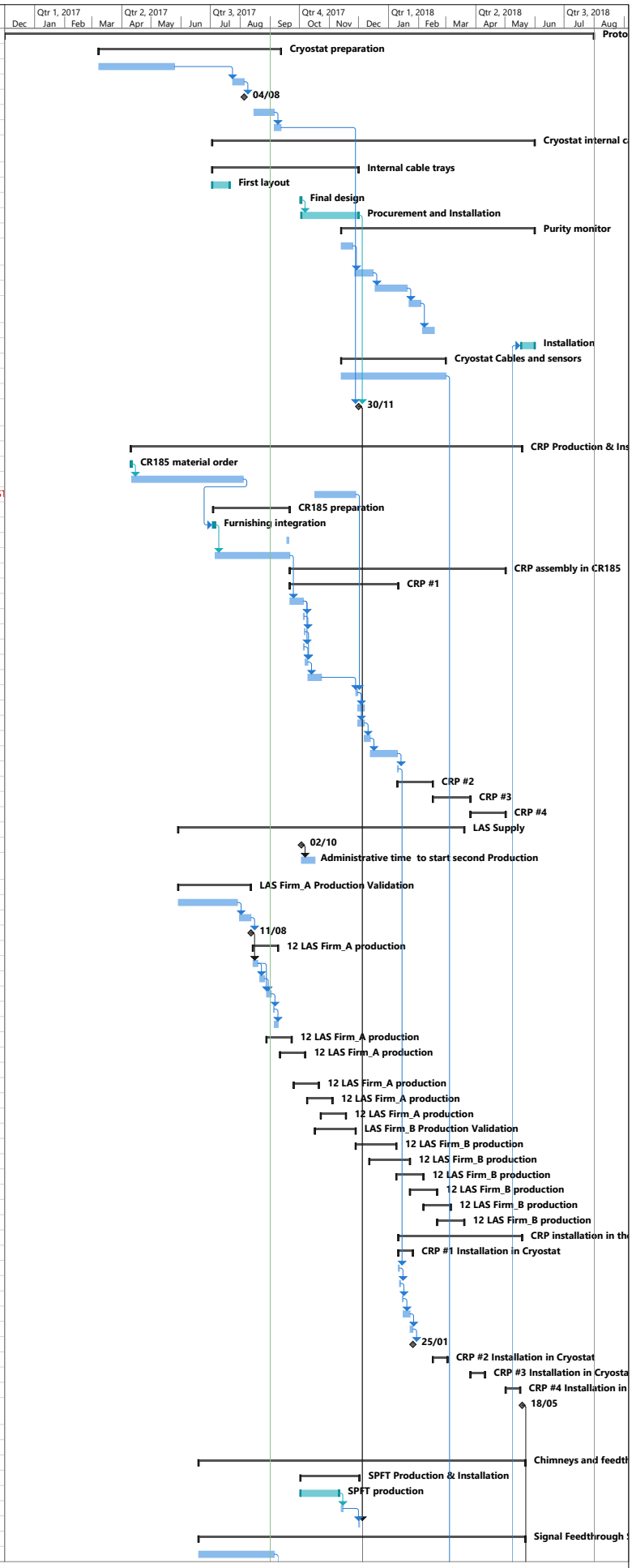
ID	Task name	Duration	Start date (dd//mm/yy)	Finish date (dd//mm/yy)	Comment
1	**ProtoDUNE-DP**	**423,71 days?**	**01/12/2016**	**31/07/2018**	
2	**Cryostat preparation**	**134 days**	**08/03/2017**	**11/09/2017**	**waiting NP update**
3	Cryostat with penetrations is ready	56 days	08/03/2017	24/05/2017	delayed
4	CRB and insertion rail preparation	10 days	24/07/2017	04/08/2017	
5	CRB ready	0 days	04/08/2017	04/08/2017	
6	Internal cryogenic piping	15 days	15/08/2017	04/09/2017	
7	Floor installation	5 days	05/09/2017	11/09/2017	
8	**Cryostat internal cables and instrumentation**	**228,71 days?**	**03/07/2017**	**31/05/2018**	
9	**Internal cable trays**	**109 days**	**03/07/2017**	**30/11/2017**	
10	First layout	14 days	03/07/2017	20/07/2017	
11	Final design	1 day	02/10/2017	02/10/2017	
12	Procurement and Installation	43 days	03/10/2017	30/11/2017	
13	**Purity monitor**	**133,71 days**	**13/11/2017**	**31/05/2018**	
14	Final design: including feedback from 3x1x1	10 days	13/11/2017	24/11/2017	
15	Procurement of 2nd monitor	15 days	27/11/2017	15/12/2017	
16	Tests at UCL with cables	15 days	18/12/2017	19/01/2018	
17	Tests in vacuum at CERN 2 weeks in bld 182	10 days	22/01/2018	02/02/2018	
18	Install cables in cryostat	10 days	05/02/2018	16/02/2018	
19	Installation	10 days	17/05/2018	31/05/2018	
20	**Cryostat Cables and sensors**	**68 days?**	**13/11/2017**	**28/02/2018**	
21	sensors (to develop)	68 days?	13/11/2017	28/02/2018	
22					
23	Cryostat is ready for detector installation	0 days	30/11/2017	30/11/2017	
24					
25	**CRP Production & Installation**	**279,71 days?**	**10/04/2017**	**18/05/2018**	
26	CR185 material order	1 day	10/04/2017	10/04/2017	
27	Clean Room Material reception	83 days	11/04/2017	03/08/2017	
28	Patch panel design and production	30 days	17/10/2017	27/11/2017	need design of CRP_INST
29	**CR185 preparation**	**57 days**	**04/07/2017**	**20/09/2017**	
30	Furnishing integration	2 days	04/07/2017	05/07/2017	
31	Initial cleaning	2 days	18/09/2017	19/09/2017	
32	Grid tooling preparation	55 days	06/07/2017	20/09/2017	
33	**CRP assembly in CR185**	**148,71 days**	**21/09/2017**	**01/05/2018**	
34	**CRP #1**	**70 days**	**21/09/2017**	**10/01/2018**	
35	Parts reception in CR185	10 days	21/09/2017	04/10/2017	
36	Supporting structure assembly	1 day	05/10/2017	05/10/2017	
37	Invar frame on supporting stu	4 hrs	06/10/2017	06/10/2017	
