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QuarkNet Center Summer Internship for High School Students – FY2024

Cooperative Research and Development Agreement Final Report

CRADA Number: FRA-2024-0007

Fermilab Technical Contact: Spencer Pasero

Report Date:
November 11, 2024

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In accordance with Requirements set forth in Article X of the CRADA document, this document is the final CRADA report, including a list of Subject Inventions, to be forwarded to the Office of Science and Technical Information as part of the commitment to the public to demonstrate results of federally funded research.

CRADA number: FRA-2024-0007

CRADA Title: QuarkNet Center Summer Internship for High School Students – FY 2024

Parties to the Agreement: Community College District 502 – College of DuPage

Sponsoring DOE Program Office(s): Office of Science

DOE Funding Commitment Table:

	FY2024	
Funding Type	Funds-in	In-kind
Partner	20,000	0
Fermilab	0	20,235
Total	40,235	

Abstract of CRADA work:

The purpose of this CRADA is to provide the contractual vehicle for Fermilab to receive funds from the College of DuPage in support of high school student research working with the Fermilab/University of Chicago QuarkNet Center, beginning with the effective date of this CRADA and continuing through 2024.

Local QuarkNet Centers provide professional development programs to high school teachers and high energy physics research opportunities to high school teachers and students who participate in the local programs. The Office of Education and Public Engagement at Fermi National Accelerator Laboratory (Fermilab) administers a local QuarkNet Center program on behalf of both Fermilab and the University of Chicago.

Summary of Research Results:

This CRADA funded the participation of four students in a seven-week summer research program. Students worked on a variety of projects at Fermilab, including:

- Developing integrated systems for testing ASICs for use in the DUNE experiment.
- Conducting optical characterization of the InfraBREAD reflector.
- Analyzing double-pulse events for cosmic ray muon detectors.
- Developing techniques for removing background noise in detection of horizontal cosmic rays.

Related Reports, Publications, and Presentations:

None.

Subject Inventions listing:

None.

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