**3:30 PM**

Present: Manuel, Will, Yipeng, Jorge, Raymond, Ben

**Initial Problem:** MiniDAQ communication test failed yesterday, problem with locking onto signal from COMET daughter boards.

Manuel explained that LHC-b chips run on a very precise 40.079 MHz clock, and that a standard 40 MHz clock would not be close enough to lock.

Discussion about whether or not we can use GBTx clock for the COMET, and rewriting the firmware.

**Scenario 1)**

DCB clock to Comet, lots of firmware writing.

**Scenario 2)**

Comet clock to DCB. Will/Yipeng have tried providing function generator clock to GBTx, which worked, but we still need to confirm whether or not the board is relying on it’s internal clock even then.

**3:45 PM**

Will, Yipeng have begun hooking up the function generator to the GBTx. Consulting schematics.

Removed jumper from J4, clock reference path. Need to reprogram master GBTx with different file, Master\_external reference.

Will analyzed COMET clock on oscilloscope; voltage drops kind of ugly, but workable. We are now trying to connect the function generator to the oscilloscope.

**Problem:** MiniDAQ does not detect GBTx.

**Resolved issue**, two programmers open at same time.

**Results:** PRBS test of DCB using the function generator clock at 40.00 MHz, same as COMET native clock, and it worked at least in the limit of a few minutes on the DCB alone. We then attempted a PRBS test using a very incorrect 20 MHz clock, which did not work.

**4:23 PM**

We are now trying to do a PRBS test with the COMET clock transmitting the DCB, at 40.00 MHz.

Caveats: Wiring is shoddy and improvised, many sources of possible noise. The MiniDAQ reads the official CERN frequency, Will says that the this might be a source off issue.

**Results:** Working, but there is a “shift” in the displayed values. We should be viewing the contents of the CSV files, a uniform “11110101” string, but instead we get a regular shifts in the pattern. To be examined further.

**5:00 PM: Fin.** Examine “shifting” problem next week.