38	G10 assembly on optical table	1 day	05/10/2017	05/10/2017	
39	G10 and Invar connection	1 day	06/10/2017	09/10/2017	
40	LAS assembly and cabling on C	10 days	09/10/2017	23/10/2017	
41	Instrumentation assembly	2 days	28/11/2017	29/11/2017	
42	Grid weaving	5 days	30/11/2017	06/12/2017	
43	Grid Installation	5 days	30/11/2017	06/12/2017	
44	Planarity tuning	4 days	07/12/2017	12/12/2017	
45	Electrical Tests	10 days	13/12/2017	09/01/2018	
46	Packing in transport box	1 day	10/01/2018	10/01/2018	
47	**CRP #2**	**26,57 days**	**10/01/2018**	**15/02/2018**	
60	**CRP #3**	**26,57 days**	**15/02/2018**	**26/03/2018**	
73	**CRP #4**	**26,57 days**	**26/03/2018**	**01/05/2018**	
86	**LAS Supply**	**201 days?**	**29/05/2017**	**19/03/2018**	
87	Green Light full LEM production	1 day?	02/10/2017	02/10/2017	
88	Administrative time to start second Production	10 days	03/10/2017	16/10/2017	
89	**LAS Firm_A Production Validatic**	**55 days**	**29/05/2017**	**11/08/2017**	
90	LEM production (Preserie 6 LE	45 days	29/05/2017	28/07/2017	
91	LEM Preserie Tests	10 days	31/07/2017	11/08/2017	
92	LEM Production Validated	0 days	11/08/2017	11/08/2017	
93	**12 LAS Firm_A production**	**20 days**	**14/08/2017**	**08/09/2017**	
94	6 LEM Batch production	5 days	14/08/2017	18/08/2017	
95	6 LEM Batch production	5 days	21/08/2017	25/08/2017	
96	12 LAS Processing at Saclay	5 days	28/08/2017	01/09/2017	
97	12 LAS send to CERN	1 day	04/09/2017	04/09/2017	
98	12 LAS Assembly at CERN	4 days	05/09/2017	08/09/2017	
99	**12 LAS Firm_A production**	**20 days**	**28/08/2017**	**22/09/2017**	
105	**12 LAS Firm_A production**	**20 days**	**11/09/2017**	**06/10/2017**	
111	second half at Firm_A	0 days	22/09/2017	22/09/2017	
112	**12 LAS Firm_A production**	**20 days**	**25/09/2017**	**20/10/2017**	
118	**12 LAS Firm_A production**	**20 days**	**09/10/2017**	**03/11/2017**	
124	**12 LAS Firm_A production**	**20 days**	**23/10/2017**	**17/11/2017**	
130	**LAS Firm_B Production Validatic**	**30 days**	**17/10/2017**	**27/11/2017**	
134	**12 LAS Firm_B production**	**20 days**	**28/11/2017**	**08/01/2018**	
140	**12 LAS Firm_B production**	**20 days**	**12/12/2017**	**22/01/2018**	
146	**12 LAS Firm_B production**	**20 days**	**09/01/2018**	**05/02/2018**	
152	**12 LAS Firm_B production**	**20 days**	**23/01/2018**	**19/02/2018**	
158	**12 LAS Firm_B production**	**20 days**	**06/02/2018**	**05/03/2018**	
