

ID		Task Mode	Task Name	Duration	Start	Finish	Predec	Resource Names	Text1	25
1			SAM 2025 PRAD II / X17							25 A
2										
3			September							
4			Wednesday 3rd - Monday 8th							
5			Magnets ramped down, Hall to restricted.	2 hrs	Wed 9/3/25 7:00 AM	Wed 9/3/25 9:00 AM		Eugene		
6			Safe out and disconnect 2H00 Girder	8 hrs	Wed 9/3/25 9:00 AM	Thu 9/4/25 9:30 AM	5	DC power		
7			Turn off Tagger pumps and back fill tagger, backfill and remove upstre	4 hrs	Wed 9/3/25 9:00 AM	Wed 9/3/25 1:30 PM	5	Calvin,Dontre		
8			Turn off pumps and backfill beam line from 2H00 to 2C21	3 hrs	Wed 9/3/25 9:00 AM	Wed 9/3/25 12:30 PM	5	Morgan,Steve		
9			Hodoscope reconstruction	3 days	Wed 9/3/25 1:30 PM	Tue 9/9/25 7:00 AM	7	Eugene,Student	To be completed by Oct.	
10			remove ALERT gas panel, close all hose connections with Swagelok plu	2 hrs	Wed 9/3/25 12:30 PM	Wed 9/3/25 2:30 PM	8	Calvin,Dontre,Steve		
11			Backfill DS beamline, remove single pipe and retract pipe from bore.	3 hrs	Thu 9/4/25 6:30 AM	Thu 9/4/25 9:30 AM	10	Calvin,Dontre		
12			move CVT upstream and de-cable BAND	8 hrs	Thu 9/4/25 6:30 AM	Fri 9/5/25 7:00 AM	10	Steve,Florian,Students		
13			remove BAND	3 hrs	Fri 9/5/25 7:00 AM	Fri 9/5/25 10:00 AM	12	Calvin,Dontre,Steve,Morgan		
14			de-cable ALERT	8 hrs	Fri 9/5/25 10:00 AM	Mon 9/8/25 10:30 AM	13	Alert		
15			remove 2H00 girder	3 hrs	Fri 9/5/25 10:00 AM	Fri 9/5/25 1:30 PM	13,6	Calvin,Dontre		
16			remove ALERT and bolt down to temporary table	4 hrs	Mon 9/8/25 6:30 AM	Mon 9/8/25 10:30 AM		Calvin,Dontre,Steve		
17			remove CVT cart	3 hrs	Mon 9/8/25 10:30 AM	Mon 9/8/25 2:00 PM	16	Calvin,Dontre,Morgan,Steve		
18										
