

Proposal Summary

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This proposal includes two parts. First, I propose to work as NOvA's run coordinator starting from February 2020, with my responsibility being coordinating work by the Detector Operations Infrastructure, Data Quality, Far Detector, Near Detector, and Underground Areas groups to maximize quality data-taking uptime. The plan has been approved by the NOvA spokespersons and operation manager. The Intensity Frontier Fellowship (track 3) would allow me to stay at Fermilab for nine months, which is required by the NOvA run coordination work.

The second part of the proposal is for analysis work using NOvA's near detector data. I propose to update NOvA's neutral current coherent π^0 analysis with full FHC and RHC datasets collected by 2019. This work would allow differential cross-section measurements and address coherent pion modeling problems. In addition, I also propose to work closely with a student at Fermilab from University of South Carolina on the charged current coherent π^+/π^- analysis. The Intensity Frontier Fellowship (track 1) would greatly enhance these efforts.