## 6x6x6m3 high level milestones

André Rubbia (ETHZ) July 20th, 2016

ProtoDUNE-OP V7 197/16   AR	n Jul Aug Sept
ProtoDUNE_OP y7 1971/6   AR	II du Aug Gept
ProtoDUNE_DP v19/16   ARS	
2	n Jul Aug Sept
2   3   Assembly detection complement   19   79   79   79   79   79   79   79	
2   Substitute personned where represent   5,00   75 / 75   75   75   75   75   75   75	
1	
1	
2   3   Soft of Commissioning with Commission   500   507-19   507-19	
Proposition	
Protection   Protection   Section	
19	
1	
1	1 1 1
1.3	
4.4   Becoultive disaging completed for DRFT AGET   100, 10044   170044	
15 4	
1	
17   27   Executive design completed for NFF   0.00   1/10/96	
18	
10	
20   10	
Passed production readiness review	
2 1.13	
3 4.14 Started assembly nBig 185 available 0.00 3/8/17 3/8/17 1	
24 14 Started assembly in Big 185 0.00 437377 37377	
24 1.5 Cryostat in EHN1 available for detector installation 1.00 4/977 4/977 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
26 4-16	
27 4.17	
28 419	
29 4:9	
30	
131 421 CRP #3 assembled in big 185 0.00 S/1/17 S/1/17	
32 422	
33 423 All CRPs cold-tested 0.00 7/9/17 7/9/17  34 424 End of CRP assembly 0.00 9/1/17 9/1/17  35 425 All CRPs installed and cabled 0.00 11/1/17 11/1/17  36 426 Field age installed 0.00 11/1/17 11/1/17  37 427 Cathode installed 0.00 12/1/17 12/1/17  38 428 HVFT installed 0.00 12/1/17 12/1/17  39 429 Light readout installed and cabled 0.00 12/1/17 12/1/17  40 430 Internal purity monitor(s) installed 0.00 12/1/17 12/1/17  41 4.31 Slow control sensors installed and cabled 0.00 12/1/17 12/1/17  42 4.32 End of installation inside the cryostat 0.00 12/2/17 12/1/17  43 4.33 End of procurement 0.00 11/5/18 1/15/18  44 4.34 Seal TCO & cryostat 0.00 1/15/18 1/15/18  45 4.35 Cryogenic system ready 0.50 2/5/18 2/5/18 CERN, Waiting for Mazrio 0.00 1/1/5/18 1/15/18  47 4.37 F/E+DAQ commissioned 0.00 2/12/18 2/12/18  47 4.37 F/E+DAQ commissioned 0.00 2/12/18 2/12/18	
34 424 End of CRP assembly 0.00 9/1/17 9/1/17  35 425 All CRPs installed and cabled 0.00 11/1/17 11/1/17  36 426 Field cage installed 0.00 11/1/17 11/1/17  37 427 Cathode installed 0.00 12/1/17 12/1/17  38 428 HVFT installed 0.00 12/1/17 12/1/17  39 429 Light readout installed and cabled 0.00 12/1/17 12/1/17  40 4.30 Internal purity monitor(s) installed 0.00 12/1/17 12/1/17  41 431 Slow control sensors installed and cabled 0.00 12/1/17 12/1/17  42 4.32 End of installation inside the cryostat 0.00 12/2/17 12/2/0/17  43 4.33 End of procurement 0.00 11/5/18 1/5/18  44 4.34 Saal TCO & cryostat 0.00 11/5/18 1/5/18  45 4.35 Cryogenic system ready 0.50 2/5/18 2/5/18 CERN, Waiting for Mazrio 0.00 12/1/18 1/5/18  46 4.36 Slow control commissioned 0.00 2/12/18 2/12/18	
35 4.25 All CRPs installed and cabled 0.00 11/1/17 11/1/17 11/1/17 11/1/17 11/1/17 11/1/17 11/1/17 11/1/17 11/1/17 11/1/17 138 4.28 Field cage installed 0.00 12/1/17 12/1/17 12/1/17 138 4.28 HVFT installed 0.00 12/1/17 12/1/17 12/1/17 139 4.29 Light readout installed and cabled 0.00 12/1/17 12/1/17 12/1/17 14.31 Slow control sensors installed and cabled 0.00 12/1/17 12/1/17 14.31 Slow control sensors installed and cabled 0.00 12/1/17 12/1/17 14.31 Slow control sensors installed and cabled 0.00 12/1/17 12/1/17 14.31 Slow control sensors installed and cabled 0.00 12/1/17 12/1/17 14.33 End of installation inside the cryostat 0.00 12/2/17 12/2/17 133 End of procurement 0.00 11/15/18 11/15/18 11/15/18 14.34 Seal TCO & cryostat 0.00 11/15/18 11/15/18 11/15/18 14.35 Cryogenic system ready 0.50 2/5/16 2/5/16 CERN, Waiting for Mazrio 14.36 Slow control commissioned 0.00 2/12/18 2/12/18 14.37 F/E+DAQ commissioned 0.00 2/12/18 2/12/18	
36 4.26 Field cage installed 0.00 11/15/17 11/15/17 11/15/17 11/15/17 12/11/17 12/1	
37 4.27 Cathode installed 0.00 12/1/17 12/1/17 12/1/17 138 4.28 HVFT installed 0.00 12/1/17 12/1/17 12/1/17 14.39 Light readout installed and cabled 0.00 12/1/17 12/1/17 12/1/17 14.31 Slow control sensors installed and cabled 0.00 12/1/17 12/1/17 14.31 Slow control sensors installed and cabled 0.00 12/1/17 12/1/17 14.31 Slow control sensors installed and cabled 0.00 12/1/17 12/1/17 14.31 Slow control sensors installed and cabled 0.00 12/1/17 12/1/17 14.31 Slow control sensors installed and cabled 0.00 12/1/17 12/1/17 14.31 Slow control sensors installed and cabled 0.00 12/2/17 12/20/17 12/2	
38 4-28	
39 4.29	
40 4 30 Internal purity monitor(s) installed	
41 4.31 Slow control sensors installed and cabled 0.00 12/11/17 1	
42 4.32 End of installation inside the cryostat 0.00 1/20/17 12/20/17 43 4.33 End of procurement 0.00 1/15/18 1/15/18 44 4.34 Seal TCO & cryostat 0.00 1/15/18 1/15/18 45 4.35 Cryogenic system ready 0.50 2/5/18 2/5/18 CERN, Waiting for Mazrio 4.36 Slow control commissioned 0.00 2/12/18 2/12/18 47 4.37 F/E+DAQ commissioned 0.00 2/12/18 2/12/18	
43 4.33 End of procurement 0.00 1/15/18 1/15/18 1/15/18 4.34 Seal TCO & cryostat 0.00 1/15/18 1/15/18 1/15/18 4.35 Cryogenic system ready 0.50 2/5/18 2/5/18 CERN, Waiting for Mazrio 46 4.36 Slow control commissioned 0.00 2/12/18 2/12/18 4.37 F/E+DAQ commissioned 0.00 2/12/18 2/12/18 4.37 F/E+DAQ commissioned 0.00 2/12/18 2/12/18	
44 4.34 Seal TCO & cryostat 0.00 1/15/18 1/15/18	
45 4.35 Cryogenic system ready 0.50 2/5/18 2/5/18 CERN, Waiting for Mazrio  46 4.36 Slow control commissioned 0.00 2/12/18 2/12/18  47 4.37 F/E+DAQ commissioned 0.00 2/12/18 2/12/18	
46 4.36 Slow control commissioned 0.00 2/12/18 2/12/18	
47 4.37 F/E+DAQ commissioned 0.00 2/12/18 2/12/18	
Apr May Jun Jul Aug Sept Oct Nov Dec Jan Feb Mar Apr May Jun Jul Aug Sept Oct Nov Dec Jan Feb Mar Apr May Jun Jul Aug Sept Oct Nov Dec Jan Feb Mar Apr May	n Jul Aug Sept

