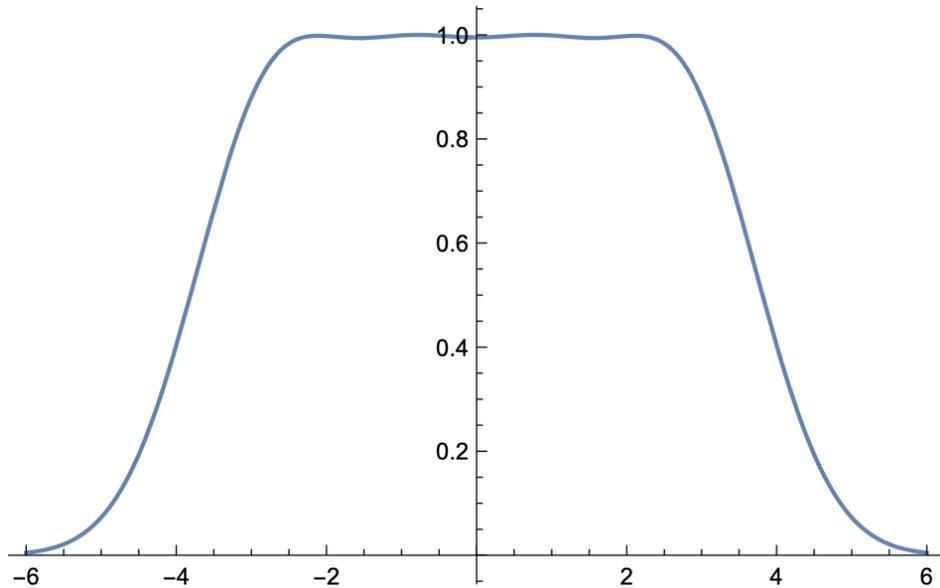


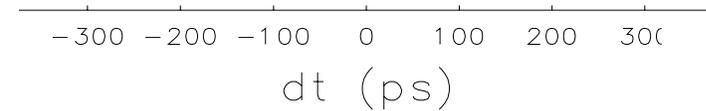
# Updates on overlapping gaussians

YJ

# 4 gaussian beamlets with adjusted intensity



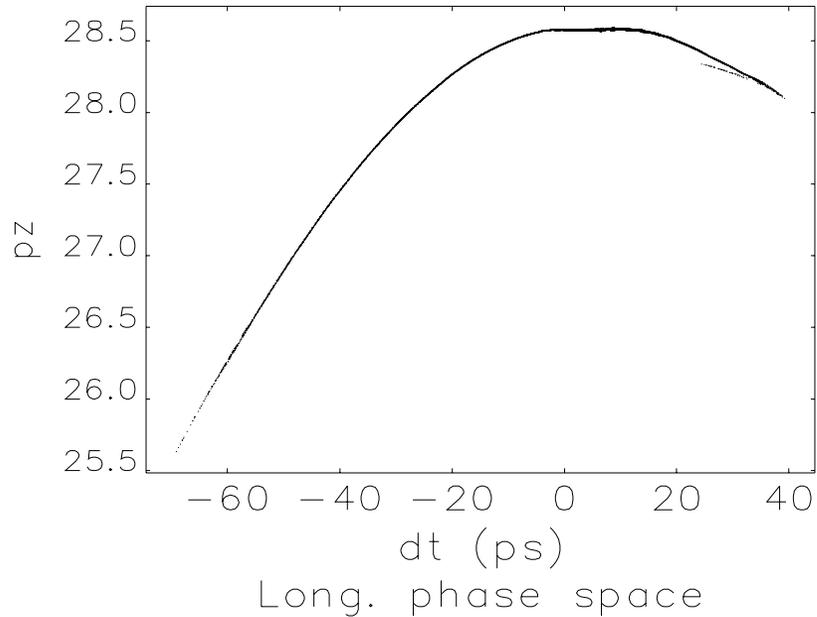
**d1 = 0.9; d2 = 2.8; am = 0.884**



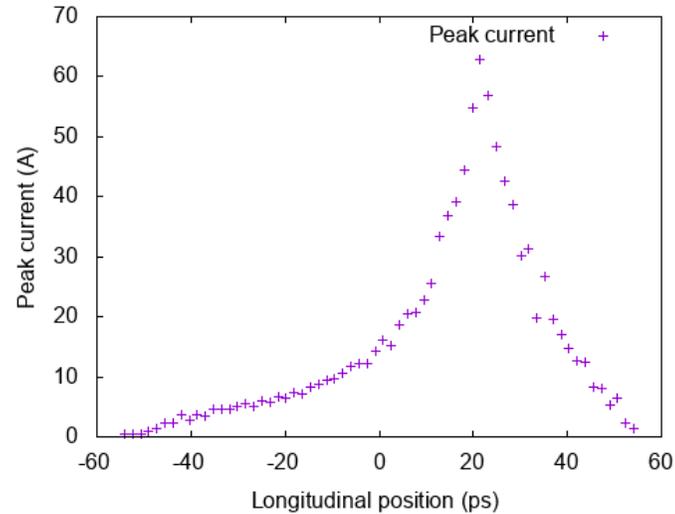
In unit of sigma of gaussians, in simulation

