

	Activity Name	Activity ID	Num	Unit Cost	Material Cost	Labor Cost	Duration (Weeks)	Start Date	Finish Date	2013				2014			
										1st	2nd	3rd	4th	1st	2nd	3rd	4th
1	Monitoring	25222085	8	\$4,000.00	\$4,000.00	\$7,455.00	15.00	3/4/13	6/14/13								
2	Fabrication Quad LED boards	25222080	1	\$0.00	\$0.00	\$0.00	12.00	3/4/13	5/24/13								
3	Fabrication LED control boards	25222080	1	\$0.00	\$0.00	\$0.00	12.00	3/4/13	5/24/13								
4	Purchase plexiglass pane		1	\$3,000.00	\$3,000.00	\$0.00	4.00	4/1/13	4/26/13								
5	Surface preparation plexiglass pane		1	\$1,000.00	\$1,000.00	\$0.00	2.00	4/29/13	5/10/13								
6	Installation plexiglass pane		1	\$0.00	\$0.00	\$340.00	1.00	5/13/13	5/17/13								
7	Mounting of LED boards		1	\$0.00	\$0.00	\$850.00	0.50	5/27/13	5/29/13								
8	Connection of LEDs to control board		1	\$0.00	\$0.00	\$425.00	0.50	5/29/13	5/31/13								
9	Checkout of LED system		1	\$0.00	\$0.00	\$5,840.00	2.00	6/3/13	6/14/13								
10	Detector Assembly		3	\$0.00	\$0.00	\$19,720.00	14.00	1/14/13	4/19/13								
11	Attachment of pmts to lead glass blocks	25222105	1	\$0.00	\$0.00	\$9,180.00	12.00	1/14/13	4/5/13								
12	Stacking of lead glass blocks	25222100a	1	\$0.00	\$0.00	\$9,180.00	12.00	1/21/13	4/12/13								
13	Final Alignment		1	\$0.00	\$0.00	\$1,360.00	1.00	4/15/13	4/19/13								
14	Erection of dark box	2562465	4	\$2,000.00	\$2,000.00	\$3,080.00	18.00	2/25/13	6/28/13								
15	Complete drawings		1	\$0.00	\$0.00	\$0.00	8.00	2/25/13	4/19/13								
16	Approve drawings		1	\$0.00	\$0.00	\$2,400.00	2.00	4/22/13	5/3/13								
17	Purchase parts (JLab)	2562465a	1	\$2,000.00	\$2,000.00	\$0.00	2.00	5/6/13	5/17/13								
18	Install dark room (JLab)	2562465b	1	\$0.00	\$0.00	\$680.00	2.00	6/17/13	6/28/13								
19	Electronic hookup		47	\$0.00	\$0.00	\$11,900.00	8.00	4/15/13	6/7/13								
20	Install racks (power, AC, etc)		12	\$0.00	\$0.00	\$5,100.00	2.00	4/15/13	4/26/13								
21	Install crates with tested boards into racks		10	\$0.00	\$0.00	\$0.00	2.00	4/29/13	5/10/13								
22	Install Cockcroft Walton power supply and distribution sytem		1	\$0.00	\$0.00	\$0.00	2.00	5/13/13	5/24/13								
23	Hook up power and communications to crates		12	\$0.00	\$0.00	\$3,400.00	1.00	5/27/13	5/31/13								
					\$6,000.00	\$219,527.00				First	Second	Third	Fourth	First	Second	Third	Fourth

	Activity Name	Activity ID	Num	Unit Cost	Material Cost	Labor Cost	Duration (Weeks)	Start Date	Finish Date	2013				2014				
										1st	2nd	3rd	4th	1st	2nd	3rd	4th	
24	Verify crate operation		12	\$0.00	\$0.00	\$3,400.00	1.00	6/3/13	6/7/13									
25	Cabling / connections		3,073	\$0.00	\$0.00	\$28,900.00	9.50	6/10/13	8/14/13									
26	Install cable trays		1	\$0.00	\$0.00	\$20,400.00	6.00	6/10/13	7/19/13									
27	Hook up bundled signal cables		2,688	\$0.00	\$0.00	\$8,500.00	2.50	7/22/13	8/7/13									
28	Hook up CW control box and cables cables		384	\$0.00	\$0.00	\$0.00	1.00	8/7/13	8/14/13									
29	Environmental control of dark room		4	\$0.00	\$0.00	\$4,360.00	19.00	2/25/13	7/5/13									
30	Complete drawing package		1	\$0.00	\$0.00	\$0.00	8.00	2/25/13	4/19/13									
31	Approval of drawings		1	\$0.00	\$0.00	\$960.00	2.00	5/1/13	5/14/13									
32	Purchase of components		1	\$0.00	\$0.00	\$0.00	4.00	5/15/13	6/11/13									
33	Installation		1	\$0.00	\$0.00	\$3,400.00	1.00	7/1/13	7/5/13									
34	Interlock system for dark room		5	\$0.00	\$0.00	\$5,060.00	21.00	2/25/13	7/19/13									
35	Complete drawing package		1	\$0.00	\$0.00	\$0.00	8.00	2/25/13	4/19/13									
36	Approval of drawings		1	\$0.00	\$0.00	\$960.00	2.00	5/1/13	5/14/13									
37	Purchase of components		1	\$0.00	\$0.00	\$0.00	4.00	5/15/13	6/11/13									
38	Installation		1	\$0.00	\$0.00	\$1,700.00	1.00	6/12/13	6/18/13									
39	Safety review		1	\$0.00	\$0.00	\$2,400.00	2.00	7/8/13	7/19/13									
40	Setup daq and controls		9	\$0.00	\$0.00	\$64,420.00	31.50	3/4/13	10/9/13									
41	Program control GUIs		1	\$0.00	\$0.00	\$38,400.00	16.00	3/4/13	6/21/13									
42	Install Cockcroft-Walton power supplies		1	\$0.00	\$0.00	\$6,800.00	4.00	6/3/13	6/28/13									
43	Install CW control system		1	\$0.00	\$0.00	\$2,920.00	2.00	6/24/13	7/5/13									
44	Check dark room environment control		1	\$0.00	\$0.00	\$1,700.00	1.00	7/22/13	7/26/13									
45	Setup DAQ system		1	\$0.00	\$0.00	\$2,920.00	2.00	7/29/13	8/9/13									
46	Check scope signals to verify correct assignment of signal and control signals		1	\$0.00	\$0.00	\$2,920.00	2.00	8/14/13	8/28/13									
					\$6,000.00	\$219,527.00				First	Second	Third	Fourth	First	Second	Third	Fourth	

