

WBS Path	Activity ID	Activity Name	Total Float	At Completion	Start	Finish	2021			2022		2023
							FY21			FY22	FY23	
01.03.01.03.01	S172800	Prepare fiber assemblies for final blocks	4	529	21-Jun-19 A	02-Aug-21						
01.06.04.02	S269500	Timing System Prototype: evaluate performance, Final Design and Production Readiness Review	15	309	24-Feb-20 A	14-May-21						
02.04.01.03	S330640	Prototype System Development Labor	12	273	16-Mar-20 A	15-Apr-21						
02.04.01.03	S330642	Prototype System Development M&S	12	273	16-Mar-20 A	15-Apr-21						
02.04.01.04	S331720	Design Cooling Manifolds for TPC	4	273	17-Mar-20 A	16-Apr-21						
02.04.01.04	S331710	Design Cooling Manifolds for EMCal	4	267	18-Mar-20 A	09-Apr-21						
01.03.01.03.01	S171800	Procure EMCAL Epoxy for Final Blocks - Delivery Acceptance	4	240	03-Aug-20 A	19-Jul-21						
01.03.01.03.01	S172500	Order parts and fabricate molds for EMCal Sectors 13-64 Blocks - Delivery Acceptance	4	240	03-Aug-20 A	19-Jul-21						
01.03.02.03.03	S195400	Procure EMCAL Mechanical Parts for Final Sectors - Delivery Acceptance	0	143	14-Sep-20 A	12-Apr-21						
02.01.04	S276900	2021 Facility Support Systems L3 Project Management	2	250	01-Oct-20 A	30-Sep-21						
01.01.02	S103200	Mgmt Labor - A - MIE - FY21	0	250	01-Oct-20 A	30-Sep-21*						
01.01.02	S103310	Mgmt labor - B - BNL Contributed Labor - FY21 - CA-D Resource(s)	0	250	01-Oct-20 A	30-Sep-21*						
01.01.02	S103300	Mgmt labor - B - BNL Contributed Labor - FY21 - Physics Resource(s)	0	250	01-Oct-20 A	30-Sep-21*						
02.01.02	S274700	2021 Magnet Project Management	7	250	01-Oct-20 A	30-Sep-21						
02.01.02	S275300	2021 Cryo L3 Project Management	7	250	01-Oct-20 A	30-Sep-21						
02.01.02	S275800	2021 PS & Quench Protection L3 Project Management	7	250	01-Oct-20 A	30-Sep-21						
02.01.04	S277500	2021 Detector Support Systems L3 Project Management	0	250	01-Oct-20 A	30-Sep-21						
02.01.05	S278100	2021 Integration & Installation Project Management	4	249	02-Oct-20 A	30-Sep-21						
02.04.01.03	S330700	Create Layout/Schematic Drawings & Design, Specification Control Documents, Assembly & Detail Drawings for Detector Elec	12	130	23-Oct-20 A	03-May-21						
02.03.01	S313000	CC Drive & Alignment System - BNL Oversight - Physics Resource(s)	13	111	03-Nov-20 A	15-Apr-21						
02.03.01	S313100	CC Drive & Alignment System - Vendor Leadtime	13	111	03-Nov-20 A	15-Apr-21						
02.03.01	S313010	CC Drive & Alignment System - BNL Oversight - CA-D Resource(s)	13	111	03-Nov-20 A	15-Apr-21						
01.03.02.02.03	S187500	Receive, unpack, log & inspect final blocks	0	295	23-Nov-20 A	31-Jan-22						
01.03.02.02.03	S187800	Install reflectors on final blocks Labor	0	295	23-Nov-20 A	31-Jan-22						
01.03.02.02.03	S187900	Install reflectors on final blocks M&S	0	295	23-Nov-20 A	31-Jan-22						
01.03.01.03.01	S172870	EMCal Block Production QA	4	208	01-Dec-20 A	27-Sep-21						
02.02.03.02.04.01	S289500	Engineering Support for Procure LN2 supply transfer line system	7	104	02-Dec-20 A	30-Apr-21						
02.04.01.04	S331730	Design Coolin Manifolds for INTT	4	95	08-Dec-20 A	23-Apr-21						
02.04.01.04	S331770	Conceptual Design for Cooling Tube Routing from Detector to EMCal manifold	4	120	08-Dec-20 A	28-May-21						

WBS Path	Activity ID	Activity Name	Total Float	At Completion	Start	Finish	2021			2022		2023
							FY21			FY22	FY23	
02.04.01.04	S331780	Conceptual Design for Cooling Tube Routing from Detector to TPC manifold	4	125	08-Dec-20 A	07-Jun-21						
02.04.01.04	S331790	Conceptual Design for Cooling Tube Routing from Detector to INTT, MVTX manifold	4	130	14-Dec-20 A	18-Jun-21						
02.02.03.01.04.02.01	S1006240	AET submits PDR report to BNL for approval of IP8 Cold Box Assembly	1	122	11-Jan-21 A	02-Jul-21						
01.03.02.03.03	S196300	Build mechanical fixtures for final sectors	3	60	12-Jan-21 A	07-Apr-21						
01.03.02.03.03	S196200	Build mechanical enclosures for final sectors	0	63	12-Jan-21 A	12-Apr-21						
01.03.02.03.03	S196400	Build cooling system for final sectors	3	93	12-Jan-21 A	24-May-21						
02.02.03.02.04.01	S289900	(LN2 supply transfer line system) Detail dwg package	7	90	18-Jan-21 A	25-May-21						
01.03.02.02.03	S187600	Install light guides on final blocks Labor	0	257	21-Jan-21 A	31-Jan-22						
01.03.02.02.03	S187700	Install light guides on final blocks M&S	0	257	21-Jan-21 A	31-Jan-22						
01.03.02.02.03	S188000	Install SiPMs daughterboards on final blocks Labor	0	259	22-Jan-21 A	03-Feb-22						
01.03.02.02.03	S188200	Glue final blocks together into modules	0	259	22-Jan-21 A	03-Feb-22						
01.03.02.02.03	S188100	Install SiPMs daughterboards on final blocks M&S	0	259	22-Jan-21 A	03-Feb-22						
01.03.02.03.03	S196500	Install modules in final sectors	0	257	26-Jan-21 A	03-Feb-22						
02.04.02.06	S343864	Start Track Modification - AH Survey and Grout Plates Labor - External	7	64	01-Feb-21 A	30-Apr-21						
02.04.02.06	S343865	Start Track Modification - AH Survey and Grout Plates M&S - External	7	64	01-Feb-21 A	30-Apr-21						
02.02.03.02.04.01	S290500	Procure LN2 supply transfer line system, Phase 3 (Final Design Review) - Delivery Acceptance	0	87	02-Feb-21 A	04-Jun-21						
01.02.05.04	S143250	TPC Front End Electronics Protection Components	14	96	15-Feb-21 A	30-Jun-21						
01.05.02.02	S232600	Procure EMCAL External LV/Bias Signal/Comm/Test Cables Sectors 13-64 - Provide Requirements to Procurement	5	70	22-Feb-21 A	28-May-21						
02.04.01.04	S331800	Create Layout/Schematic Drawings & Design, Specification Control Documents, Assembly & Detail Drawings for Detector Gas	4	94	22-Feb-21 A	02-Jul-21						
01.03.02.03.03	S196700	Install readout electronics on final sectors	0	240	22-Feb-21 A	04-Feb-22						
01.03.02.03.03	S196800	Install cables & cooling system on final sectors	0	240	22-Feb-21 A	04-Feb-22						
02.04.01.04	S331750	Conceptual Design for Routing Detector Cooling Chiller Systems to Det Manifolds	4	59	23-Feb-21 A	14-May-21						
01.03.02.03.03	S196900	Test final sectors with LEDs & cosmic rays	0	239	23-Feb-21 A	04-Feb-22						
01.05.02.02	S229300	Fabricate EMCAL Production Preamp Boards Sectors 13-64 - Delivery Acceptance	0	27	26-Feb-21 A	05-Apr-21						
01.05.02.02	S229400	Test EMCAL Preamp Boards: Production Sectors 13-64	0	76	26-Feb-21 A	14-Jun-21						
02.02.01.01	S278800	LESHC-PSSC Review Cryogenic Safety Review	0	292	08-Mar-21 A	04-May-22						
01.03.02.03.03	S197000	Repair or rework any sectors as required	0	224	16-Mar-21 A	04-Feb-22						
01.03.01.03.02	S174600	Fabricate final blocks sector 29	4	6	26-Mar-21 A	02-Apr-21						
01.05.02.02	S229405	Test EMCAL Preamp Boards: Production Sectors 13-64 - Contributed Labor	0	55	29-Mar-21 A	14-Jun-21						

