

Muon Cooling Project Updates

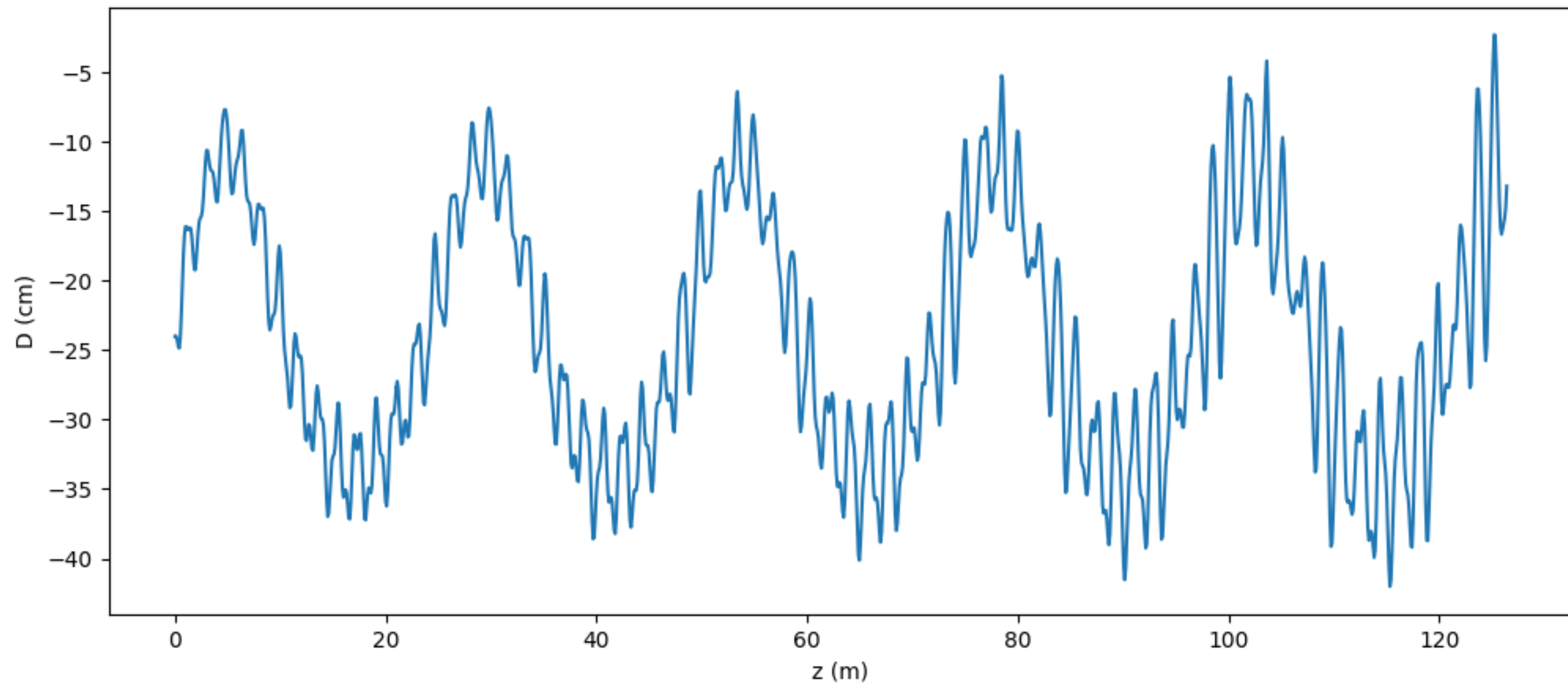
May 2, 2025

<https://github.com/criggall/muon-cooling>

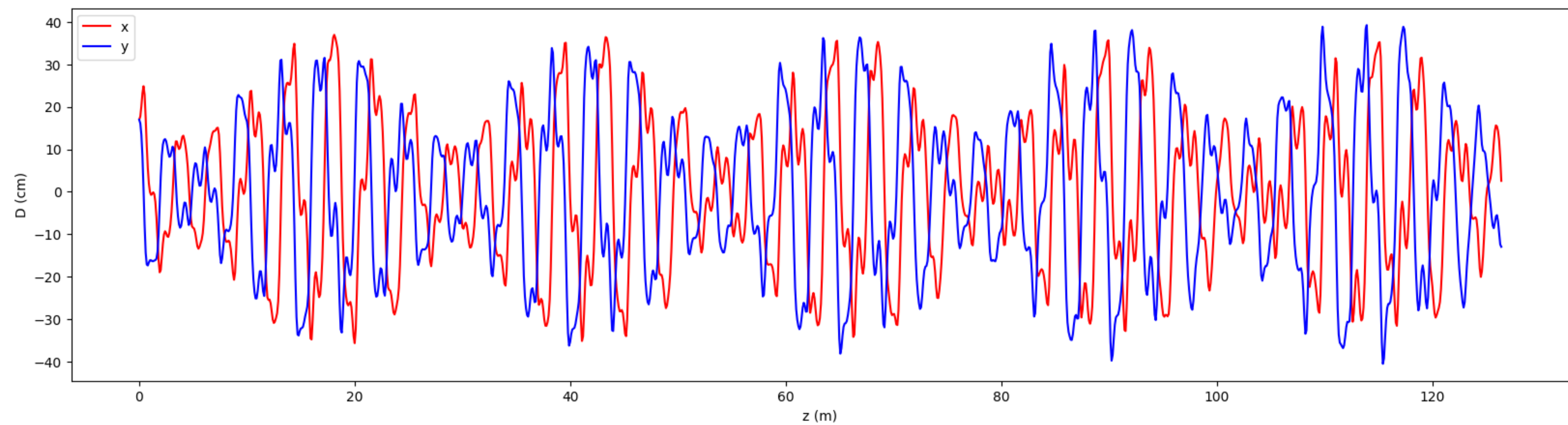
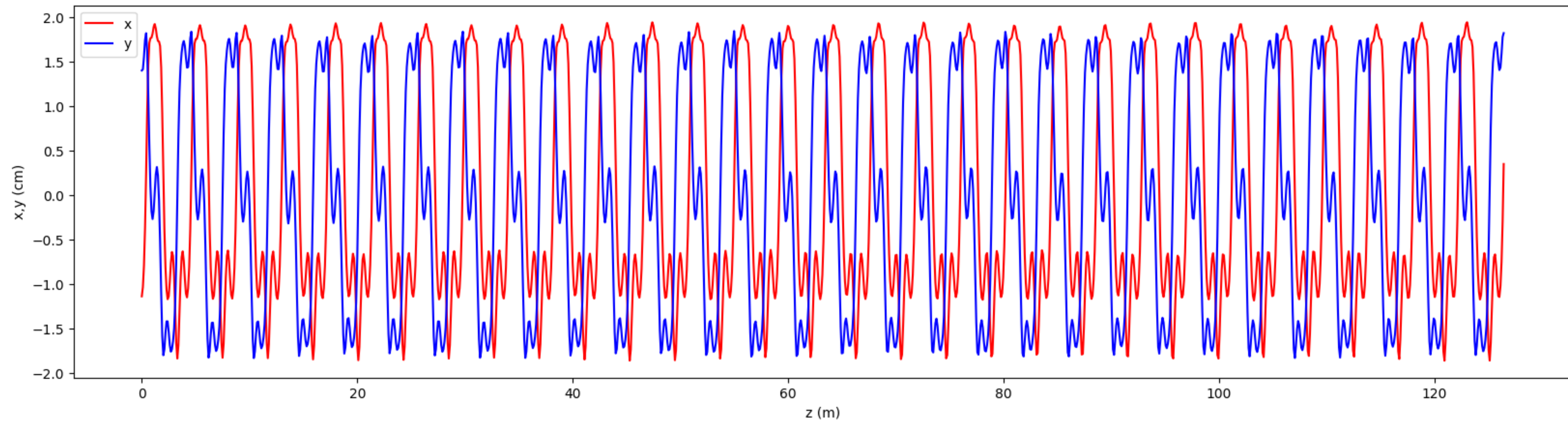
Progress from this week

- Predominantly worked on preparing my IMCC talk
 - I would like to go over some of my slides today if there is time!
- Continued investigation of dispersion and beta function
 - No improvement on fits
 - Trying to characterize what makes the HFQFO dispersion scheme unique

