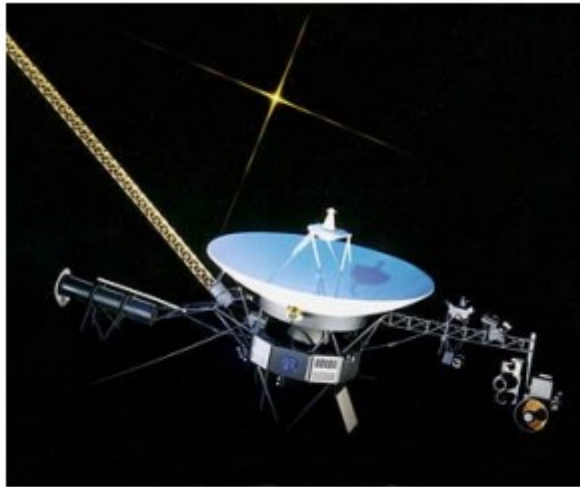


# VOYAGER

## Space Flight Operations Schedule (SFOS)

Issue Date: November 6, 2019

For the Period: 11/07/19 to 11/25/19 (19/311 – 19/329)



Posted at <https://voyager.jpl.nasa.gov/mission/status/>

**LEGEND:**

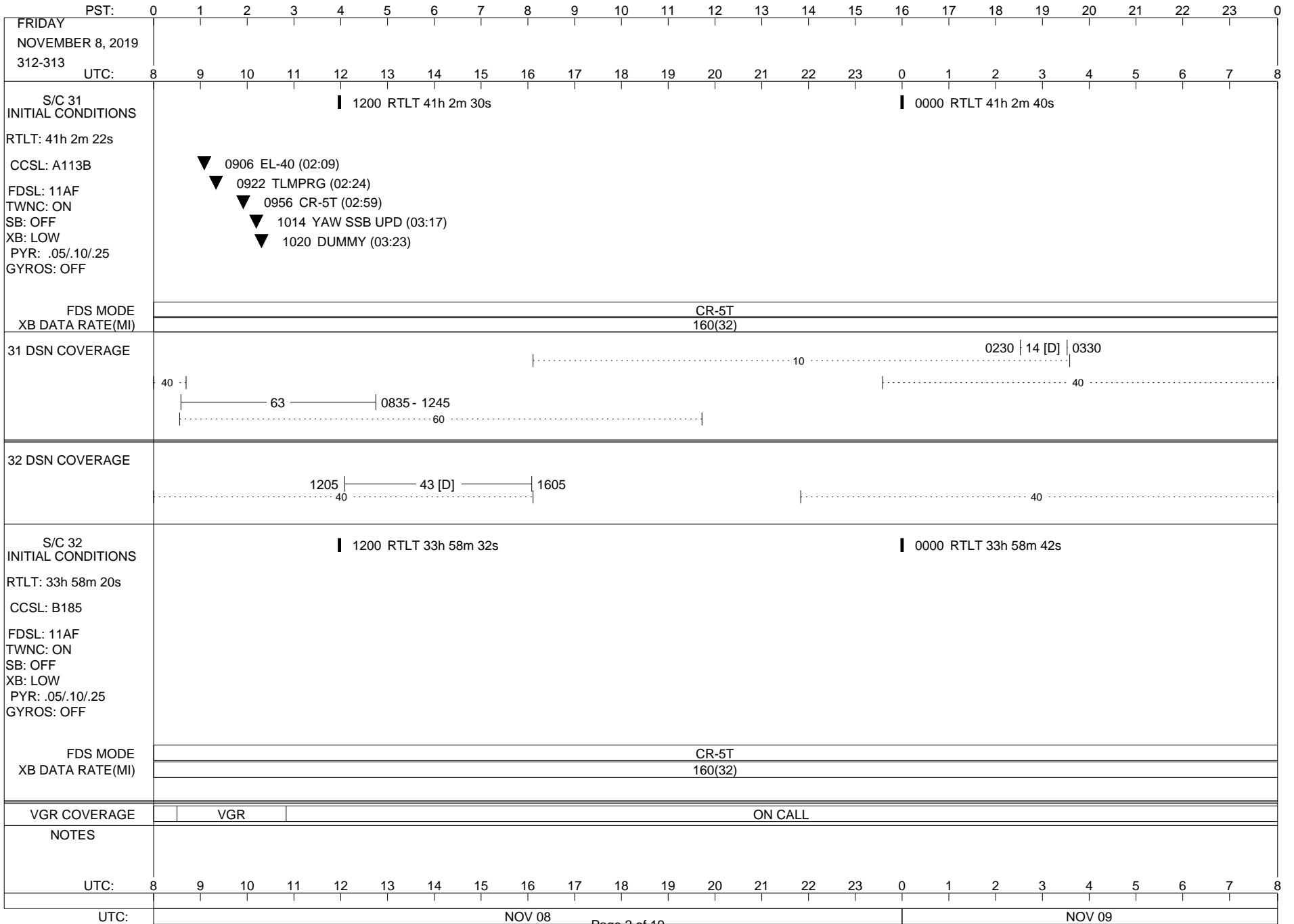
- ∇ = R/T Command (Last chance or Contingency)
- ▼ = R/T Command (Scheduled)
- \* = Result of R/T Command
- n = (where n = 1,2,3 ..) Special Note, see bottom of page
- A = Arrayed station
- B = BLF
- D = Downlink only pass
- H = High Power Transmitter
- R = Array Reference Antenna
- T = TLC Uplink
- U = Uplink only pass
- [o] = Ramp-through

