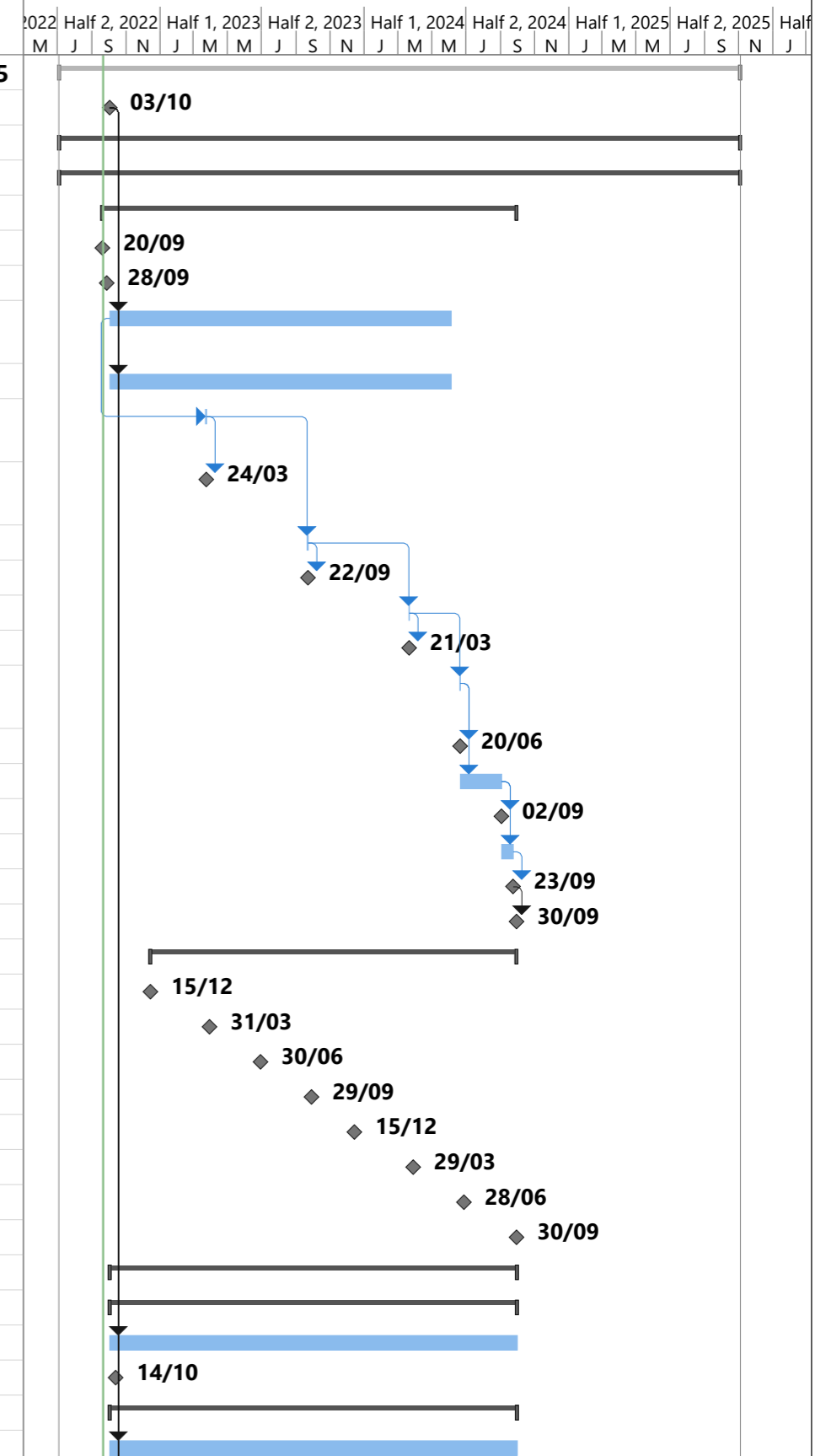


ID	Task Name	Duration	Start	Finish	
0	ITRF CDR schedule	870 days	Mon 04/07/22	Mon 03/11/25	
1	Project start	0 days	Mon 03/10/22	Mon 03/10/22	03/10
2	WPO ITRF Management & Conceptual Design Review	870 days	Mon 04/07/22	Mon 03/11/25	
3	UKRI Infrastructure Funding Waves	870 days	Mon 04/07/22	Mon 03/11/25	
15	ITRF Conceptual Design Report (CDR) - 2 years	529 days	Tue 20/09/22	Mon 30/09/24	
16	ITRF Team Kick-Off meeting at STFC Daresbury Laboratory	0 days	Tue 20/09/22	Tue 20/09/22	20/09
17	ITRF IF monitoring kick off meeting	0 days	Wed 28/09/22	Wed 28/09/22	28/09
18	Project Management Plan; scope, specifications, risk, finance, stakeholders, deliverables	437 days	Mon 03/10/22	Tue 04/06/24	
19	Technical studies	437 days	Mon 03/10/22	Tue 04/06/24	
20	Preliminary Conceptual Design Review (6 months) - refine scope, specifications, define parameters and schematic diagram of facility equipment.	2 days	Thu 23/03/23	Fri 24/03/23	
21	M2: ITRF Refined scope, specifications, defined parameters and schematic diagram of facility equipment complete.	0 days	Fri 24/03/23	Fri 24/03/23	24/03
22	Interim Conceptual Design Review 1 (12 months) - specify baseline design	2 days	Thu 21/09/23	Fri 22/09/23	
23	M4: ITRF Baseline designs complete	0 days	Fri 22/09/23	Fri 22/09/23	22/09
24	Interim Conceptual Design Review 2 (18 months) - refine specificatiosn & designs	1 day	Thu 21/03/24	Thu 21/03/24	
25	M15: Refined ITRF specifications & designs	0 days	Thu 21/03/24	Thu 21/03/24	21/03
26	Final Conceptual Design Meeting (21 months) - final specification & design ready for CDR write up	1 day	Thu 20/06/24	Thu 20/06/24	
27	M16: Start ITRF CDR write up	0 days	Thu 20/06/24	Thu 20/06/24	20/06
28	CDR writing	52 days	Fri 21/06/24	Mon 02/09/24	
29	Chapter authors complete CDR writing	0 days	Mon 02/09/24	Mon 02/09/24	02/09
30	Proof reading and final adjustments to CDR	15 days	Tue 03/09/24	Mon 23/09/24	
31	M18: ITRF CDR Publication	0 days	Mon 23/09/24	Mon 23/09/24	23/09
32	M19: ITRF CDR phase complete	0 days	Mon 30/09/24	Mon 30/09/24	30/09
33	UKRI Infrastructure Fund (IF) Deliverables	467 days	Thu 15/12/22	Mon 30/09/24	
34	D1: Y1Q1 IF progress report	0 days	Thu 15/12/22	Thu 15/12/22	15/12
35	D2: Y1Q2 IF progress report	0 days	Fri 31/03/23	Fri 31/03/23	31/03
