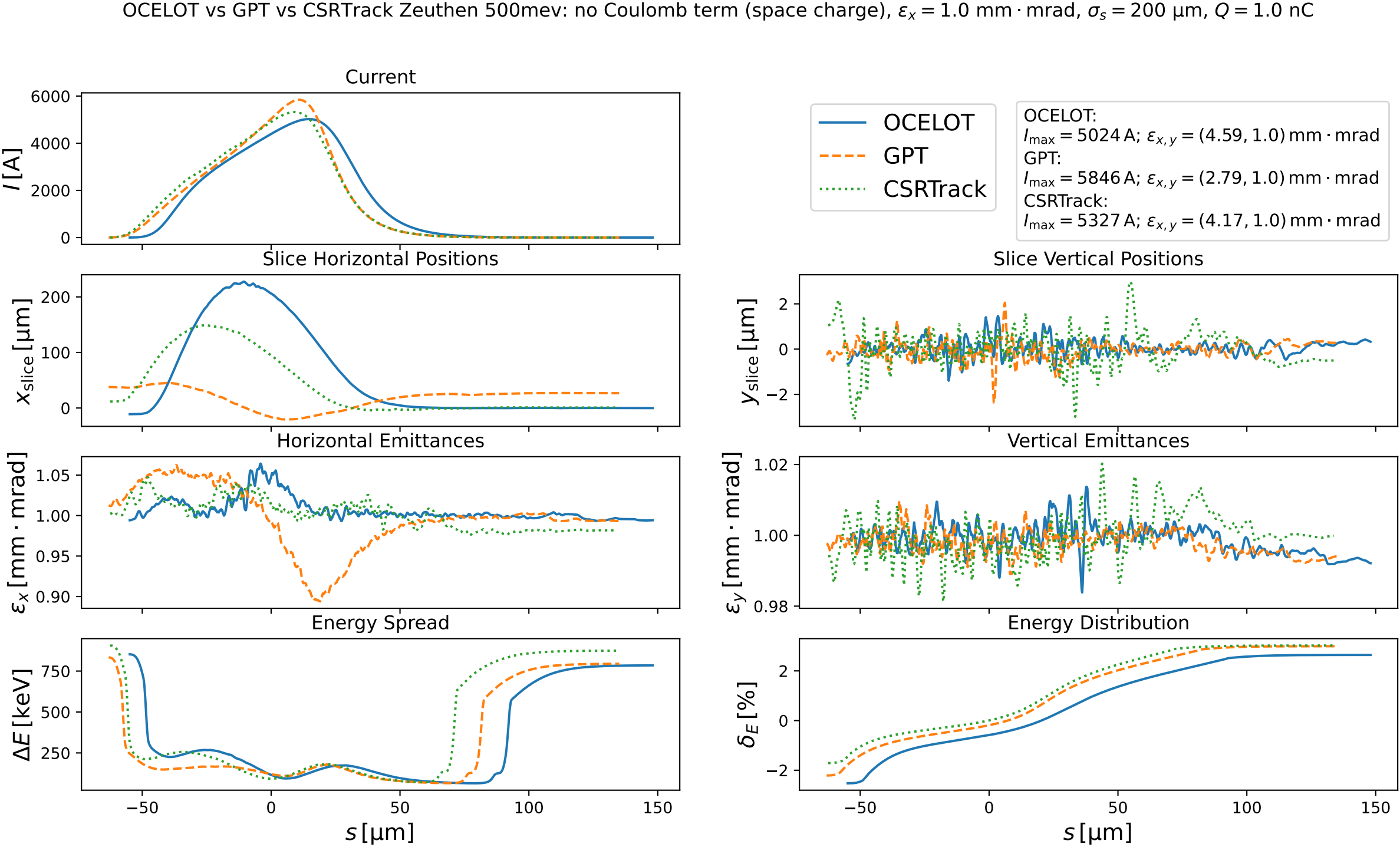
OCELOT vs GPT vs CSRTrack Zeuthen 500mev: no Coulomb term (space charge), $\varepsilon_x = 1.0$ mm · mrad, $\sigma_s = 200$ µm, $Q = 1.0$ nC
Current
I [A]
Slice Horizontal Positions
x_{slice} [µm]
Horizontal Emittances
ε_x [mm · mrad]
Energy Spread
ΔE [keV]
s [µm]
OCELOT
GPT
CSRTrack
OCELOT:
$I_{\max} = 5024$ A; $\varepsilon_{x,y} = (4.59, 1.0)$ mm · mrad
GPT:
$I_{\max} = 5846$ A; $\varepsilon_{x,y} = (2.79, 1.0)$ mm · mrad
CSRTrack:
$I_{\max} = 5327$ A; $\varepsilon_{x,y} = (4.17, 1.0)$ mm · mrad
Slice Vertical Positions
y_{slice} [µm]
Vertical Emittances
ε_y [mm · mrad]
Energy Distribution
δ_E [%]
s [µm]