ID	WBS	Task Name	Duration	Start	Finish	2014 2015 2016
1		HPS	89.13 days?	Fri 3/1/13		
3		Beamline Beamline Design	401 days 10 mons	Fri 3/1/13 Fri 3/1/13		
4		Beamline Review	1 day	Fri 12/20/13		12/20 Beamline Review
5	1.1.3	Frascati beampipe 1	8 wks	Tue 4/1/14		Fracati beampipe 1
6 7		SVT Vacuum Box Electron Target	8 wks 10 days	Mon 1/6/14 Mon 1/6/14		
8		SVT Collimator Protection	4 wks	Mon 6/16/14		SVT Collimator Protection
9	1.1.7	Vacuum beam line downstream of chicane	2 wks	Tue 4/1/14	Mon 4/14/14	👆 Vacuum team line downstream of chicane
10		Beam Offset Monitor	4 wks	Mon 6/23/14		Beam Offset Monitor
11	1.1.9	Beam Profile Monitor Frascati Vacuum Chamber	4 wks 12 wks	Tue 6/24/14 Mon 5/12/14		Beam Profile Monitor Frascati Vacuum Chamber
	1.1.11	Photon Dump & Shielding	12 wks	Mon 5/26/14		
14	1.1.12	Installation review	1 day	Mon 8/18/14	Mon 8/18/14	8/18 + nstallation review
	1.1.13	HPS Beamline Installation Beamline Installed	4 wks	Mon 9/1/14		9/26 *Beamline Installed
16		SVT	0 days 365 days	Fri 9/26/14 Mon 3/11/13		
18	1.2.1	SVT Design Review	1 day	Tue 8/20/13	Tue 8/20/13	8/20 pt SVT Design Review
19		Layers 1-3	236 days	Mon 3/11/13		Layers 1-3
20 21		Layer 1-3 Ready Layers 4-6	0 days 8 mons	Mon 2/17/14 Mon 7/1/13		2/17 - Layer 1-3 Ready Layers 4-6
22		Layers 4-6 Layer 4-6 Ready	0 days	Fri 2/21/14		
23	1.2.6	Hybrids Assembly & Wirebonding	7.7 mons	Mon 7/15/13	Thu 2/27/14	Hybrids Assembly & Wirebonding
24 25		C-Support/Cooling		Mon 10/21/13		- Support
26		DAQ Support/Cooling Baseplate		Mon 10/21/13 Mon 10/21/13		DAQ-Support/Cooling Baseplate
	1.2.10	Motion Levers		Mon 10/28/13		Motion Levers
	1.2.11	Vacuum Flanges		Mon 10/28/13		Vacµum flanges
	1.2.12	Shipping Crates	6 wks			Shipping Crates Integration and testing at SLAC
	1.2.13	Integration and testing at SLAC SVT tested and ready for shipment	2 mons 5 days	Mon 2/24/14 Mon 6/9/14		6/9 %-SVT stead and ready for shipment
32	1.2.15	Integration at Jlab	2 wks	Mon 7/21/14		Integration at Jlab
	1.2.16	SVT Ready For Installation	0 days	Fri 8/15/14		\$/15 [™] ⁄⁄⁄⁄⁄ SVT Ready For Installation
34 35		SVT DAQ FE Boards	251 days?	Mon 6/3/13		SVT DAQ
	1.3.1 1.3.1.1	ADC	45 days 6 wks	Tue 6/4/13 Tue 6/11/13		resident to the second
37	1.3.1.2	FPGA	6 wks	Tue 6/11/13	Tue 7/23/13	- PGA
	1.3.1.3	Preamps	6 wks	Tue 6/11/13		C by Proamne
	1.3.1.4 1.3.1.5	Connector Power	6 wks	Tue 6/11/13 Tue 6/11/13		Connector Power
	1.3.1.5	Board	6 wks	Tue 6/11/13		r → Magard
42	1.3.1.7	Assembly	6 wks	Tue 6/11/13		sembly
	1.3.1.8	Schematic	3 wks	Tue 6/4/13		- \$chematic
	1.3.1.9 1.3.1.10	Firmware Assembly	4 wks	Tue 6/25/13 Tue 7/23/13		Firmware G. Assembly
	1.3.1.11	Testing	1 wk	Tue 7/30/13		in Assembly intesting
