

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		▶ 10/1																							
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		▶ 10/1																							
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 (11/2	◆ 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 (11/2																								
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 (7/20																								
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 (8/2																								
9	1.1.5	sPHENIX Installation	0 days	Tue 6/1/21	Tue 6/1/21		\$0.00	\$0.00	ready for b	◆ sPHENIX Insta																							
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	▶ ITS construction																							
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	▶ ITS Electronics Pre-Production																							
12	1.1.8	ALICE ITS Electronics Production	240 days	Thu 7/13/17	Wed 6/13/18		\$0.00	\$0.00	ITS Electr	▶ ITS Electronics Production																							
13	1.1.7	LANL LDRD	781 days	Mon 10/3/16	Mon 9/30/19	LDRD	\$0.00	\$0.00	LDRD	▶ 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 I	▶ sPHENIX MAP																							
19	1.3	Design & Prototyping	363 days?	Mon 10/3/16	Wed 2/21/18	LDRD	\$0.00	\$980,090.91	LDRD/R&I	▶ 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		▶ 12/23																							
21	1.3.2	Readout Test Stand	65 days	Mon 10/3/16	Fri 12/30/16	LDRD	\$0.00	\$45,600.00		▶																							
25	1.3.3	Detector Staves	190 days?	Mon 12/26/16	Fri 9/15/17	LDRD	\$0.00	\$147,000.00		▶																							
29	1.3.4	Electronics	363 days	Mon 10/3/16	Wed 2/21/18	LDRD	\$0.00	\$360,890.91		▶																							
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		▶																							
67	1.3.6.1	obtain ALICE CAD model	0 days	Mon 10/3/16	Mon 10/3/16	LDRD	\$0.00	\$0.00	ALICE CAD	▶ ALICE CAD model																							
68	1.3.6.2	Specifications	55 days	Mon 10/3/16	Fri 12/16/16		\$0.00	\$55,000.00		▶																							
69	1.3.6.2.1	review heat load	40 days	Mon 10/3/16	Fri 11/25/16	LDRD	\$0.00	\$40,000.00		▶ Mechanical Engineer[50%]																							
70	1.3.6.2.2	review mechanical tolerances/distortions	10 days	Mon 11/28/16	Fri 12/9/16	LDRD	\$0.00	\$10,000.00		▶ Mechanical Engineer[50%]																							
71	1.3.6.2.3	review disassembly/repair options	5 days	Mon 12/12/16	Fri 12/16/16	LDRD	\$0.00	\$5,000.00		▶ Mechanical Engineer[50%]																							
72	1.3.6.3	Stave Support Frame & Global Interface to sPHENIX	115 days	Mon 12/19/16	Fri 5/26/17		\$0.00	\$159,800.00		▶																							
73	1.3.6.3.1	initial design	30 days	Mon 12/19/16	Fri 1/27/17	LDRD	\$0.00	\$60,000.00		▶ Mechanical Engineer,Physicist[20%]																							
74	1.3.6.3.2	prototype	60 days	Mon 1/30/17	Fri 4/21/17	LDRD	\$25,000.00	\$53,800.00		▶ Mech Tech[30%],Physicist																							
75	1.3.6.3.3	test	10 days	Mon 4/24/17	Fri 5/5/17	LDRD	\$0.00	\$16,000.00		▶ Mech Tech,Physicist[50%]																							
76	1.3.6.3.4	final design	15 days	Mon 5/8/17	Fri 5/26/17	LDRD	\$0.00	\$30,000.00		▶ Mechanical Engineer																							
77	1.3.6.4	Cooling System	20 days	Mon 11/28/16	Fri 12/23/16		\$0.00	\$38,000.00		▶																							
78	1.3.6.4.1	Design	10 days	Mon 11/28/16	Fri 12/9/16	LDRD	\$0.00	\$20,000.00		▶ Mechanical Engineer																							
79	1.3.6.4.2	Mock up Testing	10 days	Mon 12/12/16	Fri 12/23/16	LDRD	\$10,000.00	\$18,000.00		▶ Mech Tech[50%]																							
80	1.3.6.5	Safety Systems	70 days	Mon 12/26/16	Fri 3/31/17		\$0.00	\$56,000.00		▶																							
81	1.3.6.5.1	review sensors & interlocks	10 days	Mon 12/26/16	Fri 1/6/17	LDRD	\$0.00	\$10,000.00		▶ Mechanical Engineer[50%]																							
82	1.3.6.5.2	electrical interlock design	30 days	Mon 1/9/17	Fri 2/17/17	LDRD	\$5,000.00	\$23,000.00		▶ Electronics Engineer[30%]																							
83	1.3.6.5.3	cooling interlocks design	30 days	Mon 2/20/17	Fri 3/31/17	LDRD	\$5,000.00	\$23,000.00		▶ Mechanical Engineer[30%]																							
84	1.3.6.6	Stave Assembly Tooling	45 days	Mon 5/29/17	Fri 7/28/17		\$0.00	\$41,600.00		▶																							
85	1.3.6.6.1	design	10 days	Mon 5/29/17	Fri 6/9/17	LDRD	\$0.00	\$20,000.00		▶ Mechanical Engineer																							
86	1.3.6.6.2	prototype	30 days	Mon 6/12/17	Fri 7/21/17	LDRD	\$2,000.00	\$11,600.00		▶ Physicist[30%],Mech Tech[20%]																							
87	1.3.6.6.3	final design	5 days	Mon 7/24/17	Fri 7/28/17	LDRD	\$0.00	\$10,000.00		▶ Mechanical Engineer																							
88	1.3.6.7	Mechanics Coneptual Design Review	12 days	Mon 7/31/17	Tue 8/15/17		\$0.00	\$20,000.00		▶																							
89	1.3.6.7.1	Mechanics Design Review	1 day	Mon 7/31/17	Mon 7/31/17	LDRD	\$0.00	\$2,000.00		▶ Mechanical Engineer,Physicist																							
90	1.3.6.7.2	Incorporate Review Comments	10 days	Tue 8/1/17	Mon 8/14/17	LDRD	\$0.00	\$16,000.00		▶ Mech Tech,Physicist[20%]																							
91	1.3.6.7.3	Complete Initall Mechanical Design (for CD-1)	1 day	Tue 8/15/17	Tue 8/15/17	LDRD	\$0.00	\$2,000.00		▶ 8/15																							
92	1.4	Prototype Assembly	50 days	Tue 2/6/18	Mon 4/16/18	LDRD	\$0.00	\$72,000.00		▶																							
93	1.4.1	Stave Framing Design	10 days	Tue 2/6/18	Mon 2/19/18	LDRD	\$0.00	\$8,000.00		▶ Mech Tech[50%],Physicist[30%]																							
94	1.4.2	Assemble prototype	30 days	Tue 2/20/18	Mon 4/2/18	LDRD	\$0.00	\$48,000.00		▶ Elec tech[50%],Mech Tech[50%],Physicist																							
95	1.4.3	Prototype Full System Test	10 days	Tue 4/3/18	Mon 4/16/18	LDRD	\$0.00	\$16,000.00		▶ Physicist[200%],Elec tech[50%],Mech Tech[50%]																							
96	1.5	Test Beam Operation	35 days	Fri 1/11/19	Thu 2/28/19	LDRD	\$0.00	\$30,800.00		▶																							
97	1.5.1	Shipping/Transport	10 days	Fri 1/11/19	Thu 1/24/19	LDRD	\$10,000.00	\$13,733.33		▶ Elec tech[20%],Mech Tech[20%]																							

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