WBS Path	Activity ID	Activity Name	Total Float	At Completion	Start	Finish	2021			2022		2023
							FY21		FY22		FY23	
							Gantt Chart					
02.04.01.03	S330616	Prelim Design/Safety Reviews Complete for Det EI Racks and Rack generic support systems	12	0	01-Apr-21	01-Apr-21	◆ Prelim Design/Safety Reviews Complete for Det EI Racks and Rack generic support systems					
02.02.03.01.04.02.02	S1006640	Draft PDR of three Manifold Jumper Transfer Lines	17	10	01-Apr-21*	14-Apr-21						
01.06.01.03	S255600	Procure DAQ Production Boards - Vendor Selection	12	25	01-Apr-21	05-May-21						
01.07	S273700	Oversight of sPHENIX MBD Digitizers Procurement	12	160	01-Apr-21	17-Nov-21						
01.03.01.03.02	S174700	Fabricate final blocks sector 30	4	6	05-Apr-21	12-Apr-21						
01.03.01.03.02	S174800	Fabricate final blocks sector 31	4	6	13-Apr-21	20-Apr-21						
02.03.01	S313200	CC Drive & Alignment System - Delivery Acceptance - Physics Resource(s) - Labor	13	5	16-Apr-21	22-Apr-21						
02.03.01	S313210	CC Drive & Alignment System - Delivery Acceptance - CA-D Resource(s) - Labor	13	5	16-Apr-21	22-Apr-21						
02.03.01	S313250	CC Drive & Alignment System - Delivery Acceptance - M&S	13	5	16-Apr-21	22-Apr-21						
01.03.01.03.02	S174900	Fabricate final blocks sector 32	4	6	21-Apr-21	28-Apr-21						
02.05.03	S348600	Ready to Assemble Cradle Carriage in AH	13	0	22-Apr-21	22-Apr-21	◆ Ready to Assemble Cradle Carriage in AH					
02.03.01	S311400	Carriage Cradle - Components Ready for Installation	13	0	22-Apr-21	22-Apr-21	◆ Carriage Cradle - Components Ready for Installation					
02.03.01	S313255	Completed - CC Drive & Alignment System - Delivery Acceptance - M&S	13	0	22-Apr-21	22-Apr-21	◆ Completed - CC Drive & Alignment System - Delivery Acceptance - M&S					
01.03.01.03.02	S175000	Fabricate final blocks sector 33	4	6	29-Apr-21	06-May-21						
02.04.02.06	S343866	Start Track Modification - AH Finish AH Installation	7	0	30-Apr-21	30-Apr-21	◆ Start Track Modification - AH Finish AH Installation					
02.05.03	S348800	Assemble base, carriage alignment and carriage roller supports - M&S	7	10	03-May-21	14-May-21						
02.04.01.03	S330800	Review Detector Electronics Racks and Rack generic support systems Design/Safety - CA-D Resource(s)	12	10	04-May-21	17-May-21						
02.04.01.03	S1002799	Review Detector Electronics Racks and Rack generic support systems Design/Safety - Physics Resource(s)	12	10	04-May-21	17-May-21						
01.06.01.03	S255700	Procure DAQ Production Boards - Contract Award(s)	12	0	06-May-21	06-May-21	◆ Procure DAQ Production Boards - Contract Award(s)					
01.06.01.03	S255800	Procure DAQ Production Boards - Contract/PO - Leadtime	12	80	06-May-21	27-Aug-21						
01.03.01.03.02	S175100	Fabricate final blocks sector 34	4	6	07-May-21	14-May-21						
01.06.04.02	S269502	Procurement Readiness Review - DAQ Timing System	15	1	14-May-21	14-May-21						
01.06.04.02	S269501	Final Design Review - DAQ Timing System	15	1	17-May-21	17-May-21						
02.04.01.04	S331760	Conceptual Design for Cooling Tube Routing from Detector to IHCAl manifold	4	5	17-May-21	21-May-21						
01.03.01.03.02	S175200	Fabricate final blocks sector 35	4	6	17-May-21	24-May-21						
01.06.04.02	S269600	Update design specifications; incorporate final design choice	15	10	17-May-21	28-May-21						
02.05.03	S348915	Assemble HCal cradle onto base - M&S	7	15	17-May-21	07-Jun-21						
02.04.01.03	S330900	Address Action Items from Detector Electronics Racks and Rack generic support systems Design & Safety Reviews	12	10	18-May-21	01-Jun-21						
01.03.01.03.02	S175300	Fabricate final blocks sector 36	4	6	25-May-21	02-Jun-21						
01.06.04.03	S269700	Timing System Production (FPGA Boards) - Provide Requirements to Procurement	15	5	01-Jun-21	07-Jun-21						
01.05.02.02	S232700	Procure EMCal External LV/Bias Signal/Comm/Test Cables Sectors 13-64 - Prepare & Send Solicitation	5	30	01-Jun-21	13-Jul-21						
02.04.01.03	S331000	Design/Safety Reviews Complete, Detector Electronics Racks and Rack generic support systems Components Released for Prod	12	0	01-Jun-21	01-Jun-21	◆ Design/Safety Reviews Complete, Detector Electronics Racks and Rack generic support systems Components Released for Prod					
02.04.01.03	S331100	Prepare Detector Electronics Racks and Rack generic support systems Components Procurement Package(s)	12	60	02-Jun-21	25-Aug-21						
01.03.01.03.02	S175400	Fabricate final blocks sector 37	4	6	03-Jun-21	10-Jun-21						
02.02.03.02.04.01	S290510	Completed - Procure LN2 supply transfer line system, Phase 3 (Final Design Review) - Delivery Acceptance	0	0	04-Jun-21	04-Jun-21	◆ Completed - Procure LN2 supply transfer line system, Phase 3 (Final Design Review) - Delivery Acceptance					
02.02.03.02.04.01	S290600	(LN2 supply transfer line system) Drawings approvals	0	5	07-Jun-21	11-Jun-21						
02.05.03	S348920	Completed - Assemble HCal cradle onto base	7	0	07-Jun-21	07-Jun-21	◆ Completed - Assemble HCal cradle onto base					
02.05.04	S350600	Transport Assembled Outer HCal Sectors to AH (Partial Shipment) - Labor - CA-D Resource(s)	7	1	08-Jun-21	08-Jun-21						
02.05.04	S350700	Transport Assembled Outer HCal Sectors to AH (Partial Shipment) - M&S	7	1	08-Jun-21	08-Jun-21						