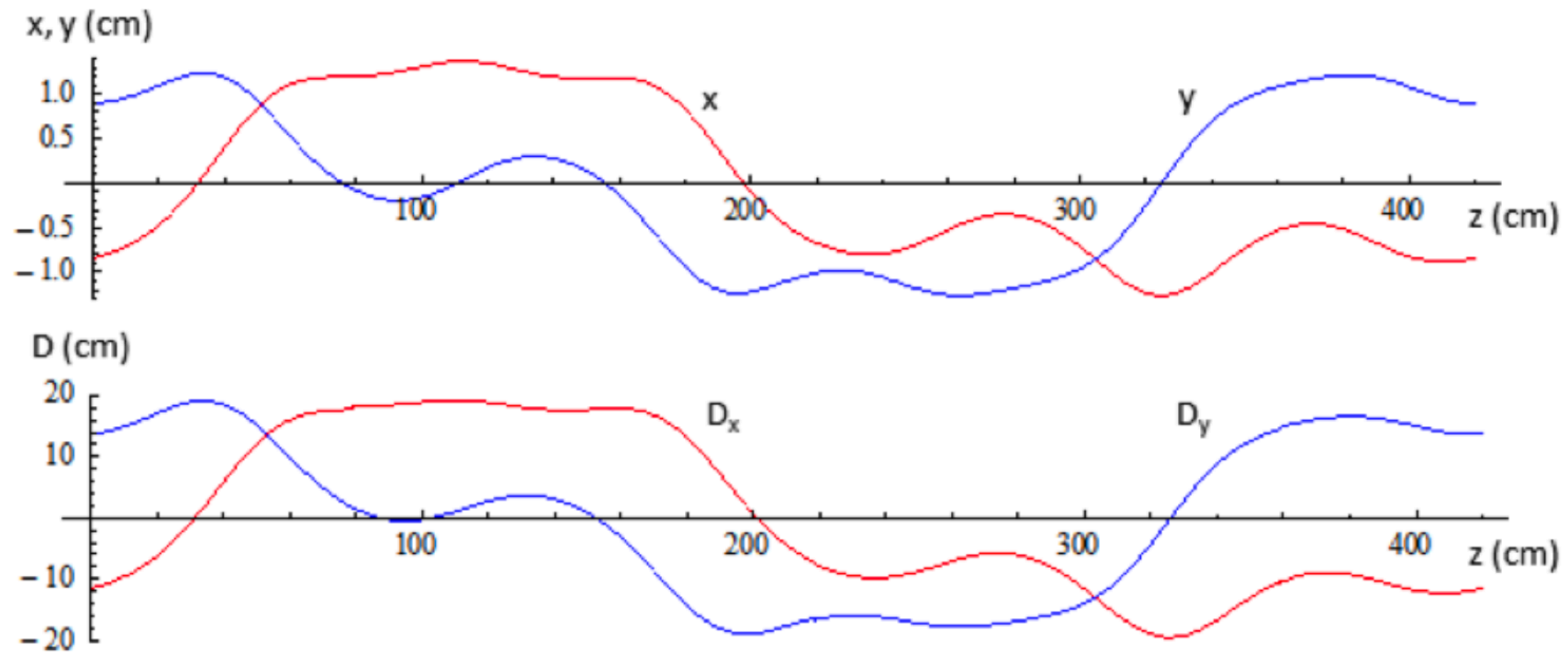
Dispersion (full channel)



Dispersion (full channel)

