

System Experts and Teams on-site at CERN

Coordination of presence and action items sequence being defined in the
Commissioning Plan & Procedures document ⊕ Run Plan & Shift Table

Commissioning Leader, Run Coordinator (F. Resnati/CERN, R. Acciarri/FNAL) + Deputy (A.Zani/CERN)

August 29, 2018 (Start)
November 11, 2018 (End)

ProtoDUNE-SP Beam Time Schedule

H4 Beam Time Allocation to NP04 by SPS-C:

7.5 weeks (including Beam Commissioning Time) in 4 blocks (2w + 2w + 2w + 1.5w)



schedule issue date: 26-Jan-2018

Version: 1.0

LHC Exp.
 PS/SPS Exp.
 Other Exp.
 INT Exp.

		Mar			Apr			Mai			Jun			Jul			Aug			Sep			Oct			Nov			Dec																																																																				
Week		11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50																																																								
Machine																									UA9 TS1 Coldex																								UA9 TS2 Coldex																								Coldex																								RP
North Area	T2 - H2	SPS & TT20 Setup 18			NA Setup 8	HERD FIT 7	NA62 GTK 7	NA61 SHINE 14						TIC 7	Calice (Ahalc) 7	ATLAS ZDC 7	Calice (Ahalc) 7	NA61 K 60GeV/c 7	NA61 SHINE 21			AXIAL 7	KLEVER 7	LEMMA 7	CMS HGCA 7	CMS HCAL 14		Calice (Sdhalc) 14		HERD 7	NA61 SHINE 7	CMS HGCA 7	NP02 26			NA61 SHINE 28																																																													
	T2 - H4	SPS & TT20 Setup 18			NA Setup 6	NA63 9	CMS ECAL 7	GIF RD51 14		NA64 setup 7	NA64 35			CMS ECAL 7	AIDA WP14 7	SHiP installation 7	SHiP Muon 14		SHiP Charm 7	GIF 7	GIF RD51 14		DS Tau 7	NP04 setup 7	NP04 7	CMS MTD 7	NP04 14		CMS ECAL 7	NP04 14		GIF RD51 7	NP04 12		RE29 DAMPE 7	HERD 7	ATLAS ZDC 7	CaloCube 7																																																											
	T4 - H6	SPS & TT20 Setup 18			NA Setup 6	Clc pix 7	CMS Outer Tracker 9	ATLAS HGTD 7	ATLAS ITK 14		ATLAS ITK Kartel 7	RD42 7	ALICE muons 7	CERF 7	CMS Outer Tracker / AIDAwp7 7	Clc pix 7	ATLAS HGTD 7	ATLAS ITK 21		ATLAS AFP 14		ATLAS BCM 7	Clc pix 7	ATLAS ITK 14		ATLAS AFP 14		ALICE muons 7	RD42 7	AIDA WP7 7	ATLAS ITK Kartel 14		CMS Outer Tracker 7	ATLAS Strip Tk 7	Clc pix 5																																																														
	T4 - H8	SPS & TT20 Setup 18			NA Setup 6	TOTEM (+UA9) 9	ATLAS HV-CMOS 7	ATLAS HV-CMOS 14		LHCb 14	ATLAS Tilecal 14		ATLAS HV-CMOS 7	TOTEM (+UA9) 7	ATLAS TRT 7	LHCb 21		crysbear 7	CMS ITK 7	ALICE FOCAL 14		TOTEM (+UA9) 7	mu-e 7	ATLAS HV-CMOS 7	FCce 7	TOTEM (+UA9) 7	ATLAS HV-CMOS 7	CMS ITK 7	LHCb 26		ATLAS Tilecal 14		R2E (+UA9) 7	HNX 14		NUCLEON 7																																																													
	T4 - K12	SPS & TT20 Setup 18			NA Setup 6																																																																																												
	T6 - M2	SPS & TT20 Setup 18			NA Setup 6																																																																																												
TT41					AWAKE 21									AWAKE 21												AWAKE 21																																																																							

For further information contact the PS/SPS-Coordinator. Email: Sps.Coordinator@cern.ch, Tel: +41 75 411 3845.