WBS Path	Activity ID	Activity Name	Total Float	At Completion	Start	Finish	2021			2022			2023
							FY21	FY22	FY23	FY21	FY22	FY23	
02.05.04	S1002439	Transport Assembled Outer HCal Sectors to AH (Partial Shipment) - Labor - Physics Resource(s)	7	1	08-Jun-21	08-Jun-21							
01.06.04.03	S269800	Timing System Production (FPGA Boards) - Prepare & Send Solicitation	15	5	08-Jun-21	14-Jun-21							
02.05.04	S350800	Install Partial Outer HCal (Prior to SC Magnet Install) - Labor - CA-D Resource(s)	7	58	09-Jun-21	30-Aug-21							
02.05.04	S350900	Install Partial Outer HCal (Prior to SC Magnet Install) - M&S	7	58	09-Jun-21	30-Aug-21							
02.05.04	S1002519	Install Partial Outer HCal (Prior to SC Magnet Install) - Labor - Physics Resource(s)	7	58	09-Jun-21	30-Aug-21							
01.03.01.03.02	S175500	Fabricate final blocks sector 38	4	6	11-Jun-21	18-Jun-21							
02.02.03.02.04.02	S290700	(LN2 supply transfer line system) Raw Material procurement Labor	5	45	14-Jun-21	16-Aug-21							
02.02.03.02.04.02	S290800	Procure LN2 supply transfer line system, Phase 4 (Raw Material) - Leadtime	0	45	14-Jun-21	16-Aug-21							
01.06.04.03	S269900	Timing System Production (FPGA Boards) - Vendor Responses	15	5	15-Jun-21	21-Jun-21							
01.03.01.03.02	S175600	Fabricate final blocks sector 39	4	6	21-Jun-21	28-Jun-21							
01.06.04.03	S270000	Timing System Production (FPGA Boards) - Vendor Selection	15	5	22-Jun-21	28-Jun-21							
01.06.04.03	S270100	Timing System Production (FPGA Boards) - Contract Award(s)	15	0	29-Jun-21								
01.03.01.03.02	S175700	Fabricate final blocks sector 40	4	6	29-Jun-21	07-Jul-21							
01.06.04.03	S270200	Timing System Production (FPGA Boards) - Contract/PO) - Leadtime	15	50	29-Jun-21	08-Sep-21							
02.04.01.04	S331900	Review Detector Gas and Cooling Services Systems Design/Safety - CA-D Resource(s)	4	10	06-Jul-21	19-Jul-21							
02.04.01.04	S1002879	Review Detector Gas and Cooling Services Systems Design/Safety - Physics Resource(s)	4	10	06-Jul-21	19-Jul-21							
02.02.03.01.04.02.01	S1006280	BNL review for PDR approval	1	10	06-Jul-21	19-Jul-21							
01.03.01.03.02	S175800	Fabricate final blocks sector 41	4	6	08-Jul-21	15-Jul-21							
01.05.02.02	S232800	Procure EMCAL External LV/Bias Signal/Comm/Test Cables Sectors 13-64 - Vendor Responses	5	10	14-Jul-21	27-Jul-21							
01.03.01.03.02	S175900	Fabricate final blocks sector 42	4	6	16-Jul-21	23-Jul-21							
02.04.01.04	S332000	Address Action Items from Detector Gas and Cooling Services Systems Design & Safety Reviews	4	10	20-Jul-21	02-Aug-21							
02.02.03.01.04.02.01	S1006360	AET submits IDR to BNL for approval	1	10	20-Jul-21	02-Aug-21							
01.03.01.03.02	S176000	Fabricate final blocks sector 43	4	6	26-Jul-21	02-Aug-21							
01.05.02.02	S232900	Procure EMCAL External LV/Bias Signal/Comm/Test Cables Sectors 13-64 - Vendor Selection	5	20	28-Jul-21	24-Aug-21							
02.04.01.04	S332100	Design/Safety Reviews Complete, Detector Gas and Cooling Services Systems Components Released for Production	4	0		02-Aug-21							
02.02.03.01.04.02.01	S1006400	BNL review for IDR approval	1	5	03-Aug-21	09-Aug-21							
01.03.01.03.02	S176100	Fabricate final blocks sector 44	4	6	03-Aug-21	10-Aug-21							
02.04.01.06	S333900	Analyze Gas Mixing House & Gas Pad Components Requirements - CA-D Resource(s)	4	30	03-Aug-21	14-Sep-21							
02.04.01.06	S1003039	Analyze Gas Mixing House & Gas Pad Components Requirements - Physics Resource(s)	4	30	03-Aug-21	14-Sep-21							
02.02.03.01.04.02.01	S1006440	AET submits FDR report to BNL for approval	1	20	10-Aug-21	07-Sep-21							
01.03.01.03.02	S176200	Fabricate final blocks sector 45	4	6	11-Aug-21	18-Aug-21							
02.02.03.02.04.02	S290900	Procure LN2 supply transfer line system, Phase 4 (Raw Material) - Delivery Acceptance	0	5	17-Aug-21	23-Aug-21							
01.03.01.03.02	S176300	Fabricate final blocks sector 46	4	6	19-Aug-21	26-Aug-21							
02.02.03.02.04.02	S290910	Completed - Procure LN2 supply transfer line system, Phase 4 (Raw Material) - Delivery Acceptance	0	0		23-Aug-21							
02.02.03.02.04.02	S291000	(LN2 supply transfer line system) Main fabrication items	0	90	24-Aug-21	05-Jan-22							
01.05.02.02	S233000	Procure EMCAL External LV/Bias Signal/Comm/Test Cables Sectors 13-64 - Contract Award(s)	5	0	25-Aug-21								
01.05.02.02	S233100	Procure EMCAL External LV/Bias Signal/Comm/Test Cables Sectors 13-64 - Contract/PO - Leadtime	5	100	25-Aug-21	21-Jan-22							

◆ Timing System Production (FPGA Boards) - Contract Award(s)

◆ Design/Safety Reviews Complete, Detector Gas and Cooling Services Systems Components Released for Production

◆ Completed - Procure LN2 supply transfer line system, Phase 4 (Raw Material) - Delivery Acceptance

◆ Procure EMCAL External LV/Bias Signal/Comm/Test Cables Sectors 13-64 - Contract Award(s)