47	1.3.2	FE Interface Board	27 days	Mon 7/1/13	Tue 8/6/13	□ □ □ □ □ FE Interfa¢e Board
	1.3.2.1	Schematic	1 wk	Mon 7/1/13		q, Schematic Lasembly
	1.3.2.2 1.3.2.3	Assembly Firmware Design	1 day 1 day	Mon 7/8/13 Tue 8/6/13		F Assembly
51	1.3.3	FE Board Tested w/ hybrid	0 days	Wed 8/28/13	Wed 8/28/13	8/28 % FE Board Tested w/ hybrid
52		Flange Board		Mon 10/28/13		Flange Board
	1.3.4.1 1.3.4.2	Connector Fiber		Mon 11/11/13 Mon 11/11/13		Connector Fiber
	1.3.4.2	Power		Mon 11/11/13		Power
56	1.3.4.4	Board	3 wks	Mon 11/11/13	Fri 11/29/13	Board Description of the second secon
	1.3.4.5	Assembly	3 wks	Mon 12/2/13		Assembly
	1.3.4.6 1.3.4.7	Schematic Testing	2 wks	Mon 10/28/13 Mon 1/6/14		Schematic Testing
60		Flange DAQ Tested	0 days	Fri 1/10/14		1/10 Flange DAQ Tested
61	1.3.6	DAQ	150 days	Thu 7/25/13		
	1.3.6.1	SVT COB RTM	4 wks	Mon 10/7/13		SVT COB
	1.3.6.2	Custom Board	4 wks	Mon 10/7/13 Mon 10/7/13		⇒ KIM ⇒ Custom Board
65	1.3.6.4	Crates	4 wks	Mon 10/7/13	Fri 11/1/13	Crates Crates
	1.3.6.5	Fiber Cables	4 wks	Mon 10/7/13		Fiber Cables
	1.3.6.6 1.3.6.7	Schematic Firmware	4 wks		Wed 8/21/13 Wed 10/30/13	Schematic Firmware
	1.3.6.8	Software			Wed 1/22/14	Software
70	1.3.6.9	Testing	6 wks	Thu 1/23/14	Wed 3/5/14	Testing
71		DAQ Full system Test	0 days	Mon 6/2/14		6/2 * DAQ Full system Test
72 73	1.3.8.1	Hybrid Hybrid Misc Part	70 days 6 wks	Mon 6/3/13 Mon 6/17/13		
	1.3.8.2	Hybrid Board		Mon 6/17/13		Hybrid Board
75	1.3.8.3	Hybrid Assembly	3 wks	Mon 6/17/13	Fri 7/5/13	📛 Hybrid Assembly
	1.3.8.4	Schematic	2 wks	Mon 6/3/13	Fri 6/14/13 Wed 7/24/13	<mark>⇒ Schematic</mark>
	1.3.8.5	Assembly Board Testing	1.5 wks			
	1.3.8.7	Hybrid qualification	4 wks	Wed 7/24/13 Wed 7/31/13		
80	1.3.8.8	Single Hybrid qualification	0 days	Wed 8/28/13	Wed 8/28/13	8/2¢ ₹ Single Hybrid qualification
81	1.3.8.9	Hybrids Testing	4 wks	Mon 8/12/13	Fri 9/6/13	
						Page 1

ID WBS	Task Name	Duration	Start	Finish		2014		2015		2016 A S O N D J F M A M J J A
82 1.3.9	Flex Cable	25 days	Tue 10/1/12	Mon 11/4/13		O N D J F M A M J J	AS	ONDJFMA	MJJ	A S O N D J F M A M J J A
83 1.3.9.1		3 wks		Mon 10/21/13		Misc Parts				
84 1.3.9.2	2 Cable	3 wks	Tue 10/1/13	Mon 10/21/13	s =	Cable				
85 1.3.9.3 86 1.3.9.4		3 wks		Mon 10/21/13	1 1	Assembly Schematic				
86 1.3.9.4		4 wks	Tue 10/1/13 Tue 10/29/13	Mon 10/28/13 Mon 11/4/13		Testing				
88 1.3.10		0 days	Fri 1/10/14			1/10 Flex Cable w/ hybrid&FE board	ď			
89 1.3.11		1 day?	Mon 11/4/13			I Power Supplies & Cables				
90 1.3.12 91 1.4	2 HV/LV Cables ECAL	1 wk 230 days	Mon 10/28/13 Mon 9/2/13			HV/LV Cables	= ECAL			
92 1.4.1	Fix 2-shorted HV groups on top-left	230 days	Mon 9/2/13 Mon 9/2/13			2-shorted HV groups on top-left				
