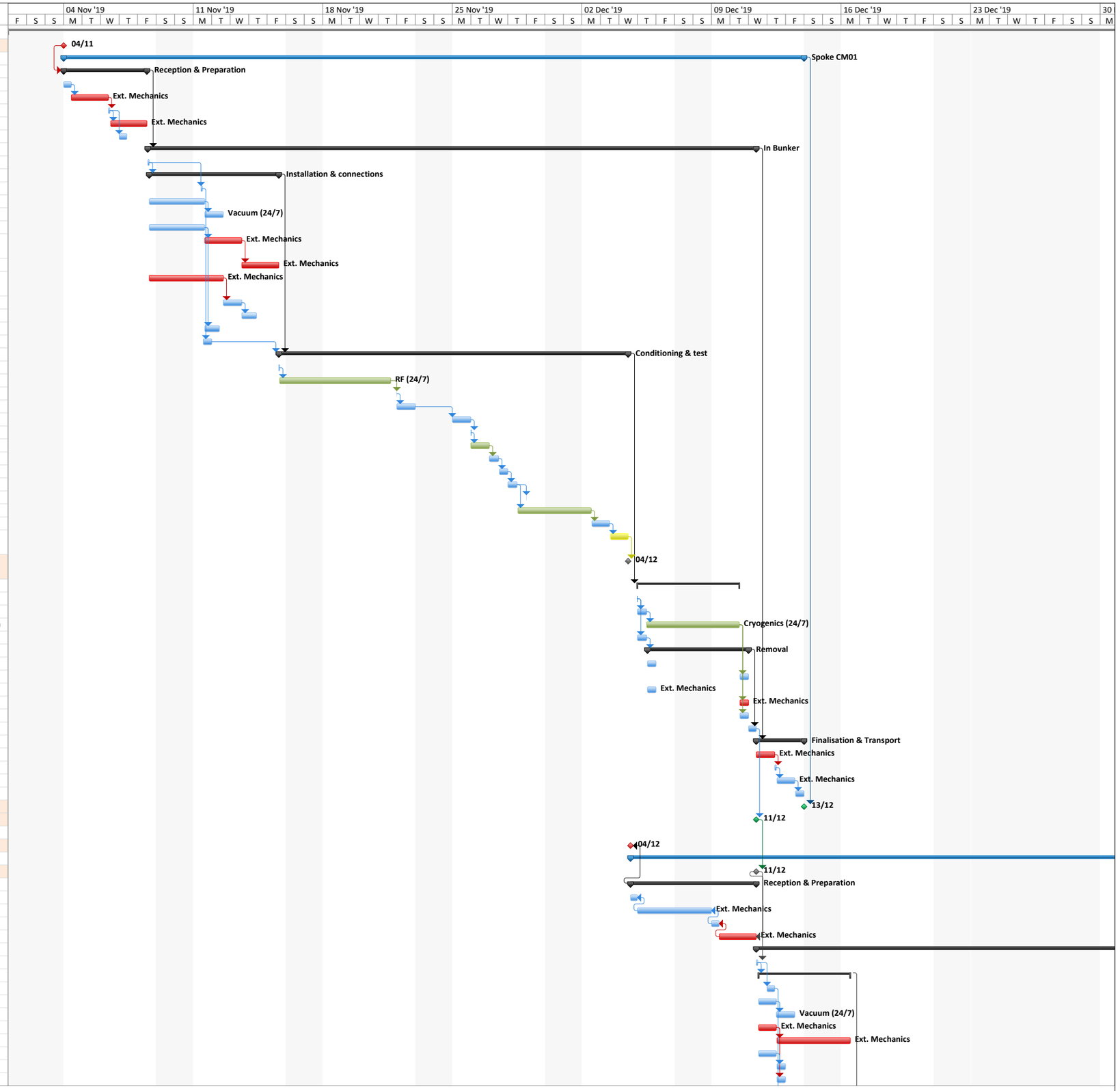
ID	Task Name	Duration	Start	Finish	Predecessors	Resource Names
0	**ESS_series_test-20190916**	**277 days?**	**Fri 01/11/19**	**Fri 05/02/21**		
1	CM arrival	0 days	Mon 04/11/19	Mon 04/11/19		
2	**Spoke CM01**	**30 days**	**Mon 04/11/19**	**Fri 13/12/19**		
3	**Reception & Preparation**	**4.5 days**	**Mon 04/11/19**	**Fri 08/11/19**	**1SS**	
4	Arrival, unloading	0.25 days	Mon 04/11/19	Mon 04/11/19		
5	Warm measurements	2 days	Mon 04/11/19	Wed 06/11/19	4	Ext. Mechanics
6	Move CM	0.25 days	Wed 06/11/19	Wed 06/11/19	5	
7	Doorknob	2 days	Wed 06/11/19	Fri 08/11/19	6	Ext. Mechanics
8	Beam vacuum (CM01 only)	0.25 days	Thu 07/11/19	Thu 07/11/19	6FS+0.5 days	
9	**In Bunker**	**22.75 days**	**Fri 08/11/19**	**Wed 11/12/19**	**3**	
10	Move CM	0.25 days	Fri 08/11/19	Fri 08/11/19		
11	**Installation & connections**	**5 days**	**Fri 08/11/19**	**Fri 15/11/19**	**10**	**Ext. Mechanics**
12	Beam vacuum	0.25 days	Mon 11/11/19	Mon 11/11/19	10FS+0.5 days	
13	Insulation vacuum	1 day	Fri 08/11/19	Mon 11/11/19		
14	Vacuum pumping (1d)	24 hrs	Mon 11/11/19	Tue 12/11/19	13	Vacuum (24/7)
15	RF lines	1 day	Fri 08/11/19	Mon 11/11/19		
16	New cryogenic connectors (CM01 only)	2 days	Mon 11/11/19	Wed 13/11/19	15	Ext. Mechanics
17	Cryogenic lines	2 days	Wed 13/11/19	Fri 15/11/19	16	Ext. Mechanics
18	New instrumentation connectors (CM01 only)	2 days	Fri 08/11/19	Tue 12/11/19		Ext. Mechanics
19	Instrumentation	1 day	Tue 12/11/19	Wed 13/11/19	18	
20	Interlocks	0.5 days	Wed 13/11/19	Thu 14/11/19	19	
21	RF calibration	0.5 days	Mon 11/11/19	Tue 12/11/19	15	
22	Close bunker	0.5 days	Mon 11/11/19	Mon 11/11/19	12	
23	**Conditioning & test**	**12.75 days**	**Fri 15/11/19**	**Wed 04/12/19**	**22,11**	