19			Monday 8th - Tuesday 16th							
20			Move solenoid and HTCC upstream	3 hrs	Mon 9/8/25 2:00 PM	Tue 9/9/25 9:00 AM	17	Calvin,Dontre,Steve		
21			Remove Moller cone	2 hrs	Tue 9/9/25 9:00 AM	Tue 9/9/25 11:00 AM	20	Morgan,Denny		
22			Baskets and material prep for shield wall removal	2 hrs	Tue 9/9/25 9:00 AM	Tue 9/9/25 11:00 AM	20	Calvin,Dontre,Steve		
23			remove shielding from collimator box	2 hrs	Tue 9/9/25 11:30 AM	Tue 9/9/25 1:30 PM	22	Calvin,Dontre,Steve		
24			Move HTCC to the floor and connect N2	4 hrs	Fri 9/12/25 6:30 AM	Fri 9/12/25 10:30 AM	21	Calvin,Dontre,Morgan,Steve		
25			FT ON to FT off conversion	3.5 hrs	Fri 9/12/25 10:30 AM	Fri 9/12/25 2:30 PM	24	Calvin,Dontre,Morgan,Steve		
26			Install beam tube into Moller cone and tie the upstream end from CTO	1 hr	Mon 9/15/25 6:30 AM	Mon 9/15/25 7:30 AM	25	Morgan,Bob		
27			Solenoid back into position.	2 hrs	Mon 9/15/25 7:30 AM	Mon 9/15/25 9:30 AM	26	Calvin,Denny,Dontre,Steve		
28			remove shield wall on pair-spec platform	5.5 hrs	Mon 9/15/25 9:30 AM	Tue 9/16/25 7:30 AM	27	Calvin,Dontre,Steve		
29			open main collimator box and reconfigure for X17	2 hrs	Tue 9/16/25 7:30 AM	Tue 9/16/25 9:30 AM	28	Denny,Morgan		
30			install harp 3 (X17 target + harp) downstream of main collimator box	4 hrs	Tue 9/16/25 9:30 AM	Tue 9/16/25 2:00 PM	29	Denny,Morgan		
31			Break down 2C24 valve section for new Harp/radiator/collimator	4 hrs	Tue 9/16/25 7:30 AM	Tue 9/16/25 12:00 PM	28	Steve		
32			Transport remaining Hycal parts to the Hall	4 hrs	Tue 9/16/25 7:30 AM	Tue 9/16/25 12:00 PM	28	Calvin,Dontre		
33			Install harp 2 upstream of the tagger magnet	4.5 hrs	Tue 9/16/25 12:00 PM	Wed 9/17/25 8:30 AM	31	Dontre,Steve		