36	D3: Y1Q3 IF progress report	0 days	Fri 30/06/23	Fri 30/06/23	30/06
37	D4: Y1Q4 IF progress report	0 days	Fri 29/09/23	Fri 29/09/23	29/09
38	D5: Y2Q1 IF progress report	0 days	Fri 15/12/23	Fri 15/12/23	15/12
39	D6: Y2Q2 IF progress report	0 days	Fri 29/03/24	Fri 29/03/24	29/03
40	D7: Y2Q3 IF progress report	0 days	Fri 28/06/24	Fri 28/06/24	28/06
41	D8: Y2Q4 IF progress report	0 days	Mon 30/09/24	Mon 30/09/24	30/09
42	WP1 LhARA	521 days	Mon 03/10/22	Mon 30/09/24	
43	WP1.1 Project Management	521 days	Mon 03/10/22	Mon 30/09/24	
44	Project management of the LhARA project	521 days	Mon 03/10/22	Mon 30/09/24	
45	LhARA Collaboration Meeting	0 days	Fri 14/10/22	Fri 14/10/22	14/10
46	WP1.2 Laser-Driven Proton & Ion Source	521 days	Mon 03/10/22	Mon 30/09/24	
47	Sub project management of the WP1.2	521 days	Mon 03/10/22	Mon 30/09/24	



Project: ITRF CDR schedule
Date: Wed 21/09/22

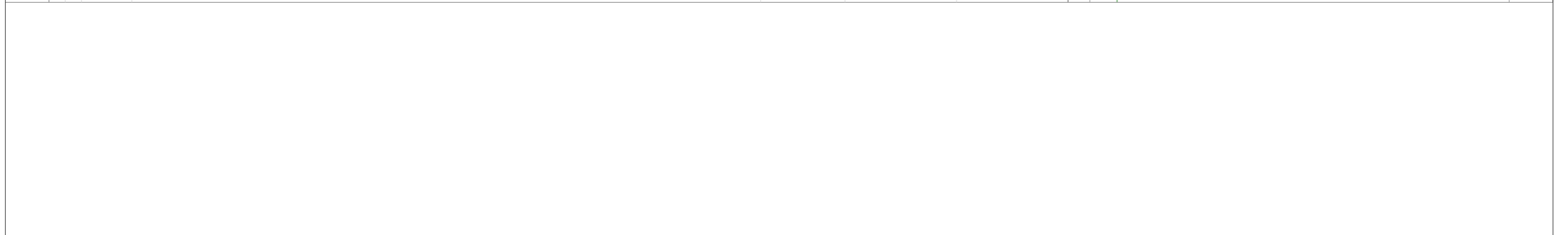
Task		Project Summary		Manual Task		Start-only		Deadline	
Split		Inactive Task		Duration-only		Finish-only		Progress	
Milestone		Inactive Milestone		Manual Summary Rollup		External Tasks		Manual Progress	
Summary		Inactive Summary		Manual Summary		External Milestone			

ID	Task Name	Duration	Start	Finish	Gantt Chart																
					2022	Half 2, 2022	Half 1, 2023	Half 2, 2023	Half 1, 2024	Half 2, 2024	Half 1, 2025	Half 2, 2025	Half								
					M	J	S	N	J	M	M	J	S	N	J	M	M	J	S	N	J
48	M5: Prediction of optimised LhARA proton source parameters for 100+ TW laser systems based on hydrodynamic and kinetic simulations complete (LhARA M2.1)	0 days	Mon 02/10/23	Mon 02/10/23	◆ 02/10																
49	M8: First LhARA ion source simulations and experiment on SCAPA completed (LhARA M2.2)	0 days	Mon 01/04/24	Mon 01/04/24	◆ 01/04																
50	WP1.3 Proton & Ion Capture	521 days	Mon 03/10/22	Mon 30/09/24	[Summary bar]																
51	Sub project management of the WP1.3	521 days	Mon 03/10/22	Mon 30/09/24	[Progress bar]																
52	M3: Validate LhARA plasma simulations with existing Swansea experimental set-up (LhARA M3.1)	0 days	Mon 03/04/23	Mon 03/04/23	◆ 03/04																
53	M9: Progress report of LhARA large diameter plasma experiments and simulations (LhARA M3.2)	0 days	Mon 01/04/24	Mon 01/04/24	◆ 01/04																
