

Table 1: General parameters of the initial beam conditions used in the simulations.

Parameter	Value
Particle	muon $\mu^+$
Number of particles	10000
Longitudinal position [mm]	-4612.1
Central energy (140 MeV/c settings) [MeV]	175.4
Central energy (200 MeV/c settings) [MeV]	228.0
Central energy (240 MeV/c settings) [MeV]	262.2
Transverse Gaussian distribution:	
$\alpha_{\perp}$	0
$\beta_{\perp}$ (140 MeV/c settings) [mm]	233.5
$\varepsilon_{\perp}$ (140 MeV/c settings) [mm]	4.2
$\beta_{\perp}$ (200 MeV/c settings) [mm]	339.0
$\varepsilon_{\perp}$ (200 MeV/c settings) [mm]	6.0
$\beta_{\perp}$ (240 MeV/c settings) [mm]	400.3
$\varepsilon_{\perp}$ (240 MeV/c settings) [mm]	7.2
Longitudinal Gaussian distribution:	
Longitudinal emittance [mm]	20
Longitudinal $\beta$ [ns]	11
Longitudinal $\alpha$	-0.7
rms momentum spread (140 MeV/c settings)	4.8%
rms time spread (140 MeV/c settings) [ns]	0.40
rms momentum spread (200 MeV/c settings)	4.0%
rms time spread (200 MeV/c settings) [ns]	0.34
rms momentum spread (240 MeV/c settings)	3.6%
rms time spread (240 MeV/c settings) [ns]	0.31