

No. of Activity	Activity Name	ACO	ACO/IND	BEA	CRY	ENG/NCM	ENG/NCM/Alignment	ENG/MDS	ENG/MIN/AK	ENG/MIN/DMU [in h]	EPS	TRI	VAC	Remarks
Capacity for Shutdown 2024* (duration of 110 working days)		150	NA	385	NA	·	85	**	**	**	240	385	330	
1.3	Preparations for renovation of EH (construction phase 0)	110	0	110	0	0	0	0	0	0	55	0	110	
VAC.1	Standard Maintenance, e.g. UNILAC	0	0	0	0	0	0	0	0	0	0	0	55	
3.2	Repair Steerer UH2MS3	0	0	0	0	2	8	0	0	0	2	30	15	
3.3	Repair Vacuum leaks in tank cap Alvarez A3	0	0	0	0	0	0	0	0	0	2	20	10	
3.4	Drift tube DR31 fore-vacuum	0	0	0	0	0	0	0	0	0	0	0	0	
3.5	Manufacturing and exchange Alvarez drift-tube UA2DR105	0	0	0	0	2	0	0	5	0	2	30	5	
3.9	Replacement of leaking pump valve Turbo1 on UA4	0	0	0	0	0	0	0	0	0	0	0	0	Prio changed to 1 by SR, effort calculated in 3.15
3.15	Modification of RF Loop UA4BA4	0	0	0	0	0	0	0	20	20	0	4	4	Taking benefit from 3.9 with prio 1
3.11	Delivery and exchange of IZ pumps (shifted from Shutdown 22/23)	0	0	0	0	0	0	0	0	0	0	20	3	
3.12	Remodeling interlock buncher (shifted from Shutdown 22/23)	0	0	0	0	0	0	0	0	20	0	0	0	
3.13	Vacuum Check Leak BB5	0	0	0	0	0	0	0	0	0	2	15	15	
3.14	Alignment of Alvarez A2 and HSI middle part	0	0	0	0	0	6	0	0	0	0	6	0	
3.16	Survey & Alignment	0	0	0	0	0	8	0	0	0	0	10	0	
3.17	Ölwechsel Vorpumpen muss gemacht werden	0	0	0	0	0	8	0	0	0	0	0	40	
3.18	Stickstoffanbindung zum Belüften wieder herstellen	0	0	0	0	0	8	0	0	0	0	0	0	
3.19	Turbopumpenwartung Pfeiffer	0	0	0	0	0	8	0	0	0	0	0	10	
3.21 NEU	Verkabelung BSM im TK	0	0	0	0	0	0	0	0	0	0	0	0	Absehbung offen!
4.5	Exchange/renewal of SIS12/SIS18 mode power switch	0	0	0	0	0	0	0	0	0	10	0	0	
4.7.a	Exchange of S06DFV scintillator screen window	0	0	4	0	0	0	0	0	0	0	2	35	
4.9	Repair of termination resistors of kicker modules	0	0	0	0	0	0	0	0	0	0	0	0	
4.10	Survey & Alignment	0	0	0	0	0	10	0	0	40	0	8	45	
5.1	Installation & testing TOF identification S1-S2 & new pocket drives	0	0	0	0	0	0	0	0	40	0	0	0	
5.2a	=Template ACC 2024IW181	0	0	32	0	0	0	0	0	0	0	0	0	
5.3	Dismantling of the infrastructure via GSI-GAF/FAIR connection on the roof of the transfer hall - construction of replacement infrastructure	0	0	0	0	0	0	0	0	0	0	0	0	
