U.S. CMS Detector Operations Change Control Activity

WBS	Subsystem	Change Request Number	Description of Change	CY17 Q4 Plan	Change $	CY17 Q4 End
11	Endcap Muon			$2,188,153	$0	$2,188,153
12	Hardon Calorimeter	CR-042	CERN TA COLA reduced for Maryland and added for Kansas State to work on online and DAQ of HCAL	$1,966,082	($5,060)	$1,961,022
13	Trigger			$1,030,397	$0	$1,030,397
14	Data Acquisition			$886,300	$0	$886,300
15	Electromagnetic Calorimeter			$859,286	$0	$859,286
16/17	Tracker (Fpix & SiTrk)	SOW; CR-009, 010	Engineering labor support at Kansas State for pixel firmware; Labor support for Fermilab and UC Davis for Fpix removal and DCDC refurbishment	$867,781	$77,387	$945,169
18	Detector Support			$92,119	$0	$92,119
19	BRIL	SOW	Engineering labor support at Rutgers for PLT opto-motherboard redesign	$265,930	$6,653	$272,583
11-19	**Detector Operations**			**$8,156,049**	**$78,980**	**$8,235,029**

U.S. CMS Common Operations Change Control Activity

WBS	Subsystem	Change Request Number	Description of Change	CY17 Q4 Plan	Change $	CY17 Q4 End
21.2	Common Costs (M&OA)			$4,003,924	$0	$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-108, 109, 110, 111; SOWs	Iowa labor and travel, FNAL engineering and tech labor for fast timing, CERN TA for HCAL Project Manager and fast timing sensors, Rice support for Det Ops L1, Caltech for fast timing test stand equipment	$2,288,925	$477,653	$2,766,578
21.6	Program Office			$1,323,397	$0	$1,323,397
21.7	Education and Outreach			$110,585	$0	$110,585
21	**Common Operations**			**$8,986,630**	**$477,653**	**$9,464,283**

U.S. CMS Software and Computing Change Control Activity

WBS	Subsystem	Change Request Number	Description of Change	CY17 Q4 Plan	Change $	CY17 Q4 End
22.1	Fermilab Facilities			$6,079,827	$0	$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			$2,365,184	$0	$2,365,184
22.6	S&C Program Management & CMS Coordination			$205,081	$0	$205,081
22	**Software and Computing**			**$15,531,307**	**$0**	**$15,531,307**

U.S. CMS Operations Program Total				**$32,673,986**	**$556,633**	**$33,230,619**