

Magnets

- FastDAQ plots generated by Excel compared to tordaqGUI Analyzer.
 - ★ The plots created in Excel and Analyzer did not match.
 - ★ Discrepancy caused by duplicated timestamps in FastDAQ data causing data to be stitched together incorrectly on Analyzer.
 - In Excel, only VT1-DAQ timestamp which was used to plot data was automatically shifted, compensating for duplicated timestamps.
 - ★ New “-D” option is used in Analyzer to correct duplicated timestamps on plots.
- Performed four fast dumps of magnet at 100 A to test timestamping of FastDAQ and PLC SOE modules.
 - ★ 100 A chosen as dump current to limit cryogenic consequences.
- Replaced both QD units in use with two spare, modified QD units.
 - ★ Faulty QD units thought to be cause of fast dumps when cause was not seen in FastDAQ data.
 - ★ Modified QD boards had 12-turn trim pots replaced with 24-turn trim pots to limit change if pots drift over time.
 - ★ Tuned all QD channels after installing the spares.
- After fast dump on 9/10/2018 at 11:43AM, found that all QD channels had thresholds ~40% lower than set value.
 - ★ Voltage injector used to tune channels found to have incorrect setting.
 - ★ Re-tuned all QD channels with voltage injector whose output was verified.
 - ★ Threshold for QD channels for VCL increased from 100 mV to 200 mV to compensate for VCL voltage taps (VT1-DAQ and VT19-DAQ) having a 60 mV value during normal operation.