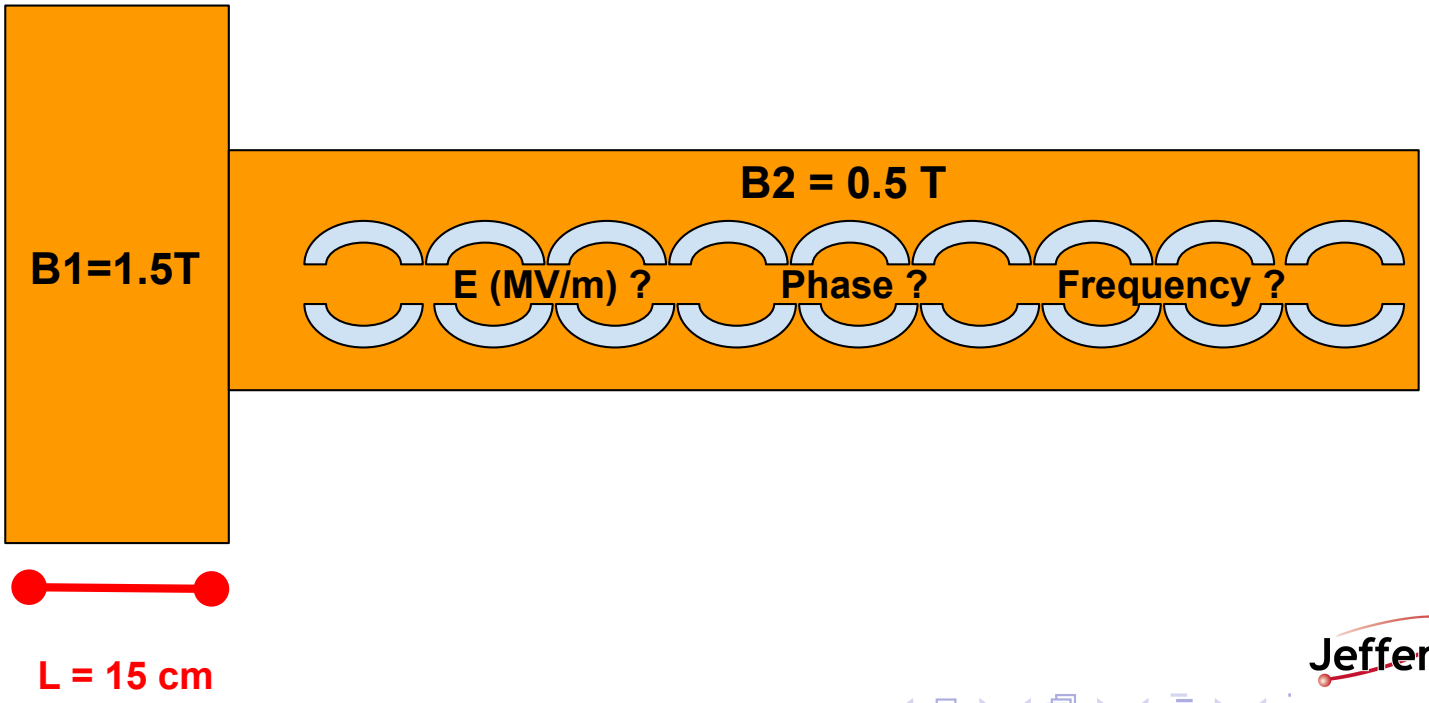
Collection system configuration

- We will use two different warm cavities:
  - 4 MV/m with 7 cm of aperture
  - 1 MV/m with 2.3 cm of aperture