34										
35			Wednesday 17th - Tuesday 23rd							
36			Align collimators	8 hrs	Wed 9/17/25 8:00 AM	Thu 9/18/25 8:30 AM	29	S&A		
37			Align Harp 3	3 hrs	Thu 9/18/25 8:30 AM	Thu 9/18/25 12:00 PM	36	S&A		
38			Align Harp 2 upstream of the tagger magnet	3 hrs	Thu 9/18/25 12:00 PM	Fri 9/19/25 7:00 AM	37	S&A		
39			Remove the internal collimator before moving Hycal from the ESB (the	2 hrs	Wed 9/3/25 8:00 AM	Wed 9/3/25 10:00 AM		HyCal	Anytime prior to transport	
40			Prepare and preassemble hycal parts for installation	4 hrs	Wed 9/17/25 8:30 AM	Wed 9/17/25 1:00 PM	33	Calvin,Dontre,Morgan,Steve		

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ID		Task Mode	Task Name	Duration	Start	Finish	Predecessor	Resource Names	Text1	25	
73			Remainder of PRAD target components and supporting equipment on the pairspec deck and L2 spaceframe, beam left	4 hrs	Mon 10/6/25 2:00 PM	Tue 10/7/25 10:00 AM	71	Calvin,Dontre,Steve		A	
74			Configure pumpset for Faraday cup upstream of shield wall	1.5 days	Wed 10/1/25 10:30 AM	Fri 10/3/25 7:30 AM	69	Calvin,Dontre,Steve			
75			Setup piping and pumpset for Faraday cup and start pump down	4 days	Wed 10/8/25 6:30 AM	Tue 10/14/25 8:30 AM		Calvin,Dontre,Steve	Diagnostics Ion pump, contact I&C, Vacuum group		
76			Start and test Ion pump	3 hrs	Tue 10/14/25 8:30 AM	Tue 10/14/25 12:00 PM	75	Calvin,I&C			
77			Complete Faraday vacuum work and close alcove	1 day	Wed 10/15/25 6:30 AM	Thu 10/16/25 7:00 AM		Calvin,Dontre,Steve			
78			Install DS beam pipe removed in August and pump down 2H02 region	4 hrs	Thu 10/16/25 7:00 AM	Thu 10/16/25 11:00 AM	77	Calvin,Dontre,Steve			