WBS Path	Activity ID	Activity Name	Total Float	At Completion	Start	Finish	2021			2022			2023
							FY21			FY22			FY23
01.05.02.02	S233250	Trunk Signal Cables - EMCal	10	100	25-Aug-21	21-Jan-22							
01.05.02.02	S244450	Trunk Signal Cables - OuterHCal	10	100	25-Aug-21	21-Jan-22							
02.04.01.03	S331200	Evaluate & Process Detector Electronics Racks and Rack generic support systems Components Bids	12	60	26-Aug-21	22-Nov-21							
01.03.01.03.02	S176400	Fabricate final blocks sector 47	4	6	27-Aug-21	03-Sep-21							
01.06.01.03	S255900	Procure DAQ Production Boards - Delivery Acceptance	12	5	30-Aug-21	03-Sep-21							
02.05.04	S350910	Completed - Install Partial Outer HCal (Prior to SC Magnet Install)	7	0		30-Aug-21							
02.05.03	S349100	Install magnet mounting feet - Labor - CA-D Resource(s)	7	10	31-Aug-21	14-Sep-21							
02.05.03	S349200	Install magnet mounting feet - M&S	7	10	31-Aug-21	14-Sep-21							
02.05.03	S1002239	Install magnet mounting feet - Labor - Physics Resource(s)	7	10	31-Aug-21	14-Sep-21							
02.01.01	S274320	RHIC FY22 Run	0	81	01-Sep-21*	30-Dec-21							
01.03.01.03.02	S176500	Fabricate final blocks sector 48	4	6	07-Sep-21	14-Sep-21							
01.06.01.03	S256000	DAQ Production Boards: Firmware updates	12	80	07-Sep-21	04-Jan-22							
02.02.03.01.04.02.01	S1006480	AET begins material procurement	1	5	08-Sep-21	14-Sep-21							
01.06.04.03	S270300	Timing System Production (FPGA Boards) - Delivery Acceptance	15	5	09-Sep-21	15-Sep-21							
02.05.05	S353100	Transport SC Magnet from 912 to AH - Labor - Physics Resource(s)	7	2	15-Sep-21	16-Sep-21							
02.05.05	S353200	Transport SC Magnet from 912 to AH - M&S	7	2	15-Sep-21	16-Sep-21							
02.05.05	S353110	Transport SC Magnet from 912 to AH - Labor - CA-D Resource(s)	7	2	15-Sep-21	16-Sep-21							
01.03.01.03.02	S176600	Fabricate final blocks sector 49	4	6	15-Sep-21	22-Sep-21							
02.04.01.06	S334000	Create Gas Mixing House & Gas Pad Components Schematic Design and Specification Control Documents C	4	30	15-Sep-21	27-Oct-21							
02.04.01.06	S1003079	Create Gas Mixing House & Gas Pad Components Schematic Design and Specification Control Documents P	4	30	15-Sep-21	27-Oct-21							
02.02.03.01.04.02.01	S1006520	Fabricate the IP8 Cold Box Assembly	1	60	15-Sep-21	13-Dec-21							
01.06.04.03	S270600	Timing System Production: install timing system	15	30	16-Sep-21	28-Oct-21							
01.06.04.03	S270610	Timing System Production: install timing system	15	30	16-Sep-21	28-Oct-21							
02.05.05	S353300	Install SC Magnet on Cradle - Labor - Physics Resource(s)	7	2	17-Sep-21	20-Sep-21							
02.05.05	S353400	Install SC Magnet on Cradle - M&S	7	2	17-Sep-21	20-Sep-21							
02.05.05	S353310	Install SC Magnet on Cradle - Labor - CA-D Resource(s)	7	2	17-Sep-21	20-Sep-21							
02.05.05	S353410	Completed - Install SC Magnet on Cradle	7	0		20-Sep-21							
02.05.05	S353500	Align/Survey SC Magnet to Cradle - Labor - Physics Resource(s)	7	10	21-Sep-21	04-Oct-21							
02.05.05	S353600	Align/Survey SC Magnet to Cradle - M&S	7	10	21-Sep-21	04-Oct-21							
02.05.05	S353510	Align/Survey SC Magnet to Cradle - Labor - CA-D Resource(s)	7	10	21-Sep-21	04-Oct-21							
01.03.01.03.02	S176700	Fabricate final blocks sector 50	4	6	23-Sep-21	30-Sep-21							
01.01.01	S101016	FY22 funding available	0	0	01-Oct-21*								
01.03.01.03.02	S176800	Fabricate final blocks sector 51	4	6	01-Oct-21	08-Oct-21							
01.01.02	S103400	Mgmt labor - A - MIE - FY22	0	63	01-Oct-21*	05-Jan-22							
01.01.02	S103510	Mgmt labor - B - BNL Contributed Labor - FY22 - CA-D Resource(s)	0	63	01-Oct-21*	05-Jan-22							
01.01.02	S103500	Mgmt labor - B - BNL Contributed Labor - FY22 - Physics Resource(s)	0	63	01-Oct-21*	05-Jan-22							
02.01.02	S274800	2022 Magnet Project Management	7	250	01-Oct-21	30-Sep-22							
02.01.02	S275400	2022 Cryo L3 Project Management	7	250	01-Oct-21	30-Sep-22							
02.01.02	S275900	2022 PS & Quench Protection L3 Project Management	7	250	01-Oct-21	30-Sep-22							
02.01.05	S278200	2022 Integration & Installation Project Management	4	250	01-Oct-21	30-Sep-22							
02.01.04	S277000	2022 Facility Support Systems L3 Project Management	2	250	01-Oct-21	30-Sep-22							
02.01.04	S277600	2022 Detector Support Systems L3 Project Management	0	250	01-Oct-21*	30-Sep-22							
02.05.04	S350950	Install Large Support Rings and Cross Braces	7	5	05-Oct-21	12-Oct-21							
01.03.01.03.02	S176900	Fabricate final blocks sector 52	4	6	12-Oct-21	19-Oct-21							
02.05.04	S351000	Transport Remainder of Outer Hcal Sectors to AH - Labor - CA-D Resource(s)	7	10	13-Oct-21	26-Oct-21							
02.05.04	S351100	Transport Remainder of Outer Hcal Sectors to AH - M&S	7	10	13-Oct-21	26-Oct-21							