24	Start conditioning	1 hr	Fri 15/11/19	Fri 15/11/19		
25	Warm conditioning (6d)	144 hrs	Fri 15/11/19	Thu 21/11/19	24	RF (24/7)
26	Start cool down	1 hr	Fri 22/11/19	Fri 22/11/19	25	
27	Cool down 4K	1 day	Fri 22/11/19	Fri 22/11/19	26	
28	2K Cool down	1 day	Mon 25/11/19	Mon 25/11/19	27	
29	Start conditioning	1 hr	Tue 26/11/19	Tue 26/11/19	28	
30	Cold conditioning FPC	1 day	Tue 26/11/19	Tue 26/11/19	29	
31	RF calibration	0.5 days	Wed 27/11/19	Wed 27/11/19	30	
32	Cold tuner system	0.5 days	Wed 27/11/19	Wed 27/11/19	31	
33	Cavity accelerating mode	0.5 days	Thu 28/11/19	Thu 28/11/19	32	
34	Start conditioning	1 hr	Fri 29/11/19	Fri 29/11/19	33	
35	Cavity conditioning	2 days	Thu 28/11/19	Mon 02/12/19	33	
36	Cold measurements	1 day	Mon 02/12/19	Tue 03/12/19	35	
37	Long-term stability (CM01 only)	1 day	Tue 03/12/19	Wed 04/12/19	36	
38	Disengagement test CTS (Prototype only)	0 days	Wed 04/12/19	Wed 04/12/19	37	
39	**Warm-up**	**3.5 days**	**Thu 05/12/19**	**Tue 10/12/19**	**23**	
40	Start warm-up	1 hr	Thu 05/12/19	Thu 05/12/19		
41	Boil-off LHe	0.5 days	Thu 05/12/19	Thu 05/12/19	40	
42	Warm-up CM (5d)	120 hrs	Thu 05/12/19	Tue 10/12/19	41	Cryogenics (24/7)
43	Open bunker	0.5 days	Thu 05/12/19	Thu 05/12/19	40	
44	**Removal**	**3.5 days**	**Thu 05/12/19**	**Tue 10/12/19**	**43**	
45	Beam vacuum	0.5 days	Thu 05/12/19	Thu 05/12/19		
46	Insulation vacuum	0.5 days	Tue 10/12/19	Tue 10/12/19	42	
47	RF lines	0.5 days	Thu 05/12/19	Thu 05/12/19		Ext. Mechanics
48	Cryogenic lines	0.5 days	Tue 10/12/19	Tue 10/12/19	42	Ext. Mechanics
49	Instrumentation	0.5 days	Tue 10/12/19	Tue 10/12/19	42	
50	Move CM	0.25 days	Wed 11/12/19	Wed 11/12/19	44	
51	**Finalisation & Transport**	**2.75 days**	**Wed 11/12/19**	**Fri 13/12/19**	**9**	
