Maggie’s guide to erf/super erf CPI research project (Fall 2024 – Winter 2025)

**Transition docs folder:**

paper\_plots\_mar.nb - this is the notebook I used to create all the plots in the paper (and more) in case you want to recreate them. The data used is in the Mar7\_results folder.

Mar7\_results folder – this folder contains the code and the data that was used in the final version of the paper

erf/lin/super\_dips\_mar\_7 folders - each contain 81 txt files with the data from the dips with

different amounts of dispersion (0 mm to 64 mm of BK7 glass)

dispersion\_mar7.nb – this is the code that was run to obtain the data (it can be run by

clicking “evaluate -> evaluate notebook” or step by step)

erf/linear/super\_0\_64\_mar7.txt – these text files have the dip width data for linear/erf/super

erf for 0 to 64 mm of dispersion

march18 results folder – this folder contains the code and the data that was used to get the super erf data used in my PHYS437B report

B\_1XX folders - each contain 22 txt files with the data from the dips with

different amounts of dispersion (0 mm to 16 mm of BK7 glass) with a super erf width

parameter equal to 11.2, 11.8, 12.4, etc. These folders also have the widths, in a txt file

called super\_0\_16.

superduper\_erf\_mar15.nb – this is the code that was run to obtain the data (it can be run

by clicking “evaluate -> evaluate notebook” or step by step)

mar18 results plotted.nb – this is the notebook I used to plot the results for my report, in

case you want to recreate them

Berube phys437B presentation.pptx – my presentation from February 2025, it’s got some good diagrams and extra slides at the end

Berube, Madeleine, (Resch) PHYS437B – my report from this term (W25)

Berube\_Madeleine\_PHYS\_437\_A.pdf – my report from last term (F24), some of the stuff is outdated (like the SFG integration range, the chirp parameters, the amount of dispersion, etc) but it has more background information than the PHYS437B report which might be helpful.

Enhanced resolution chirped-pulse interferometry.pdf – the paper!