

SVT Readout Electronics FDR Committee Report

April 12, 1999
STAR Note #396

Review Date: March 30, 1999
Review Location: Austin, Texas

The review committee would like to thank the presenters of the design of the SVT readout electronics and the designers. The presentations were complete and thorough. The design was well done and the documentation was good. The designers deserve to be proud of their work. The SVT passed its FDR for the readout electronics. When the action items have been addressed the production can start. Action items are intended to help the SVT readout electronics meet all performance requirements with robustness and serviceability.

Action Items:

1. The requirements document must be brought up to date before production can start. Implementation-specific comments which are no longer applicable should be removed.
2. Calibration pulses from the platform to the detector need to be changed to differential signal.
3. Verify the proper sequence to turn on/off the low and high voltage. The implementation should be as fail safe as practical.
4. The regulator chip for V3 (3 A device) (2.4 A used) should be upgraded to a 5 A device.
5. Verify that the DC busses on the input to the crate can safely carry the fuse-limited current available from the power supply. Where parallel conductors/fuses are employed, keeping them separate may help.
6. The ADC must be tested with pulsed inputs.
7. The cable shields in the crate must be either grounded or eliminated.
8. Measure the temperature of the hottest (G-link, PLD, Regulators, etc) and several reference chips on each card in the crate (cooling water flowing and not flowing). This information will be needed for the safety review.
9. The safety committee must rule on the HV on the transition card before production starts.
10. Try to move the J Tag connector to a reachable location on the installed cards.
11. Include a time stamp with the temperature loaded into the read-out header from slow controls.
12. Complete the documentation of the system (code, operators manual, maintenance manual, etc).
13. Production fabrication can not start till after the 3 ladder system test of all functionality meets the updated requirements.

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