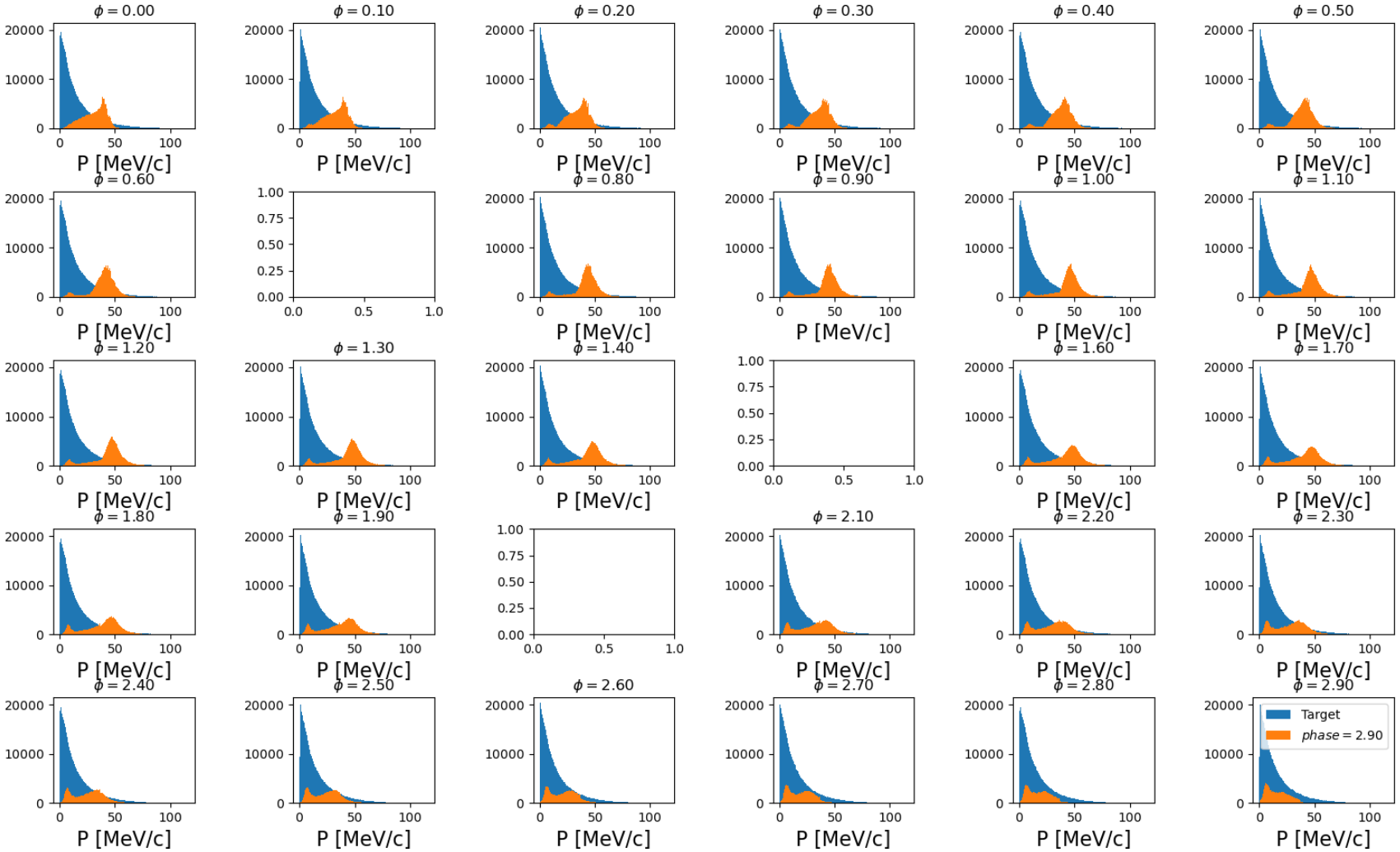


4 MV/m

- Using the following cavities's parameters:
  - $E = 4\ MV/m$
  - $f = 499\ Mhz$
  - $L_{cell} = 0.6\ m$
  - $B_1 = 1.5\ T$ I have adjusted the B values to set the acceptance volume of the QWT arround the central momentum of the initial distribution.
  - $B_2 = 0.5\ T$
  - Aperture = 7 cm

