

A (very brief) Progress Report

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SBS Collaboration Meeting
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I'm currently attending the National Nuclear Physics Summer School (NNPSS) at UC Riverside. Please email me with questions. msatnik@wm.edu. I will be giving a report at an upcoming GMn analysis meeting, so tune in then to see an analysis update. This presentation will only show my current graduation timeline and things I need assistance with.

Graduation Timeline

Month	Event	Deliverables	Research
July 2023	NNPSS July 10-21	Summer school, GRINCH documentation	GRINCH documentation, GRINCH Analysis
August 2023			Develop software on SBS 8 or 9. Analyze SBS 11 and SBS 14 for yeilds and GMn extraction to present at DNP. (Tons of substeps here). Finish up any GRINCH calibrations and analysis.
September 2023			
October 2023	DNP Hawii	Talk on preliminary GMn results for my assigned kinematics.	
Nov 2023 - April 2024	Semi-annual review with my commitee. Start applying for post-docs and jobs.	Slideshow/talk for my committee.	Finish up any lose string with GRINCH doumentation or analysis. Radiative corrections? Error analysis. Write thesis near full-time. Write analysis section for GRINCH NIM paper.
May 2024	Defend!	Latex document, presentation...	

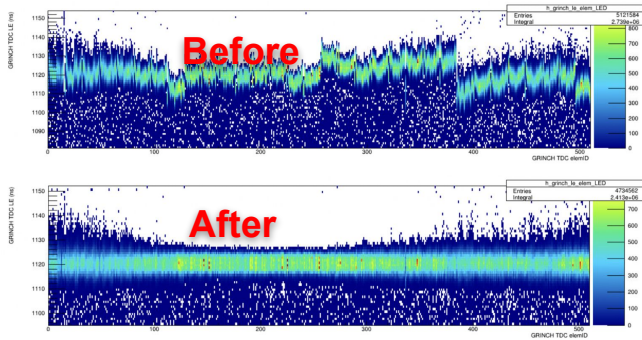
Things I need help on:

- GRINCH replay: Struggling to get the analyzer working so that I can replay both cluster and individual PMT info for GRINCH.
- Need more guidance on physics analysis. How are things like radiative corrections applied? How are uncertainties handled? What all is expected of me for each kinematic? Am I expected to do HCal Efficiency?
- Simulations: Am I expected to run simulations for GMn extraction? What do I need to simulate and how do I simulate it?

Timing Calibrations

- Need to provide offsets in the software so that the electron signals all come in at the same time across all the PMTs, allowing for tighter timing cuts.
- Unable to calibration using cosmics since it is a cherenkov detector. And many of the PMTs are outside the expected acceptance for electrons.
- Using LED installed inside GRINCH, we can align the Leading Edge (LE) of the TDC signal, then see how that affects the LE from production data.
- “Additional Offsets” refers to adjusting some channel offsets by hand.

LED Leading Edge



GEn runs 3036, 3038.