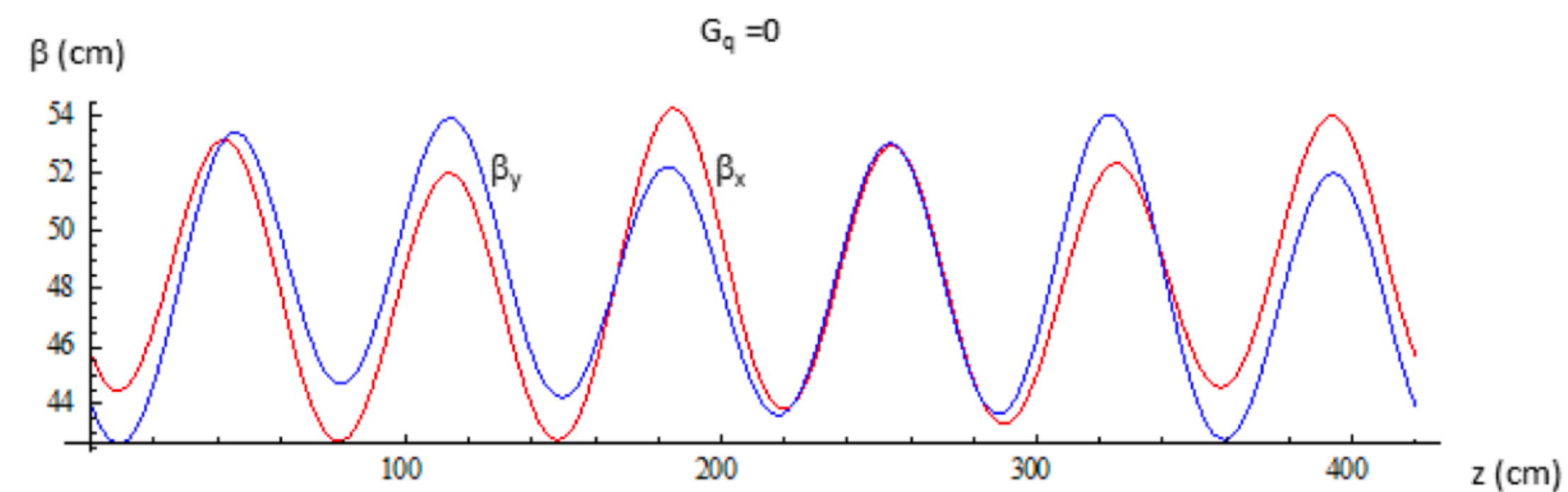
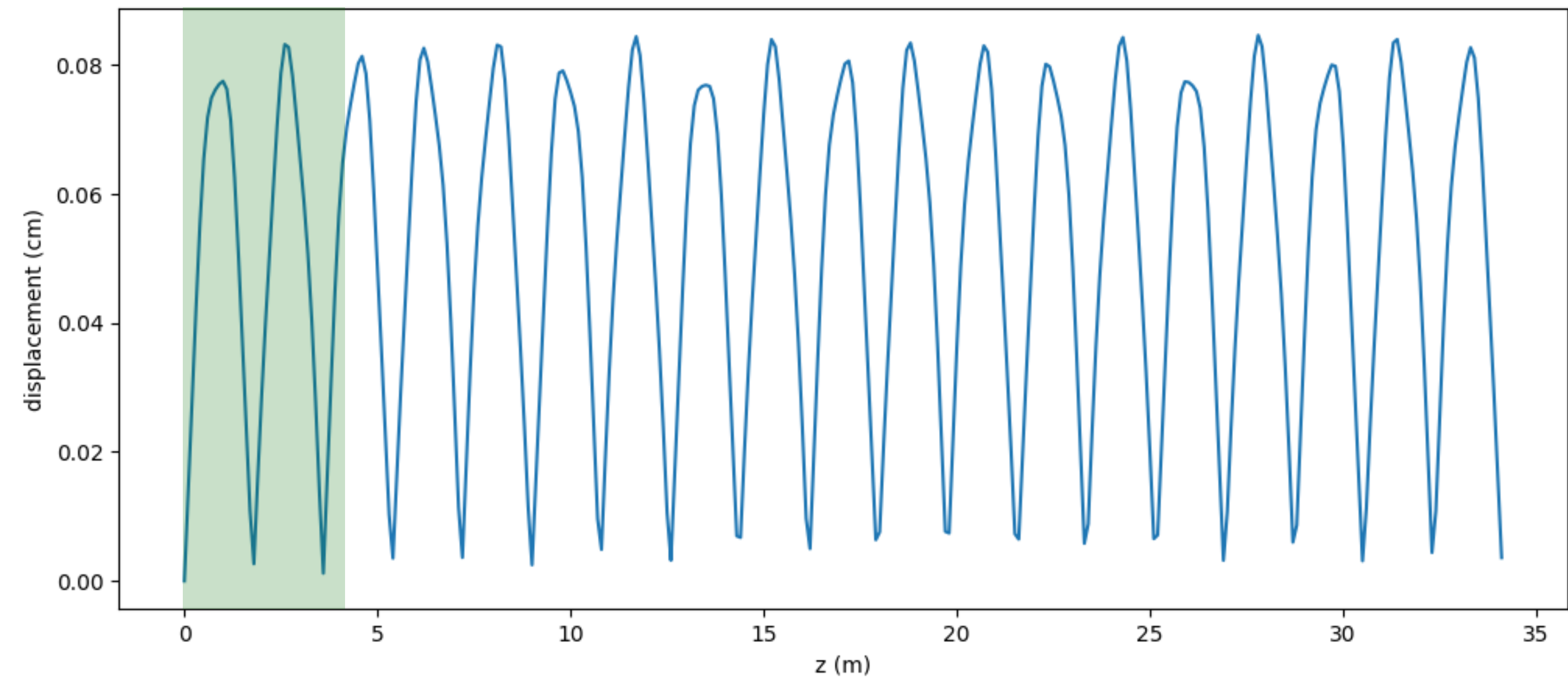