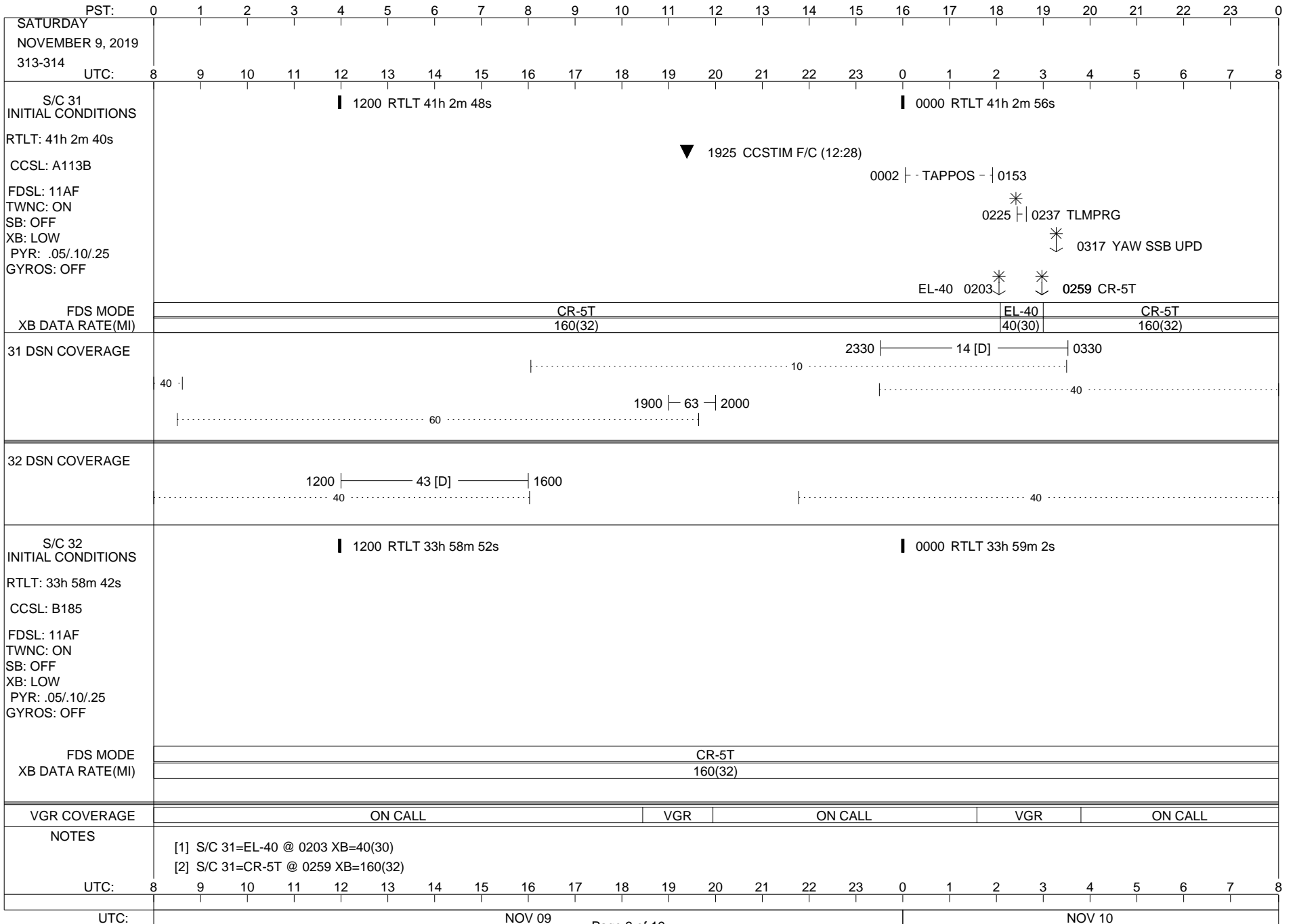
02/27/19

ISSUE DATE: 11/06/19 11:30

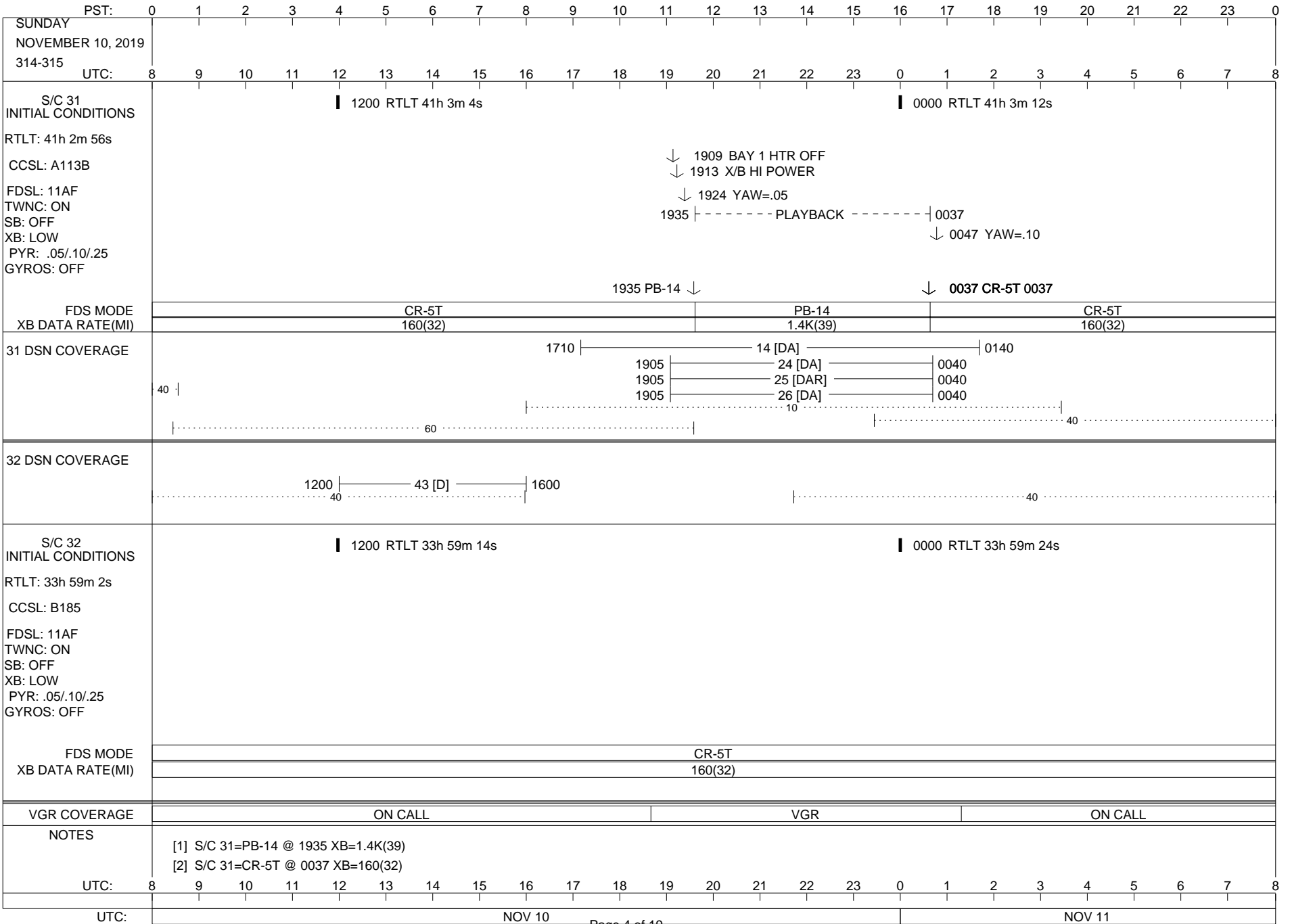
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THURSDAY NOVEMBER 7, 2019 311-312																									
UTC:	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	0	1	2	3	4	5	6	7	8
S/C 31 INITIAL CONDITIONS RTLTL: 41h 2m 6s CCSL: A113B FDSL: 11AF TWNC: ON SB: OFF XB: LOW PYR: .05/10/25 GYROS: OFF	█ 1200 RTLTL 41h 2m 14s												█ 0000 RTLTL 41h 2m 22s												
FDS MODE													CR-5T												
XB DATA RATE(MI)													160(32)												
31 DSN COVERAGE	-----												-----												
	40												40												
	-----												-----												
	1720												2010												
	60												63 [D]												
32 DSN COVERAGE	-----												-----												
	40												40												
	-----												-----												
S/C 32 INITIAL CONDITIONS RTLTL: 33h 58m 0s CCSL: B185 FDSL: 11AF TWNC: ON SB: OFF XB: LOW PYR: .05/10/25 GYROS: OFF	█ 1200 RTLTL 33h 58m 10s												█ 0000 RTLTL 33h 58m 20s												
FDS MODE													CR-5T												
XB DATA RATE(MI)													160(32)												
VGR COVERAGE	ON CALL												VGR						ON CALL						
NOTES	[1] S/C 31=EL-40 @ 1718 XB=40(30) [2] S/C 31=CR-5T @ 2006 XB=160(32)																								
UTC:	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	0	1	2	3	4	5	6	7	8
UTC:	NOV 07												Page 1 of 19						NOV 08						