164	**12 LAS Firm_B production**	**20 days**	**20/02/2018**	**19/03/2018**	
170	**CRP installation in the cryostat**	**91,71 days**	**11/01/2018**	**18/05/2018**	
171	**CRP #1 Installation in Cryostat**	**11 days**	**11/01/2018**	**25/01/2018**	
172	CRP Transportation from Mey	1 day	11/01/2018	11/01/2018	
173	Unpacking and preparation in	1 day	12/01/2018	12/01/2018	
174	Insertion in the Cryostat	1 day	15/01/2018	15/01/2018	
175	Metrology & Connections ope	5 days	16/01/2018	22/01/2018	
176	Electrical and signal tests	3 days	23/01/2018	25/01/2018	
177	CRP is ready	0 days	25/01/2018	25/01/2018	
178	**CRP #2 Installation in Cryostat**	**11 days**	**15/02/2018**	**02/03/2018**	
185	**CRP #3 Installation in Cryostat**	**11 days**	**26/03/2018**	**10/04/2018**	
192	**CRP #4 Installation in Cryostat**	**11 days**	**01/05/2018**	**16/05/2018**	
199	CRP lateral position adjustment (warm conditions)	2 days	16/05/2018	18/05/2018	
200					
201					
202	**Chimneys and feedthroughs**	**231 days**	**19/06/2017**	**21/05/2018**	
203	**SPFT Production & Installation**	**45 days**	**02/10/2017**	**01/12/2017**	
204	SPFT production	30 days	02/10/2017	10/11/2017	
205	SPFT Pre-Assembly	2 days	13/11/2017	14/11/2017	
206	SPFT Assembly on Cryostat Roof	1 day	01/12/2017	01/12/2017	
207	**Signal Feedthrough SGFT**	**231 days**	**19/06/2017**	**21/05/2018**	
208	Final design	56 days	19/06/2017	04/09/2017	



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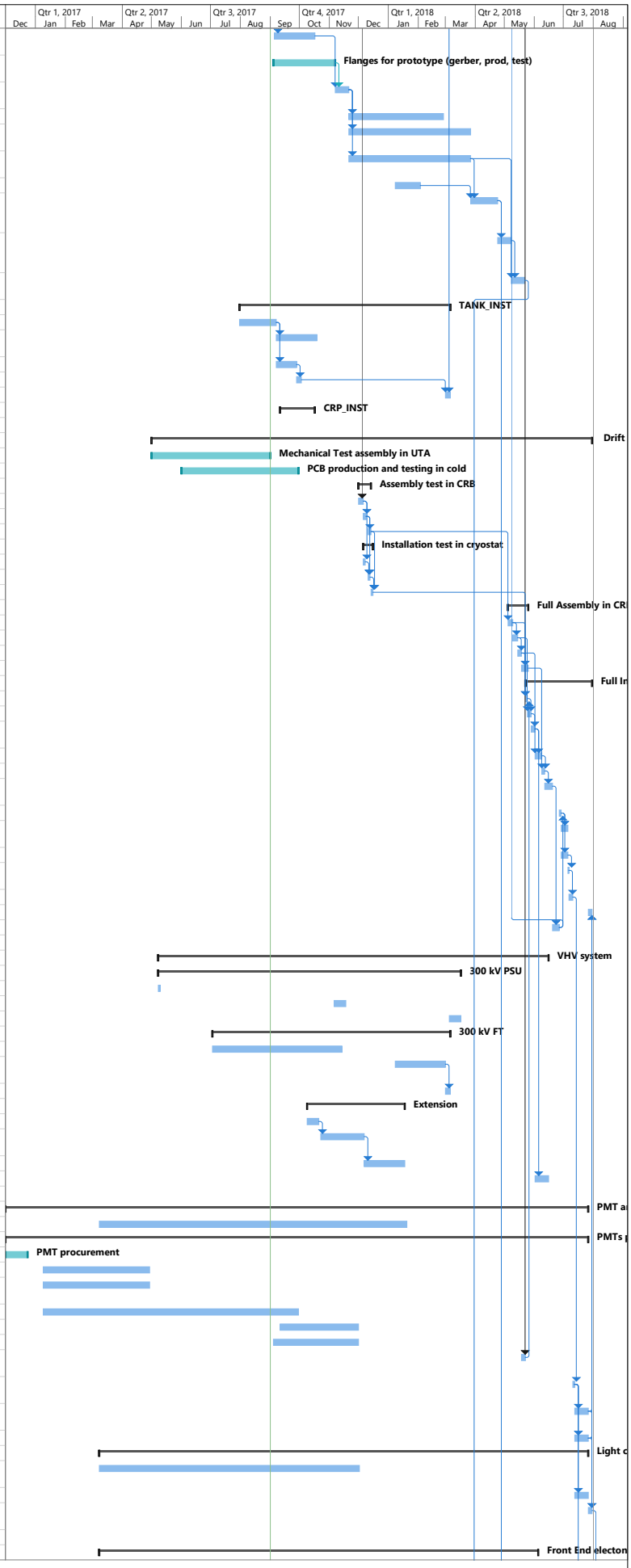
Tâche		Récapitulatif du projet		Tâche manuelle		Début uniquement		Échéance	
Fractionnement		Tâche inactive		Durée uniquement		Fin uniquement		Avancement	
Jalon		Jalon inactif		Report récapitulatif manuel		Tâches externes		Progression manuelle	
Récapitulative		Récapitulatif inactif		Récapitulatif manuel		Jalons externes			

ID	Task name	Duration	Start date (dd//mm/yy)	Finish date (dd//mm/yy)	Comment
209	Tender and Procurement (2 firms in parallel)	30 days	05/09/2017	16/10/2017	
210	Flanges for prototype (gerber, prod, test)	46 days	04/09/2017	06/11/2017	
211	Protoype for design validation with blade and cable	10 days	07/11/2017	20/11/2017	
212	Reception of all SGFT	60 days	21/11/2017	26/02/2018	
213	Warm flange: gerber +production + connector	80 days	21/11/2017	26/03/2018	
214	Cold flange: gerber + production + connector soldering+testing	80 days	21/11/2017	26/03/2018	
