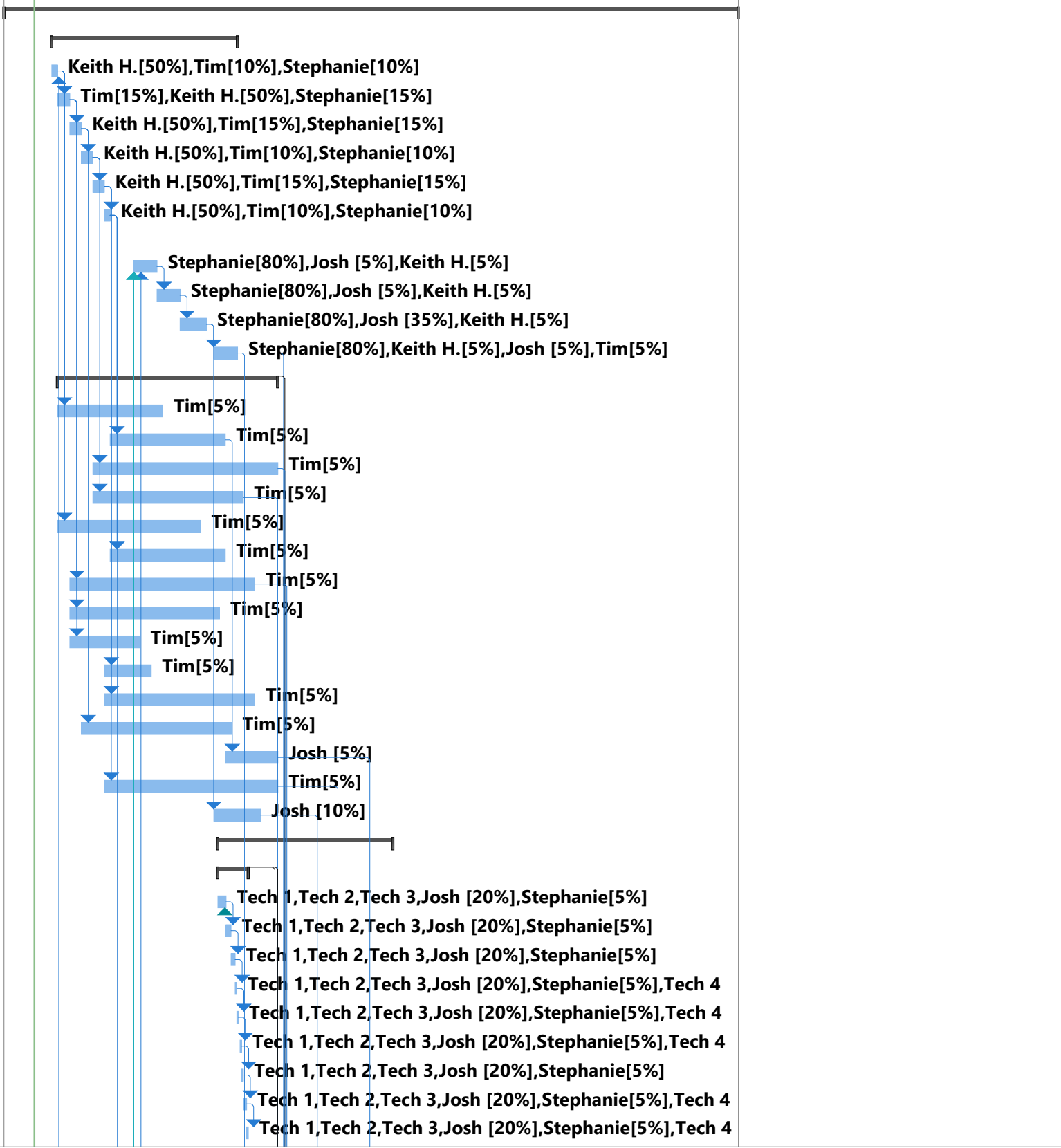


ID	Task Mode	Task Name	Duration	Start	Finish	Predecessors	Half 1, 2024			Half 2, 2024			Half 1, 2025			Half 2, 2025			Half 1, 2026			Half 2, 2026			Half 1, 2027			Half 2, 2027		
							J	M	M	J	S	N	J	M	M	J	S	N	J	M	M	J	S	N	J	M	M	J	S	N
1	→	<b>K-Long Design, Fabrication and Installation</b>	<b>607 days</b>	<b>Mon 4/22/24</b>	<b>Thu 10/1/26</b>																									
2	→	<b>KPT Design</b>	<b>150 days</b>	<b>Wed 6/19/24</b>	<b>Thu 1/30/25</b>																									
3	→	Beryllium Target/Absorber updated drawing	5 days	Wed 6/19/24	Tue 6/25/24	56																								
4	→	Target Shielding final drawings	10 days	Wed 6/26/24	Wed 7/10/24	3																								
5	→	Beamline final drawings	10 days	Thu 7/11/24	Wed 7/24/24	4																								
6	→	Frame/rails system final drawings	10 days	Thu 7/25/24	Wed 8/7/24	5																								
7	→	Shield Wall Final drawings	10 days	Thu 8/8/24	Wed 8/21/24	6																								
8	→	Beryllium and Tungsten cooling plates final drawings	5 days	Thu 8/22/24	Wed 8/28/24	7																								
9	→	Profiler Final Design	20 days	Fri 9/27/24	Thu 10/24/24	176,177,59																								
10	→	Active collimator final design	20 days	Fri 10/25/24	Thu 11/21/24	9																								
11	→	Cooling system final drawings/control specs	20 days	Fri 11/22/24	Mon 12/23/24	10																								
12	→	Final Installation Drawings	20 days	Thu 1/2/25	Thu 1/30/25	11																								
13	→	<b>KPT Procurements</b>	<b>180 days</b>	<b>Wed 6/26/24</b>	<b>Thu 3/20/25</b>																									
14	→	Beryllium Target	90 days	Wed 6/26/24	Thu 10/31/24	3																								
15	→	Beryllium target cooling/containment shroud	90 days	Thu 8/29/24	Wed 1/15/25	8																								
16	→	Support Structure	150 days	Thu 8/8/24	Thu 3/20/25	6																								
17	→	Rail system/rollers	120 days	Thu 8/8/24	Thu 2/6/25	6																								
18	→	Tungsten Absorber	120 days	Wed 6/26/24	Mon 12/16/24	3																								
19	→	Absorber cooling plates	90 days	Thu 8/29/24	Wed 1/15/25	8																								
20	→	Target lead shielding	150 days	Thu 7/11/24	Thu 2/20/25	4																								
21	→	Target Borated Poly Shielding	120 days	Thu 7/11/24	Wed 1/8/25	4																								
22	→	Aluminum filler tubes	60 days	Thu 7/11/24	Thu 10/3/24	4																								
23	→	Concrete shield walls	40 days	Thu 8/22/24	Thu 10/17/24	7																								
24	→	Lead Shield walls	120 days	Thu 8/22/24	Thu 2/20/25	7																								
25	→	Vacuum Beamline components and support	120 days	Thu 7/25/24	Thu 1/23/25	5																								
26	→	PLC components	45 days	Thu 1/16/25	Thu 3/20/25	15																								