WBS Path	Activity ID	Activity Name	Total Float	At Completion	Start	Finish	2021			2022			2023
							FY21			FY22			FY23
02.05.04	S1002599	Transport Remainder of Outer Hcal Sectors to AH - Labor - Physics Resource(s)	7	10	13-Oct-21	26-Oct-21							
01.03.01.03.02	S177000	Fabricate final blocks sector 53	4	6	20-Oct-21	27-Oct-21							
02.05.04	S351200	Install Remainder of Outer HCal Sectors - Labor - CA-D Resource(s)	7	20	20-Oct-21	17-Nov-21							
02.05.04	S351300	Install Remainder of Outer HCal Sectors - M&S	7	20	20-Oct-21	17-Nov-21							
02.05.04	S1002679	Install Remainder of Outer HCal Sectors - Labor - Physics Resource(s)	7	20	20-Oct-21	17-Nov-21							
01.03.01.03.02	S177100	Fabricate final blocks sector 54	4	6	28-Oct-21	04-Nov-21							
02.04.01.06	S334100	Review Gas Mixing House & Gas Pad Components Design/Safety - CA-D Resource(s)	4	10	28-Oct-21	10-Nov-21							
02.04.01.06	S1003119	Review Gas Mixing House & Gas Pad Components Design/Safety - Physics Resource(s)	4	10	28-Oct-21	10-Nov-21							
01.06.04.03	S270700	Timing System Production: commission timing system	15	25	29-Oct-21	07-Dec-21							
01.06.04.03	S270710	Timing System Production: commission timing system	15	25	29-Oct-21	07-Dec-21							
01.03.01.03.02	S177200	Fabricate final blocks sector 55	4	6	05-Nov-21	15-Nov-21							
01.07	S273500	Procure Min/Bias Electronics (sPHENIX Production Digitizers) - Delivery Acceptance	12	5	10-Nov-21	17-Nov-21							
01.07	S273600	Procure MBD Shaper/Disc Board 128 Channels - Delivery Acceptance	12	5	10-Nov-21	17-Nov-21							
02.04.01.06	S334200	Address Action Items from Gas Mixing House & Gas Pad Components Design & Safety Reviews	4	10	12-Nov-21	29-Nov-21							
01.04.01	S199330	Manufacture Inner HCal Support Structure - Delivery Acceptance 4	6	5	15-Nov-21*	19-Nov-21							
01.03.01.03.02	S177300	Fabricate final blocks sector 56	4	5	16-Nov-21	22-Nov-21							
02.05.04	S351310	Completed - Install Remainder of Outer HCal Sectors	7	0		17-Nov-21							
02.05.04	S351400	Align/Survey Outer Hcal to Centerline - Labor - Physics Resource(s)	11	5	18-Nov-21	24-Nov-21							
02.05.04	S351500	Align/Survey Outer Hcal to Centerline - M&S	11	5	18-Nov-21	24-Nov-21							
02.05.04	S351410	Align/Survey Outer Hcal to Centerline - Labor - CA-D Resource(s)	11	5	18-Nov-21	24-Nov-21							
02.02.03.01.04.02.03	S1006940	Draft PDR of three Solenoid Valve Box Transfer Lines	17	10	18-Nov-21	03-Dec-21							
02.05.03	S349300	Install platforms & access - Labor - Physics Resource(s)	7	20	18-Nov-21	17-Dec-21							
02.05.03	S349400	Install platforms & access - M&S	7	20	18-Nov-21	17-Dec-21							
02.05.03	S349310	Install platforms & access - Labor - CA-D Resource(s)	7	20	18-Nov-21	17-Dec-21							
01.07	S273800	Test Full Min/Bias Electronics	12	35	18-Nov-21	11-Jan-22							
01.04.01	S200100	Inner HCal Support Structure Ready for Installation	6	0		19-Nov-21							
02.05.06	S355100	Inner HCal Sectors Ready for Installation	6	0		19-Nov-21							
02.05.06	S355400	Install Inner Hcal Assembly Insertion Fixture - Labor	6	4	22-Nov-21	29-Nov-21							
02.05.06	S355500	Install Inner Hcal Assembly Insertion Fixture - M&S	6	4	22-Nov-21	29-Nov-21							
01.03.01.03.02	S177400	Fabricate final blocks sector 57	4	5	23-Nov-21	01-Dec-21							
02.04.01.03	S331300	Procure & Deliver Detector Elec. Racks & Rack generic support systems Components (leadtime and fab incl.) - Labor	12	60	23-Nov-21	22-Feb-22							
02.04.01.03	S331400	Procure & Deliver Detector Elec. Racks & Rack generic support systems Components (leadtime and fab incl.) - M&S	12	60	23-Nov-21	22-Feb-22							
02.04.01.06	S334300	Design/Safety Reviews Complete, Gas Mixing House & Gas Pad Components Released for Production	4	0		29-Nov-21							
02.05.06	S355600	Install Inner HCal assembly on Insertion Fixture - Labor	6	4	30-Nov-21	03-Dec-21							
02.05.06	S355700	Install Inner HCal assembly on Insertion Fixture - M&S	6	4	30-Nov-21	03-Dec-21							
02.04.01.06	S334400	Prepare Gas Mixing House & Gas Pad Components Procurement Package(s) - CA-D Resource(s)	4	30	30-Nov-21	12-Jan-22							
02.04.01.06	S1003159	Prepare Gas Mixing House & Gas Pad Components Procurement Package(s) - Physics Resource(s)	4	30	30-Nov-21	12-Jan-22							
01.03.01.03.02	S177500	Fabricate final blocks sector 58	4	5	02-Dec-21	08-Dec-21							
02.05.06	S355800	Install 1st Inner HCal Support Ring - Labor	6	2	06-Dec-21	07-Dec-21							
02.05.06	S355900	Install 1st Inner HCal Support Ring - M&S	6	2	06-Dec-21	07-Dec-21							
02.02.03.01.04.02.03	S1006960	AET submits PDR report to BNL for approval of three Solenoid Valve Box Transfer Lines	17	10	06-Dec-21*	17-Dec-21							

◆ Completed - Install Remainder of Outer HCal Sectors

◆ Inner HCal Support Structure Ready for Installation

◆ Inner HCal Sectors Ready for Installation

◆ Design/Safety Reviews Complete, Gas Mixing House & Gas Pad Components Released for Pro