215	All blade + cable preparation:	20 days	08/01/2018	02/02/2018	
216	Chimney internal cabling (blade insertion,...) and electrical continuity tests	20 days	27/03/2018	23/04/2018	
217	Chimney closure and vacuum certification of each assembled chimney	10 days	24/04/2018	07/05/2018	
218	Bring to EHN1 and installation on top of cryostat	10 days	08/05/2018	21/05/2018	
219	**TANK_INST**	**146 days**	**31/07/2017**	**05/03/2018**	
220	Final design	28 days	31/07/2017	06/09/2017	
221	Procurement, fabrication and QA/QC	30 days	07/09/2017	18/10/2017	
222	Fabrication of chimney separator	15 days	07/09/2017	27/09/2017	
223	ship to CERN	3 days	28/09/2017	02/10/2017	
224	Installation on top of cryostat	3 days	01/03/2018	05/03/2018	
225	**CRP_INST**	**26 days**	**11/09/2017**	**16/10/2017**	
227					
228	**Drift Cage Production and Installatio**	**315,71 days**	**01/05/2017**	**30/07/2018**	
229	Mechanical Test assembly in UTA	89 days	01/05/2017	31/08/2017	
230	PCB production and testing in cold	87 days	01/06/2017	29/09/2017	
231	**Assembly test in CRB**	**9 days**	**01/12/2017**	**13/12/2017**	
232	3 submodules of column 1	3 days	01/12/2017	05/12/2017	
233	3 submodules of column 2	3 days	06/12/2017	08/12/2017	
234	3 submodules of column 3	3 days	11/12/2017	13/12/2017	
235	**Installation test in cryostat**	**8 days**	**06/12/2017**	**15/12/2017**	
236	Assemble First column	2 days	06/12/2017	07/12/2017	
237	Assemble Second column	2 days	11/12/2017	12/12/2017	
238	Assemble Third column	2 days	14/12/2017	15/12/2017	
239	**Full Assembly in CRB**	**15 days**	**04/05/2018**	**25/05/2018**	
240	3 submodules of column 4	3 days	04/05/2018	09/05/2018	
241	3 submodules of column 5	3 days	09/05/2018	14/05/2018	
242	4 submodules of column 6 and 7	4 days	14/05/2018	18/05/2018	
243	5 submodules to install last	5 days	18/05/2018	25/05/2018	
244	**Full Installation in cryostat**	**49 days**	**22/05/2018**	**30/07/2018**	
245	Assemble Fourth column	2 days	22/05/2018	24/05/2018	
246	Assemble Fifth column	2 days	24/05/2018	28/05/2018	
247	Fix clips and contacting dividers and reinforcements	4 days	28/05/2018	01/06/2018	
248	Assemble 2/3 of columns 6 and	5 days	01/06/2018	08/06/2018	
249	Bring last 5 submodules on the si	1 day	08/06/2018	11/06/2018	
250	Bring and assemble cathode and GND grid modules	6 days	11/06/2018	19/06/2018	
251	Remove Crane I-Beam inside the	2 days	26/06/2018	28/06/2018	