Dispersion (full channel)

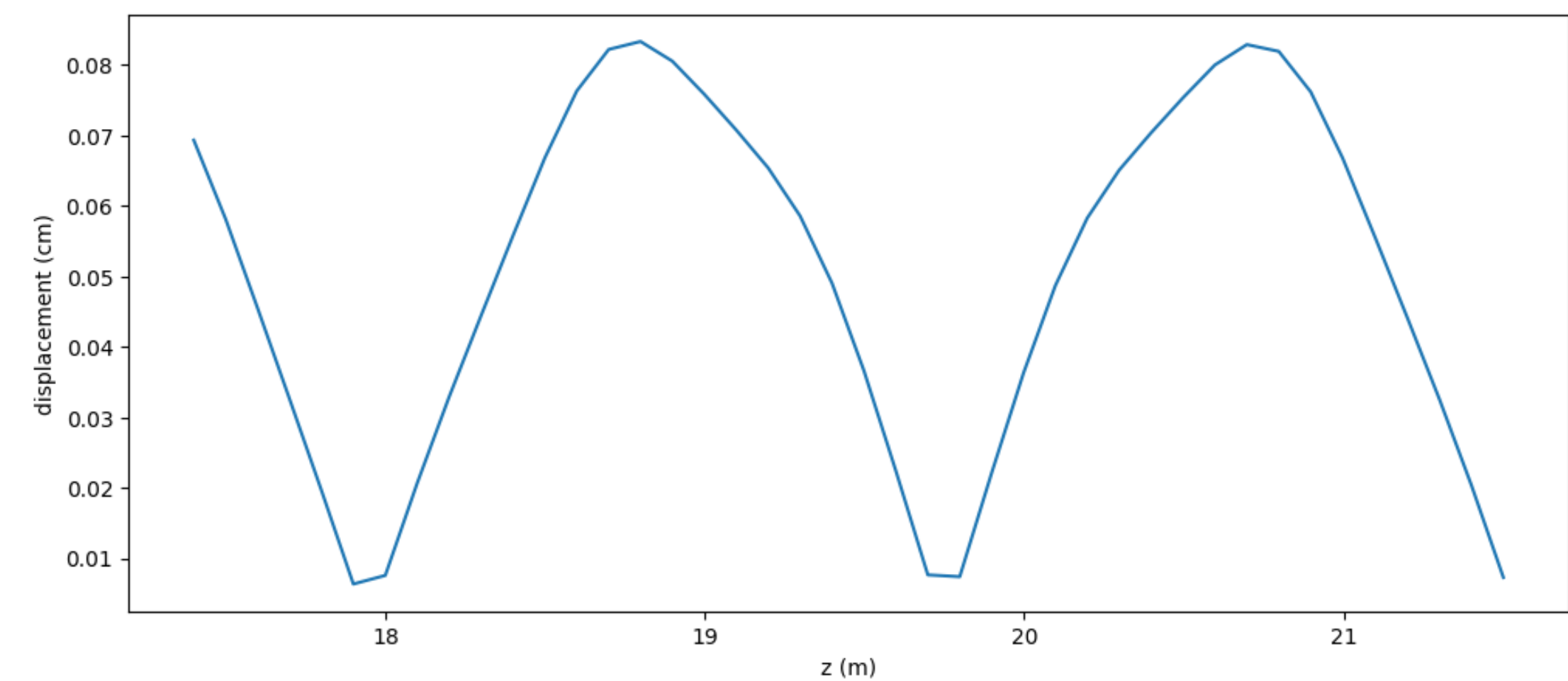


From Yuri's paper

Beta function



From Yuri's paper



Simplified channel sim

Next steps

- Investigate linearity with momentum scan
- Run beam to study phase space evolution and beta function
 - Using ECALC9
- Add RF and absorbers