54	M14: Next generation plasma lens test bench design (LhARA M3.3)	0 days	Fri 30/08/24	Fri 30/08/24	◆ 30/08																
55	WP1.4 Ion-acoustic dose - deposition profiling	521 days	Mon 03/10/22	Mon 30/09/24	[Summary bar]																
56	Sub project management of the WP1.4	521 days	Mon 03/10/22	Mon 30/09/24	[Progress bar]																
57	M10: Geant4 simulations of beam energy deposition profile (LhARA M4.1)	0 days	Mon 01/04/24	Mon 01/04/24	◆ 01/04																
58	M15: Acoustic sensor array design complete (LhARA M4.2)	0 days	Fri 30/08/24	Fri 30/08/24	◆ 30/08																
59	WP1.5 Novel, automated end-station development	521 days	Mon 03/10/22	Mon 30/09/24	[Summary bar]																
60	Sub project management of the WP1.5	521 days	Mon 03/10/22	Mon 30/09/24	[Progress bar]																
61	M16: Automated cell dish handling and environmental system design complete (LhARA M5.1)	0 days	Fri 30/08/24	Fri 30/08/24	◆ 30/08																
62	M16: End-station user-community consultation complete (LhARA M5.2)	0 days	Fri 30/08/24	Fri 30/08/24	◆ 30/08																
63	M16: End-station component testing at Birmingham complete (LhARA M5.3)	0 days	Fri 30/08/24	Fri 30/08/24	◆ 30/08																
64	M16: kG,y/s tests at Birmingham complete (LhARA M5.7)	0 days	Fri 30/08/24	Fri 30/08/24	◆ 30/08																
65	M17: Specification of LhARA beam monitoring technology complete (LhARA M5.5)	0 days	Fri 30/08/24	Fri 30/08/24	◆ 30/08																
66	WP1.6 LhARA Facility design & Integration	473 days	Mon 03/10/22	Wed 24/07/24	[Summary bar]																
67	LhARA lattice optimisation, aperture estimation, parameter list and schematic diagram update	87 days	Mon 03/10/22	Tue 31/01/23	[Progress bar]																
68	M1: LhARA lattice optimisation, aperture estimation, parameter list and schematic diagram update	0 days	Tue 31/01/23	Tue 31/01/23	◆ 31/01																
69	Preliminary design of LhARA mitigating solenoid	129 days	Wed 01/02/23	Mon 31/07/23	[Progress bar]																
70	M6: Preliminary design of LhARA mitigating solenoid complete	0 days	Mon 31/07/23	Mon 31/07/23	◆ 31/07																
71	Preliminary design of LhARA MA RF cavity	302 days	Wed 01/02/23	Thu 28/03/24	[Progress bar]																
72	M6: Preliminary design of LhARA MA RF cavity complete	0 days	Thu 28/03/24	Thu 28/03/24	◆ 28/03																
