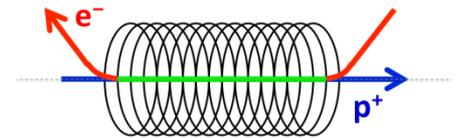


Electron Lens Superconducting Solenoid Status

Michael Anerella

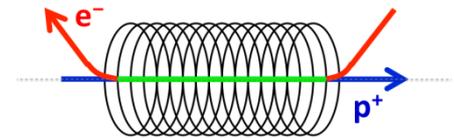
June 7, 2011

Outline



- Corrector coils
- Main solenoid coils
- Anti-Fringe field, Fringe Field coils
- Schedule

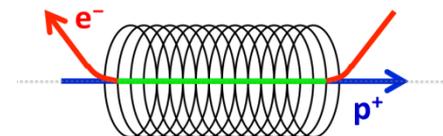
Corrector coils



- All 20 0.5 m Coils complete
- 1st of 4 2.5m coils complete (DM)
- 2nd support tube insulation nearly complete (MH)
- Pushers - complete, tube cut for forming in oven (AM/DM?)
- OVEN - need "retort" for final cure (AM/RC)



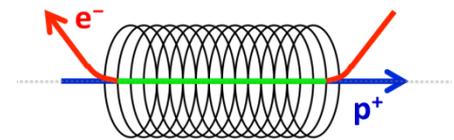
Main Solenoid Coils



- Parts insulating, reworking thickness (insert segments) continues
- 8th double layer complete
- Layer 17 underway
- Need improved method for insulating leads for electrical testing that does not require flexing - JE



AFF, FF Solenoid coils

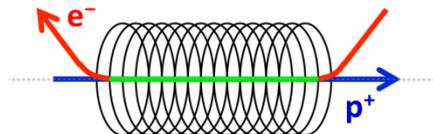


- FF coil #1

- Rework to flanges needed for exiting lead, O.D. reduction per AM (TVW)
- Kapton insulating of hub unneeded afterwards
- Winding to start after insulation is complete (and after 1st corrector)
- **Waiting for resources**



schedule p.1

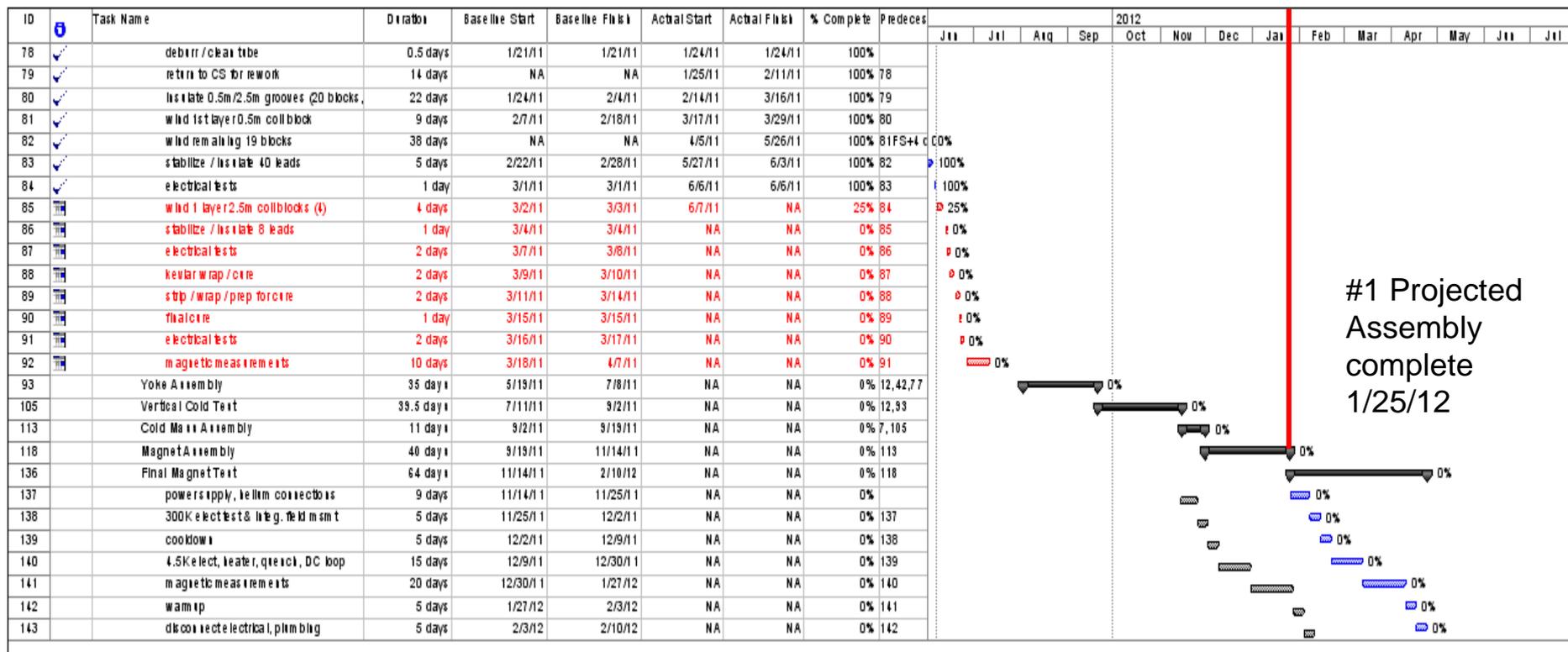
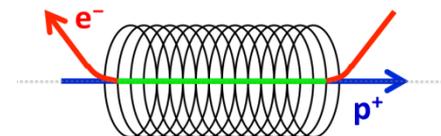


