



## 12 GeV Upgrade VARIANCE ANALYSIS REPORT

**WBS: 1.4.2.2 - Construction Hall B Detectors**  
**Control Account Manager: L. Elouadrhiri**  
**For Period Ending: Sep 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 Sep-13 | 138           | 247          | 109               | 1.79                   | 247          | 294         | -47           | 0.84               |
| Cumulative      | 138           | 247          | 109               | 1.79                   | 247          | 294         | -47           | 0.84               |

**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 cost variances are the tracking system SVT (\$37K), DC (\$49K) and FTOF (\$36K). For the SVT this is due to fabrication and testing of 5 production modules which is part of the FNAL deliverable first milestone. The DC this is due to efficient work of stringing of R1 at ISU: all 6 chambers are completed, and the first shipment to JLab is due this December, as well as to the completion of stringing of 5 of the 6 R3 chambers. For FTOF this is due to efficient work of assembly and testing of panel 1b, which was fabricated at University of South Carolina and then assembled and tested at JLab ahead of schedule. It will be ready for installation in October. The completion of FTOF 1-a refurbishment also helped generate positive SV.

### 2. Proposed Solutions (Corrective Actions)

**SV:** None, the P6 schedule will catch up.

Estimated Resolution By (Date):

### 3. Impact on Project Cost/ Schedules

| Schedule Variance Projection |     |     |     |     |     |
|------------------------------|-----|-----|-----|-----|-----|
| Oct                          | Nov | Dec | Jan | Feb | Mar |
| 109                          | 80  | 80  | 0   | 0   | 0   |
|                              |     |     |     |     |     |

### 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

| Sep                       | 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                |
| <b>12 GeV 1.4.2.2.1</b>   |               |              |                   |                        |              |             |               |                    |
| Month of Sep-13           | 81            | 168          | 87                | 2.07                   | 168          | 175         | -8            | 0.96               |
| Cumulative                | 81            | 168          | 87                | 2.07                   | 168          | 175         | -8            | 0.96               |
| <b>12 GeV 1.4.2.2.1.1</b> |               |              |                   |                        |              |             |               |                    |
| Month of Sep-13           | 55            | 92           | 37                | 1.67                   | 92           | 98          | -6            | 0.94               |
| Cumulative                | 55            | 92           | 37                | 1.67                   | 92           | 98          | -6            | 0.94               |
| <b>12 GeV 1.4.2.2.1.3</b> |               |              |                   |                        |              |             |               |                    |
| Month of Sep-13           | 26            | 75           | 49                | 2.90                   | 75           | 77          | -1            | 0.98               |
| Cumulative                | 26            | 75           | 49                | 2.90                   | 75           | 77          | -1            | 0.98               |
| <b>12 GeV 1.4.2.2.2</b>   |               |              |                   |                        |              |             |               |                    |
| Month of Sep-13           | 8             | 12           | 5                 | 1.63                   | 12           | 14          | -2            | 0.87               |
| Cumulative                | 8             | 12           | 5                 | 1.63                   | 12           | 14          | -2            | 0.87               |
| <b>12 GeV 1.4.2.2.2.3</b> |               |              |                   |                        |              |             |               |                    |
| Month of Sep-13           | 8             | 12           | 5                 | 1.63                   | 12           | 14          | -2            | 0.87               |
| Cumulative                | 8             | 12           | 5                 | 1.63                   | 12           | 14          | -2            | 0.87               |
| <b>12 GeV 1.4.2.2.3</b>   |               |              |                   |                        |              |             |               |                    |
| Month of Sep-13           | 3             | 39           | 36                | 14.46                  | 39           | 39          | 0             | 1.01               |
| Cumulative                | 3             | 39           | 36                | 14.46                  | 39           | 39          | 0             | 1.01               |
| <b>12 GeV 1.4.2.2.3.1</b> |               |              |                   |                        |              |             |               |                    |
| Month of Sep-13           | 1             | 1            | 0                 | 1.00                   | 1            | 14          | -14           | 0.04               |
| Cumulative                | 1             | 1            | 0                 | 1.00                   | 1            | 14          | -14           | 0.04               |
| <b>12 GeV 1.4.2.2.3.2</b> |               |              |                   |                        |              |             |               |                    |
| Month of Sep-13           | 2             | 38           | 36                | 18.49                  | 38           | 24          | 14            | 1.58               |
| Cumulative                | 2             | 38           | 36                | 18.49                  | 38           | 24          | 14            | 1.58               |
| <b>12 GeV 1.4.2.2.4</b>   |               |              |                   |                        |              |             |               |                    |
| Month of Sep-13           | 46            | 28           | -19               | 0.60                   | 28           | 65          | -38           | 0.42               |
| Cumulative                | 46            | 28           | -19               | 0.60                   | 28           | 65          | -38           | 0.42               |
| <b>12 GeV 1.4.2.2.4.1</b> |               |              |                   |                        |              |             |               |                    |
| Month of Sep-13           | 39            | 25           | -14               | 0.64                   | 25           | 48          | -23           | 0.52               |
| Cumulative                | 39            | 25           | -14               | 0.64                   | 25           | 48          | -23           | 0.52               |
| <b>12 GeV 1.4.2.2.4.2</b> |               |              |                   |                        |              |             |               |                    |
| Month of Sep-13           | 8             | 3            | -5                | 0.36                   | 3            | 18          | -15           | 0.15               |
| Cumulative                | 8             | 3            | -5                | 0.36                   | 3            | 18          | -15           | 0.15               |