5.4	Upgrade of FRS quadrupole PC incl. ACU systems	0	0	0	0	0	0	0	0	0	??	0	0	EPS effort?
5.10	Procurement crane at FRS S1	0	0	0	0	0	0	0	0	40	0	0	0	
5.12	Survey and Alignment	0	0	0	0	0	8	0	0	0	0	0	0	
6.2	Modifications to target section for subsequent experiments	0	0	0	0	0	0	0	0	40	0	0	15	
6.3	Modernization of gas jet controls (shifted from Shutdown 22/23)	10	0	0	0	0	0	0	0	0	0	0	0	
8.1	Installation of the 14.5 GHz ion source from Frankfurt	0	0	0	0	0	0	0	0	20	0	20	10	
8.6	Survey & Alignment	0	0	0	0	0	5	0	0	0	0	4	0	
9.2.a	Cupid Upgrade - cameras easy to replace - Replacement of cameras GTE2DF4, GHADDF2, GHADDF4,	0	0	60	0	0	0	0	0	120	0	36	23	
9.4.b	Exchange of GHTTDF2V screen - non bakeable	0	0	20	0	0	0	0	0	0	0	3	10	
9.7	Survey & Alignment	0	0	0	0	0	12	0	0	0	0	8	0	
9.8	DGUV check of electrical equipment in HEST	0	0	0	0	0	0	0	0	0	0	0	0	
9.9	Tidy up, clean and remove safety risks in HEST	0	0	0	0	0	0	0	0	0	0	0	0	
10.4	The new Helmholtz Young Investigator Group (HYIG) builds a laboratory in NE14	0	0	0	0	0	0	0	0	200	30	15	0	
10.6	Survey & Alignment	0	0	0	0	0	3	0	0	0	0	0	0	
12.1	Steuerung von GUCWBB1 (Baugleich wie GUN6BB14 in "HF-Service Application" von HLI)	0	0	0	0	0	0	0	0	0	0	0	0	
12.3	Balkendecke cwLinac Bunker Abdecken, Transport vom Kryomodul nach HI Mainz	0	0	0	0	0	0	0	0	0	0	4	0	
Total	Prio 1, 2024	120	0	226	0	4	84	0	25	540	103	235	405	
3.9	Replacement of leaking pump valve Turbo1 on UA4	0	0	0	0	0	0	0	0	0	0	0	0	Resources see 3.15
5.5	Modularity and maintenance of side drives Target area	0	0	0	0	0	0	0	0	20	0	0	0	
5.6	Procurement for vacuum system and separator spare parts	0	0	0	0	0	0	0	40	20	0	0	0	
6.4	Digitization of ESR Cooler (Picoskope - installation) (shifted from Shutdown 22/23)	10	0	0	0	0	0	0	0	0	5	0	0	
10.1	Extension control system from GTR5 to GTR7	10	0	0	0	0	0	0	0	0	0	0	0	
10.2	Operation of IH and RFQ	0	0	0	0	0	0	0	0	0	0	0	0	
10.5	Upgrade Cupid System HITRAP to FAIR beam diagnostic standard	0	0	10	0	0	0	0	0	0	0	0	0	
12.2	Alignment von GUN6DK1, GUCWTK1, MOBEMI	0	0	30	0	0	2	0	0	0	0	0	0	
Total	Prio2, no TRI, no VAC	20	0	40	0	0	2	0	40	40	5	0	0	
3.8	Replacement of thermal watchdogs in Alvarez Area A3+A4	0	0	0	0	4	0	0	0	0	2	10	0	
9.5	Power Converters GTE1QD11/QD12/KY1 refurbishment	3	0	0	0	0	0	0	0	0	30	2	0	depending on delivery of PC
Total	Prio2, TRI, no VAC	3	0	0	0	4	0	0	0	0	32	12	0	
0	NA	0	0	0	0	0	0	0	0	0	0	0	0	
Total	Prio2, no TRI, but VAC	0	0	0	0	0	0	0	0	0	0	0	0	
0	Capacity remaining	7	0	119	0	0	-1	0	0	0	100	138	-75	
5.7	Upgrades at focal planes FRS S2 and S4	0	0	0	0	0	0	0	0	40	0	0	0	
5.8	Integration of 2 new current grids	0	0	15	0	0	0	0	0	0	0	0	0	
Total	Prio3 no VAC	0	0	15	0	0	0	0	0	40	0	0	0	
4.3	Installation of gantry for μ-Spill Kavität (shifted from Shutdown 22/23) or removal of cavity.	0	0	0	0	0	0	0	0	30	0	0	0	
6.5	Alignment (Istzustand der Maschine)	0	0	0	0	0	6	0	0	0	0	0	0	
9.1	Repair and replacement of PMTs and scintillators for PDC	0	0	15	0	0	0	0	0	0	0	0	0	
Total	Prio4 no VAC	0	0	15	0	0	6	0	0	30	0	0	0	
Total	Prio 1, Prio 2&3&4 w/o VAC	143	0	296	0	8	92	0	65	650	140	247	405	
0	Capacity remaining	7	0	89	0	0	-7	0	0	0	100	138	-75	
3.20	Schnellschließerumbau LSB	0	0	0	0	2	8	0	0	0	2	30	15	
4.1	Installation of cryo insert prototype	0	0	0	0	0	10	0	0	40	0	8	45	Check of external VAC Resources, e.g. if J Pan
4.7.c	Change of S05VV1T gate valve (part of sector S06) (two valves defect)	0	0	0	0	0	0	0	0	0	0	2	0	Effort for bake outs required included in 4.7a (prio 1) and 4.6, prio 2, see line below
4.6	Open SIS18 electrostatic extraction septum and repair of clearing electrode	0	0	0	0	0	0	0	0	0	0	6	25	It, together with 4.7c

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Capacity for Shutdown 2024* (duration of 110 working days)		150	NA	385	NA	-	85	**	**	**	240	385	330	