252	Install 4 of the last FC submodules + missing	5 days	28/06/2018	05/07/2018	
253	HVFT and degraders	5 days	28/06/2018	05/07/2018	
254	connect cathode and ground grid to the FC	1 day	05/07/2018	06/07/2018	
255	Remove floor and scaffoldings	2 days	06/07/2018	10/07/2018	
256	Lower the ground grid	2 days	26/07/2018	30/07/2018	
257	Beam plug installation	5 days	19/06/2018	26/06/2018	not yet designed
258					
259	**VHV system**	**279,71 days**	**08/05/2017**	**15/06/2018**	
260	**300 kV PSU**	**215 days**	**08/05/2017**	**16/03/2018**	
261	procurement and reception	2 days	08/05/2017	09/05/2017	
262	QA/QC test in Bld 182	10 days	06/11/2017	17/11/2017	
263	sent to EHN1	10 days	05/03/2018	16/03/2018	
264	**300 kV FT**	**166 days**	**03/07/2017**	**05/03/2018**	
265	Production (3 FT)	96 days	03/07/2017	13/11/2017	
266	Test with 300 kV in upgraded setup in Bldg 182	38 days	08/01/2018	28/02/2018	
267	Sent to EHN1	3 days	01/03/2018	05/03/2018	
268	**Extension**	**63 days**	**09/10/2017**	**17/01/2018**	
269	final design and validation	10 days	09/10/2017	20/10/2017	
270	Procurement and production follow up	33 days	23/10/2017	06/12/2017	
271	QA/QC	20 days	07/12/2017	17/01/2018	
272	Insertion and assembly in cryostat	10 days	01/06/2018	15/06/2018	
273					
274	**PMT and Light Read Out System**	**420,71 days?**	**01/12/2016**	**26/07/2018**	
275	LRO electronics	218 days	08/03/2017	19/01/2018	
276	**PMTs preparation and installation**	**420,71 days?**	**01/12/2016**	**26/07/2018**	
277	PMT procurement	17 days	01/12/2016	23/12/2016	
278	PMT base design and manufactu	80 days?	09/01/2017	28/04/2017	
279	PMT support structure production and assembly	80 days	09/01/2017	28/04/2017	
280	PMTs characterization	190 days?	09/01/2017	29/09/2017	
281	TPB coating	59 days	11/09/2017	30/11/2017	
282	Splitter production and tests	64 days	04/09/2017	30/11/2017	
283	PMT cable and fiber routing in cryostat from flange to bottom	2 days	18/05/2018	22/05/2018	
284	PMT support installation on the membrane	2 days	10/07/2018	12/07/2018	
285	PMT testing, installation in cryostat and cabling	10 days	12/07/2018	26/07/2018	
286	Splitter installation	10 days	12/07/2018	26/07/2018	
287	**Light calibration system**	**351,71 days**	**08/03/2017**	**26/07/2018**	
288	Fibers, light source tests and procurement	193 days	08/03/2017	01/12/2017	
289	Fiber calibration system installat	10 days	12/07/2018	26/07/2018	
