

ID	WBS	Task Name	Duration	Start	Finish	Cost Center	Fixed Cost	Cost	Text10	2017					2018				2019				2020				2021						
										Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4			
1		1 MAPS Inner Barrel	1217 days	Mon 10/3/16	Tue 6/1/21		\$0.00	\$4,835,948.24																									
2	1.11	MAPS Inner Barrel Starts	0 days	Sat 10/1/16	Sat 10/1/16		\$0.00	\$0.00																									
3	1.10	MAPS Inner Barrel Ends	0 days	Tue 6/1/21	Tue 6/1/21		\$0.00	\$0.00																									
4	1.1	Milestones of sPHENIX	1216 days	Mon 10/3/16	Tue 6/1/21		\$0.00	\$0.00																									
5	1.1.1	sPHENIX Technical Design CD-0	0 days	Tue 11/1/16	Tue 11/1/16		\$0.00	\$0.00	CD-0 (11/2016)																								
6	1.1.2	sPHENIX Technical Design (CD-1/CD-3a)	0 days	Wed 11/1/17	Wed 11/1/17		\$0.00	\$0.00	CD-1 (11/2017)																								
7	1.1.3	sPHENIX Technical Dewsgin (CD-2)	0 days	Mon 7/2/18	Mon 7/2/18		\$0.00	\$0.00	CD-2 (7/2018)																								
8	1.1.4	sPHENIX Start Construction (CD-3b)	0 days	Wed 8/1/18	Wed 8/1/18		\$0.00	\$0.00	CD-3b (8/2018)																								
9	1.1.5	sPHENIX Installation	0 days	Tue 6/1/21	Tue 6/1/21		\$0.00	\$0.00	ready for b																								
10	1.1.6	ALICE ITS Inner Barrel Construction	261 days	Mon 1/2/17	Mon 1/1/18		\$0.00	\$0.00	ITS constr																								
11	1.1.9	ALICE ITS Electronics Pre-Production	100 days	Wed 2/22/17	Tue 7/11/17		\$0.00	\$0.00	ITS Electr																								
12	1.1.8	ALICE ITS Electronics Production	240 days	Thu 7/13/17	Wed 6/13/18		\$0.00	\$0.00	ITS Electr																								
13	1.1.7	LANL LDRD	781 days	Mon 10/3/16	Mon 9/30/19	LDRD	\$0.00	\$0.00	LDRD																								
14	1.1.11	sPHENIX Test Beam	21 days	Fri 2/1/19	Fri 3/1/19	LDRD	\$0.00	\$0.00																									
15	1.2	Project Management	1217 days	Mon 10/3/16	Tue 6/1/21		\$0.00	\$671,784.00	sPHENIX																								
19	1.3	Design & Prototyping	363 days?	Mon 10/3/16	Wed 2/21/18	LDRD	\$0.00	\$980,090.91	LDRD/R&D																								
20	1.3.1	MOU btw LANL/sPHENIX and ALICE	60 days?	Mon 10/3/16	Fri 12/23/16	LDRD	\$0.00	\$0.00																									
21	1.3.2	Readout Test Stand	65 days	Mon 10/3/16	Fri 12/30/16	LDRD	\$0.00	\$45,600.00																									
22	1.3.2.1	Obtain Design from CERN	5 days	Mon 10/3/16	Fri 10/7/16	LDRD	\$0.00	\$2,000.00	Electronics Engineer[20%]																								
23	1.3.2.2	Procure 2 Test Stands	60 days	Mon 10/3/16	Fri 12/23/16	LDRD	\$30,000.00	\$39,600.00	Elec tech[10%],Physicist[20%]																								
24	1.3.2.3	Setup Test Stands	5 days	Mon 12/26/16	Fri 12/30/16	LDRD	\$0.00	\$4,000.00	Physicist,Elec tech[50%]																								
25	1.3.3	Detector Staves	190 days?	Mon 12/26/16	Fri 9/15/17	LDRD	\$0.00	\$147,000.00																									