WBS Path	Activity ID	Activity Name	Total Float	At Completion	Start	Finish	2021			2022			2023
							FY21			FY22			FY23
02.05.06	S356000	Install Inner HCal - Labor - CA-D Resource(s)	6	2	08-Dec-21	09-Dec-21							
02.05.06	S356100	Install Inner HCal - M&S	6	2	08-Dec-21	09-Dec-21							
02.05.06	S1003799	Install Inner HCal - Labor - Physics Resource(s)	6	2	08-Dec-21	09-Dec-21							
01.06.04.03	S270800	Timing System Production: additional firmware updates	15	25	08-Dec-21	13-Jan-22							
01.03.01.03.02	S177600	Fabricate final blocks sector 59	4	5	09-Dec-21	15-Dec-21							
02.05.06	S356200	Install 2nd Inner HCal Support Ring - Labor	6	2	10-Dec-21	13-Dec-21							
02.05.06	S356300	Install 2nd Inner HCal Support Ring - M&S	6	2	10-Dec-21	13-Dec-21							
02.05.06	S356310	Completed - Install 2nd Inner HCal Support Ring	6	0		13-Dec-21							
02.05.06	S356400	Align/Survey Inner HCal to SC Magnet Centerline - Labor - Physics Resource(s)	6	5	14-Dec-21	20-Dec-21							
02.05.06	S356500	Align/Survey Inner HCal to SC Magnet Centerline - M&S	6	5	14-Dec-21	20-Dec-21							
02.05.06	S356410	Align/Survey Inner HCal to SC Magnet Centerline - Labor - CA-D Resource(s)	6	5	14-Dec-21	20-Dec-21							
02.02.03.01.04.02.01	S1006560	Witness test IP8 Cold Box Assembly	1	5	14-Dec-21	20-Dec-21							
01.03.01.03.02	S177700	Fabricate final blocks sector 60	4	5	16-Dec-21	22-Dec-21							
02.05.03	S349410	Completed - Install platforms & access	7	0		17-Dec-21							
02.02.03.01.04.02.03	S1007000	BNL review for PDR approval	17	5	20-Dec-21	27-Dec-21							
02.02.03.01.04.02.01	S1006600	Delivery of the IP8 Cold Box Assembly and Document Package	1	5	21-Dec-21	28-Dec-21							
01.03.01.03.02	S177800	Fabricate final blocks sector 61	4	5	23-Dec-21	30-Dec-21							
02.02.03.01.04.02.03	S1007040	AET submits IDR to BNL for approval	17	5	28-Dec-21	04-Jan-22							
02.02.03.01.06	S287400	(Helium System: 1008B Coldbox/Transfer lines / IR8 Coldbox) Installation/Rigging of IR8 Coldbox	1	30	29-Dec-21	10-Feb-22							
02.05.07	S358200	Transport Assembled EMCAL Sectors to AH - Labor - CA-D Resource(s)	0	25	30-Dec-21	04-Feb-22							
02.05.07	S358300	Transport Assembled EMCAL Sectors to AH - M&S	0	25	30-Dec-21	04-Feb-22							
02.05.07	S1003839	Transport Assembled EMCAL Sectors to AH - Labor - Physics Resource(s)	0	25	30-Dec-21	04-Feb-22							
01.03.01.03.02	S177900	Fabricate final blocks sector 62	4	5	03-Jan-22	07-Jan-22							
02.05.07	S358400	Install EMCAL Sectors - Labor	0	16	03-Jan-22	25-Jan-22							
02.05.07	S358500	Install EMCAL Sectors - M&S	0	16	03-Jan-22	25-Jan-22							
02.02.03.01.04.02.03	S1007080	BNL review for IDR approval	17	5	05-Jan-22	11-Jan-22							
01.06.01.03	S260700	DAQ Production: Internal Readiness Review	12	10	05-Jan-22	19-Jan-22							
02.02.03.02.04.02	S291100	(LN2 supply transfer line system) Final assemblies	0	30	06-Jan-22	17-Feb-22							
01.03.01.03.02	S178000	Fabricate final blocks sector 63	4	5	10-Jan-22	14-Jan-22							
01.07	S273900	MBD Production Complete	12	0		11-Jan-22							
01.07	S274000	Bench Test Min/Bias Detector	12	5	12-Jan-22	19-Jan-22							
02.02.03.01.04.02.03	S1007120	AET submits FDR report to BNL for approval	17	5	12-Jan-22	19-Jan-22							
02.04.01.06	S334500	Evaluate & Process Gas Mixing House & Gas Pad Components Bids - CA-D Resource(s)	4	30	13-Jan-22	25-Feb-22							
02.04.01.06	S1003199	Evaluate & Process Gas Mixing House & Gas Pad Components Bids - Physics Resource(s)	4	30	13-Jan-22	25-Feb-22							
01.06.04.03	S270900	Timing System Production: Timing system ready to operate	15	0		13-Jan-22							
01.03.01.03.02	S178100	Fabricate final blocks sector 64	4	5	18-Jan-22	24-Jan-22							
01.07	S274100	MinBias Detector Ready to Install	12	0		19-Jan-22							
01.06.01.03	S260800	DAQ Production: DAQ Ready for Operation	12	0		19-Jan-22							
02.02.03.01.04.02.03	S1007160	AET begins material procurement	17	5	20-Jan-22	26-Jan-22							
01.05.02.02	S233200	Procure EMCAL External LV/Bias Signal/Comm/Test Cables Sectors 13-64 - Delivery Acceptance	5	5	24-Jan-22	28-Jan-22							
01.03.01.03.02	S178200	EMCAL Block fabrication is complete	5	0		24-Jan-22							
01.03.01.03.03	S178900	Pack and ship final blocks for sectors 57-64 to BNL - Purchased Services	4	1	25-Jan-22	25-Jan-22							
01.03.01.03.03	S176010	Pack and ship final blocks for sectors 57-64 to BNL - M&S	4	1	25-Jan-22	25-Jan-22							
01.03.01.03.03	S179000	EMCAL final blocks arrive at BNL	4	0		25-Jan-22							

WBS Path	Activity ID	Activity Name	Total Float	At Completion	Start	Finish	2021		2022		2023
							FY21	FY22	FY22	FY23	
02.05.10	EXT101400	[External Activity] MVTX Complete and ready for installation	0	0	17-Mar-22*						◆ [External Activity] MVTX Complete and ready for installation
02.05.03	S349610	Completed - Install Pole Tips	0	0	21-Mar-22						◆ Completed - Install Pole Tips
02.05.12	S370000	Move Full sPHENIX to IR - Labor - CA-D Resource(s)	0	5	22-Mar-22						■
02.02.03.02.06	S292110	Completed - (LN2 supply transfer line system) Rigging in place onto piping supports	0	0	28-Mar-22						◆ Completed - (LN2 supply transfer line system) Rigging in place onto piping supports
02.02.03.01.06	S287500	RHIC Helium Interface - Final Bayonet jumpers lines install, pressure & leak check and valve check out	5	10	29-Mar-22						■
02.02.03.02.06	S292120	Welding LN2 Segment #1 to LN2 Dewar	5	10	29-Mar-22						■
02.02.03.02.06	S292200	(LN2 supply transfer line system) Install Instrumentation, reliefs and air supply to valves	0	15	29-Mar-22						■
02.02.03.03.04	S294880	(Warm Piping System) IR Hall work Jumper work between Platform and West Wall	0	15	29-Mar-22						■
02.02.03.04.03	S300000	(Cryo Controls Hardware) Check out continuity	1	10	04-Apr-22						■
02.02.03.03.04	S295000	(Warm Piping System) Pressure and leak check	0	5	12-Apr-22						■
02.02.03.01.06	S287600	RHIC Helium Interface - Final pump and purge	5	10	12-Apr-22						■
02.02.03.04.03	S300600	(Cryo Controls Hardware) Hardware Installed	1	0	15-Apr-22						◆ (Cryo Controls Hardware) Hardware Installed
02.02.03.05	S301100	(Cryo Controls Hardware) Live I/O check out and control logic test	1	10	18-Apr-22						■
02.02.03.03.04	S294910	Completed - (Warm Piping System) Phase 2: Welding of piping, vent lines & install of piping supports	0	0	18-Apr-22						◆ Completed - (Warm Piping System) Phase 2: Welding of piping, vent lines & install of piping supports
02.02.03.03.04	S295200	(Warm Piping System) Final pressure. leak check and equipment shakedown	0	5	19-Apr-22						■
02.02.03.02.06	S292300	(LN2 supply transfer line system) Final pressure. leak check and equipment shakedown	0	10	19-Apr-22						■
02.02.03.01.06	S287700	RHIC Helium Interface - Installation complete	5	0	25-Apr-22						◆ RHIC Helium Interface - Installation complete
02.02.03.02.06	S292310	Completed - (LN2 supply transfer line system) Final pressure. leak check and equipment shakedown	0	0	02-May-22						◆ Completed - (LN2 supply transfer line system) Final pressure. leak check and equipment shakedown
02.02.01.01	S278900	LESHC Review Magnet Overall System Safety Review	0	1	03-May-22						■
02.02.01.01	S279000	ASSRC REVIEW and Full Walkthrough	0	1	04-May-22						■
02.02.01.02	S279100	Cooldown	0	15	05-May-22						■
02.05.12	S370500	Prepare for Review of Safety System Design by CAD ESRC	9	20	09-May-22						■
02.05.09	EXT327600	[External Activity] INTT Assembly Complete and Ready for Installation	0	0	25-May-22*						◆ [External Activity] INTT Assembly Complete and Ready for Installation
02.02.01.02	S279200	4.5K Static Heat Load test	0	2	26-May-22						■
02.02.01.02	S279300	4.5K Low power test	0	5	31-May-22						■
02.05.02	S347200	Install Electronics Racks On Carriage - Labor	12	60	02-Jun-22						■
02.05.02	S347310	Install Electronics Racks On Carriage - M&S	12	60	02-Jun-22						■
02.05.12	S370510	Review of Safety System Design by CAD ESRC	9	3	07-Jun-22						■
02.02.01.02	S279400	4.5K High Power Test	0	5	07-Jun-22						■
02.05.12	S370520	Prepare Procedures (Blue Sheet, Pink Sheet)	9	20	10-Jun-22						■
02.02.01.02	S279500	Magnet is operational	0	0	13-Jun-22						◆ Magnet is operational
02.02.05.03	S309000	Magnet Field Measurements: Map Magnetic Field of SC Magnet	0	15	14-Jun-22						■
02.02.05.03	S309005	Magnet Field Measurements: Map Magnetic Field of SC Magnet	0	15	14-Jun-22						■
02.05.08	S360400	Transport Assembled TPC Sections to AH - Labor - Physics Resource(s)	0	5	30-Jun-22						■
02.05.08	S360500	Transport Assembled TPC Sections to AH - M&S	0	5	30-Jun-22						■
02.05.08	S360410	Transport Assembled TPC Sections to AH - Labor - CA-D Resource(s)	0	5	30-Jun-22						■
02.02.05.03	S309010	Completed - Magnet Field Measurements: Map Magnetic Field of SC Magnet	0	0	05-Jul-22						◆ Completed - Magnet Field Measurements: Map Magnetic Field of SC Magnet
02.02.05.03	S309100	Magnet Field Measurements: Remove Field Mapping Equipment	0	2	06-Jul-22						■
02.04.01.06	S334800	Perform Gas Mixing House & Gas Pad Components Acceptance - CA-D Resource(s)	4	10	06-Jul-22						■
02.04.01.06	S1003239	Perform Gas Mixing House & Gas Pad Components Acceptance - Physics Resource(s)	4	10	06-Jul-22						■

