Fri, Jan 3.

Missed Email

This was the weekend when I went back home one more time before school starts. I basically tuned out of emails and relaxed for the most part. Apparently, there were further things Erich wanted me to do, but I didn't see the email until Monday.

There was an email requesting me to numerically solve for other DW walls for the axion project. Next, Andrew did his version of the axion simulation and sent it to us. However, his result disagrees with mine in that his axion field did not spread out more as its scale increases. From the energy function, it is obvious that the profile over which there is non-zero gradient should be larger as the axion scale gets large. So I have no doubt that I am correct and Andrew will agree with me after further inspection.

Started Solution Viewer

Going back to my confining string project now, I started copying the old code called "field solution" class and started adapted it to my solution viewer class. In principle, everything is the same except that the old code stores the field solution and the new code read the solution from the core dictionary. But it was quite a lot of work to go through the code and adapted everything. I believe it will be worth the effort because this mode of storage is much more resilient to future changes.

Today, I only got to the point where I can plot field and error.