26	1.3.3.1	Procure and Produce 4 Staves	180 days	Mon 12/26/16	Fri 9/1/17	LDRD	\$55,000.00	\$127,000.00	Physicist,Elec tech																								
27	1.3.3.2	Test Staves	10 days	Mon 9/4/17	Fri 9/15/17	LDRD	\$0.00	\$0.00	Physicist[200%]																								
28	1.3.3.3	Travel and Per Diem Support	180 days?	Mon 12/26/16	Fri 9/1/17	LDRD	\$20,000.00	\$20,000.00																									
29	1.3.4	Electronics	363 days	Mon 10/3/16	Wed 2/21/18	LDRD	\$0.00	\$360,890.91																									
30	1.3.4.1	ALICE Readout Electronics	272 days	Mon 10/3/16	Tue 10/17/17		\$0.00	\$39,600.00																									
31	1.3.4.1.1	SamTec Cables	12 days	Mon 10/3/16	Tue 10/18/16		\$0.00	\$5,200.00																									
32	1.3.4.1.1.1	Procure 7 SamTec Cables	10 days	Mon 10/3/16	Fri 10/14/16	LDRD	\$2,000.00	\$5,200.00	Physicist[20%],Elec tech[20%]																								
33	1.3.4.1.1.2	Test Cables	2 days	Mon 10/17/16	Tue 10/18/16	LDRD	\$0.00	\$0.00	Physicist																								
34	1.3.4.1.2	Readout Units (RDOs)	70 days	Wed 7/12/17	Tue 10/17/17		\$0.00	\$13,000.00																									
35	1.3.4.1.2.1	Procure 4 RDOs	60 days	Wed 7/12/17	Tue 10/3/17	LDRD	\$5,000.00	\$8,200.00	Physicist[10%],Elec tech[5%]																								
36	1.3.4.1.2.2	Test RDOs	10 days	Wed 10/4/17	Tue 10/17/17	LDRD	\$0.00	\$4,800.00	Physicist,Elec tech[30%]																								
37	1.3.4.1.3	Optical Cables	12 days	Tue 10/4/16	Wed 10/19/16		\$0.00	\$2,600.00																									
38	1.3.4.1.3.1	Procure 4 Optical Cables	10 days	Tue 10/4/16	Mon 10/17/16	LDRD	\$1,000.00	\$2,600.00	Physicist[20%],Elec tech[10%]																								
39	1.3.4.1.3.2	Test Optical Cables	2 days	Tue 10/18/16	Wed 10/19/16	LDRD	\$0.00	\$0.00	Physicist																								
40	1.3.4.1.4	Common Readout Units (CRUs)	65 days	Wed 10/5/16	Tue 1/3/17		\$0.00	\$18,800.00																									
41	1.3.4.1.4.1	Procure 2 CRUs	60 days	Wed 10/5/16	Tue 12/27/16	LDRD	\$10,000.00	\$14,800.00	Physicist[20%],Elec tech[5%]																								
42	1.3.4.1.4.2	Test CRUs	5 days	Wed 12/28/16	Tue 1/3/17	LDRD	\$0.00	\$4,000.00	Physicist,Elec tech[50%]																								
43	1.3.4.2	sPHENIX Readout Electronics Integration (FEM)	351 days	Mon 10/3/16	Mon 2/5/18		\$0.00	\$309,290.91																									
44	1.3.4.2.1	obtain ALICE Readout Unit design	1 day	Mon 10/3/16	Mon 10/3/16	LDRD	\$0.00	\$2,000.00	Physicist,Electronics Engineer																								
45	1.3.4.2.2	initial design	40 days	Tue 10/4/16	Mon 11/28/16	LDRD	\$0.00	\$40,000.00	Electronics Engineer,Physicist[10%]																								
46	1.3.4.2.3	prototype	60 days	Tue 11/29/16	Mon 2/20/17	LDRD	\$5,000.00	\$24,200.00	Physicist[50%],Elec tech[20%]																								
47	1.3.4.2.4	test-I	20 days	Tue 2/21/17	Mon 3/20/17	LDRD	\$0.00	\$2,545.45	Electronics Engineer[30%],Physicist[50%]																								