52	Doorknob	1 day	Wed 11/12/19	Thu 12/12/19		Ext. Mechanics
53	Move CM	0.25 days	Thu 12/12/19	Thu 12/12/19	52	
54	Warm measurements	1 day	Thu 12/12/19	Fri 13/12/19	53	Ext. Mechanics
55	Prepare for transport	0.5 days	Fri 13/12/19	Fri 13/12/19	54	
56	Ready to ship CM	0 days	Fri 13/12/19	Fri 13/12/19	2	
57	Ready to test next CM	0 days	Wed 11/12/19	Wed 11/12/19	50	
58						
59	CM arrival	0 days	Wed 04/12/19	Wed 04/12/19	62SF	
60	**Spoke CM02**	**29.75 days**	**Wed 04/12/19**	**Thu 30/01/20**		
61	Ready for Move CM into bunker	0 days	Wed 11/12/19	Wed 11/12/19	57	
62	**Reception & Preparation**	**4.5 days**	**Wed 04/12/19**	**Wed 11/12/19**		
63	Arrival, unloading	0.25 days	Wed 04/12/19	Thu 05/12/19	64SF	
64	Warm measurements	2 days	Thu 05/12/19	Mon 09/12/19	65SF	Ext. Mechanics
65	Move CM	0.25 days	Mon 09/12/19	Mon 09/12/19	66SF	
66	Doorknob	2 days	Mon 09/12/19	Wed 11/12/19	61SF	Ext. Mechanics
67	**In Bunker**	**22.5 days**	**Wed 11/12/19**	**Mon 27/01/20**		
68	Move CM	0.25 days	Wed 11/12/19	Wed 11/12/19	61	
69	**Installation & connections**	**3 days**	**Wed 11/12/19**	**Mon 16/12/19**	**68**	
70	Beam vacuum	0.25 days	Thu 12/12/19	Thu 12/12/19	68FS+0.5 days	
71	Insulation vacuum	1 day	Wed 11/12/19	Thu 12/12/19		
72	Vacuum pumping (1d)	24 hrs	Thu 12/12/19	Fri 13/12/19	71	Vacuum (24/7)
73	RF lines	1 day	Wed 11/12/19	Thu 12/12/19		Ext. Mechanics
74	Cryogenic lines	2 days	Thu 12/12/19	Mon 16/12/19	73	Ext. Mechanics
75	Instrumentation	1 day	Wed 11/12/19	Thu 12/12/19		
76	Interlocks	0.5 days	Thu 12/12/19	Thu 12/12/19	75	
77	RF calibration	0.5 days	Thu 12/12/19	Thu 12/12/19	73	



Project: ESS_series_test-2019091
Date: Wed 25/09/19

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