73	Preliminary design of LhARA FFA magnet	302 days	Wed 01/02/23	Thu 28/03/24	[Progress bar]																
74	M6: Preliminary design of LhARA FFA magnet complete	0 days	Thu 28/03/24	Thu 28/03/24	◆ 28/03																
75	Preliminary design of LhARA diagnostic system	302 days	Wed 01/02/23	Thu 28/03/24	[Progress bar]																
76	M6: Preliminary design of LhARA diagnostic system complete	0 days	Thu 28/03/24	Thu 28/03/24	◆ 28/03																
77	Preliminary design of LhARA control and feedback systems	129 days	Mon 02/10/23	Thu 28/03/24	[Progress bar]																
78	M6: Preliminary design of LhARA control and feedback systems complete	0 days	Thu 28/03/24	Thu 28/03/24	◆ 28/03																
79	Finalise Conceptual Design iterations (All LhARA systems)	80 days	Thu 04/04/24	Wed 24/07/24	[Progress bar]																
80	M6: Finalise Conceptual Design iterations (All LhARA systems) complete	0 days	Wed 24/07/24	Wed 24/07/24	◆ 24/07																
81	WP2 ITRF Facilities & Costing	302 days	Wed 01/02/23	Thu 28/03/24	[Summary bar]																

Project: ITRF CDR schedule
Date: Wed 21/09/22

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 WBS	Task Name	Duration	Start	Finish	2022 Half 2, 2022 Half 1, 2023 Half 2, 2023 Half 1, 2024 Half 2, 2024 Half 1, 2025 Half 2, 2025 Half 1																						
						M	J	S	N	J	M	M	J	S	N	J	M	M	J	S	N	J	M	M	J	S	N	J
82	5.1	Preliminary design study of bulk shielding, beam dump and radioprotection requirements	302 days	Wed 01/02/23	Thu 28/03/24																							
83	5.2	M7: Preliminary design study of LhARA bulk shielding, beam dump and radioprotection requirements complete	0 days	Thu 28/03/24	Thu 28/03/24																							
84	5.3	Mechanical design of accelerator systems & integration	302 days	Wed 01/02/23	Thu 28/03/24																							
85	5.4	M7: Mechanical design of LhARA accelerator systems & integration complete	0 days	Thu 28/03/24	Thu 28/03/24																							
86	5.5	Preliminary design of the building and infrastructure requirements	129 days	Mon 02/10/23	Thu 28/03/24																							
87	5.6	M7: Preliminary design of LhARA building and infrastructure requirements complete	0 days	Thu 28/03/24	Thu 28/03/24																							