ISSUE DATE: 11/06/19 11:30





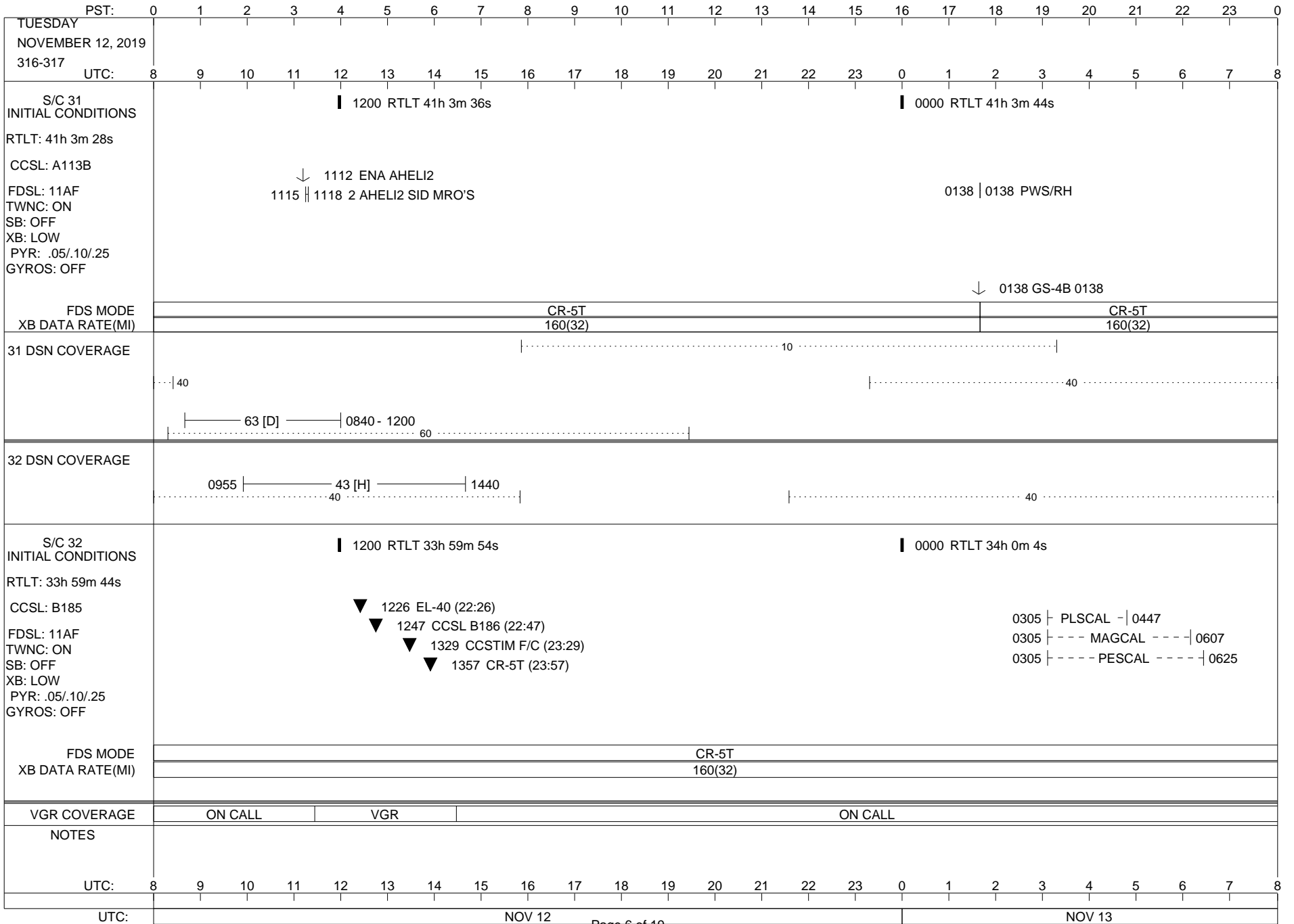
ISSUE DATE: 11/06/19 11:30



ISSUE DATE: 11/06/19 11:30

PST:	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	0
MONDAY NOVEMBER 11, 2019 315-316	UTC: 8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	0	1	2	3	4	5	6	7	8
S/C 31 INITIAL CONDITIONS RTLTL: 41h 3m 12s CCSL: A113B FDSL: 11AF TWNC: ON SB: OFF XB: HI PYR: .05/10/.25 GYROS: OFF	1200 RTLTL 41h 3m 20s 0959   TAPPOS   1139 * 1227   1234 CCSTIM FINE 1259   1303 COARSE 1351   -   1424 SSB ASCAL ↓ 1424 ROLL=.25 ↓ 1430 X/B LOW POWER ↓ 1434 BAY 1 HTR ON ↓ 1325 EL-40 1427												0000 RTLTL 41h 3m 28s												
FDS MODE XB DATA RATE(MI)	CR-5T 160(32)						EL-40 40(30)						CR-5T 160(32)												
31 DSN COVERAGE	1040  ----- 63 [D] -----  1440  ----- 60 -----  40												----- 40 -----												
32 DSN COVERAGE	1155  ----- 43 [D] -----  1555  ----- 40 -----												----- 40 -----												
S/C 32 INITIAL CONDITIONS RTLTL: 33h 59m 24s CCSL: B185 FDSL: 11AF TWNC: ON SB: OFF XB: LOW PYR: .05/10/.25 GYROS: OFF	1200 RTLTL 33h 59m 34s												0000 RTLTL 33h 59m 44s 2354     0011 SHUNT POWER TEST												
FDS MODE XB DATA RATE(MI)	CR-5T 160(32)																								
VGR COVERAGE	ON CALL						VGR						ON CALL												
NOTES																									
UTC:	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	0	1	2	3	4	5	6	7	8
UTC:	NOV 11												NOV 12												