27	→	Lead Shield Wall Supports	140 days	Thu 8/22/24	Thu 3/20/25	7																								
28	→	Cooling system components	40 days	Thu 1/2/25	Thu 2/27/25	11																								
29	→	<b>KPT Installation</b>	<b>148 days</b>	<b>Tue 1/7/25</b>	<b>Thu 8/7/25</b>																									
30	→	<b>Remove equipment from Collimator</b>	<b>26 days</b>	<b>Tue 1/7/25</b>	<b>Wed 2/12/25</b>																									
31	→	Perform Shut down of existing equipment	8 days	Tue 1/7/25	Thu 1/16/25	174																								
32	→	Bleed up Vacuum and remove pumps	3 days	Fri 1/17/25	Wed 1/22/25	31																								
33	→	Remove Collimator/Profiler	3 days	Thu 1/23/25	Mon 1/27/25	32																								
34	→	Remove permanent magnet and move to	2 days	Tue 1/28/25	Wed 1/29/25	33																								
35	→	Remove 2ndary Collimator	2 days	Thu 1/30/25	Fri 1/31/25	34																								
36	→	Remove sweep magnet	2 days	Mon 2/3/25	Tue 2/4/25	35																								
37	→	Remove Polarimeter	2 days	Wed 2/5/25	Thu 2/6/25	36																								
38	→	Remove beamline and stands	2 days	Fri 2/7/25	Mon 2/10/25	37																								
39	→	Remove/reposition Cable trays/wiring	2 days	Tue 2/11/25	Wed 2/12/25	38																								



Project: K-Long Design, Fab an Date: Wed 5/29/24	Task		Project Summary		Manual Task		Start-only		Deadline	
	Split		Inactive Task		Duration-only		Finish-only		Progress	
	Milestone		Inactive Milestone		Manual Summary Rollop		External Tasks		Manual Progress	
	Summary		Inactive Summary		Manual Summary		External Milestone			

ID	Task Mode	Task Name	Duration	Start	Finish	Predecessors	Half 1, 2024			Half 2, 2024			Half 1, 2025			Half 2, 2025			Half 1, 2026			Half 2, 2026			Half 1, 2027			Half 2, 2027		
							J	M	M	J	S	N	J	M	M	J	S	N	J	M	M	J	S	N	J	M	M	J	S	N
40	→	<b>Install Collimator area equipment</b>	<b>96 days</b>	<b>Fri 3/21/25</b>	<b>Thu 8/7/25</b>	<b>30,13</b>																								
41	→	Install rails	3 days	Fri 3/21/25	Tue 3/25/25	30,17																								
42	→	Install Support structure	4 days	Wed 3/26/25	Mon 3/31/25	41,16																								
43	→	Install target/shielding	25 days	Tue 4/1/25	Mon 5/5/25	42,20																								
44	→	Fiducialize and Align target	2 days	Tue 5/6/25	Wed 5/7/25	43																								
45	→	Install cooling system/leak check	5 days	Thu 5/8/25	Wed 5/14/25	44,28																								
46	→	Install Collimator/profiler	5 days	Thu 5/15/25	Wed 5/21/25	45																								
47	→	Cables/trays	4 days	Thu 5/22/25	Wed 5/28/25	46																								
48	→	Test and Align collimator/profiler	2 days	Thu 5/29/25	Fri 5/30/25	47																								
49	→	Install Shielding walls	20 days	Mon 6/2/25	Mon 6/30/25	48,27																								
