Initial Charge Test (5/20/2023)

Firmware Rev: 3

Purpose: This is the first test where the generator system is used to put current through a battery pack to charge it.

Description: The test battery pack is attached across the output of the charger generator system. The current set point is 110. The generator is turned on, and the battery is charged. The battery pack voltage is logged using an oscilloscope, and a hall effect current sensor is also used to measure the current through the battery pack. Two short spurts of charging were done. The system is cowboy charging, so a long charging test cannot be done.

Results: The battery pack did not explode. The current that was read bounced around anywhere from 0.7A to 1A. The measured battery pack voltage before any charging took place was 151.6V, and the measured pack voltage after all the charging was 164.4V.

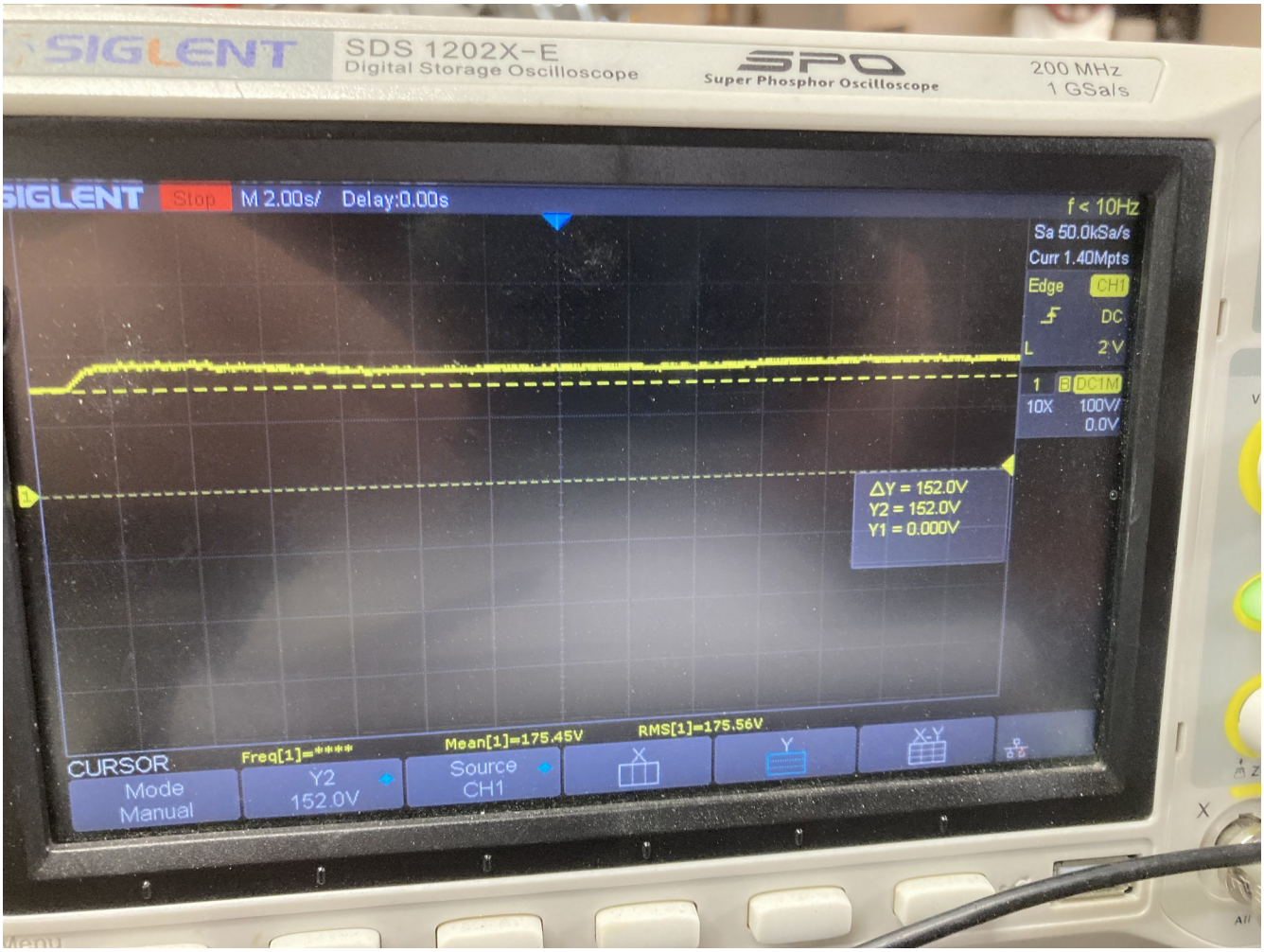

Figure 1: First Charging Spurt

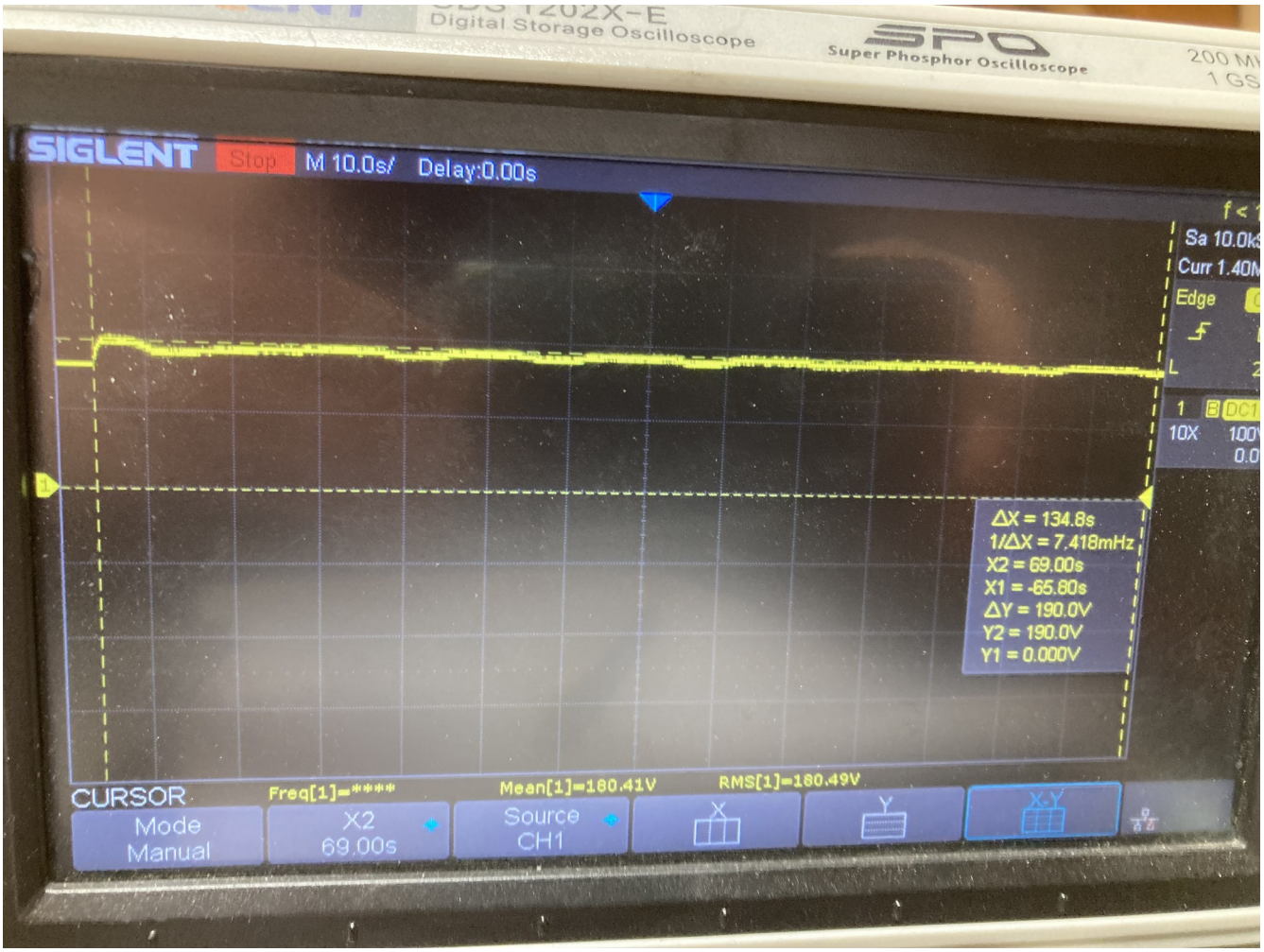

Figure 2: Second Charging Spurt

Analysis: The system does seem to be regulating the current to the extent required; however; the current is not completely constant and tends to bounce around. As has previously been observed, the battery voltage seems to increase more than normal at the start of charge. This is a possible indicator of poor cell health.