



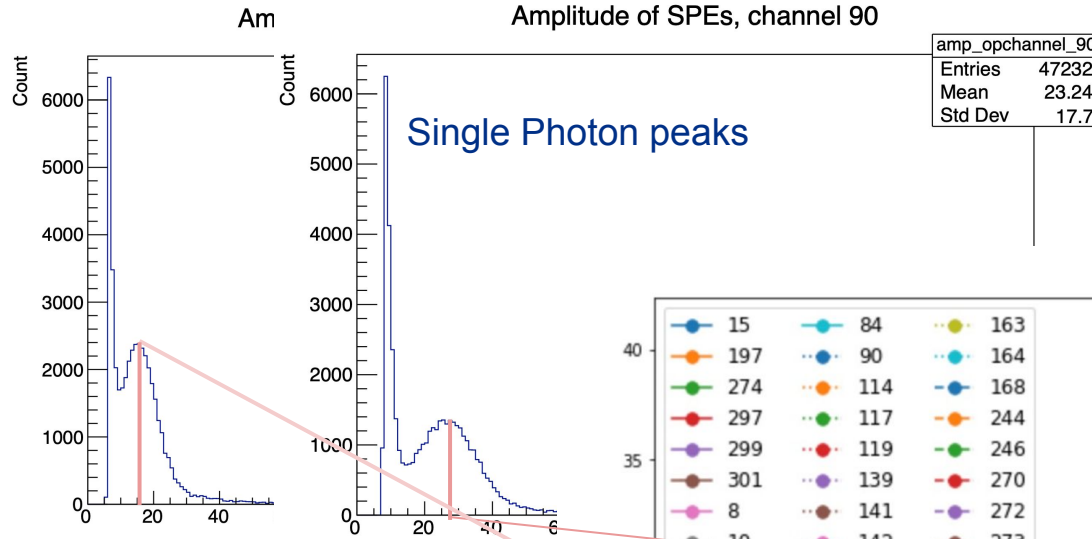
Short Baseline Neutrino



SBND Status

Michelle Stancari, Lauren Yates
Proton PMG / All Experimenters' Meeting
May 2, 2024

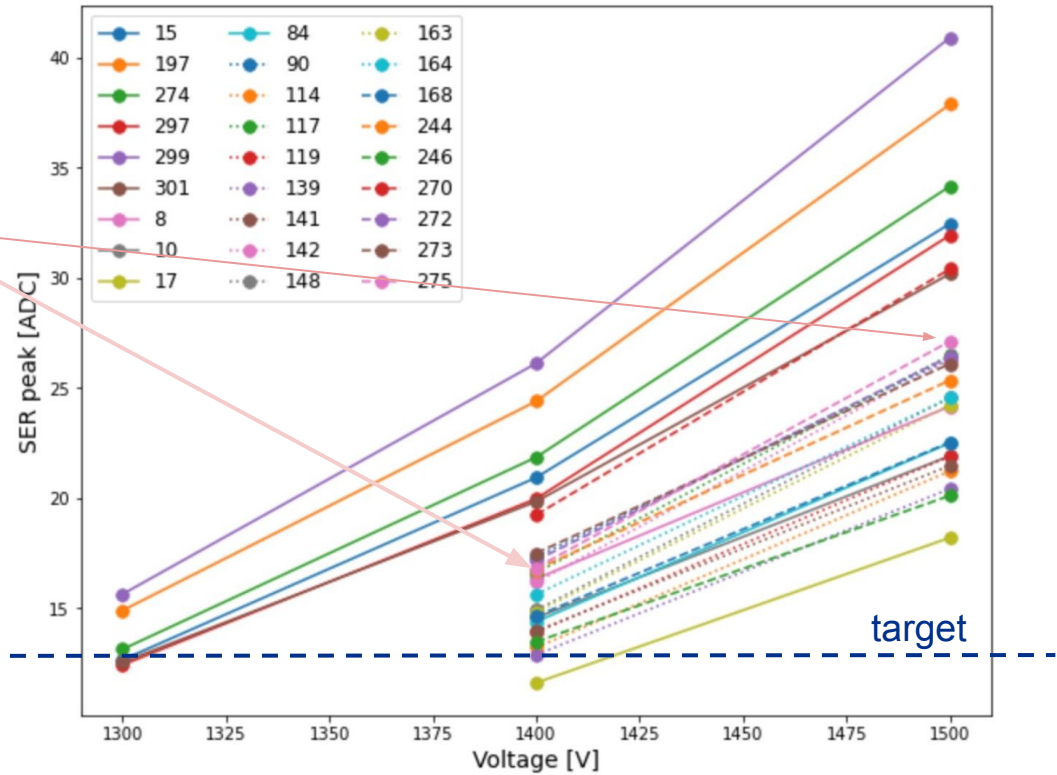
Detector Commissioning: First PMT Gain Studies



Right: Distribution of ADC values for single photoelectron peaks from an SBND PMT at two different voltages

Below: Single PE ADC peaks for many SBND PMTs at different voltages

Photon Detection System (PDS) team has collected data with PMTs at several voltages
 Analysis to extract voltages that will equalize PMTs is currently ongoing