50	→	Install Permanent Magnet	3 days	Tue 7/1/25	Mon 7/7/25	49																								
51	→	Install Vacuum beamline	3 days	Tue 7/8/25	Thu 7/10/25	50																								
52	→	Commission Controls	20 days	Fri 7/11/25	Thu 8/7/25	51,26																								
53	→	<b>CPS Design</b>	<b>285 days</b>	<b>Mon 4/22/24</b>	<b>Fri 6/13/25</b>																									
54	→	Absorber Preliminary Design	10 days	Mon 4/22/24	Fri 5/3/24																									
55	→	Magnet final design drawings and spec	44 days	Tue 4/30/24	Tue 7/2/24	175																								
56	→	"Removable de-commission" preliminary de	30 days	Mon 5/6/24	Tue 6/18/24	54																								
57	→	Support Structure preliminary design	30 days	Wed 7/3/24	Wed 8/14/24	55																								
58	→	Moving system development	10 days	Thu 8/15/24	Wed 8/28/24	57																								
59	→	Support Structure final drawings	20 days	Thu 8/29/24	Thu 9/26/24	58																								
60	→	Radiator Preliminary Design	20 days	Fri 1/31/25	Thu 2/27/25	12																								
61	→	Beamline layout	20 days	Fri 2/28/25	Thu 3/27/25	60																								
62	→	Final Absorber drawings	5 days	Thu 8/29/24	Thu 9/5/24	177,8																								
63	→	Shielding preliminary design	20 days	Fri 9/6/24	Thu 10/3/24	62																								
64	→	Removable portion final drawings	25 days	Fri 10/4/24	Thu 11/7/24	56,63																								
65	→	Cooling System layout	10 days	Fri 11/8/24	Thu 11/21/24	64																								
66	→	Nitrogen system layout	10 days	Fri 11/22/24	Mon 12/9/24	65																								
67	→	Radiator final drawings	10 days	Fri 3/28/25	Thu 4/10/25	60,61,12																								
68	→	Shielding final drawings	30 days	Tue 12/10/24	Thu 1/30/25	66																								
69	→	CPS Assembly drawings	25 days	Fri 1/31/25	Thu 3/6/25	68																								
70	→	CPS Assembly Procedure	30 days	Fri 3/7/25	Thu 4/17/25	69																								
71	→	Final Beamline drawings	25 days	Fri 4/11/25	Thu 5/15/25	67																								
72	→	Define control system	20 days	Fri 5/16/25	Fri 6/13/25	71																								
73	→	Final Installation drawings	30 days	Fri 3/7/25	Thu 4/17/25	69																								
74	→	<b>CPS Procurements</b>	<b>445 days</b>	<b>Mon 4/22/24</b>	<b>Thu 2/12/26</b>																									
75	→	Copper Absorber	90 days	Fri 9/6/24	Thu 1/23/25	62																								
76	→	Cu/W shielding	90 days	Fri 1/31/25	Fri 6/6/25	68																								
77	→	Magnet	300 days	Wed 7/3/24	Thu 9/18/25	55																								
78	→	Lead shielding shapes	120 days	Fri 1/31/25	Wed 7/23/25	68																								
79	→	Steel support plates	90 days	Fri 11/8/24	Thu 3/27/25	64																								

