

Construction and Installation schedule

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- Updated construction and installation schedule discussed at the last IB on 7/04/17 wrt LEM/anode production
- Basically finalised to be the reference for PRR end of April



TB meeting 12/04/2017

Detector installation schedule depends directly on the installation sequences in the cryostat:

- CRP
- Field Cage and Cathode
- PMTs

The CRP assembly depends on LEM and anode production strategy (and LAS = LEM + Anode Sandwich assembly)

- The default planning 3 weeks ago was to start full LEM production (160) by 2 firms on April 2017 but this has evolved since the last Collaboration meeting

Main changes are:

- First do a first production of 80 LEM+anode enough to build at least the two first CRP before giving the green light to full production
- The t0 to start the first production has moved by 6 weeks to start middle of May compared to the SPSC report
- New Field Cage assembly procedure in the cryostat to take into account, space, logistics etc....

ProtoDUNE-DP

Version 12/04/2017

Task name	Duration (days)	Start date (dd/mm/yy)	Finish date (dd/mm/yy)
▾ ProtoDUNE-DP	323 days	09/01/2017	19/04/2018
▸ Cryostat preparation	93 days	08/03/2017	14/07/2017
▾ CRP Production & Installation	193 days	10/04/2017	17/01/2018
CR185 material order	1 day	10/04/2017	10/04/2017
Clean Room Material reception	30 days	11/04/2017	22/05/2017
▸ CR185 preparation	6 days	23/05/2017	30/05/2017
▸ CRP assembly in CR185	143 days	31/05/2017	15/12/2017
▸ LAS Supply	136 days	15/05/2017	20/11/2017
▸ CRP installation in the cryostat	77 days	19/09/2017	17/01/2018
▸ Chimneys and feedthroughs	75 days	24/04/2017	04/08/2017
▸ Drift Cage Production and Installation	215 days	01/05/2017	02/04/2018
Beam plug installation	5 days	19/02/2018	26/02/2018
▸ HV system	10 days	01/02/2018	15/02/2018
▸ PMT and Light Read Out System	307 days	09/01/2017	29/03/2018
Ground grid installation	2 days	29/03/2018	02/04/2018
▸ Front End electronics	90 days	11/09/2017	26/01/2018
▸ Slow control	30 days	23/10/2017	01/12/2017
▾ Purity monitor	30 days	07/03/2018	18/04/2018
Installation	30 days	07/03/2018	18/04/2018
Ready to seal TCO & cryostat	1 day	18/04/2018	19/04/2018
▾ Large Area Trigger Counters	30 days	15/11/2017	22/12/2017

The end of installation is now moved to April 18, 2018



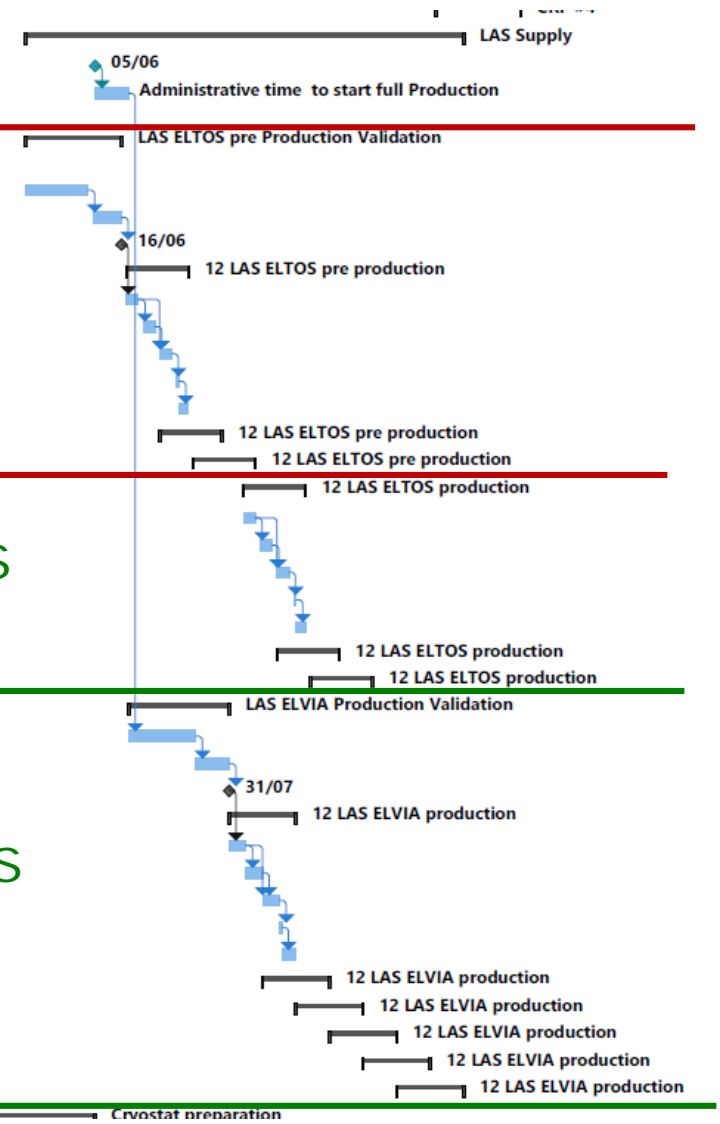
Scenario from last IB discussion: LAS production schedule

