Contribution ID: **73** Type: **not specified**

In-Network DAQ Functions

A revolution in networking is changing how we compute, but we lack the tools that can channel this new capability to benefit science. It is now possible to write programs that operate "in" the network—on network cards (NICs) and network switches themselves, rather than on servers. These programs can analyze and reduce huge volumes of data as they flow through the network—at higher throughput, lower latency, and lower power consumption than if servers (containing CPUs or GPUs) were used. That equipment offers appealing features for scientific experiments that involve huge quantities of data.
This poster will describe a prototype of part of DUNE's data acquisition pipeline, which we built as part of ongoing research to better understand how to put programmable network hardware to use in large scientific experiments.

Primary authors: SULTANA, Nik (Fermilab Quantum Institute and the Real-time Processing Systems Division); KOWALKOWSKI, Jim (Fermilab); WANG, Michael H L (Fermilab)

Presenter: SULTANA, Nik (Fermilab Quantum Institute and the Real-time Processing Systems Division)

Session Classification: Poster Session