	Activity Name	Activity ID	Num	Unit Cost	Material Cost	Labor Cost	Duration (Weeks)	Start Date	Finish Date	2013				2014				
										1st	2nd	3rd	4th	1st	2nd	3rd	4th	
47	Start data taking with a few boards in one crate and verify operation		1	\$0.00	\$0.00	\$2,920.00	2.00	8/28/13	9/11/13									
48	Check that data is recorded with a single full crate		1	\$0.00	\$0.00	\$2,920.00	2.00	9/11/13	9/25/13									
49	Check multi-crate operation		1	\$0.00	\$0.00	\$2,920.00	2.00	9/25/13	10/9/13									
50	Setup LED monitoring	2562480	4	\$0.00	\$0.00	\$14,892.00	16.00	5/6/13	8/23/13									
51	Check LED bias settings		1	\$0.00	\$0.00	\$2,920.00	2.00	7/1/13	7/12/13									
52	Procure pulsing system		1	\$0.00	\$0.00	\$1,752.00	12.00	5/6/13	7/26/13									
53	Program pulsing system		1	\$0.00	\$0.00	\$5,840.00	2.00	7/29/13	8/9/13									
54	Setup pulsing system		1	\$0.00	\$0.00	\$4,380.00	2.00	8/12/13	8/23/13									
55	Trigger setup	2562482a	9	\$0.00	\$0.00	\$20,340.00	9.00	10/9/13	12/11/13									
56	Setup LED trigger		1	\$0.00	\$0.00	\$1,460.00	1.00	10/9/13	10/16/13									
57	Verify all channels are operational by pulsing various LED combinations		1	\$0.00	\$0.00	\$1,460.00	1.00	10/16/13	10/23/13									
58	Check data with LED trigger		1	\$0.00	\$0.00	\$1,460.00	1.00	10/23/13	10/30/13									
59	Setup self-trigger on individual block		1	\$0.00	\$0.00	\$3,860.00	1.00	10/30/13	11/6/13									
60	Verify trigger system is operational in single self-trigger mode		1	\$0.00	\$0.00	\$1,460.00	1.00	11/6/13	11/13/13									
61	Setup of self-trigger OR of multiple modules		1	\$0.00	\$0.00	\$3,860.00	1.00	11/13/13	11/20/13									
62	Verify trigger system is operational for all modules in self-trigger mode		1	\$0.00	\$0.00	\$1,460.00	1.00	11/20/13	11/27/13									
63	Setup cosmic-ray trigger consisting of		1	\$0.00	\$0.00	\$3,860.00	1.00	11/27/13	12/4/13									
64	Check consistency of patterns of cosmic-ray tracks in fADCs		1	\$0.00	\$0.00	\$1,460.00	1.00	12/4/13	12/11/13									
65	Detector testing with DAQ	2562482	4	\$0.00	\$0.00	\$20,440.00	9.00	12/11/13	2/12/14									
66	Monitoring data with LEDs		1	\$0.00	\$0.00	\$2,920.00	1.00	12/11/13	12/18/13									
					\$6,000.00	\$219,527.00					First	Second	Third	Fourth	First	Second	Third	Fourth

	Activity Name	Activity ID	Num	Unit Cost	Material Cost	Labor Cost	Duration (Weeks)	Start Date	Finish Date	2013				2014				
										1st	2nd	3rd	4th	1st	2nd	3rd	4th	
67	Cosmic-ray data		1	\$0.00	\$0.00	\$2,920.00	2.00	12/18/13	1/1/14									
68	Study feature extraction and sparcification		1	\$0.00	\$0.00	\$2,920.00	2.00	1/1/14	1/15/14									
69	Setup test and analyze FCAL data		1	\$0.00	\$0.00	\$11,680.00	4.00	1/15/14	2/12/14									
70	Checks of calorimeter systems		1	\$0.00	\$0.00	\$18,960.00	3.00	2/12/14	3/5/14									
71	Fcal checks	2562590	1	\$0.00	\$0.00	\$18,960.00	3.00	2/12/14	3/5/14									
					\$6,000.00	\$219,527.00					First	Second	Third	Fourth	First	Second	Third	Fourth