WBS Path	Activity ID	Activity Name	Total Float	At Completion	Start	Finish	2021			2022			2023
							FY21			FY22			FY23
02.05.08	S360600	Open SC Magnet Pole Tip Doors	0	1	08-Jul-22	08-Jul-22							
02.05.12	S370530	Review and approve procedures	9	2	11-Jul-22	12-Jul-22							
02.05.08	S360700	Install TPC Support - Labor	0	5	11-Jul-22	15-Jul-22							
02.05.08	S360800	Install TPC Support - M&S	0	5	11-Jul-22	15-Jul-22							
02.05.12	S370540	Magnet Checkout After Power Testing	9	5	13-Jul-22	19-Jul-22							
02.05.08	S360900	Install TPC (Mechanical) - Labor - CA-D Resource(s)	0	5	18-Jul-22	22-Jul-22							
02.05.08	S361000	Install TPC (Mechanical) - M&S	0	5	18-Jul-22	22-Jul-22							
02.05.08	S1003879	Install TPC (Mechanical) - Labor - Physics Resource(s)	0	5	18-Jul-22	22-Jul-22							
02.04.01.06	S334900	Gas Mixing House & Gas Pad Components Ready for Installation	4	0		19-Jul-22							
02.05.12	S370550	Preparation for Full Operation - In-Rack Safety System Check	9	5	20-Jul-22	26-Jul-22							
02.05.02	S346700	Install Non-IR Infrastructure - Labor - Physics Resource(s)	4	35	20-Jul-22	07-Sep-22							
02.05.02	S346800	Install Non-IR Infrastructure - M&S	4	35	20-Jul-22	07-Sep-22							
02.05.02	S346710	Install Non-IR Infrastructure - Labor - CA-D Resource(s)	4	35	20-Jul-22	07-Sep-22							
02.05.08	S361010	Completed - Install TPC	0	0		22-Jul-22							
02.05.08	S361100	Align/Survey TPC to SC Magnet Centerline - Labor - Physics Resource(s)	0	5	25-Jul-22	29-Jul-22							
02.05.08	S361200	Align/Survey TPC to SC Magnet Centerline - M&S	0	5	25-Jul-22	29-Jul-22							
02.05.08	S361110	Align/Survey TPC to SC Magnet Centerline - Labor - CA-D Resource(s)	0	5	25-Jul-22	29-Jul-22							
02.05.12	S370560	Preparation for Full Operation - Magnet Re-check Cryo/PSU/QD/ODH Check	9	10	27-Jul-22	09-Aug-22							
02.05.02	S346300	Install Beampipe/Vacuum/Bakeout - Labor - Physics Resource(s)	0	7	01-Aug-22	09-Aug-22							
02.05.02	S346400	Install Beampipe/Vacuum/Bakeout - M&S	0	7	01-Aug-22	09-Aug-22							
02.05.02	S346310	Install Beampipe/Vacuum/Bakeout - Labor - CA-D Resource(s)	0	7	01-Aug-22	09-Aug-22							
02.05.02	S346410	Completed - Install Beampipe	0	0		09-Aug-22							
02.05.11	S368500	Transport Assembled Min Bias Sections to AH - Labor	0	1	10-Aug-22	10-Aug-22							
02.05.11	S368600	Transport Assembled Min Bias Sections to AH - M&S	0	1	10-Aug-22	10-Aug-22							
02.05.09	S362800	Transport Assembled INTT Sections to AH - Labor	1	2	10-Aug-22	11-Aug-22							
02.05.09	S362900	Transport Assembled INTT Sections to AH - M&S	1	2	10-Aug-22	11-Aug-22							
02.05.12	S370570	Preparation for Full Operation - Verify Global Safety System	9	5	10-Aug-22	16-Aug-22							
02.05.08	S361300	Install TPC Cables and Services - Labor	4	15	10-Aug-22	30-Aug-22							
02.05.08	S361400	Install TPC Cables and Services - M&S	4	15	10-Aug-22	30-Aug-22							
02.05.11	S368700	Install Min Bias Support - Labor	0	8	11-Aug-22	22-Aug-22							
02.05.11	S368800	Install Min Bias Support - M&S	0	8	11-Aug-22	22-Aug-22							
02.05.09	S363000	Install INTT Support - Labor	1	2	12-Aug-22	15-Aug-22							
02.05.09	S363100	Install INTT Support - M&S	1	2	12-Aug-22	15-Aug-22							
02.05.10	S365500	Install MVTX Support - Labor	1	3	12-Aug-22	16-Aug-22							
02.05.10	S365600	Install MVTX Support - M&S	1	3	12-Aug-22	16-Aug-22							
02.05.09	S363200	Install INTT (mechanical) - Labor	7	3	16-Aug-22	18-Aug-22							
02.05.09	S363300	Install INTT (mechanical) - M&S	7	3	16-Aug-22	18-Aug-22							
02.05.10	S365700	Install FELIX	1	2	17-Aug-22	18-Aug-22							
02.05.10	S365900	Install Optical fibers	1	2	17-Aug-22	18-Aug-22							
02.05.10	S366000	Install RU	1	2	17-Aug-22	18-Aug-22							
02.05.10	S366200	Install Samtec Cables	1	2	17-Aug-22	18-Aug-22							
02.05.10	S365800	Install FELIX	1	2	17-Aug-22	18-Aug-22							
02.05.10	S366100	Install RU	1	2	17-Aug-22	18-Aug-22							
02.05.12	S370580	Preparation for Full Operation - Final Safety Walk Trough	9	5	17-Aug-22	23-Aug-22							
02.05.09	S363400	Align/Survey INTT to SC Magnet Centerline - Labor - Physics Resource(s)	7	5	19-Aug-22	25-Aug-22							
02.05.09	S363500	Align/Survey INTT to SC Magnet Centerline - M&S	7	5	19-Aug-22	25-Aug-22							
02.05.09	S363410	Align/Survey INTT to SC Magnet Centerline - Labor - CA-D Resource(s)	7	5	19-Aug-22	25-Aug-22							