ISSUE DATE: 11/06/19 11:30

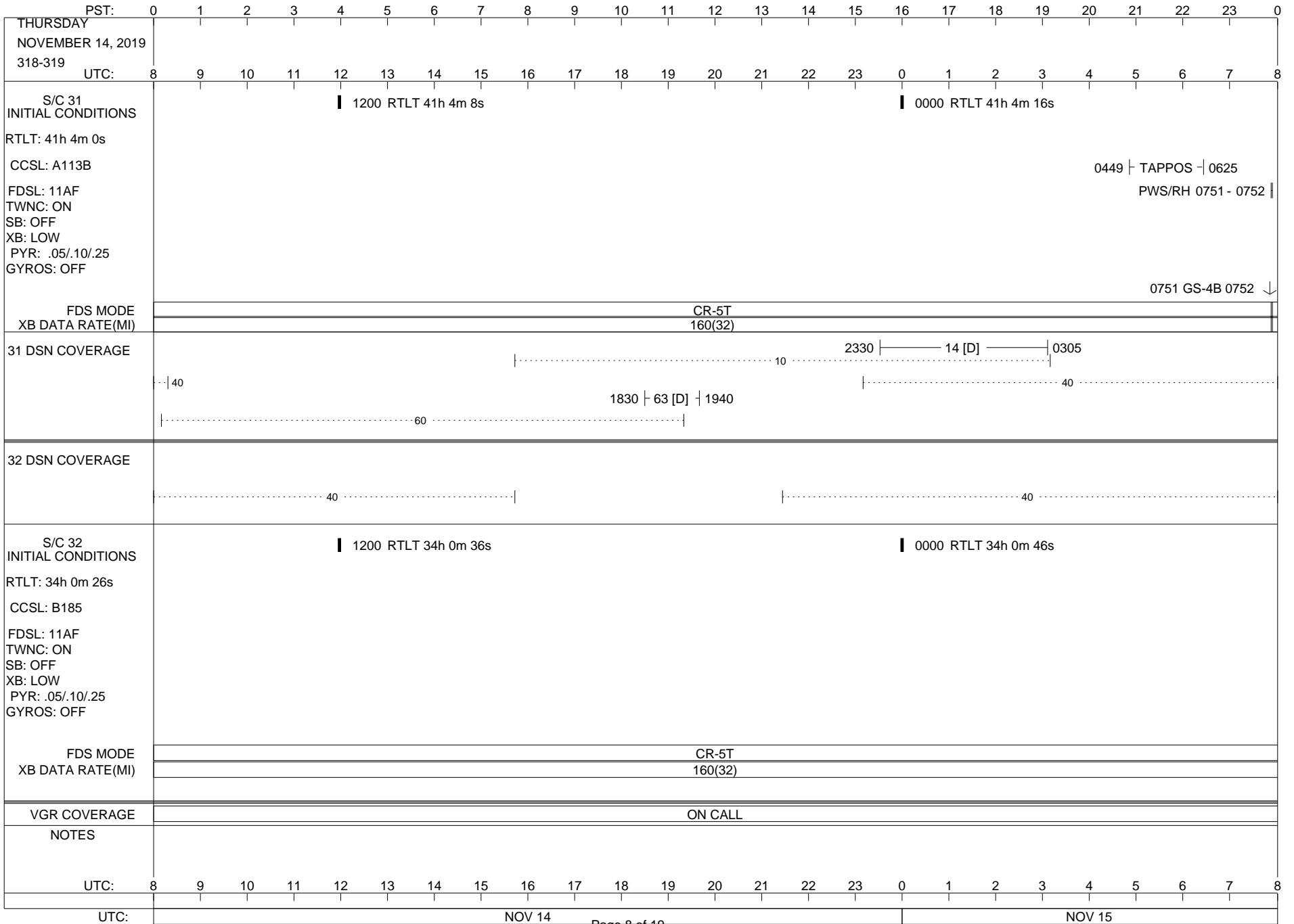


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WEDNESDAY																													
NOVEMBER 13, 2019																													
317-318																													
UTC:		8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	0	1	2	3	4	5	6	7	8			
S/C 31 INITIAL CONDITIONS		1200 RTLT 41h 3m 52s														0000 RTLT 41h 4m 0s													
RTLT: 41h 3m 44s																													
CCSL: A113B																													
FDSL: 11AF																													
TWNC: ON																													
SB: OFF																													
XB: LOW																													
PYR: .05/.10/.25																													
GYROS: OFF																													
FDS MODE																CR-5T													
XB DATA RATE(MI)																160(32)													
31 DSN COVERAGE																													
32 DSN COVERAGE																													
S/C 32 INITIAL CONDITIONS		1200 RTLT 34h 0m 16s														0000 RTLT 34h 0m 26s													
RTLT: 34h 0m 4s																													
CCSL: B185																													
FDSL: 11AF																													
TWNC: ON																													
SB: OFF																													
XB: LOW																													
PYR: .05/.10/.25																													
GYROS: OFF																													
FDS MODE																EL-40				CR-5T									
XB DATA RATE(MI)																2226				40(30)				160(32)					
VGR COVERAGE		ON CALL														VGR				ON CALL									
NOTES		<p>[1] SC 32=EL-40 @ 2226 XB=40(30)</p> <p>[2] SC 32=CR-5T @ 2357 XB=160(32)</p>																											
UTC:		8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	0	1	2	3	4	5	6	7	8			
UTC:		NOV 13														NOV 14													