79			LCW filter change	1 day	Thu 10/16/25 11:30 AM	Fri 10/17/25 12:00 PM	78	Calvin,Dontre			
80			Upstream work awaiting GEM's. Gems on site in Sept. Set up and test in EEL. Move to Hall first part of November								
81			Power Outage	3 days	Mon 10/13/25 8:00 AM	Thu 10/16/25 9:30 AM		Facilities	Annual breaker PM's and testing		
82											
83			November								
84			Wednesday 12th - 19th								
85			Gems to Hall from EEL	7.5 hrs	Wed 11/12/25 6:30 AM	Wed 11/12/25 2:30 PM		Calvin,Dontre,Morgan,Steve			
86			Install Gem modules	8 hrs	Thu 11/13/25 6:30 AM	Fri 11/14/25 7:00 AM	85	Bob,Calvin,Dontre,Steve			
87			align and commission GEM modules	8 hrs	Fri 11/14/25 7:00 AM	Mon 11/17/25 7:30 AM	86	Bob,S&A			
88			remove US GEM module for hycal calibration	1.5 hrs	Mon 11/17/25 7:30 AM	Mon 11/17/25 9:00 AM	87	Bob,Denny,Dontre,Steve			
89			PRAD Veto install	5 hrs	Mon 11/17/25 9:00 AM	Mon 11/17/25 2:30 PM	88	PRAD			
90			install vacuum tank stand	2 hrs	Mon 11/17/25 9:00 AM	Mon 11/17/25 11:00 AM	88	Calvin,Dontre,Steve			
91			install vacuum tank with PRAD II Vacuum chamber	3 hrs	Mon 11/17/25 11:30 AM	Mon 11/17/25 2:30 PM	90	Calvin,Dontre,Morgan,Steve			
92			Install vacuum tank pump and adapter	3 hrs	Tue 11/18/25 6:30 AM	Tue 11/18/25 9:30 AM	91	Calvin,Dontre,Steve			
93			align vacuum tank	8 hrs	Tue 11/18/25 9:30 AM	Wed 11/19/25 10:00 AM	92	S&A			
94			install the beam tube upstream of BPM	2 hrs	Tue 11/18/25 9:30 AM	Tue 11/18/25 12:00 PM	92	Dontre,Steve			
95			Align beam tube upstream of BPM	2 hrs	Wed 11/19/25 10:00 AM	Wed 11/19/25 12:30 PM	93	S&A			
96			Connect vacuum tank to PRAD II target	2 hrs	Wed 11/19/25 6:30 AM	Wed 11/19/25 8:30 AM		Dontre,PRAD			