WBS Path	Activity ID	Activity Name	Total Float	At Completion	Start	Finish	2021			2022			2023
							FY21	FY22	FY23	FY21	FY22	FY23	FY23
02.05.10	S366300	Install Half-Barrel 1	1	6	19-Aug-22	26-Aug-22							
02.05.10	S366400	Install Half-Barrel 1	1	6	19-Aug-22	26-Aug-22							
02.05.11	S368900	Install Min Bias (mechanical) - Labor	0	5	23-Aug-22	29-Aug-22							
02.05.11	S369000	Install Min Bias (mechanical) - M&S	0	5	23-Aug-22	29-Aug-22							
02.05.12	S370590	Preparation for Full Operation - Approvals - CAD and Physics	9	5	24-Aug-22	30-Aug-22							
02.05.09	S363600	Install INTT Cables and Services - Labor	7	5	26-Aug-22	01-Sep-22							
02.05.09	S363700	Install INTT Cables and Services - M&S	7	5	26-Aug-22	01-Sep-22							
02.05.10	S366500	Install Half-Barrel 2	1	5	29-Aug-22	02-Sep-22							
02.05.10	S366600	Install Half-Barrel 2	1	5	29-Aug-22	02-Sep-22							
02.05.11	S369010	Completed - Install Min Bias	0	0		29-Aug-22							◆ Completed - Install Min Bias
02.05.11	S369100	Align/Survey Min Bias to SC Magnet Centerline - Labor - Physics Resource(s)	0	5	30-Aug-22	06-Sep-22							
02.05.11	S369200	Align/Survey Min Bias to SC Magnet Centerline - M&S	0	5	30-Aug-22	06-Sep-22							
02.05.11	S369110	Align/Survey Min Bias to SC Magnet Centerline - Labor - CA-D Resource(s)	0	5	30-Aug-22	06-Sep-22							
02.05.08	S361500	TPC - Operational Readiness Review (ORR)	4	5	31-Aug-22	07-Sep-22							
02.05.09	S363800	INTT - Operational Readiness Review (ORR)	7	5	02-Sep-22	09-Sep-22							
02.05.10	S366700	Align/Survey MVTX to SC Magnet Centerline - Labor - Physics Resource(s)	1	2	06-Sep-22	07-Sep-22							
02.05.10	S366800	Align/Survey MVTX to SC Magnet Centerline - M&S	1	2	06-Sep-22	07-Sep-22							
02.05.10	S366710	Align/Survey MVTX to SC Magnet Centerline - Labor - CA-D Resource(s)	1	2	06-Sep-22	07-Sep-22							
02.05.11	S369300	Install Min Bias Cables and Services - Labor	0	5	07-Sep-22	13-Sep-22							
02.05.11	S369400	Install Min Bias Cables and Services - M&S	0	5	07-Sep-22	13-Sep-22							
02.05.10	S366900	Install MVTX Remaining Cables and Services - Labor	1	3	08-Sep-22	12-Sep-22							
02.05.10	S367000	Install MVTX Remaining Cables and Services - M&S	6	3	08-Sep-22	12-Sep-22							
02.05.08	S361600	Address Action Items from TPC ORR	4	5	08-Sep-22	14-Sep-22							
02.05.09	S363900	Address Action Items from INTT ORR	7	5	12-Sep-22	16-Sep-22							
02.05.10	S367100	MVTX - Operational Readiness Review (ORR)	6	5	13-Sep-22	19-Sep-22							
02.05.10	S367200	MVTX - Operational Readiness Review (ORR)	6	5	13-Sep-22	19-Sep-22							
02.05.12	S370400	sPHENIX Installation Complete Ready for ORR	0	0		13-Sep-22							◆ sPHENIX Installation Complete Ready for ORR
02.05.11	S369500	Min Bias - Operational Readiness Review (ORR)	5	5	14-Sep-22	20-Sep-22							
02.05.12	S370600	Full sPHENIX Detector - Operational Readiness Review (ORR)	0	5	14-Sep-22	20-Sep-22							
02.05.08	S361700	Commission TPC - Labor Phys	4	15	15-Sep-22	05-Oct-22							
02.05.08	S361900	Commission TPC - M&S	4	15	15-Sep-22	05-Oct-22							
02.05.08	S361800	Commission TPC - Labor Students	4	15	15-Sep-22	05-Oct-22							
02.05.09	S364000	Commission INTT - Labor	7	10	19-Sep-22	30-Sep-22							
02.05.09	S364200	Commission INTT - M&S	7	10	19-Sep-22	30-Sep-22							
02.05.09	S364100	Commission INTT - Labor	7	10	19-Sep-22	30-Sep-22							
02.05.10	S367300	Address Action Items from MVTX ORR	6	5	20-Sep-22	26-Sep-22							
02.05.10	S367400	Address Action Items from MVTX ORR	6	5	20-Sep-22	26-Sep-22							
02.05.11	S369600	Address Action Items from Min Bias ORR	5	5	21-Sep-22	27-Sep-22							
02.05.12	S370700	Address Action Items from Full sPHENIX Detector ORR	0	15	21-Sep-22	12-Oct-22							
02.05.10	S367500	Commission MVTX - Labor	6	5	27-Sep-22	03-Oct-22							
02.05.10	S367600	Commission MVTX - M&S	6	5	27-Sep-22	03-Oct-22							
02.05.11	S369700	Commission Min Bias - Labor	5	5	28-Sep-22	04-Oct-22							
02.05.11	S369900	Commission Min Bias - M&S	5	5	28-Sep-22	04-Oct-22							
02.05.11	S369800	Commission Min Bias - Labor	5	5	28-Sep-22	04-Oct-22							
02.05.09	S364210	Completed - Install INTT	7	0		30-Sep-22							◆ Completed - Install INTT
02.01.04	S277700	2023 Detector Support Systems L3 Project Management	0	2	03-Oct-22*	04-Oct-22							
02.01.05	S278300	2023 Integration & Installation Project Management	4	3	03-Oct-22	05-Oct-22							

