

## **Minutes of Parity Quality Beam Meeting 04/01/03**

**In attendance: Armstrong, Bevins, Chao, Garza, Paschke**

### **A. BPM checkout**

Omar Garza presented the result of recent comprehensive revamping of the Injector BPM system by him & Pete Francis (see attached). This included not only the 0L/0R BPM's but also all the ones upstream. Many problems were found and corrected. This should result in much more robust BPM performance in the Injector and should be verifiable soon.

Similar effort continues with the linac SEE BPM's, as more IF modules become available. Completion of this work before July is deemed achievable by Omar.

Kent requested that same checkout be performed on critical Hall A BPM's, the list of which to be communicated to Omar. This will be carried out. Hall C at this point does not have urgent need for similar work.

### **B. FOPT/BPM interaction**

Brian Bevins described recent progress towards identifying cause for missing BPM's in FOPT data. A strong candidate for this is the error status bit flagged when the signal switches from one range to another in the RF module. More beam based test will be performed by Richard Dickson & Chris Slominski to reproduce this problem. Whether FOPT should be made less heavy-handed regarding error rejection is another issue that is being addressed.

### **C. Recent Hall A helicity correlated orbit analysis**

Kent Paschke presented numbers from most recent run-averaged analysis on Hall A helicity correlated orbit. It is unmistakable, without pinning down the exact numbers, that the position correlation is an order of magnitude larger than requirement, while the angle correlation is closer to requirement but still larger. Kent is interested in monitoring this data again in April. Also it would be interesting to verify if measures identified in this meeting so far to ensure adiabatic damping will improve such numbers in a controlled test.

### **D. Next meeting: April 8th, 2003, 3:30 pm to 5:00 pm, ARC 528**

Injector Study Results?  
Other topics TBA

- Kazimi?

## **Attachment: Presentation of Omar Garza**

### **Injector SEE BPM System Corrections**

#### **Feb / March 2003 Shutdown**

1. Calibrated and Aligned SEE IF modules for IOCSE11, SE12, SE19.
  - a. Several IF modules were off by +2dB.
2. IPM0I02A
  - a. Replaced RF module
  - b. Re-terminated 45Mhz coaxial cables
3. IPM0I05
  - a. Replaced RF module
  - b. Re-terminated 45Mhz coaxial cables
4. IPM1I06
  - a. Re-terminated 45Mhz coaxial cables
5. IPM0R04
  - a. Re-terminated 45Mhz coaxial cables
  - b. Replaced 1497Mhz cables
6. IPM0R06
  - a. Replaced RF module
  - b. Re-terminated 45Mhz coaxial cables
7. IPM0L03
  - a. Replaced RF module
  - b. Re-terminated 45Mhz coaxial cables
  - c. Replaced 1497Mhz cables.
8. Installed all calibrated IF and RF modules and then ran calibration and twiddle numbers.

In summary, Pete Francis found quite a few terminations on the coaxial cables that had poor shielding, unnecessary lengths, and broken shields on the 1497Mhz cables. The IF modules were also found not to have been calibrated for sometime.