Project: K-Long Design, Fab an  
Date: Wed 5/29/24

Task		Project Summary		Manual Task		Start-only		Deadline	
Split		Inactive Task		Duration-only		Finish-only		Progress	
Milestone		Inactive Milestone		Manual Summary Rollup		External Tasks		Manual Progress	
Summary		Inactive Summary		Manual Summary		External Milestone			

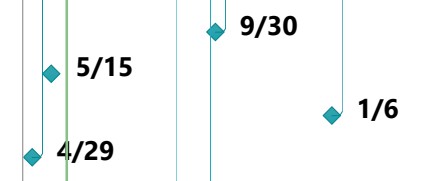
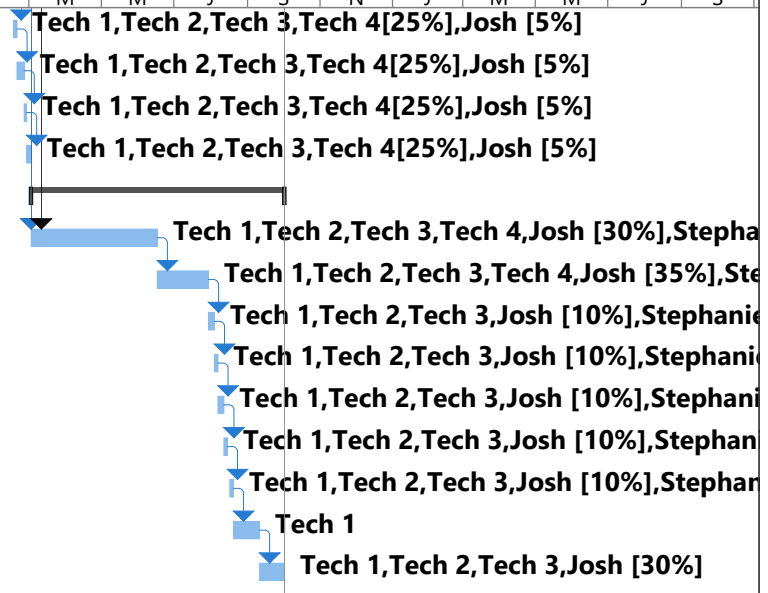
ID	Task Mode	Task Name	Duration	Start	Finish	Predecessors	Half 1, 2024			Half 2, 2024			Half 1, 2025			Half 2, 2025			Half 1, 2026			Half 2, 2026			Half 1, 2027			Half 2, 2027	
							J	M	M	J	S	N	J	M	M	J	S	N	J	M	M	J	S	N	J	M	M	J	S
80	→	Alignment cartridges	90 days	Fri 11/8/24	Thu 3/27/25	64							S&A, Tim[5%]																
81	→	Support structure	150 days	Fri 9/27/24	Thu 5/8/25	59							Josh [5%]																
82	→	steel shielding	90 days	Fri 1/31/25	Fri 6/6/25	68							Tim[5%]																
83	→	Heavy Concrete shielding	150 days	Fri 1/31/25	Thu 9/4/25	68							Tim[5%]																
84	→	Borated Poly shielding	75 days	Fri 1/31/25	Thu 5/15/25	68							Tim[5%]																
85	→	Beamline vacuum components	100 days	Fri 5/16/25	Thu 10/9/25	71							Josh [5%]																
86	→	Radiator components	125 days	Fri 4/11/25	Thu 10/9/25	67							Josh [5%]																
87	→	Magnet Power supply	250 days	Mon 4/22/24	Thu 4/24/25								Josh [5%]																
88	→	Cooling System components	105 days	Fri 4/18/25	Thu 9/18/25	73							Josh [5%]																
89	→	Nitrogen system components	105 days	Fri 4/18/25	Thu 9/18/25	73							Josh [5%]																
90	→	Controls instrumentation	200 days	Fri 4/18/25	Thu 2/12/26	73							Josh [5%]																
91	→	Downstream shielding support structure	120 days	Fri 9/27/24	Thu 3/27/25	59							Josh [5%]																
92	→	<b>CPS Installation</b>	<b>141 days</b>	<b>Fri 7/11/25</b>	<b>Mon 2/9/26</b>	<b>51</b>																							
93	→	<b>Remove existing equipment from Tagger ar</b>	<b>24 days</b>	<b>Fri 7/11/25</b>	<b>Wed 8/13/25</b>																								
94	→	Remove Shielding blocks at entrance	8 days	Fri 7/11/25	Tue 7/22/25								Josh [10%], Tech 1, Tech 2, Tech 3, Tech 4																
95	→	Bleed up vacuum downstream of Goniom	2 days	Wed 7/23/25	Thu 7/24/25	94							Josh [10%], Tech 1, Tech 2, Tech 3																
96	→	Remove Microscope	2 days	Fri 7/25/25	Mon 7/28/25	95							Josh [10%], Tech 1, Tech 2, Tech 3, Tech 4																
97	→	Remove Hodoscope	2 days	Tue 7/29/25	Wed 7/30/25	96							Josh [10%], Tech 1, Tech 2, Tech 3, Tech 4																
98	→	Remove racks	2 days	Thu 7/31/25	Fri 8/1/25	97							Josh [10%], Tech 1, Tech 2, Tech 3, Tech 4																
