



12 GeV Upgrade VARIANCE ANALYSIS REPORT

WBS: 1.4.2.2 - Construction Hall B Detectors
Control Account Manager: L. Elouadrhiri
For Period Ending: Oct 13

12 GeV 1.4.2.2	SCHEDULE FLAG				COST FLAG			
	(A)	(B)	(B-A)	(B/A)	(C)	(D)	(C-D)	(C/D)
	Planned Value	Earned Value	Schedule Variance	Schedule Perform Index	Earned Value	Actual Cost	Cost Variance	Cost Perform Index
	BCWS	BCWP	SV	SPI	BCWP	ACWP	CV	CPI
Month of Oct-13	122	99	-23	0.82	99	233	-133	0.43
Cumulative	260	346	87	1.33	346	526	-180	0.66

Yellow Flag: Index <.9 / >1.1 OR Variance > \$25K
Red Flag: Index <.8 / >1.2 AND Variance > \$50K

1. Cause (Address Variances Individually)

SV: The drivers of the positive variances are the tracking system DC (\$84K) and FTOF (\$35K). For the DC this is due to efficient work of stringing of R1 at ISU: all 6 chambers are completed, the first shipment is due this December, and the completion of stringing of 5 R3 chambers. For FTOF this is due to efficient work of assembly and testing of panel 1b fabricated at University of South Carolina, assembled and tested at JLab ahead of schedule. It is ready for installation.

CV: The drivers of the negative variance are SVT (-\$36K), DC (-\$49K), CTOF (-\$25K), and both HTCC (-\$31K) and LTCC (-\$34K). SVT is due to labor testing modules and preparing assembly into the support frame, but not ready to claim. For DC it is extra effort to complete the last box and install it. For CTOF it is extra effort to handle light guides that had to be re-worked by the vendor. For HTCC and LTCC it is extra effort to qualify mirror coating methods, testing samples sent by vendors, as well as extra effort to assemble the HTCC containment vessel.

2. Proposed Solutions (Corrective Actions)

SV: None; the schedule will catch up.

CV: For SVT the needed production flex cables are being produced at the vendor, which allows the main assembly line to restart by January and allow progress to be claimed. For DC the last chamber is ready to be strung and further setup is not needed; this can avoid further negative CV but does not affect present CV. For the Cerenkov counters the mirror mass production of coatings must start to have further progress to claim.

Estimated Resolution By (Date): March 2014

3. Impact on Project Cost/ Schedules

Schedule Variance Projection					
Nov	Dec	Jan	Feb	Mar	Apr
80	80	0	0	0	0

		Cost Variance Projection					
	CVcum (K)	Nov	Dec	Jan	Feb	Mar	Apr
Recoverable							
Unrecoverable	-180k \$	-200	-160	-140	-120	-100	-100
Error							

4. Comments

In addition to tracking the detectors with positive variances we are also tracking the detectors that are showing slightly negative cost and schedule variances. Particular attention is given to the mirror systems on both Cerenkov Counters (1.4.2.2.4.1 and 1.4.2.2.4.2).

Control Account Manager:

Latifa Elouadrhiri

Project Manager:

G. R. Young

D. Miner for C. Rode

Oct	Planned Value	Earned Value	Schedule Variance	Schedule Perform Index	Earned Value	Actual Cost	Cost Variance	Cost Perform Index
	BCWS	BCWP	SV	SPI	BCWP	ACWP	CV	CPI
12 GeV 1.4.2.2.1								
Month of Oct-13	55	52	-3	0.94	52	129	-77	0.40
Cumulative	136	220	83	1.61	220	305	-85	0.72
12 GeV 1.4.2.2.1.1								
Month of Oct-13	74	36	-38	0.49	36	66	-30	0.55
Cumulative	129	129	0	1.00	129	165	-36	0.78
12 GeV 1.4.2.2.1.3								
Month of Oct-13	-19	15	34	-0.81	15	63	-47	0.25
Cumulative	7	91	84	13.02	91	140	-49	0.65
12 GeV 1.4.2.2.2								
Month of Oct-13	14	8	-6	0.59	8	18	-10	0.46
Cumulative	21	20	-1	0.96	20	32	-11	0.64
12 GeV 1.4.2.2.2.3								
Month of Oct-13	14	8	-6	0.59	8	18	-10	0.46
Cumulative	21	20	-1	0.96	20	32	-11	0.64
12 GeV 1.4.2.2.3								
Month of Oct-13	21	6	-15	0.30	6	26	-20	0.23
Cumulative	23	45	22	1.93	45	65	-20	0.70
12 GeV 1.4.2.2.3.1								
Month of Oct-13	17	4	-13	0.23	4	15	-11	0.26
Cumulative	18	5	-13	0.26	5	30	-25	0.15
12 GeV 1.4.2.2.3.2								
Month of Oct-13	3	2	-1	0.65	2	11	-8	0.20
Cumulative	5	41	35	7.63	41	35	6	1.16
12 GeV 1.4.2.2.4								
Month of Oct-13	33	34	1	1.02	34	60	-26	0.56
Cumulative	79	61	-18	0.77	61	125	-64	0.49
12 GeV 1.4.2.2.4.1								
Month of Oct-13	22	29	7	1.33	29	37	-8	0.79
Cumulative	60	54	-7	0.89	54	84	-31	0.64
12 GeV 1.4.2.2.4.2								
Month of Oct-13	11	5	-6	0.42	5	23	-18	0.20
Cumulative	19	7	-11	0.39	7	41	-34	0.18