48	1.3.4.2.5	revised design	30 days	Tue 3/21/17	Mon 5/1/17	LDRD	\$0.00	\$30,000.00	Electronics Engineer,Physicist[20%]																								
49	1.3.4.2.6	prototype	60 days	Tue 5/2/17	Mon 7/24/17	LDRD	\$5,000.00	\$24,200.00	Physicist[50%],Elec tech[20%]																								
50	1.3.4.2.7	test-II	20 days	Tue 7/25/17	Mon 8/21/17	LDRD	\$0.00	\$2,545.45	Electronics Engineer[30%],Physicist																								
51	1.3.4.2.8	final design	30 days	Tue 8/22/17	Mon 10/2/17	LDRD	\$0.00	\$30,000.00																									
52	1.3.4.2.9	Procure 4 FEMs	60 days	Tue 10/3/17	Mon 12/25/17	LDRD	\$20,000.00	\$24,800.00	Physicist[20%],Elec tech[5%]																								
53	1.3.4.2.10	System Test	30 days	Tue 12/26/17	Mon 2/5/18	LDRD	\$0.00	\$6,000.00	Electronics Engineer[30%],Physicist																								
54	1.3.4.2.11	sPHENIX DAQ System Integration	180 days	Mon 10/3/16	Fri 6/9/17		\$0.00	\$123,000.00																									
55	1.3.4.2.11.4	Slow Control Design	60 days	Mon 10/3/16	Fri 12/23/16	LDRD	\$5,000.00	\$41,000.00	Physicist[50%],Electronics Engineer[30%]																								
56	1.3.4.2.11.5	Trigger Interface Design	60 days	Mon 12/26/16	Fri 3/17/17	LDRD	\$5,000.00	\$41,000.00	Physicist[50%],Electronics Engineer[30%]																								

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57	1.3.4.2.11.6	DAQ Interface Design	60 days	Mon 3/20/17	Fri 6/9/17	LDRD	\$5,000.00	\$41,000.00																													
58	1.3.4.4	Electronics Final Design Review	12 days	Tue 2/6/18	Wed 2/21/18		\$0.00	\$12,000.00																													
59	1.3.4.4.1	Electronics Design Review	1 day	Tue 2/6/18	Tue 2/6/18	LDRD	\$0.00	\$2,000.00																													
60	1.3.4.4.2	Incorporate Review Comments	10 days	Wed 2/7/18	Tue 2/20/18	LDRD	\$0.00	\$8,000.00																													
61	1.3.4.4.3	Complete Final Electronics Design	1 day	Wed 2/21/18	Wed 2/21/18	LDRD	\$0.00	\$2,000.00																													
62	1.3.5	Ancillaries	64 days	Tue 10/4/16	Fri 12/30/16	LDRD	\$0.00	\$56,200.00																													
66	1.3.6	Mechanics	227 days	Mon 10/3/16	Tue 8/15/17	LDRD	\$0.00	\$370,400.00																													
92	1.4	Prototype Assembly	50 days	Tue 2/6/18	Mon 4/16/18	LDRD	\$0.00	\$72,000.00																													
96	1.5	Test Beam Operation	35 days	Fri 1/11/19	Thu 2/28/19	LDRD	\$0.00	\$30,800.00																													
100	1.6	sPHENIX Mechanics Integration	42 days?	Wed 4/18/18	Thu 6/14/18		\$0.00	\$50,000.00																													
106	1.7	MAPS Inner Barrel Review	12 days	Fri 6/15/18	Mon 7/2/18		\$0.00	\$28,000.00																													
110	1.8	Productions	661 days?	Wed 8/1/18	Wed 2/10/21		\$0.00	\$3,003,273.33	Productio																												
144	1.9	Ready for beam	0 days	Wed 2/10/21	Wed 2/10/21		\$0.00	\$0.00																													