99	→	Remove shielding blocks	2 days	Mon 8/4/25	Tue 8/5/25	98							Josh [10%], Tech 1, Tech 2, Tech 3, Tech 4																
100	→	Remove beamline DS of Tagger vacuum chamber	3 days	Wed 8/6/25	Fri 8/8/25	99							Josh [10%], Tech 1, Tech 2, Tech 3																
101	→	Remove Permanent magnet and stands	3 days	Mon 8/11/25	Wed 8/13/25	100							Josh [10%], Tech 1, Tech 2, Tech 3, Tech 4																
102	→	<b>Install CPS</b>	<b>117 days</b>	<b>Thu 8/14/25</b>	<b>Mon 2/9/26</b>	<b>93</b>																							
103	→	Clean and seal floor	4 days	Thu 8/14/25	Tue 8/19/25								Josh [20%], Tech 1, Tech 2, Tech 3, Stephanie[15%]																
104	→	Bring support base to staging area	5 days	Wed 8/20/25	Tue 8/26/25	103,81							Josh [20%], Tech 1, Tech 2, Tech 3, Stephanie[15%], Tech 4																
105	→	Test moving system	3 days	Wed 8/27/25	Fri 8/29/25	104							Josh [20%], Tech 1, Tech 2, Tech 3, Stephanie[15%], Tech 4																
106	→	Install Alignment cartidges	1 day	Tue 9/2/25	Tue 9/2/25	105,80							Josh [20%], Tech 1, Tech 2, Tech 3, Stephanie[15%]																
107	→	Install lower shielding components	10 days	Fri 9/5/25	Thu 9/18/25	106,83							Josh [20%], Tech 1, Tech 2, Tech 3, Stephanie[15%], Tech 4																
108	→	Install Removable section	6 days	Fri 9/19/25	Fri 9/26/25	107,76							Josh [20%], Tech 1, Tech 2, Tech 3, Stephanie[15%], Tech 4																
109	→	Move dump diagnostic girder to position	2 days	Mon 9/29/25	Tue 9/30/25	108							Josh [20%], Tech 1, Tech 2, Tech 3, Stephanie[15%], Tech 4																
110	→	Test Alignment capabilities - in and out of final position	3 days	Wed 10/1/25	Fri 10/3/25	109							Josh [20%], Tech 1, Tech 2, Tech 3, Stephanie[15%], Tech 4																
111	→	Install final position location fittings	2 days	Mon 10/6/25	Tue 10/7/25	110							Josh [20%], Tech 1, Tech 2, Tech 3, Stephanie[15%]																
112	→	Install Magnet on support stand	1 day	Wed 10/8/25	Wed 10/8/25	111,77							Josh [20%], Tech 1, Tech 2, Tech 3, Stephanie[15%], Tech 4																
113	→	Preliminary align magnet and absorber	2 days	Thu 10/9/25	Fri 10/10/25	112							Josh [20%], Tech 1, Tech 2, Tech 3, Stephanie[15%]																
114	→	Install additional shielding	20 days	Mon 10/13/25	Fri 11/7/25	113							Josh [20%], Tech 1, Tech 2, Tech 3, Stephanie[15%], Tech 4																
115	→	Move assy into final position and align	3 days	Mon 11/10/25	Wed 11/12/25	114							Josh [20%], Tech 1, Tech 2, Tech 3, Stephanie[15%], Tech 4																
116	→	Install permanent magnet	4 days	Thu 11/13/25	Tue 11/18/25	115							Josh [20%], Tech 1, Tech 2, Tech 3, Stephanie[15%], Tech 4																
117	→	Check Alignment	3 days	Wed 11/19/25	Fri 11/21/25	116							Josh [20%], Tech 1, Tech 2, Tech 3, Stephanie[15%]																