CP	CRP #	Duration	Start	End
62	LAS Supply	100 days	08/05/2017	06/11/2017
63	Green Light full LEM production	1 day	05/06/2017	05/06/2017
64	Administrative time to start full Production	10 days	06/06/2017	19/06/2017
65	LAS ELTOS pre Production Validation	30 days	08/05/2017	16/06/2017
66	LEM production (Preserie 6 LEM)	20 days	08/05/2017	02/06/2017
67	LEM Preserie Tests	10 days	05/06/2017	16/06/2017
68	LEM Production Validated		16/06/2017	16/06/2017
69	12 LAS ELTOS pre production	20 days	19/06/2017	14/07/2017
70	6 LEM Batch production	5 days	19/06/2017	23/06/2017
71	6 LEM Batch production	5 days	26/06/2017	30/06/2017
72	12 LAS Processing at Saclay	5 days	03/07/2017	07/07/2017
73	12 LAS send to CERN	1 day	10/07/2017	10/07/2017
74	12 LAS Assembly at CERN	4 days	11/07/2017	14/07/2017
75	12 LAS ELTOS pre production	20 days	03/07/2017	28/07/2017
81	12 LAS ELTOS pre production	20 days	17/07/2017	11/08/2017
88	12 LAS ELTOS production	20 days	07/08/2017	01/09/2017
89	6 LEM Batch production	5 days	07/08/2017	11/08/2017
90	6 LEM Batch production	5 days	14/08/2017	18/08/2017
91	12 LAS Processing at Saclay	5 days	21/08/2017	25/08/2017
92	12 LAS send to CERN	1 day	28/08/2017	28/08/2017
93	12 LAS Assembly at CERN	4 days	29/08/2017	01/09/2017
94	12 LAS ELTOS production	20 days	21/08/2017	15/09/2017
100	12 LAS ELTOS production	20 days	04/09/2017	29/09/2017
106	LAS ELVIA Production Validation	30 days	20/06/2017	31/07/2017
107	LEM production (Preserie 6 LEM)	20 days	20/06/2017	17/07/2017
108	LEM Preserie Tests	10 days	18/07/2017	31/07/2017
109	LEM Production Validated		31/07/2017	31/07/2017
110	12 LAS ELVIA production	20 days	01/08/2017	28/08/2017
111	6 LEM Batch production	5 days	01/08/2017	07/08/2017
112	6 LEM Batch production	5 days	08/08/2017	14/08/2017
113	12 LAS Processing at Saclay	5 days	15/08/2017	21/08/2017
114	12 LAS send to CERN	1 day	22/08/2017	22/08/2017
115	12 LAS Assembly at CERN	4 days	23/08/2017	28/08/2017
116	12 LAS ELVIA production	20 days	15/08/2017	11/09/2017
122	12 LAS ELVIA production	20 days	29/08/2017	25/09/2017
128	12 LAS ELVIA production	20 days	12/09/2017	09/10/2017
134	12 LAS ELVIA production	30 days	26/09/2017	23/10/2017
140	12 LAS ELVIA production	20 days	10/10/2017	06/11/2017
146	Crostat preparation	64 days	08/03/2017	05/06/2017

40 LEMS
ELTOS

+ 40 LEMS
ELTOS

+ 80 LEMS
ELVIA



Summary:

Before releasing the planning:

- Need to cross check with different teams for the different items
 - Cryostat preparation **ok**
 - Field Cage **ok**
 - CRP **ok**
 - LEM/Anode **to check after the tender finishes on the 14/04**
 - Light System (basically ok, in discussion with Inés and colleagues from Spain)
 - FE electronics and slow control **ok**
- Provide 1 planning/item to different speakers for the installation presentations