97			Start pump down vacuum chamber (extended pump time)	0.5 hrs	Wed 11/19/25 8:30 AM	Wed 11/19/25 9:00 AM	96	Calvin,Dontre,PRAD	Control w/PRAD or Hall?		
98			pump down beam tube inside tagger magnet (before pumping tagger)	2 hrs	Wed 11/19/25 9:00 AM	Wed 11/19/25 11:00 AM	97	Calvin,Dontre,Steve	2H00 disabled		
99			pump down tagger magnet (after tagger pipe vacuum verification)	3 hrs	Wed 11/19/25 11:30 AM	Wed 11/19/25 2:30 PM	98	Calvin,Dontre,Steve			
100			Pump down intermediate beam tube, connect BPM and harp.	1 hr	Wed 11/19/25 12:30 PM	Wed 11/19/25 1:30 PM	95	Denny	2H01 disabled		
101			enable 2H00, verify vacuum and valve function	1 hr	Wed 11/19/25 1:30 PM	Wed 11/19/25 2:30 PM	100	Denny			
102			Ready for HyCal calibration 20-26 FEB 26								
103											
104			February PRAD II								
105			Friday 26th - Wednesday 4th	4.59 days	Thu 2/26/26 6:30 AM	Wed 3/4/26 1:45 PM			(All work during this change requires ePAS and hearing protection)		

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External Tasks

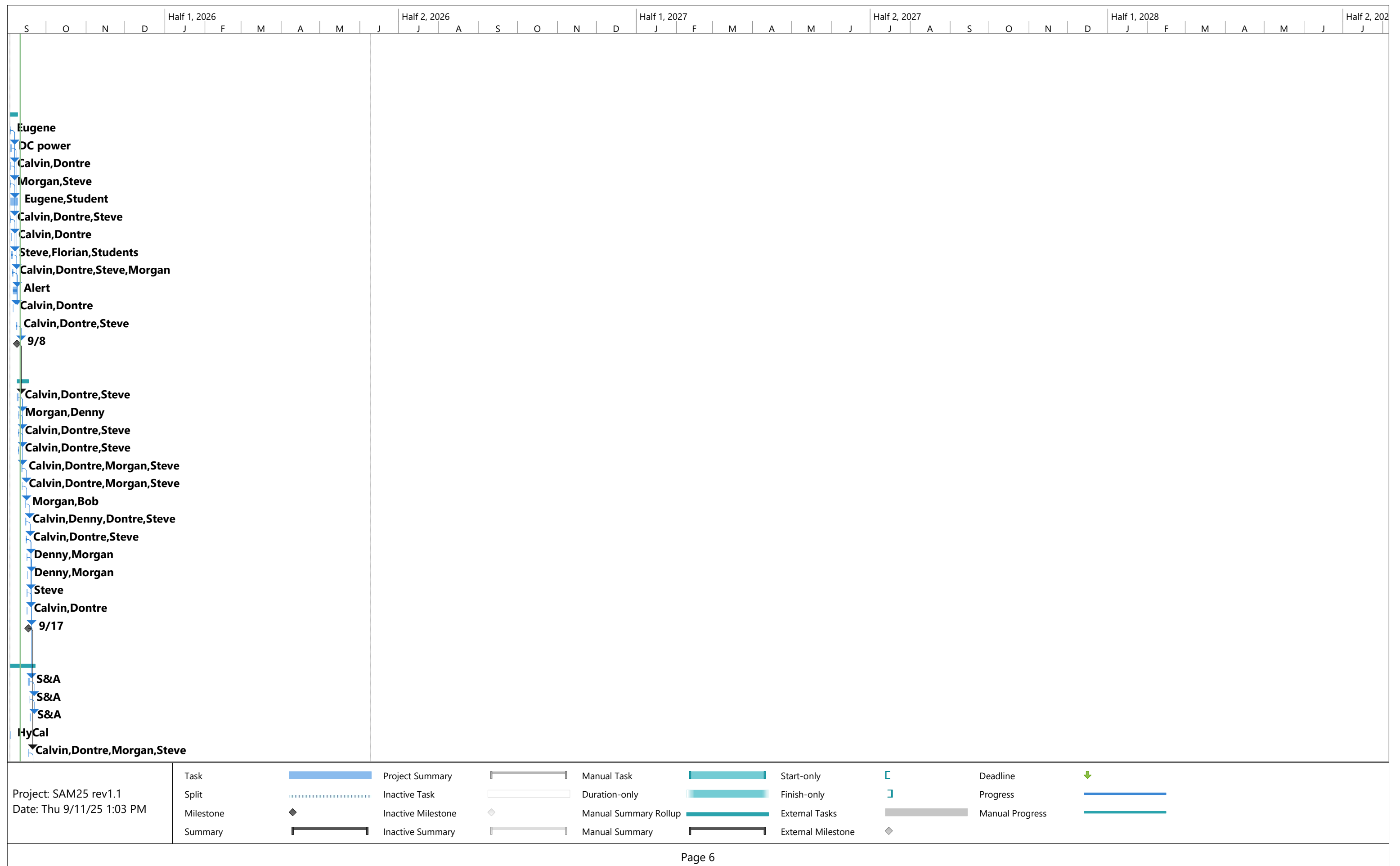
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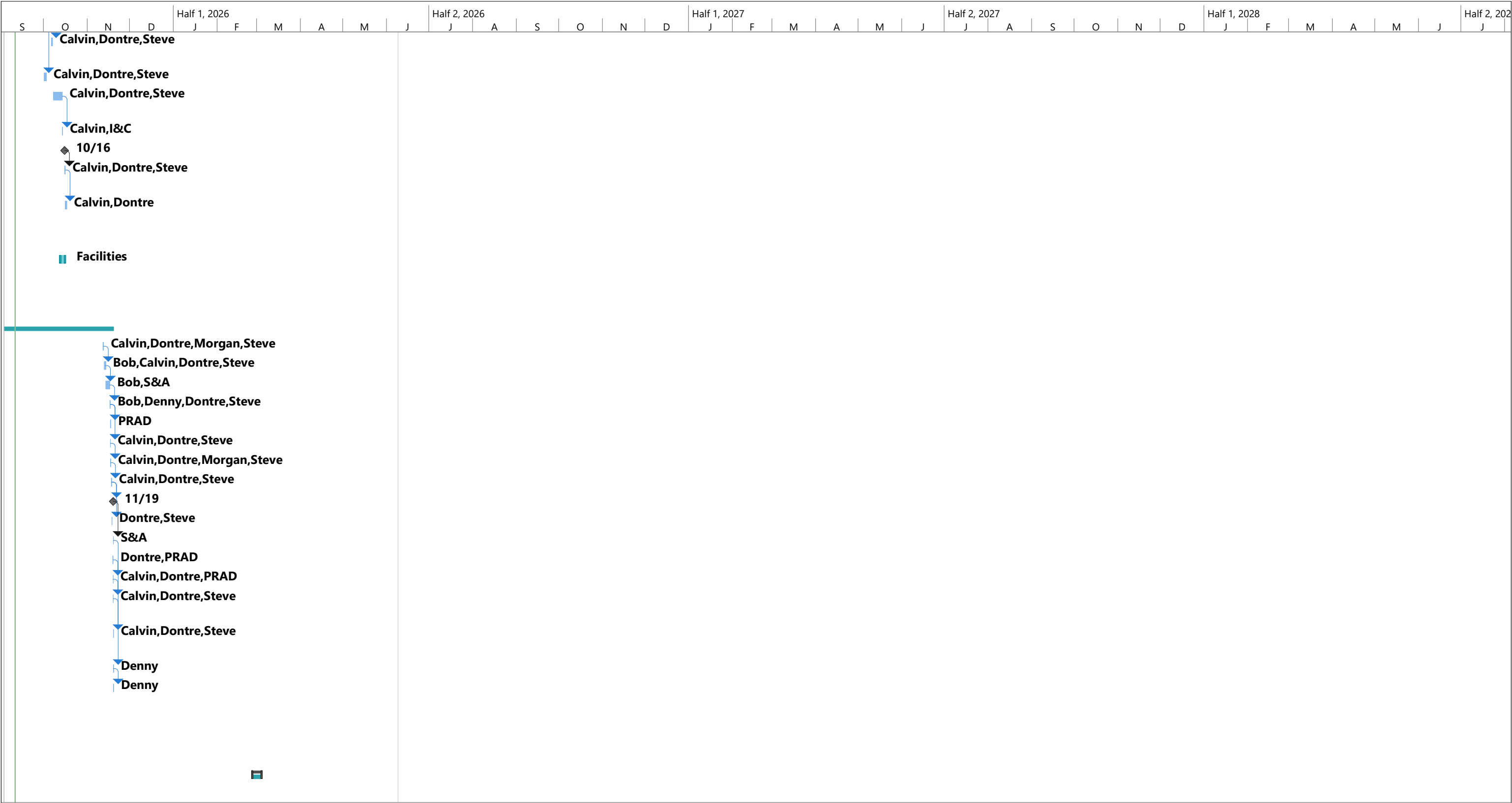
Deadline

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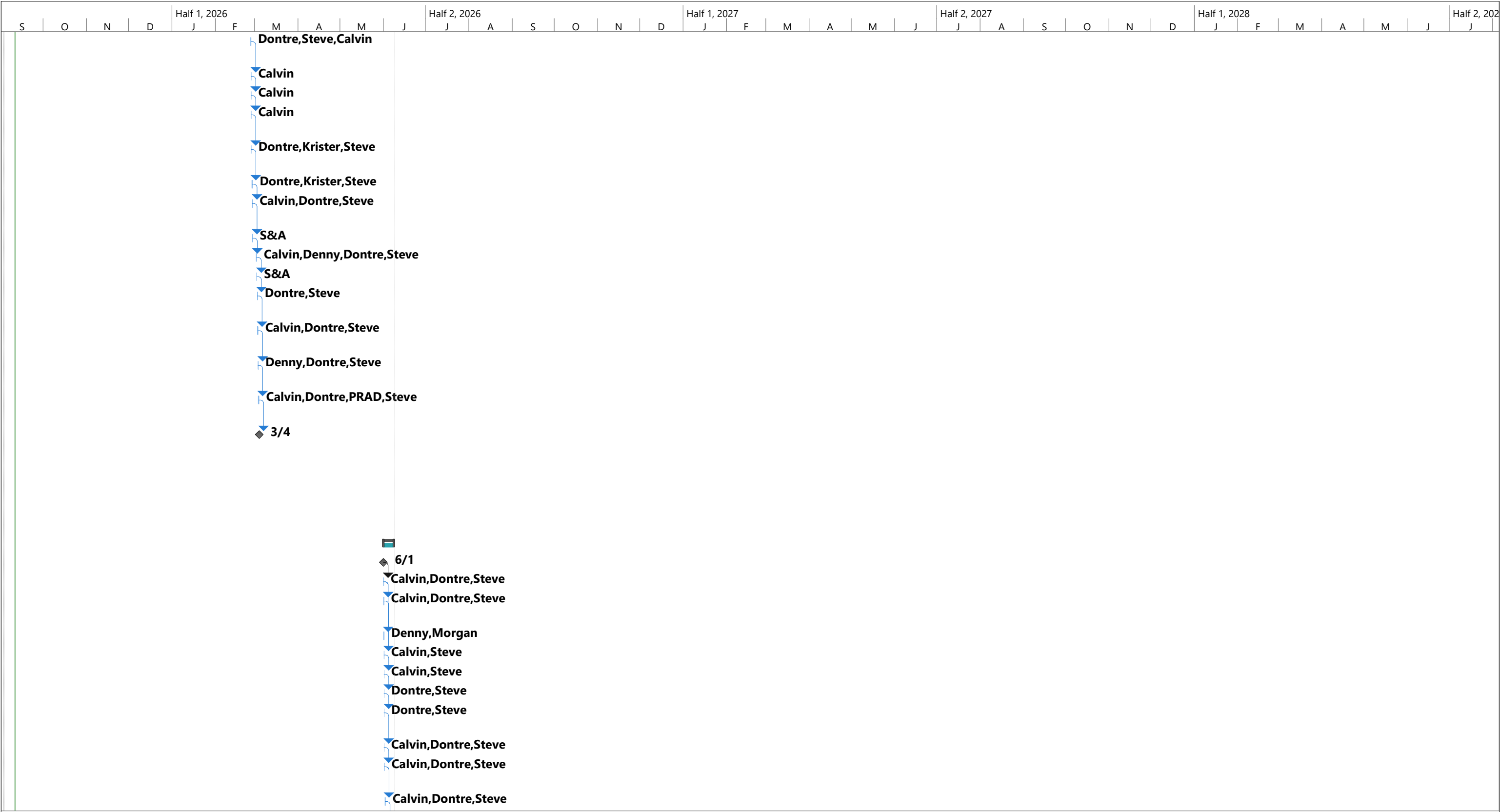
Manual Progress

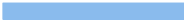
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106			Close valves, disable 2H00 valve, turn off pumps and back fill PRAD tank	3 hrs	Thu 2/26/26 6:30 AM	Thu 2/26/26 9:30 AM		Dontre,Steve,Calvin		A	
107			bleed up intermediate beam tube	0.5 hrs	Thu 2/26/26 9:30 AM	Thu 2/26/26 10:00 AM	106	Calvin			
108			remove beam tube upstream of BPM	1 hr	Thu 2/26/26 10:00 AM	Thu 2/26/26 11:00 AM	107	Calvin			