93 1.4.2	Order new motherboard	6 wks	Mon 9/2/13	Fri 10/11/13	B	Order new motherboard				
94 1.4.3 95 1.4.4	New motherboards and amplifiers New pre-amplifier boards	8 wks	Mon 10/14/13			New motherboards and amplifiers New pre-amplifier boards				
96 1.4.5	Assembling ECAL	6 wks	Mon 9/2/13 Mon 1/20/14			New pre-amplifier boards Assembling ECA	4			
97 1.4.6	Test and Calibrate Ecal	4 mons	Mon 4/14/14		4 - 1			d Calibrate Ecal		
98 1.4.7	New mounting system	4 wks	Mon 1/6/14			New mounting system	J l			
99 1.4.8 100 1.5	ECAL Ready for the installation TDAQ	0 days	Fri 8/1/14 Fri 3/1/13		·	8/1 :	* ECAL I	Ready for the installation TDAQ		
100 1.5	EPICS information into data stream	511 days 4 wks	Mon 1/6/14			EPICS information into data	a stream	IDAQ		
102 1.5.2	Software TDAQ	4 wks	Mon 1/6/14	Fri 1/31/14		Software TDAQ				
103 1.5.3 104 1.5.4	Hardware TDAQ	4 wks	Fri 3/1/13 Mon 9/2/13			Update firmware on FADC250				
104 1.5.4	Update firmware on FADC250 New firmware for cluster finding	4 wks	Mon 9/2/13 Mon 9/30/13		1 ""	New firmware for cluster finding				
106 1.5.6	New firmware for SSP	2 wks	Mon 10/28/13	Fri 11/8/13		New firmware for SSP				
107 1.5.7	Trigger monitoring tools		Mon 11/11/13			Trigger monitoring tools				
108 1.5.8 109 1.5.9	TDAQ ready Data Storage	0 days 105 days	Fri 12/6/13 Mon 10/6/14			12/6 ♣ TDAQ ready		Data St	orage	
110 1.6	Slow Control	261 days						Control		
111 1.6.1	Chiller control programming	2 wks	Mon 1/20/14	Fri 1/31/14		Chiller control programming	ng			
112 1.6.2 113 1.6.3	I/O modules for control	7 mons	Mon 12/2/13			I/O	modules	for control out programming		
113 1.6.3 114 1.6.4	Sensor readout programming SVT voltage control	30 wks				Sen		out programming		
115 1.6.5	ECAL voltage control	13 wks	Mon 9/2/13	Fri 11/29/13	-	ECAL voltage control				
116 1.6.6	SVT motor controls	2 wks	Mon 7/21/14	Fri 8/1/14		_		tor controls		
117 1.6.7 118 1.6.8	Target motor control Software interlock	1 wk	Mon 8/4/14 Mon 1/6/14			Software inte	T -	motor control		
118 1.6.8	Software interlock Hardware interlocks	17 wks 7 mons	Mon 1/6/14 Mon 1/6/14					interlocks		
120 1.6.10	Beamline control screens	5 mons	Tue 4/1/14	Mon 8/18/14	ı		Beam	nline control screens		
121 1.6.11	1 EPICS Scalers programing	34 wks	Mon 8/5/13			EPICS Scalers p	programing	g		
122 1.6.12 123 1.6.13		1 wk	Mon 7/28/14 Tue 4/1/14					configuration g of controls		
123 1.6.13 124 1.7	Installation & Commissioning	40 days	Mon 8/4/14					Installation & Commissioning		
125 1.7.1	SVT installation	2 days	Mon 8/4/14	Tue 8/5/14		l r	SVT ins	stallation		
126 1.7.2 127 1.7.3	SVT Commissioning	40 hrs	Tue 8/26/14					T Commissioning		