$$\sigma = 60 \text{ ps}$$

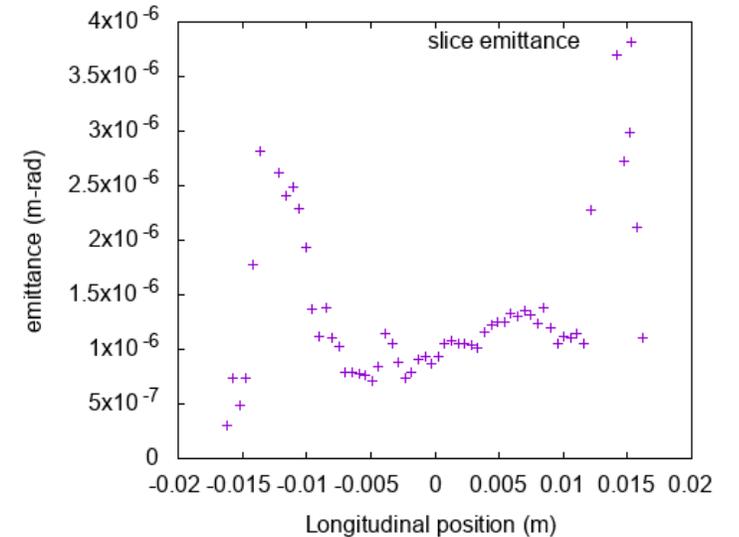
# Beam quality



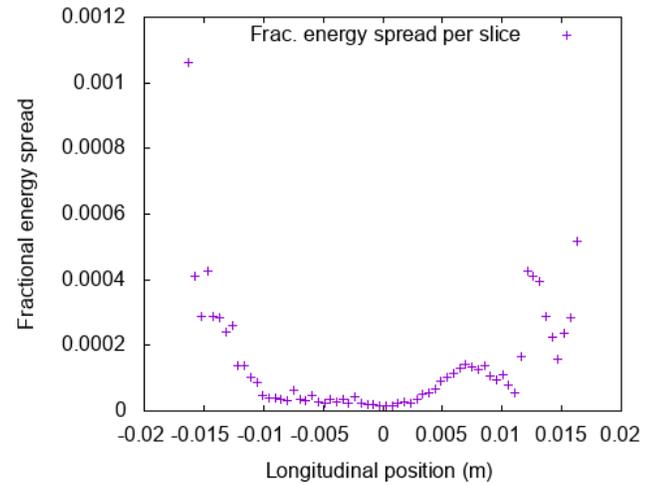
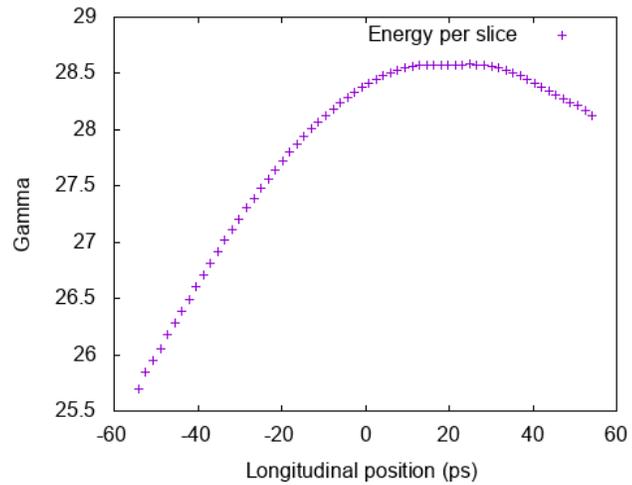
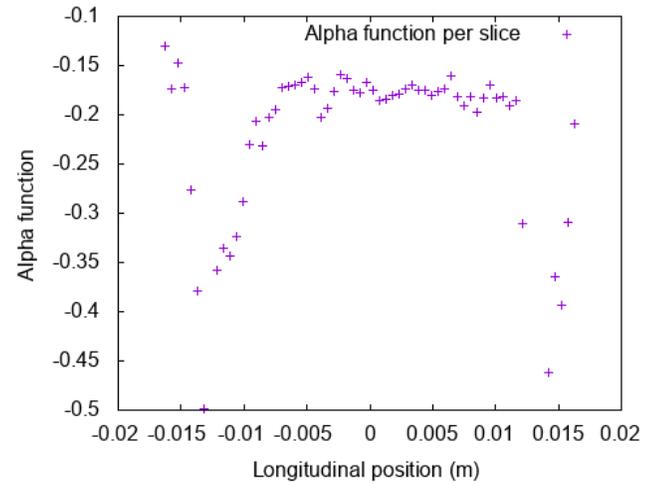
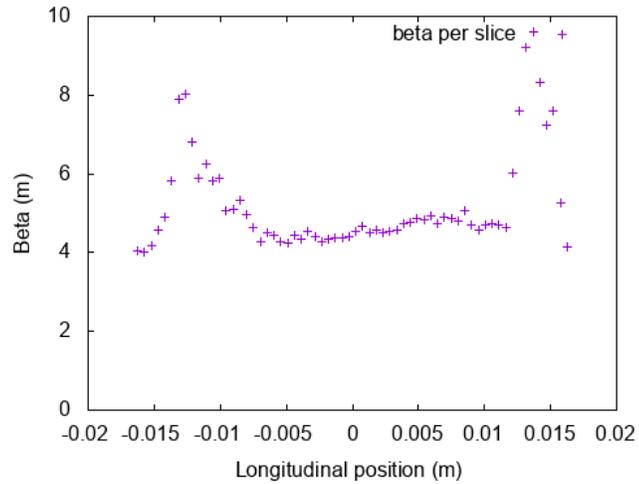
Low energy tail is **long**  $\sim 10\%$ ,  
need improvements



Offset in time is caused by  
post processing (for slices) to  
center with head and tail  
around 0, highest current is  
aligned with the plateau in  
top energies



# Center uniformity is improved



# Future work

- Reduce sigmas of initial gaussian beamlets (10% energy tail will cause beam loss in CW operation)
- Increase compression
- Try using shorter initial bunch length with the same ratio