109			move A-frame to BPM and move collimator shutter to closed position	0.25 hrs	Thu 2/26/26 11:30 AM	Thu 2/26/26 11:45 AM	108	Calvin			
110			Raise HyCal to allow installation of the PRAD beam pipe from downstream	2 hrs	Thu 2/26/26 11:45 AM	Thu 2/26/26 1:45 PM	109	Dontre,Krister,Steve			
111			place hycal on hycal cart	2 hrs	Fri 2/27/26 6:30 AM	Fri 2/27/26 8:30 AM	110	Dontre,Krister,Steve			
112			move hycal downstream 21”, check clearance between helium tube and BPM	0.5 hrs	Fri 2/27/26 8:30 AM	Fri 2/27/26 9:00 AM	111	Calvin,Dontre,Steve			
113			align hycal and strap it to the cart	4 hrs	Fri 2/27/26 9:00 AM	Fri 2/27/26 1:30 PM	112	S&A			
114			install and commission US GEM module	3 hrs	Mon 3/2/26 7:00 AM	Mon 3/2/26 10:00 AM	113	Calvin,Denny,Dontre,Steve			
115			Align US GEM module	4 hrs	Mon 3/2/26 10:00 AM	Mon 3/2/26 2:30 PM	114	S&A			
116			Slide HyCal beam pipe upstream through GEM's and attach to PRAD II tank window flange	1 hr	Tue 3/3/26 7:00 AM	Tue 3/3/26 8:00 AM	115	Dontre,Steve			
117			move hycal to the final position, move A-frame to support intermediate beam tube	1 hr	Tue 3/3/26 8:00 AM	Tue 3/3/26 9:00 AM	116	Calvin,Dontre,Steve			
118			Connect DS end of HyCal beampipe and intermediate beam pipe	2 hrs	Tue 3/3/26 9:00 AM	Tue 3/3/26 11:00 AM	117	Denny,Dontre,Steve			
119			Start pump down of PRAD vacuum tank and intermediate beampipe	4 hrs	Tue 3/3/26 11:30 AM	Wed 3/4/26 7:30 AM	118	Calvin,Dontre,PRAD,Steve			
120			Enable valves and test once vacuum is established	1 hr	Wed 3/4/26 7:30 AM	Wed 3/4/26 8:30 AM	119	Calvin,Denny,PRAD			
121											
122			PRAD II Run from 26 FEB 26 to 1 JUN 26								