127 1.7.3 128 1.7.4	ECAL Commissioning TDAQ Commissioning	40 hrs 2 wks	Tue 9/2/14 Mon 8/4/14			L		CAL Commissioning Commissioning		
129 1.7.5	Slow Control Commissioning	1 wk	Tue 8/19/14	Mon 8/25/14			Slow	Control Commissioning		
130 1.7.6	HPS ready for the beam	0 days	Fri 9/26/14				9/26	HPS ready for the beam	, Duran'	
131 1.8 132 1.8.1	Electron Running Beamline Commissioning (2014)	110 days	Mon 9/29/14 Mon 9/29/14].	Beamline Commissioning (2014)	on Running	
132 1.8.1	Detector Commissioning Run (2014)	1 WK					`,	Detector Commissioning (2014)		
134 1.8.3	Data Run 2.2GeV (2014)	2 wks	Mon 10/20/14	Fri 10/31/14	4 : :		- 1	Data Run 2.2GeV (2014)		
135 1.8.4	Data Run 1.1 GeV (2014)	2 wks	Mon 11/3/14		ή [- 1	Data Run 1.1 GeV (2014)	missioning (acc	15)
136 1.8.5 137 1.8.6	Beamline recommissioning (2015) Data Run (2015)	2 wks 8 wks	Mon 1/5/15 Mon 1/19/15				- 1	Beamline recom		,
138 1.9	SLAC Travel Meetings	690 days	Mon 9/9/13	Fri 5/27/16	SLAC Travel Meetings			Daid N	,,	<u> </u>
139 1.9.1	Consultation 1 at JLAB	5 days	Mon 9/9/13	Fri 9/13/13	B Col	onsultation 1 at JLAB				
140 1.9.2	Consultation 2 at II AB	-	Mon 11/11/13			Collaboration Meeting November 2013	Iltation 2 at	JIAB		
141 1.9.3 142 1.9.4	Consultation 2 at JLAB Collaboration Meeting November 2014	5 days 5 days	Mon 6/2/14 Mon 11/10/14			a Consul	панип 2 а	t JLAB Collaboration Meeting Nov	rember 2014	
143 1.9.5	Collaboration Meeting May 2015	5 days	Fri 5/1/15	Thu 5/7/15	5		- 1		Collaboration	n Meeting May 2015
144 1.9.6	Collaboration Meeting November 2015	5 days	Mon 5/18/15	Fri 5/22/15	5		- 1			ion Meeting November 2015
145 1.9.7 146 1.10	Collaboration Meeting May 2016	5 days				LAC Travel for Commissioning and Running				Collaboration Meeting May 2016
146 1.10 147 1.10.1	SLAC Travel for Commissioning and Running Integration and Installation SVT at JLAB	160 days 2 wks			4 - 1			ion and Installation SVT at JLAB		
148 1.10.2	2 Commissioning	2 wks	Mon 9/22/14	Fri 10/3/14		~		Commissioning		
149 1.10.3				Fri 10/17/14				Commissioning (2014)		
150 1.10.4 151 1.10.5				Fri 10/31/14 Fri 11/14/14				Run 2.2 GeV (2014) Run 1.1 GeV (2014)		
152 1.10.6		2 wks						Commissioning		
153 1.10.7	7 Run 2.2 GeV (2015)	4 wks	Mon 1/19/15	Fri 2/13/15	5			Run 2.2 Ge\	V (2015)	
154 1.10.8			Mon 2/16/15					Run 6.6		
155 1.11 156 1.12			Thu 6/13/13 Wed 5/22/13	Fri 3/13/15 Thu 8/25/16				Project	t management	
157 1.12.1	1 UCSC FY13		Wed 5/22/13 Wed 5/22/13			UCSC FY13				
158 1.12.2	2 UCSC FY14	10.59 mons	Tue 10/1/13	Wed 8/6/14	<u> </u>		UCSC F	FY14		
159 1.12.3			Wed 10/1/14							UCSC FY15
160 1.12.4	4 UCSC FY16	11.66 mons	ivion 10/5/15	Thu 8/25/16	1 1					
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