4 MV/m

E=4MV/m $L_{cell} = 0.6m$ $N_{cell} = 16$ f=499 Mhz $B_1 = 1.5T$ $B_2 = 0.5T$

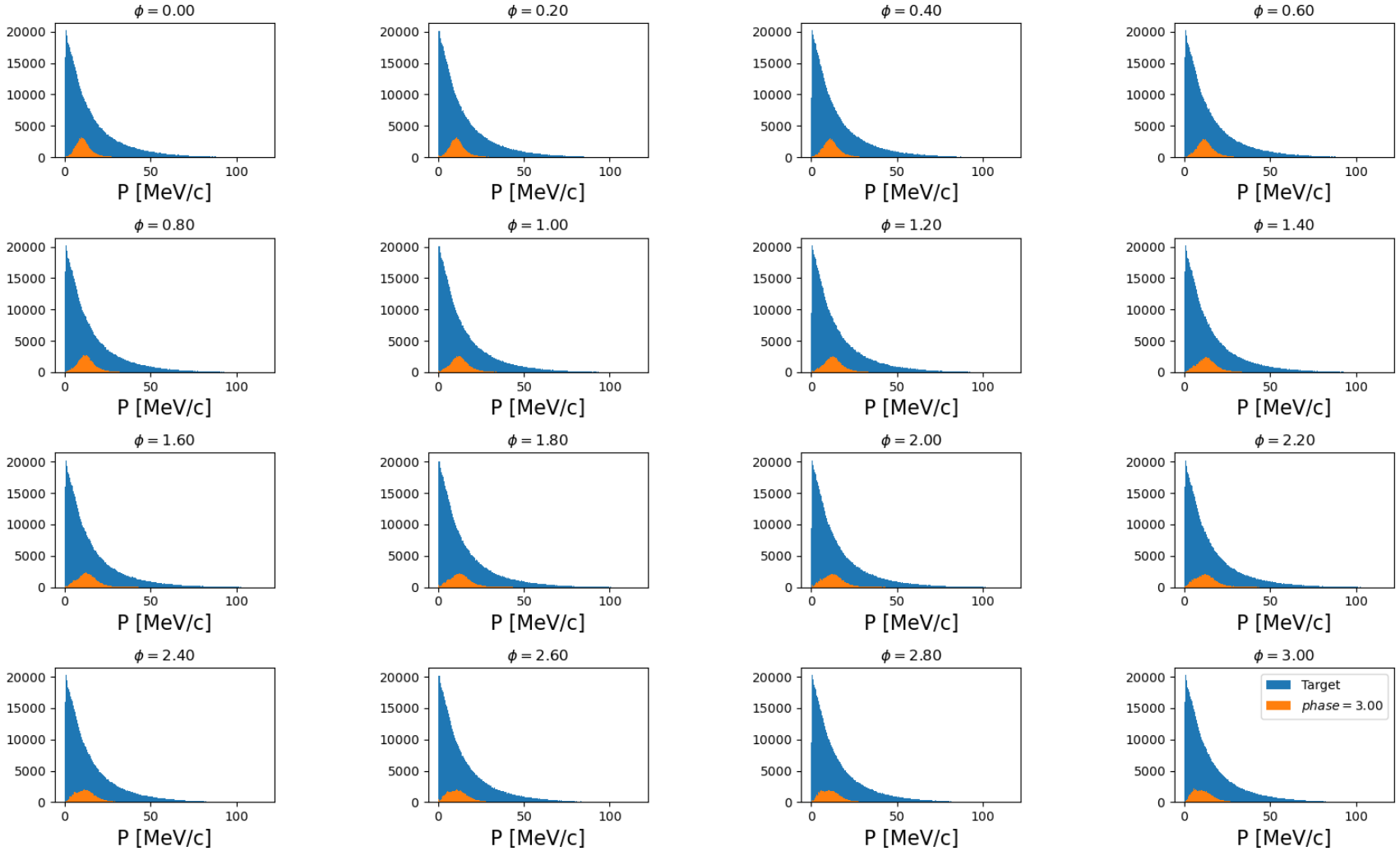


1 MV/m

- $E = 1\ MV/m$
- $f = 1497\ Mhz$
- $L_{cell} = 0.2\ m$
- $B_1 = 1.5\ T$
- $B_2 = 0.5\ T$
- Aperture = 23 cm

1 MV/m

E=1MV/m $L_{cell} = 0.2m$ $N_{cell} = 16$ f=1497 Mhz $B_1 = 1.5T$ $B_2 = 0.5T$



Efficiency 4 MV/m Vs 1MV/m