ID	Task Name	Duration	Baseline Start	Baseline Finish	Actual Start	Actual Finish	% Complete	Predecessors	2012														
									Jul	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	
1	electron lens solenoid	578.5 days	4/5/10	5/22/12	4/5/10	NA	33%																33%
2	Preliminary Design	80 days	4/5/10	7/27/10	4/5/10	7/27/10	100%																
3	Final Design	143.75 days	7/28/10	3/4/11	7/28/10	NA	74%	2															
4	Coils	118.75 days	7/28/10	1/27/11	7/28/10	NA	90%																
5	Cold Masses	10 days	1/28/11	2/10/11	NA	NA	0%	4															
6	Magnets	15 days	2/11/11	3/4/11	NA	NA	0%	5															
7	Fabrication / Procurement	276 days	7/28/10	8/31/11	7/28/10	NA	28%	2															
8	Coils	130 days	7/28/10	2/3/11	7/28/10	NA	70%																
9	Cold Masses	70 days	2/4/11	5/13/11	NA	NA	0%																
10	Magnets	130 days	3/1/11	8/31/11	NA	NA	0%																
11	Magnet #1	323.5 days	1/21/11	2/10/12	1/24/11	NA	37%																
12	Solenoid Coil Assembly	83 days	2/7/11	5/2/11	3/21/11	NA	61%	7, 8, 13															
13	Install tube / core	17 days	2/7/11	2/8/11	3/21/11	4/12/11	100%																
14	Install cable spool, support tube	1 day	2/9/11	2/9/11	4/13/11	4/13/11	100%	13															
15	weldable layer 1	6 days	2/10/11	2/11/11	4/14/11	4/21/11	100%	14															
16	wrap, core	1 day	2/14/11	2/14/11	4/22/11	4/22/11	100%	15															
17	weldable layer 2	6 days	2/16/11	2/16/11	4/25/11	5/2/11	100%	16															
18	wrap, core	1 day	2/17/11	2/17/11	5/3/11	5/3/11	100%	17															
19	weldable layer 3	2 days	2/18/11	2/22/11	5/4/11	5/5/11	100%	18															
20	wrap, core	1 day	2/23/11	2/23/11	5/10/11	5/10/11	100%	19															
21	weldable layer 4	2 days	2/24/11	2/25/11	5/11/11	5/12/11	100%	20															
22	wrap, core	1 day	2/28/11	2/28/11	5/19/11	5/19/11	100%	21															
23	weldable layer 5	2 days	3/1/11	3/2/11	5/20/11	5/23/11	100%	22															
24	wrap, core	1 day	3/3/11	3/3/11	5/24/11	5/24/11	100%	23															
25	weldable layer 6	2 days	3/4/11	3/7/11	5/25/11	5/26/11	100%	24															
26	wrap, core	1 day	3/8/11	3/8/11	5/27/11	5/27/11	100%	25															
27	weldable layer 7	2 days	3/9/11	3/10/11	5/31/11	6/1/11	100%	26															
28	wrap, core	1 day	3/11/11	3/11/11	6/2/11	6/2/11	100%	27															
29	weldable layer 8	2 days	3/14/11	3/15/11	6/3/11	6/5/11	100%	28															