SHIFT TABLE

Shift unit is TWO-Weeks

1 ... 39 = Shift unit ID NUMBER

Shift units are assigned/taken to/by Institutions (not by individuals)

Shifters (and their Institution) must be registered in the CERN Graybook

For first-visit-at-CERN shifters:

- Paperwork for CERN badge&access to be prepared well before
[Maxine-DUNE Secretariat & Simona-CENF Secretariat]
- Arrival at CERN at least 2-3 days before first shift

		AUGUST				SEPTEMBER				OCTOBER				NOVEMBER													
W#		34	35	36	37	38	39	40	41	42	43	44	45	46													
W		22 A 29 A	29 A 5 S	5 S 12 S	12 S 19 S	19 S 26 S	26 S 3 O	3 O 10 O	10 O 17 O	17 O 24 O	24 O 31 O	31 O 7 N	7 N 14 N														
D	h	E.S.	S	E.S.	S	E.S.	S	E.S.	S	E.S.	S	E.S.	S	E.S.	S	E.S.	S										
We	16/24	1	4	6	7	9	10	12	13	15	16	18	19	21	22	24	25	27	28	30	31	33	34	36	37	39	
Th	00/08	2	5	4	8	7	11	10	14	13	17	16	20	19	23	22	26	25	29	28	32	31	35	34	38	37	
	08/16	3	6	5	9	8	12	11	15	14	18	17	21	20	24	23	27	26	30	29	33	32	36	35	39	38	
	16/24	3	6	5	9	8	12	11	15	14	18	17	21	20	24	23	27	26	30	29	33	32	36	35	39	38	
Fr	00/08	1	4	6	7	9	10	12	13	15	16	18	19	21	22	24	25	27	28	30	31	33	34	36	37	39	
	08/16	2	5	4	8	7	11	10	14	13	17	16	20	19	23	22	26	25	29	28	32	31	35	34	38	37	
	16/24	2	5	4	8	7	11	10	14	13	17	16	20	19	23	22	26	25	29	28	32	31	35	34	38	37	
Sa	00/08	3	6	5	9	8	12	11	15	14	18	17	21	20	24	23	27	26	30	29	33	32	36	35	39	38	
	08/16	1	4	6	7	9	10	12	13	15	16	18	19	21	22	24	25	27	28	30	31	33	34	36	37	39	
	16/24	1	4	6	7	9	10	12	13	15	16	18	19	21	22	24	25	27	28	30	31	33	34	36	37	39	
Su	00/08	2	5	4	8	7	11	10	14	13	17	16	20	19	23	22	26	25	29	28	32	31	35	34	38	37	
	08/16	3	6	5	9	8	12	11	15	14	18	17	21	20	24	23	27	26	30	29	33	32	36	35	39	38	
	16/24	3	6	5	9	8	12	11	15	14	18	17	21	20	24	23	27	26	30	29	33	32	36	35	39	38	
Mo	00/08	1	4	6	7	9	10	12	13	15	16	18	19	21	22	24	25	27	28	30	31	33	34	36	37	39	
	08/16	2	5	4	8	7	11	10	14	13	17	16	20	19	23	22	26	25	29	28	32	31	35	34	38	37	
	16/24	2	5	4	8	7	11	10	14	13	17	16	20	19	23	22	26	25	29	28	32	31	35	34	38	37	
Tu	00/08	3	6	5	9	8	12	11	15	14	18	17	21	20	24	23	27	26	30	29	33	32	36	35	39	38	
	08/16	1	4	6	7	9	10	12	13	15	16	18	19	21	22	24	25	27	28	30	31	33	34	36	37	39	
	16/24	1	4	6	7	9	10	12	13	15	16	18	19	21	22	24	25	27	28	30	31	33	34	36	37	39	
We	00/08	2	5	4	8	7	11	10	14	13	17	16	20	19	23	22	26	25	29	28	32	31	35	34	38	37	
	08/16	3	6	5	9	8	12	11	15	14	18	17	21	20	24	23	27	26	30	29	33	32	36	35	39	38	