WBS								Apr	May Ju	ın Ju	ıl Aug	Sept	Oct	Nov	Dec .	Jan F	eb Ma	r Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec J	an Fe	b Mar	Apr	May	Jun	Jul	Aug	Sept	Oct
	Activity Name	Duration (Days)	Start Date	Finish Date	Resources Assigned	People	People 2016							2017											2018										
								Apr	May Ju	ın Ju	ıl Aug	Sept	Oct	Nov	Dec .	Jan F	eb Ma	r Apr	May	Jun	Jul	Aug	Sept	Oct	Nov I	Dec J	an Fe	b Mar	Apr	May	Jun	Jul	Aug	Sept	Oct
48	4.38	Trigger counters commissioned	0.00	2/12/18	2/12/18																						-								
49	4.39	Online computing farm commissioned	0.00	2/12/18	2/12/18																						-								
50	4.40	Start of cryogenic operation	0.00	4/2/18	4/2/18																								<b>♦</b>						
51	4.41	LAr purity achieved in side cryostat	0.00	4/2/18	4/2/18																							$\top$	<b>♦</b>				$\neg$		
52	4.42	Cosmic tracks recorded	0.00	4/2/18	4/2/18																							T	<b>—</b>						
53	4.43	Ready for beam	0.00	4/2/18	4/2/18																							$\top$	<b>♦</b>				$\neg$		
54	4.44	H2 beam running	130.00	4/2/18	9/28/18																							$\top$		1			<b>=</b>		
55	4.45										П																	$\top$							
								Apr	May Ju	ın Ju	ıl Aug	Sept	Oct	Nov	Dec .	Jan F	eb Ma	r Apr	May	Jun	Jul	Aug	Sept	Oct	Nov I	Dec J	an Fe	b Mar	Apr	May	Jun	Jul	Aug	Sept	Oct