

# ToroidMeeting-May-24-06

## Toroid Electronics Meeting Minutes

May 24, 2006

### Concept Design Review

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#### Contents

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#### Attendees:

Steve Smith	Mike Browne	Dave Dowell
Hamid Shoaee	Bob Simmons	Stephen Norum
Michael Cecere		

#### Agenda:

1. System Architecture
2. Board Architecture
3. Timing and Flowcharts
4. Project Timeline

#### Presentation Materials:

[CDR Presentation, M. Cecere](#) (PPT Format)

[Toroid Charge Monitor Timeline, M. Cecere](#) ( Project Format)

#### Minutes:

1. Presented MicroController based design
2. Discussed Analog Integrator Technique
  - a. Dual Integrators twice as long to calibrate, change design for single integrator, staged sampling of output
  - b. Bring in baseline and pulse signals for subtraction into PIC
  - c. No need to bring Vcomp signal into IOC ADC
3. Network reprogrammability would be very useful for configuration management. (could be done with jumpers, prog header...)
  - a. Program which toroids to compare.
  - b. Program which toroid channels, comp channels are enabled
  - c. Program MPS signalling thresholds Enable/Disable?
4. How to trigger IOC/MPS that data is ready?
  - a. Need digital input to IOC to signal data ready on Vcharge analog lines
  - b. Need/How to signal MPS that data has been updated?
5. need watchdog timer on EVR trigger arrival?
  - a. Since Beam CAN be run in Single-Shot mode, determining a missing trigger is tricky
6. Faraday Cup accuracy ~10-15%
7. Question to Tim M., when is first articles rom ISA?
8. Need a Test Plan for this project

#### Action Items:

1. **M. Cecere:** Need ICD and Test Plan
2. **M. Cecere:** When is first article from ISA due?
3. **M. Cecere:** Check with Ron Akre on his boards' availability
4. **M. Cecere:** Determine handshaking scheme for IOC and MPS
5. **M. Cecere:** Redraw integrators with one integrator, 2 S/Hs

6. **M. Cecere:** Add Mechanical Box design to timeline
7. **M. Cecere:** Add fast digitizer coding, and coder, to timeline