88	5.7	LhARA vacuum systems specification	129 days	Mon 02/10/23	Thu 28/03/24																							
89	5.8	M7: Finalise LhARA vacuum systems specification	0 days	Thu 28/03/24	Thu 28/03/24																							
90	5.9	Preliminary design of the mechanical supports including the vertical arc	129 days	Mon 02/10/23	Thu 28/03/24																							
91	5.10	M7: Preliminary design of LhARA mechanical supports including the vertical arc complete	0 days	Thu 28/03/24	Thu 28/03/24																							
92	5.11	Estimation of LhARA power consumption and cooling requirements	129 days	Mon 02/10/23	Thu 28/03/24																							
93	5.12	M7: Estimation of LhARA power consumption and cooling requirements complete	0 days	Thu 28/03/24	Thu 28/03/24																							
94	6	WP3 Conventional Technology	521 days	Mon 03/10/22	Mon 30/09/24																							
95	6.1	WP3.1 Synchrotron Design	521 days	Mon 03/10/22	Mon 30/09/24																							
96	6.1.1	Synchrotron study	521 days	Mon 03/10/22	Mon 30/09/24																							
97	6.1.2	Collate parameters from CERN He synchrotron	120 days	Mon 03/10/22	Fri 17/03/23																							
98	6.1.3	Preliminary lattice design of reduced synchrotron	120 days	Mon 20/03/23	Fri 01/09/23																							
99	6.1.4	Assessment of fast extraction	120 days	Mon 04/09/23	Fri 16/02/24																							
100	6.1.5	Delivery line design	120 days	Mon 04/09/23	Fri 16/02/24																							
101	6.1.6	Prepare design report on synchrotron	141 days	Mon 19/02/24	Mon 02/09/24																							
102	6.1.7	Synchrotron CDR chapter writing complete	0 days	Mon 02/09/24	Mon 02/09/24																							
103	6.2	WP3.2 Linac Assessment	501 days	Mon 03/10/22	Mon 02/09/24																							
104	6.2.1	Linac study	501 days	Mon 03/10/22	Mon 02/09/24																							
105	6.2.2	Linac study CDR chapter writing complete	0 days	Mon 02/09/24	Mon 02/09/24																							
106	6.3	WP3.3 End Station Design	501 days	Mon 03/10/22	Mon 02/09/24																							
107	6.3.1	End station study	501 days	Mon 03/10/22	Mon 02/09/24																							
108	6.3.2	End station CDR chapter writing complete	0 days	Mon 02/09/24	Mon 02/09/24																							



Project: ITRF CDR schedule Date: Wed 21/09/22	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			