ToroidMeeting-June-07-06

Toroid Electronics Meeting Minutes

June 7, 2006

Electronics/Triggering Discussion

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Contents

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Attendees:

Steve Smith	Mike Browne	Stephen Norum
John Dusatko	Bob Fuller	Sheng Peng
Patrick Krejcik	Arturo Alarcon	Michael Cecere

Agenda:

1. Analog Electronics
2. Trigger Generation

Presentation Materials:

Analog Electronics and Triggering, M. Cecere (PPT Format)

Minutes:

1. Discussed Analog Electronics Design
   a. Pulse stretch (if needed) on first buffer op-amp
   b. Need first switch (S1) at all?
   c. Don't need blocking 100uF cap
   d. Won't need 1meg pulldown if no S1
   e. Both channels need to be matched for calibration
2. Discussed Triggering requirements and generation
   a. Need seperate trigger for each toroid channel from EVR
      i. this allows the IOC to scan the sampling windows and determine the optimum location for each channel independently
   b. Need seperate triggers for Ron's PAD Acquisition board? maybe not.
   c. ASYNCH or SYNCH triggering scheme? use delay units or count out memory locations
      i. Mike B. mentions using a recylable 1-shot to generate a clock train synched with EVR trigger
   d. How to signal IOC that ready to convert? send EVR to IOC or ADC in IOC (IP330)?
      i. does IP330 interrupt on an ext trigger?
      ii. use a dedicated line from toroid electronics to IOC?
3. Met with Bob F. and Sheng and discussed rack layout and commited to such
   a. Need an ICD to describe these connections completely
4. Need scheme for configuration management on Toroid Electronics Board
   a. Individual Channel Enable Needed?
   b. Channel is Toroid or FARC?
   c. Comparator Mode assignment
   d. ...?

Action Items:

1. **M. Cecere:** Adjust circuit as described above
2. **M. Cecere:** Develop Trigger Generation Scheme

3. **M. Cecere:** Need ICD and Test Plan
4. **M. Cecere:** Check with Ron Akre on his boards' availability
5. **M. Cecere:** Determine handshaking scheme for IOC and MPS
6. **M. Cecere:** Add Mechnical Box design to timeline
7. **M. Cecere:** Add fast digitizer coding, and coder, to timeline