Institutions	TeamLeader	SHIFT ID NUMBER	NON AVAILABLE FOR SHIFT
SLAC	M. Convery		
Michigan Stae U	C. Bromberg		
ANL	Z. Djurcic		
Louisiana State U	T. Kutter		
LBNL	C-J Lin		
Indiana U	S. Mufson		
Boston U	E. Kearns, F. Blaszczyk		
U of Chicago	E. Blucher		
U of Cincinnati	A. Aurisano		
Oregon State U	H. Schellman		
U of California Davis	R. Svoboda, J. Wang		
U of Hawaii	J. Maricic		
U of Huston	L. Whitehead, A. Renshaw		
U of Iowa	O. Yasar		
U of California Irvine	J. Biang		
Drexel U	C. Lane		
U of Rochester	S. Manly		
Stony Brook U	C-K. Jung		
BNL	S. Kettell, M. Worcester		
William&Mary	M. Kordosky		
Virginia Tech	C. Mariani		
U of California LosAngeles	H. Wang		
U of Wisconsin Madison	R. Paulos		
U of Minnesota	M. Marshak, W. Miller		
U of Dallas	W. Flanagan		
Kansas State U	G. Horton-Smith		
Yale U	B. Fleming, S. Tufanli		
FNAL	F. Cavanna, G. Rameika		

CERN	M. Nessi		
NIKHEF (NL)	P. DeJong		
IFIC-Valencia (Sp)	A. Cervera		
UNICAMP (Br)	E. Segreto		
UFABC (Br)	A. Machado		
U of Bristol	J. Brooke		
U of Oxford	G. Barr		
U of Birmingham	A. Watson		
U of Sheffield	C. Booth		
RAL	A. Weber		
U of Edinburgh	F. Muheim		
U of Liverpool	C. Touramanis		
U of Manchester	J. Evans		
U of Warwick	G. Barker		

Institutions (not registered in GrayBook)	Team Leader	SHIFT ID NUMBER	NON AVAILABLE FOR SHIFT
U of Prague (Cz)	J. Zalesak		
UAN (Colombia)	R. Gutierrez		
UPenn	J. Klein		
U of Cambridge			
Colorado State U	R. Wilson		
Florida State U	I. Furic		
.....			
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The SHIFT TABLE is organized in COLUMNS.

Each Column represents ONE WEEK of shifts - there are 12 Weeks of shifts starting on Aug.22 and ending on Nov.14 (one additional week after Nov.14 is left as optional)

The Week starts on Wed. at 4pm (usually the Wed. morning is used by SPS for machine development, and there is no beam in the morning) and ends on the following Wednesday at 4pm

Each Week is thus made of SIX full DAYS + ONE DAY (Wed) split in two segments - Days are vertically displayed from top to bottom of the Week column.

Each Day of the Week is split into THREE PERIODS of 8 hrs each (vertically ordered)

Each Period has TWO SHIFTS (horizontally ordered - forming the width of the Column). Shifts are classified as E.S. (Expert Shift) and S (Shift)

Each Shift is represented by a “Pixel” in the shift table, identified by a Shift Unit **ID NUMBER**.

Each ID NUMBER identifies the Institution signing-up for the corresponding Shift Unit.

Each Id Number/Institution (with the exception of shift Id. 1, 2, 3 - reserved to Experts) is assigned with a Shift Unit, i.e. with a total of 14 Shifts Periods, distributed over TWO consecutive Weeks (7 S-type Shifts in the first Week and 7 ES-type shifts in the second week) indicated by the corresponding Id. Number.

The Institution supports their shifter(s) for travel expenses. The Project can supply for lodging (room in apartment near Preveessin).

Shift rotation logic aims to distribute an even number of owl and w.e. shifts to ALL Institutions:

shifts are either single 8hrs long (owl shift, over night from 0:00 to 8:00) or double 8+8 hrs long (during day, 8:00 to 24:00). This arrangement allows for ONE full day (24hrs) to relax between shifts.

See the highlighted “**Id 16**” as example of *shift/rest* period distribution.

Note: After the first week **Shifter** 16 becomes **Expert Shifter** in the second week.

Note 2: Institutions may send one or two shifters to cover their shift unit. In case of TWO, both shifters are required to stay the entire period of two weeks.

The Shift Table requires in total **39 Institutions** for the coverage of
12 Weeks x 7 Day/Week x 3 Periods/Day x 2 Shifter/Periods = 504 Pixels

Currently there are 43 Institution registered in the CERN Gray Book and several more active Institutions not (yet) registered.