Project: K-Long Design, Fab an Date: Wed 5/29/24	Task		Project Summary		Manual Task		Start-only		Deadline	
	Split		Inactive Task		Duration-only		Finish-only		Progress	
	Milestone		Inactive Milestone		Manual Summary Rollup		External Tasks		Manual Progress	
	Summary		Inactive Summary		Manual Summary		External Milestone			





ID	Task Mode	Task Name	Duration	Start	Finish	Predecessors	Half 1, 2024			Half 2, 2024			Half 1, 2025			Half 2, 2025			Half 1, 2026			Half 2, 2026			Half 1, 2027			Half 2, 2027	
							J	M	M	J	S	N	J	M	M	J	S	N	J	M	M	J	S	N	J	M	M	J	S
156	→	Remove Cable Trays	3 days	Mon 2/16/26	Wed 2/18/26	155																							
157	→	Remove PS Shielding Wall	4 days	Thu 2/19/26	Tue 2/24/26	156																							
158	→	Remove PS Magnet Vacuum Chamber	2 days	Wed 2/25/26	Thu 2/26/26	157																							
159	→	Remove Start Counter	2 days	Fri 2/27/26	Mon 3/2/26	158																							
160	→	<b>Install KFM</b>	<b>150 days</b>	<b>Tue 3/3/26</b>	<b>Thu 10/1/26</b>																								
161	→	Install MRI magnet infrastructure	75 days	Tue 3/3/26	Tue 6/16/26	102,151,15																							
162	→	Install MRI magnet	30 days	Wed 6/17/26	Wed 7/29/26	161																							
163	→	Install FWC Structure	3 days	Thu 7/30/26	Mon 8/3/26	162																							
164	→	Install FPC Structure	3 days	Tue 8/4/26	Thu 8/6/26	163																							
165	→	Install FVH Structure	3 days	Fri 8/7/26	Tue 8/11/26	164																							
166	→	Install FRI Structure	3 days	Wed 8/12/26	Fri 8/14/26	165																							
167	→	Install Beamline	3 days	Mon 8/17/26	Wed 8/19/26	166																							
168	→	Cable detectors	15 days	Thu 8/20/26	Thu 9/10/26	167																							
169	→	Test all systems	15 days	Fri 9/11/26	Thu 10/1/26	168																							
170	→																												
171	→																												
172	★	Receive detector from Julich	1 day	Mon 9/30/24	Mon 9/30/24																								
173	★	Get on KPT updated drawings	1 day	Wed 5/15/24	Wed 5/15/24																								
174	★	Beam 2025 stops	1 day	Mon 1/6/25	Mon 1/6/25																								
175	★	Start of schedule	1 day	Mon 4/29/24	Mon 4/29/24																								
176	★	Decisions on collimator and profiler	1 day	Thu 8/29/24	Thu 8/29/24																								
177	★	Finish CPS absorber test	1 day	Tue 8/13/24	Tue 8/13/24																								



Project: K-Long Design, Fab an  
Date: Wed 5/29/24

Task		Project Summary		Manual Task		Start-only		Deadline	
Split		Inactive Task		Duration-only		Finish-only		Progress	
Milestone		Inactive Milestone		Manual Summary Rollup		External Tasks		Manual Progress	
Summary		Inactive Summary		Manual Summary		External Milestone			