30	wrap, core	1 day	3/16/11	3/16/11	6/7/11	6/7/11	100%	29															
31	weldable layer 9	2 days	3/17/11	3/18/11	6/8/11	NA	50%	30															
32	wrap, core	1 day	3/21/11	3/21/11	NA	NA	0%	31															
33	weldable layer 10	2 days	3/22/11	3/23/11	NA	NA	0%	32															
34	wrap, core	1 day	3/24/11	3/24/11	NA	NA	0%	33															
35	weldable layer 11, including 4 layers of	3 days	3/25/11	3/29/11	NA	NA	0%	34															
36	wrap, core	2 days	3/30/11	3/31/11	NA	NA	0%	35															
37	over-wrap fiberglass	2 days	4/1/11	4/1/11	NA	NA	0%	36															
38	core	2 days	4/5/11	4/5/11	NA	NA	0%	37															
39	machine O.D	5 days	4/7/11	4/13/11	NA	NA	0%	38															
40	stabilize, install, install exiting lead	11 days	4/14/11	4/28/11	NA	NA	0%	39															
41	electrical tests	2 days	4/29/11	5/2/11	NA	NA	0%	40															
42	Fringe Field Solenoid Coils	100 days	2/7/11	5/18/11	3/14/11	NA	37%																
43	AFF Coil #1	12 days	2/23/11	3/14/11	3/23/11	NA	100%																
51	AFF Coil #2	8 days	2/24/11	3/11/11	3/30/11	4/8/11	100%																
59	FF Coil #1	40 days	3/14/11	4/14/11	5/16/11	NA	0%																
60	install tube	2 days	3/14/11	3/14/11	5/16/11	NA	0%	58															
61	splice, install start lead / install	1 day	3/15/11	3/15/11	NA	NA	0%	60															
62	weld 70 layers	7 days	3/16/11	3/31/11	NA	NA	0%	61, 90															
63	splice, install exiting lead	1 day	4/1/11	4/1/11	NA	NA	0%	62															
64	core	1 day	4/4/11	4/4/11	NA	NA	0%	63															
65	overwrap / core	1 day	4/5/11	4/5/11	NA	NA	0%	64															
66	machine O.D	2 days	4/6/11	4/7/11	NA	NA	0%	65															
67	electrical tests	1 day	4/14/11	4/14/11	NA	NA	0%	66															
68	FF Coil #2	15 days	4/15/11	5/18/11	NA	NA	0%																
69	install tube	1 day	4/15/11	4/15/11	NA	NA	0%	67															
70	splice, install start lead / install	1 day	4/18/11	4/18/11	NA	NA	0%	69															
71	weld 70 layers	7 days	4/19/11	5/4/11	NA	NA	0%	70															
72	splice, install exiting lead	1 day	5/5/11	5/5/11	NA	NA	0%	71															
73	core	1 day	5/6/11	5/6/11	NA	NA	0%	72															
74	overwrap / core	1 day	5/9/11	5/9/11	NA	NA	0%	73															
75	machine O.D	2 days	5/10/11	5/11/11	NA	NA	0%	74															
76	electrical tests	1 day	5/18/11	5/18/11	NA	NA	0%	75															
77	Block Corrector Coils	118 days	1/21/11	4/7/11	1/24/11	NA	86%	7, 8, 120															