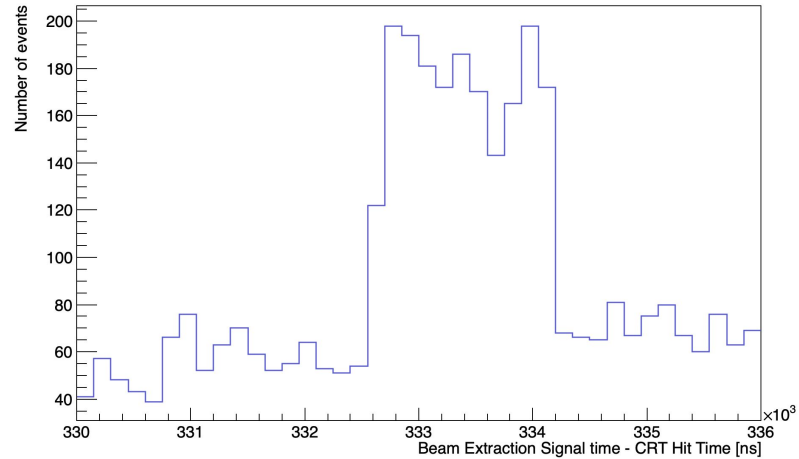
Detector Commissioning: CRT Installation

Shortly after BNB returned, observed beam activity in the north wall of the CRT

Thermal qualification of SBND cryostat completed and additional side walls are now being installed on a rolling basis

East wall of CRT has been installed, and west wall is being assembled and cabled

CRT North Wall [data collected 14 March 2024, 3pm-6pm]



Beam activity excess in CRT in ~3 hours of BNB data



East CRT wall sliding into place between cryostat and pit wall

Detector Commissioning: DAQ & Trigger

Significant progress on integrating all subsystems in DAQ and verifying time synchronization, trigger functionality

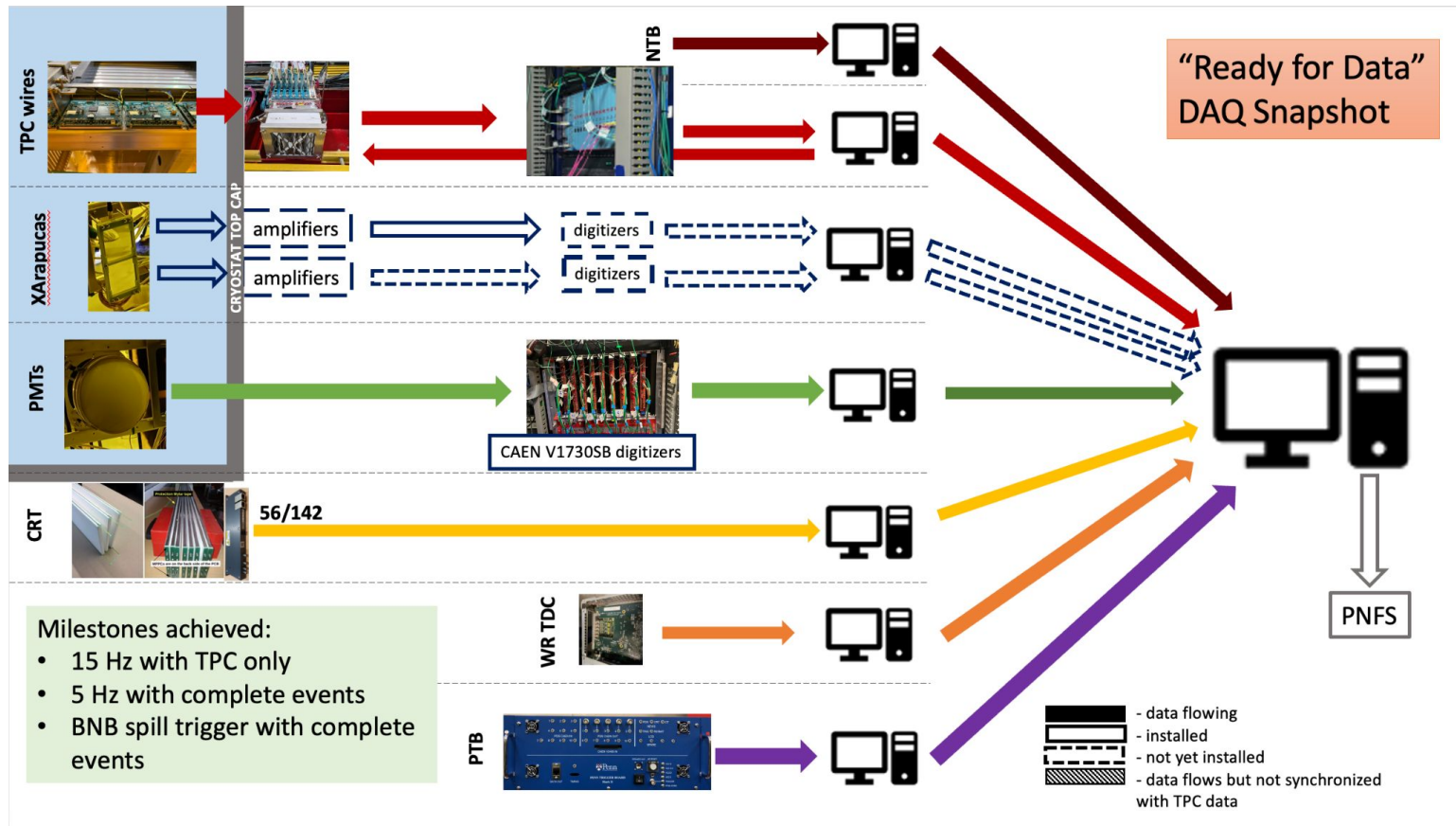


Diagram illustrating status of DAQ integration.

Detector Commissioning: Ongoing Work

Aiming to complete commissioning of beam trigger, including time synchronization with PMTs and CRT, before summer shutdown

Will then focus on beam+light trigger that is the basis for main SBND physics

Also plan to commission CRT crossing muon triggers which will facilitate other types of commissioning studies