290	Lower the Ground grid to its fnal position	2 days	26/07/2018	30/07/2018	
291					
292	**Front End electonics**	**314 days**	**08/03/2017**	**04/06/2018**	



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Tâche		Récapitulatif du projet		Tâche manuelle		Début uniquement		Échéance	
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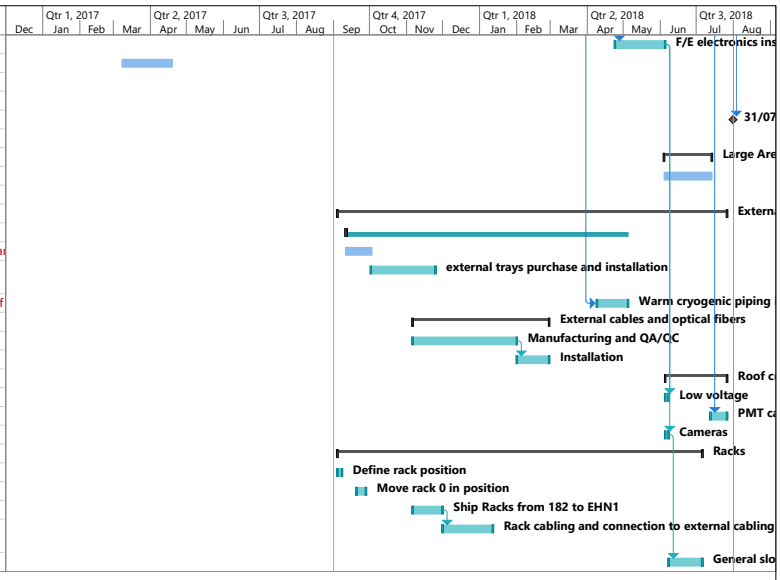
Jalon		Jalon inactif		Report récapitulatif manuel		Tâches externes		Progression manuelle	
Récapitulative		Récapitulatif inactif		Récapitulatif manuel		Jalons externes			

ID	Task name	Duration	Start date (dd//mm/yy)	Finish date (dd//mm/yy)	Comment
293	F/E electronics installation	30 days	24/04/2018	04/06/2018	
294	microTCA installation	30 days	08/03/2017	18/04/2017	
295					
296					
297	Ready to seal TCO & cryostat	1 day	30/07/2018	31/07/2018	
298					
299	**Large Area Trigger Counters**	**30 days**	**04/06/2018**	**13/07/2018**	
300	Installation	30 days	04/06/2018	13/07/2018	
301					
302	**External cabling, roof layout and Rac**	**223,71 days**	**04/09/2017**	**26/07/2018**	
303	**cable trays and roof piping**	**1 day**	**11/09/2017**	**11/09/2017**	
304	design and 3D layout	16 days	11/09/2017	02/10/2017	to be clarified with NP a
305	external trays purchase and installation	40 days	02/10/2017	24/11/2017	
306	Warm cryogenic piping installatio	20 days	09/04/2018	04/05/2018	to be clarified with NP if
307	**External cables and optical fibers**	**72 days**	**06/11/2017**	**27/02/2018**	
308	Manufacturing and QA/QC	53 days	06/11/2017	31/01/2018	
309	Installation	19 days	01/02/2018	27/02/2018	
310	**Roof crates**	**37,71 days**	**05/06/2018**	**26/07/2018**	
311	Low voltage	3 days	05/06/2018	07/06/2018	
312	PMT calibration	10 days	12/07/2018	26/07/2018	
313	Cameras	3 days	05/06/2018	07/06/2018	
314	**Racks**	**209 days**	**04/09/2017**	**05/07/2018**	
315	Define rack position	4 days	04/09/2017	07/09/2017	clarify with NP
316	Move rack 0 in position	6 days	20/09/2017	27/09/2017	
317	Ship Racks from 182 to EHN1	19 days	06/11/2017	30/11/2017	
318	Rack cabling and connection to external cabling	20 days	01/12/2017	11/01/2018	
319	General slow control testing	20 days	08/06/2018	05/07/2018	



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Jalon		Jalon inactif		Report récapitulatif manuel		Tâches externes		Progression manuelle	
Récapitulative		Récapitulatif inactif		Récapitulatif manuel		Jalons externes			