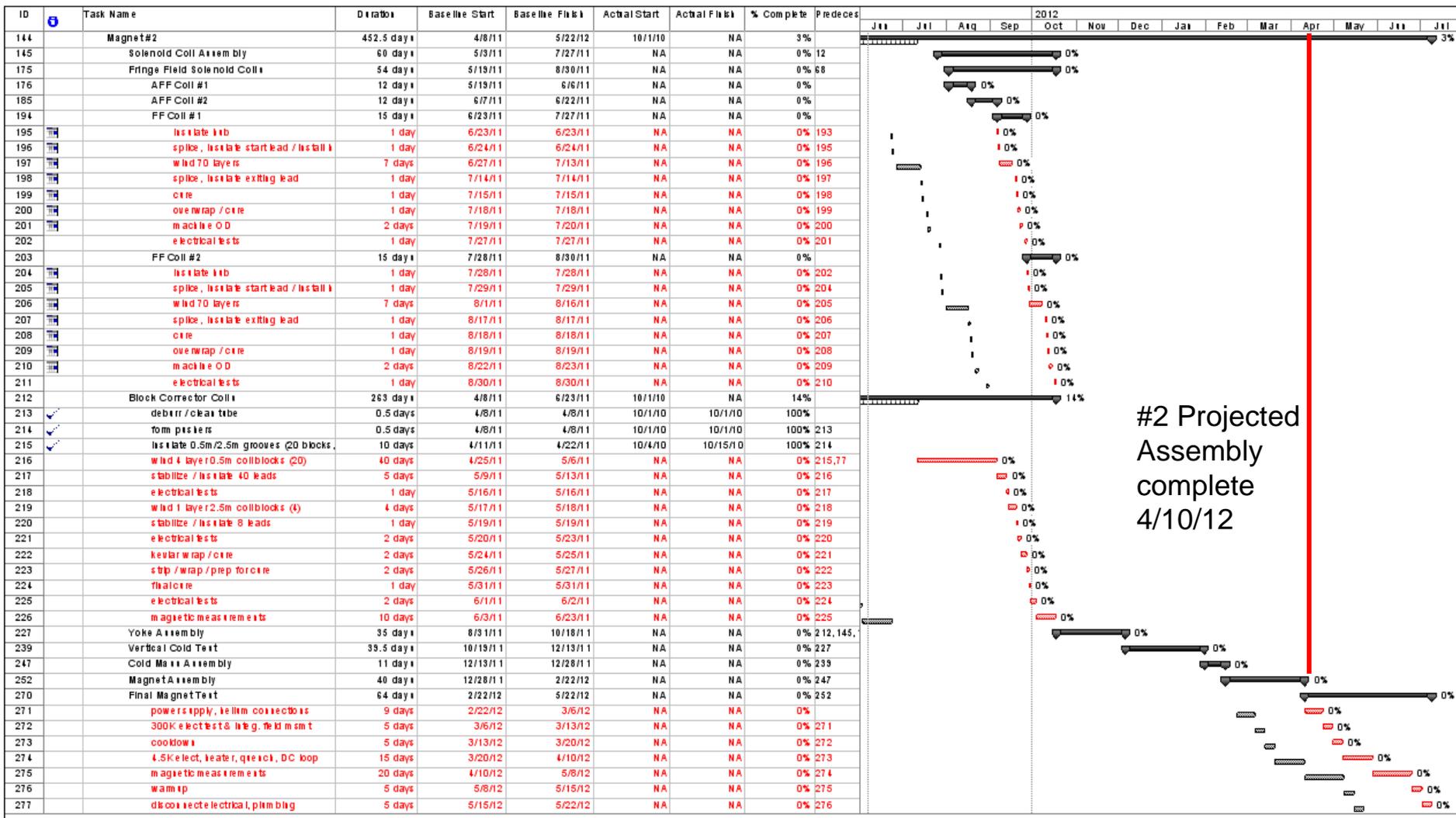
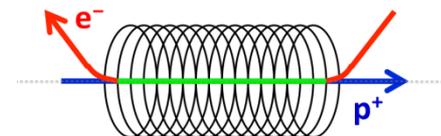
Main solenoid and fringe field coils close to / on critical path (in red)

Main solenoid schedule to complete is based on 2 layers every 3 days (now achieved)

schedule p.2



schedule p.3



#2 Projected Assembly complete 4/10/12