123											
124			1 JUN 26 PRAD II to X17								
125			Monday 1 Jun 26	5.09 days	Mon 6/1/26 6:30 AM	Mon 6/8/26 9:45 AM					
126			Close and isolate beamline valves, turn off tagger pumps	0.5 hrs	Mon 6/1/26 6:30 AM	Mon 6/1/26 7:00 AM		Calvin,Dontre,Steve,PRAD			
127			Backfill tagger vacuum	1 hr	Mon 6/1/26 7:00 AM	Mon 6/1/26 8:00 AM	126	Calvin,Dontre,Steve			
128			Backfill vacuum tube inside tagger and collimator box (only after tagger)	0.5 hrs	Mon 6/1/26 8:00 AM	Mon 6/1/26 8:30 AM	127	Calvin,Dontre,Steve			
129			Bleed up/ Backfill vacuum tank	2 hrs	Mon 6/1/26 8:00 AM	Mon 6/1/26 10:00 AM	127	Denny,Morgan			
130			intermediate beam tube	0.5 hrs	Mon 6/1/26 8:30 AM	Mon 6/1/26 9:00 AM	128	Calvin,Steve			
131			remove beam tube upstream of BPM and move A-frame to BPM	0.5 hrs	Mon 6/1/26 9:00 AM	Mon 6/1/26 9:30 AM	130	Calvin,Steve			
132			move hycal downstream 1 foot	0.5 hrs	Mon 6/1/26 9:30 AM	Mon 6/1/26 10:00 AM	131	Dontre,Steve			
133			Disconnect HyCal beam pipe from vacuum tank and move downstream	0.5 hrs	Mon 6/1/26 10:00 AM	Mon 6/1/26 10:30 AM	132	Dontre,Steve			
134			move hycal downstream 2 more feet	0.5 hrs	Mon 6/1/26 10:30 AM	Mon 6/1/26 11:00 AM	133	Calvin,Dontre,Steve			
135			Disconnect PRAD vacuum chamber from target and remove vacuum tank.	3 hrs	Mon 6/1/26 11:30 AM	Mon 6/1/26 2:30 PM	134	Calvin,Dontre,Steve			
136			Remove PRAD vacuum chamber and install X17 chamber	3 hrs	Tue 6/2/26 6:30 AM	Tue 6/2/26 9:30 AM	135	Calvin,Dontre,Steve			
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	Summary		Inactive Summary		Manual Summary		External Milestone			



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