8.8 NEW	Ausheizen YR03	0	0	0	0	0	0	0	0	0	0	0	2	0
8.9 NEW	Verkabelung YR03 Pumpen und Röhren	0	0	0	0	0	0	0	0	0	0	0	0	Aufwandsabschätzung fehlt noch!
9.3	Replacement of Ion Pumps	0	0	0	0	0	0	0	0	0	0	30	10	Will be executed, with number of pumps depending on resource situation during shutdown for cable/connector assembly
Total	Prio2, TRI and VAC	0	0	0	0	2	18	0	0	40	2	76	97	0
0	Capacity remaining	7	0	89	0	0	-25	0	0	0	98	62	-172	0
4.2	Exchange of old vacuum pumps in S01	0	0	0	0	0	0	0	0	0	0	30	10	0
4.7.b	Exchange of old vacuum pumps in S06	0	0	0	0	0	0	0	0	0	0	30	10	0
4.11	IPM (Exchange MCP)	0	0	10	0	0	0	0	0	0	2	8	15	0
6.2	Completion of UHV control pumping chambers E-Cooler	0	0	0	0	0	0	0	0	0	0	0	5	0
6.3	Completion of the UHV control section YR09	0	0	0	0	0	0	0	0	0	0	0	35	0
6.7	IPM Installation Section 12	0	0	2	0	0	1	0	0	40	0	0	20	0
Total	Prio3 VAC	0	0	12	0	0	1	0	0	40	2	68	95	0
3.1	Replace fore-vacuum hoses Alvarez A1	0	0	0	0	0	0	0	0	0	0	40	5	0
4.11 new	Change of S01VV1T gate valves together with 4.1 and/or 4.2	0	0	0	0	0	0	0	0	0	0	0	30	0
4.8	Bake out of all vented sections including e-cooler section	0	0	2	0	0	0	0	0	0	0	2	8	0
Total	Prio4 VAC	0	0	2	0	0	0	0	0	0	0	42	43	0
3.6	Manufacturing and installation of Triplet in IH-Structure UNSQ14	0	0	0	0	0	0	0	0	0	0	0	0	0
3.7	Rebuilding the old QQ, dismantling the new one	0	0	0	0	0	0	0	0	5	0	180	0	0
4.4	Installation of new injection quadrupole power converter	8	0	0	0	0	0	0	0	0	25	1	0	0
5.2b	Installation of electronics stepper motors control hardware - part 2	0	0	32	0	0	0	0	0	0	0	0	0	0
6.1	Modification of the internal target to a jet with a smaller beam diameter	0	0	0	0	0	4	0	0	40	0	40	0	VAC effort included in 7.5.2
6.4	Design of an adapted section YR11 for the NECTAR experiment	0	0	0	0	0	0	0	0	40	0	0	0	0
9.2.b	Cupid Upgrade - camera more complex to replace	0	0	80	0	0	0	0	0	120	0	0	35	0
9.6	Repair of GTE3UF stripper	0	0	12	0	0	0	0	300	300	0	4	0	0
10.7 NEW	Reparatur IH Innertriplenet	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	Moved to Shutdown 2025	0	0	124	0	0	4	0	300	500	0	44	35	0
3.4.a	Exchange of S00DPV screen - bakeable -> double with 4.7a therefore this item is deleted.	0	0	30	0	0	0	0	0	0	0	4	0	double with 4.7a therefore this item is deleted.
Total	Cancelled/deleted	0	0	30	0	0	0	0	0	0	0	4	0	0