

| U.S. CMS Detector Operations Change Control Activity | | | | | | |
|---|---|----------------|---|--------------|------------|--------------|
| | | Change Request | | | | |
| WBS | Subsystem | Number | Description of Change | CY17Q3 Plan | Change \$ | CY17Q4 Plan |
| 11 | Endcap Muon | | | \$2,188,153 | \$0 | \$2,188,153 |
| 12 | Hardon Calorimeter | CR-041 | CERN TA COLA adjusted for UC Riverside, UC Santa Barbara, Maryland, Brown, and Florida State to account for current needs in operations and availabilites | \$1,973,953 | (\$7,871) | \$1,966,082 |
| 13 | Trigger | CR-020 | Engineering & technician labor support at Wisconsin for Calorimeter Trigger Layer-1 operations | \$912,537 | \$117,860 | \$1,030,397 |
| 14 | Data Acquisition | | | \$886,300 | \$0 | \$886,300 |
| 15 | Electromagnetic Calorimeter | | | \$859,286 | \$0 | \$859,286 |
| 16/17 | Tracker (Fpix & SiTrk) | CR-007, 008 | Add CERN TA travel funds for Purdue Calumet; Add CERN TA travel funds for Nebraska, reduce CERN TA travel funds for UC Davis | \$861,035 | \$6,747 | \$867,781 |
| 18 | Detector Support | | | \$92,119 | \$0 | \$92,119 |
| 19 | BRIL | | | \$265,930 | \$0 | \$265,930 |
| 11-19 | Detector Operations | | | \$8,039,313 | \$116,736 | \$8,156,049 |
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| U.S. CMS Common Operations Change Control Activity | | | | | | |
| | | Change Request | | | | |
| WBS | Subsystem | Number | Description of Change | CY17Q3 Plan | Change \$ | CY17Q4 Plan |
| 21.2 | Common Costs (M&OA) | CR-105, 106 | M&O-A adjustments for additional author and actual exchange rate applied to software developer credit | \$4,005,636 | (\$1,713) | \$4,003,924 |
| 21.3 | Run Coord. and Monitoring | | | \$440,073 | \$0 | \$440,073 |
| 21.4 | LHC Physics Center | | | \$819,727 | \$0 | \$819,727 |
| 21.5 | Operations Support | CR-104, 107 | CERN TA support for HCAL Project Manager; engineering and technician labor support at Fermilab for Timing Detector design and prototyping | \$2,169,262 | \$119,663 | \$2,288,925 |
| 21.6 | Program Office | | | \$1,323,397 | \$0 | \$1,323,397 |
| 21.7 | Education and Outreach | | | \$110,585 | \$0 | \$110,585 |
| 21 | Common Operations | | | \$8,868,679 | \$117,950 | \$8,986,630 |
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| U.S. CMS Software and Computing Change Control Activity | | | | | | |
| | | Change Request | | | | |
| WBS | Subsystem | Number | Description of Change | CY17Q3 Plan | Change \$ | CY17Q4 Plan |
| 22.1 | Fermilab Facilities | CR-018, 019 | Reduce CERN TA labor support for High Throughput Computing; Add support for this person at Fermilab | \$6,048,769 | \$31,058 | \$6,079,827 |
| 22.2 | University Facilities | | | \$3,480,253 | \$0 | \$3,480,253 |
| 22.3 | Computing Operations | | | \$929,522 | \$0 | \$929,522 |
| 22.4 | Computing Infra. and Services | | | \$2,471,440 | \$0 | \$2,471,440 |
| 22.5 | Software and Support | CR-020, 021 | Add CERN TA labor support for optimizing CMSSW code; Reduce support at Fermilab due to delayed hire | \$2,384,513 | (\$19,329) | \$2,365,184 |
| 22.6 | S&C Program Management & CMS Coordination | | | \$205,081 | \$0 | \$205,081 |
| 22 | Software and Computing | | | \$15,519,578 | \$11,729 | \$15,531,307 |
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| U.S. CMS Operations Program Total | | | | \$32,427,571 | \$246,415 | \$32,673,986 |