REU: Week Four

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I started this week by testing my code ch\_sync which worked after the addition of a parenthesis, pretty remarkable that was the only mistake. Ch\_track is now running after some minor fixes but takes quite a while because I traverse through every region detected by ch\_track\_surf on each frame so I might have to switch to using overlap to detect holes. I also wrote code to take my mask from ch\_track and the hmi data from ch\_sync to calculate flux.

The tracking code ended up taking a long time to debug after I sped it up by creating a smaller box around the hole to track the hole in. But, now the code takes about 1 percent of the time it used to. The new masks that track the hole of interest intermittently lose some other holes towards the edges of the picture, seems like some sort of rounding error but I have yet to figure out what's really going on there. There's also a problem with connecting and disconnecting with new regions but I can probably fix that with some new code in the coming weeks. So now I have some results to look at. The flux plots are somewhat hard to decipher but they'll appear on the summary for week 5, after I pretty them up. The code seems to track the hole very well, I'm so glad it's finally working.