- The two weeks block - to be assigned upon request to Institution (and not to individual).
- The two weeks minimizes travel costs (especially flight cost from US) for the coverage of the entire shift period.
- Each block has same number of Day, Evening and Night shifts, as well as weekday and w.e. shifts.
- The shift rotation also always foresees one entire day (24 hrs) btw consecutive shifts - (and not 16 hr as in most common cases)
- Institutions are normally expected to take ONE shift unit (block) and send two shifters that can alternate - having 32 or 48 hrs between consecutive shifts.
- If an institution cannot send two shifters (for any reason), this Institution can/ should combine with another institution in the same conditions. It is however necessary that the shifters stay two weeks at CERN (and not sending one for one week and the other for the other week).
- The shifter(s) in the first week will be on shift with an "expert shifter", and will become himself/herself "expert shifter" in the second week.

Documentation and Shift Tables can be found at

<https://drive.google.com/open?id=1RMum6BSnB0jiDSzggPBaVDLft5uQdBpg>



Drive

Search Drive

Shared with me > ProtoDUNE Shift



New



My Drive



Computers



Shared with me



Recent



Starred



Trash



Backups

Files

Name ↓

PDF SignUp-list.pdf

PDF Shift table with i...

Shift Instruction...

ProtoDUNE Shift...

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y
1			August				September						October						November						
2		W	22-Aug-18	29-Aug-18	5-Sep-18	12-Sep-18	19-Sep-18	26-Sep-18	3-Oct-18	10-Oct-19	17-Oct-18	24-Oct-18	31 - Berkeley-Oct-18	7-Nov											
3			29-Aug-18	5-Sep-18	12-Sep-18	19-Sep-18	26-Sep-18	3-Oct-18	10-Oct-18	17-Oct-18	24-Oct-18	31 - Berkeley-Oct-18	7-Nov-18	14-Nov											
4	Date	Hour	E.S.	S	E.S.	S	E.S.	S	E.S.	S	E.S.	S	E.S.	S	E.S.	S	E.S.	S	E.S.	S	E.S.	S	E.S.	S	E.S.
5	Wed	16:00-24:00	1	4	6	7 - Houston	9	10 - LBNL	12	13 - BNL	15 - nikhef	16	18	19	21	22 - Houston	24	25	27	28 - Sheffield	30-RAL	31 - Berkeley	33	34 - Bristol	36
6	Thur	00:00 - 08:00	2	5	4	8 - Rochester	7 - Houston	11	10 - LBNL	14 - Manchester	13 - BNL	17	16	20	19	23	22 - Houston	26	25	29	28 - Sheffield	32	31 - Berkeley	35	34 - Bristol
7		08:00-16:00	3	6	5	9	8 - Rochester	12	11	15 - nikhef	14 - Manchester	18	17	21	20	24	23	27	26	30-RAL	29	33	32	36	35
8		16:00-24:00	3	6	5	9	8 - Rochester	12	11	15 - nikhef	14 - Manchester	18	17	21	20	24	23	27	26	30-RAL	29	33	32	36	35
9	Fri	00:00 - 08:00	1	4	6	7 - Houston	9	10 - LBNL	12	13 - BNL	15 - nikhef	16	18	19	21	22 - Houston	24	25	27	28 - Sheffield	30-RAL	31 - Berkeley	33	34 - Bristol	36
10		08:00-16:00	2	5	4	8 - Rochester	7 - Houston	11	10 - LBNL	14 - Manchester	13 - BNL	17	16	20	19	23	22 - Houston	26	25	29	28 - Sheffield	32	31 - Berkeley	35	34 - Bristol
11		16:00-24:00	2	5	4	8 - Rochester	7 - Houston	11	10 - LBNL	14 - Manchester	13 - BNL	17	16	20	19	23	22 - Houston	26	25	29	28 - Sheffield	32	31 - Berkeley	35	34 - Bristol
12	Sat	00:00 - 08:00	3	6	5	9	8 - Rochester	12	11	15 - nikhef	14 - Manchester	18	17	21	20	24	23	27	26	30-RAL	29	33	32	36	35
13		08:00-16:00	1	4	6	7 - Houston	9	10 - LBNL	12	13 - BNL	15 - nikhef	16	18	19	21	22 - Houston	24	25	27	28 - Sheffield	30-RAL	31 - Berkeley	33	34 - Bristol	36
14		16:00-24:00	1	4	6	7 - Houston	9	10 - LBNL	12	13 - BNL	15 - nikhef	16	18	19	21	22 - Houston	24	25	27	28 - Sheffield	30-RAL	31 - Berkeley	33	34 - Bristol	36
15	Sun	00:00 - 08:00	2	5	4	8 - Rochester	7 - Houston	11	10 - LBNL	14 - Manchester	13 - BNL	17	16	20	19	23	22 - Houston	26	25	29	28 - Sheffield	32	31 - Berkeley	35	34 - Bristol
16		08:00-16:00	3	6	5	9	8	12	11	15 - nikhef	14 - Manchester	18	17	21	20	24	23	27	26	30-RAL	29	33	32	36	35
17		16:00-24:00	3	6	5	9	8	12	11	15 - nikhef	14 - Manchester	18	17	21	20	24	23	27	26	30-RAL	29	33	32	36	35
18	Mon	00:00 - 08:00	1	4	6	7 - Houston	9	10 - LBNL	12	13 - BNL	15 - nikhef	16	18	19	21	22 - Houston	24	25	27	28 - Sheffield	30-RAL	31 - Berkeley	33	34	36
19		08:00-16:00	2	5	4	8 - Rochester	7 - Houston	11	10 - LBNL	14 - Manchester	13 - BNL	17	16	20	19	23	22 - Houston	26	25	29	28 - Sheffield	32	31 - Berkeley	35	34 - Bristol
20		16:00-24:00	2	5	4	8 - Rochester	7 - Houston	11	10 - LBNL	14 - Manchester	13 - BNL	17	16	20	19	23	22 - Houston	26	25	29	28 - Sheffield	32	31 - Berkeley	35	34 - Bristol
21	Tues	00:00 - 08:00	3	6	5	9	8 - Rochester	12	11	15 - nikhef	14 - Manchester	18	17	21	20	24	23	27	26	30-RAL	29	33	32	36	35
22		08:00-16:00	1	4	6	7 - Houston	9	10 - LBNL	12	13 - BNL	15 - nikhef	16	18	19	21	22 - Houston	24	25	27	28 - Sheffield	30-RAL	31 - Berkeley	33	34 - Bristol	36
23		16:00-24:00	1	4	6	7 - Houston	9	10 - LBNL	12	13	15 - nikhef	16	18	19	21	22 - Houston	24	25	27	28 - Sheffield	30-RAL	31 - Berkeley	33	34 - Bristol	36
24	Wed	00:00 - 08:00	2	5	4	8 - Rochester	7 - Houston	11	10 - LBNL	14 - Manchester	13 - BNL	17	16	20	19	23	22 - Houston	26	25	29	28 - Sheffield	32	31 - Berkeley	35	34 - Bristol
25		08:00-16:00	3	6	5	9	8 - Rochester	12	11	15 - nikhef	14 - Manchester	18	17	21	20	24	23	27	26	30-RAL	29	33	32	36	35

1/3 assigned !!

Shift Unit Id Number	Shift Unit start/end	Institution
1	22 Aug - 29 Aug	
2	22 Aug - 29 Aug	
3	22 Aug - 29 Aug	
4	22 Aug - 5 Sept	Hawaii
5	22 Aug - 5 Sept	
6	22 Aug - 5 Sept	
7	29 Aug - 12 Sept	Huston
8	29 Aug - 12 Sept	Rochester
9	29 Aug - 12 Sept	
10	5 Sept - 19 Sept	LBNL
11	5 Sept - 19 Sept	
12	5 Sept - 19 Sept	
13	12 Sept - 26 Sept	BNL
14	12 Sept - 26 Sept	Manchester
15	12 Sept - 26 Sept	Nikhef
16	19 Sept - 3 Oct	
17	19 Sept - 3 Oct	
18	19 Sept - 3 Oct	

19	26 Sept - 10 Oct	
20	26 Sept - 10 Oct	
21	26 Sept - 10 Oct	
22	3 Oct - 17 Oct	Huston
23	3 Oct - 17 Oct	
24	3 Oct - 17 Oct	
25	10 Oct - 24 Oct	
26	10 Oct - 24 Oct	
27	10 Oct - 24 Oct	
28	17 Oct - 31 Oct	Sheffield
29	17 Oct - 31 Oct	
30	17 Oct - 31 Oct	RAL
31	24 Oct - 7 Nov	Berkeley
32	24 Oct - 7 Nov	
33	24 Oct - 7 Nov	
34	31 Oct - 14 Nov	Bristol
35	31 Oct - 14 Nov	
36	31 Oct - 14 Nov	
37	7 Nov - 21 Nov	
38	7 Nov - 21 Nov	
39	7 Nov - 21 Nov	