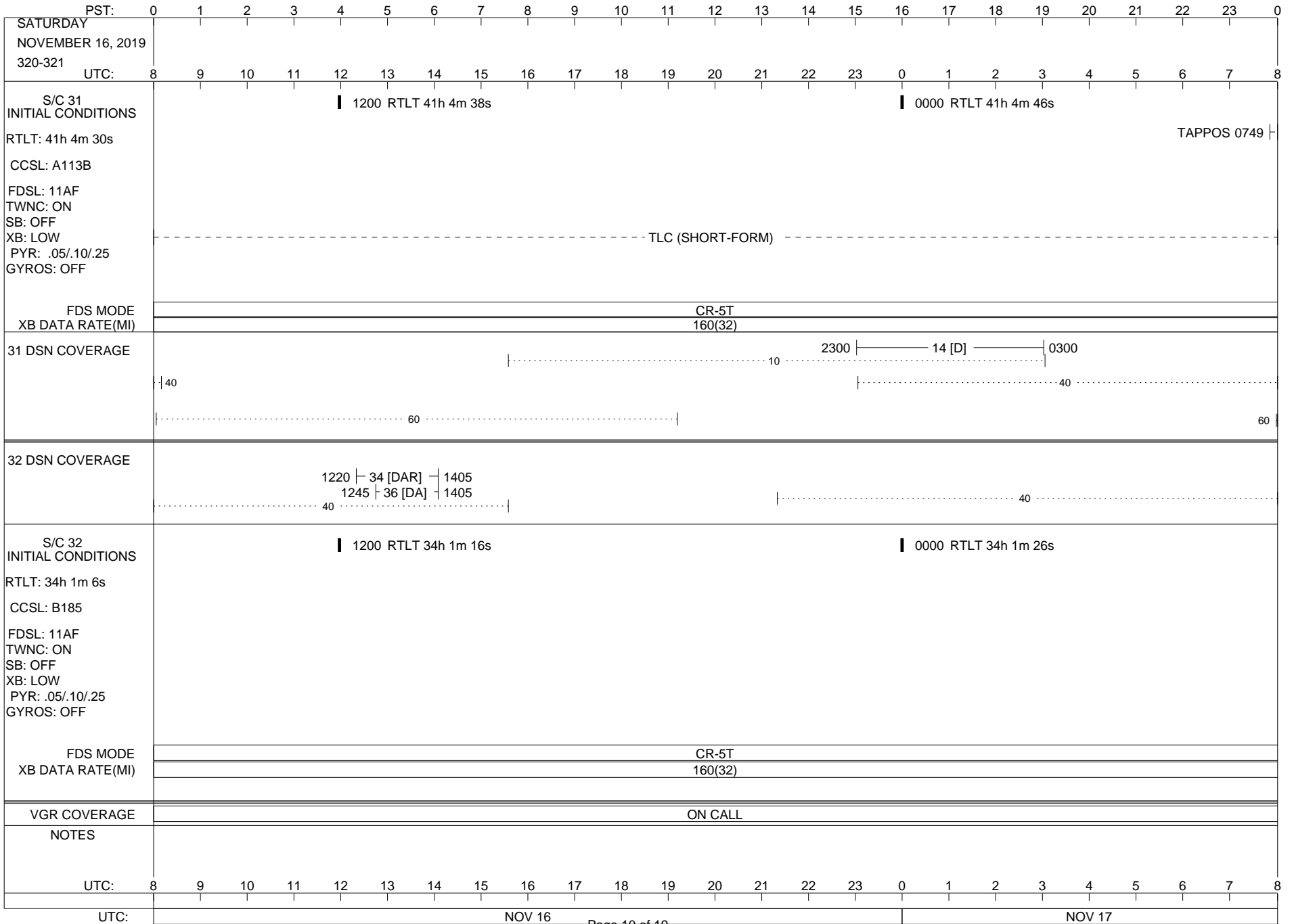
ISSUE DATE: 11/06/19 11:30



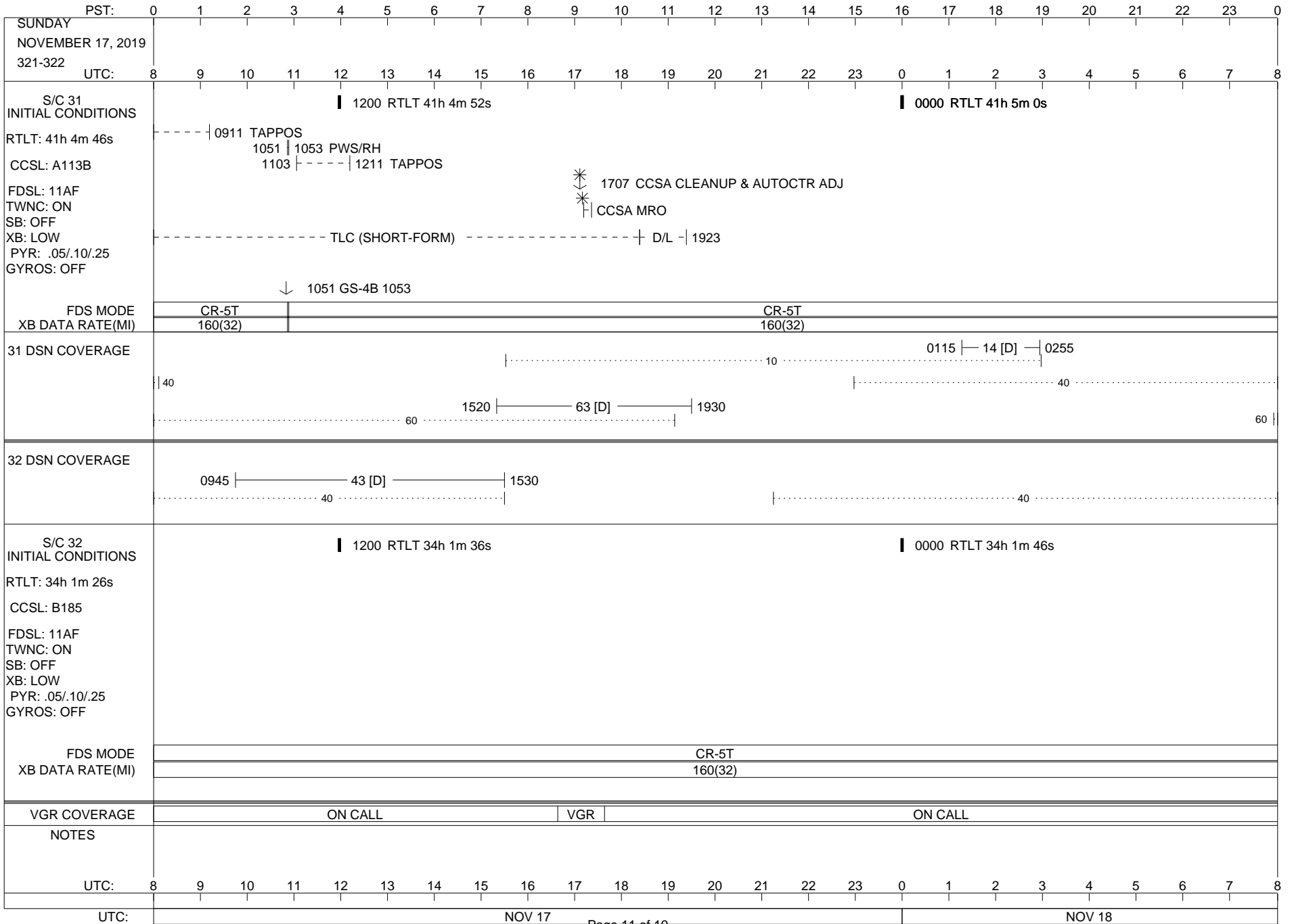
ISSUE DATE: 11/06/19 11:30

PST:	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	0		
FRIDAY NOVEMBER 15, 2019 319-320	UTC: 8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	0	1	2	3	4	5	6	7	8		
S/C 31 INITIAL CONDITIONS RTLT: 41h 4m 16s CCSL: A113B FDSL: 11AF TWNC: ON SB: OFF XB: LOW PYR: .05/.10/.25 GYROS: OFF	1200 RTLT 41h 4m 22s												0000 RTLT 41h 4m 30s														
TAPPOS   0803 - 0924													▼ 2325 DUMMY (16:30) ▼ 0002 CCSA CLEANUP & AUTOCTR ADJ (17:06)  U/L 0050   -   ----- TLC (SHORT-FORM) -----														
FDS MODE XB DATA RATE(MI)													CR-5T 160(32)														
31 DSN COVERAGE	..... 40 ..... 60 ..... ..... 10 ..... 2300 ..... 14 [T] ..... 0305 ..... 40 .....																										
32 DSN COVERAGE	..... 40 ..... 1140 ..... 43 [D] ..... 1540 .....												..... 40 ..... 2245 ..... 43 [H1o] ..... 0245 .....														
S/C 32 INITIAL CONDITIONS RTLT: 34h 0m 46s CCSL: B185 FDSL: 11AF TWNC: ON SB: OFF XB: LOW PYR: .05/.10/.25 GYROS: OFF	1200 RTLT 34h 0m 56s												0000 RTLT 34h 1m 6s														
FDS MODE XB DATA RATE(MI)													CR-5T 160(32)														
VGR COVERAGE	ON CALL												VGR			ON CALL											
NOTES	[1] B186 BACKUP U/L SUPPORT																										
UTC: 8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	0	1	2	3	4	5	6	7	8			
UTC:	NOV 15															NOV 16											

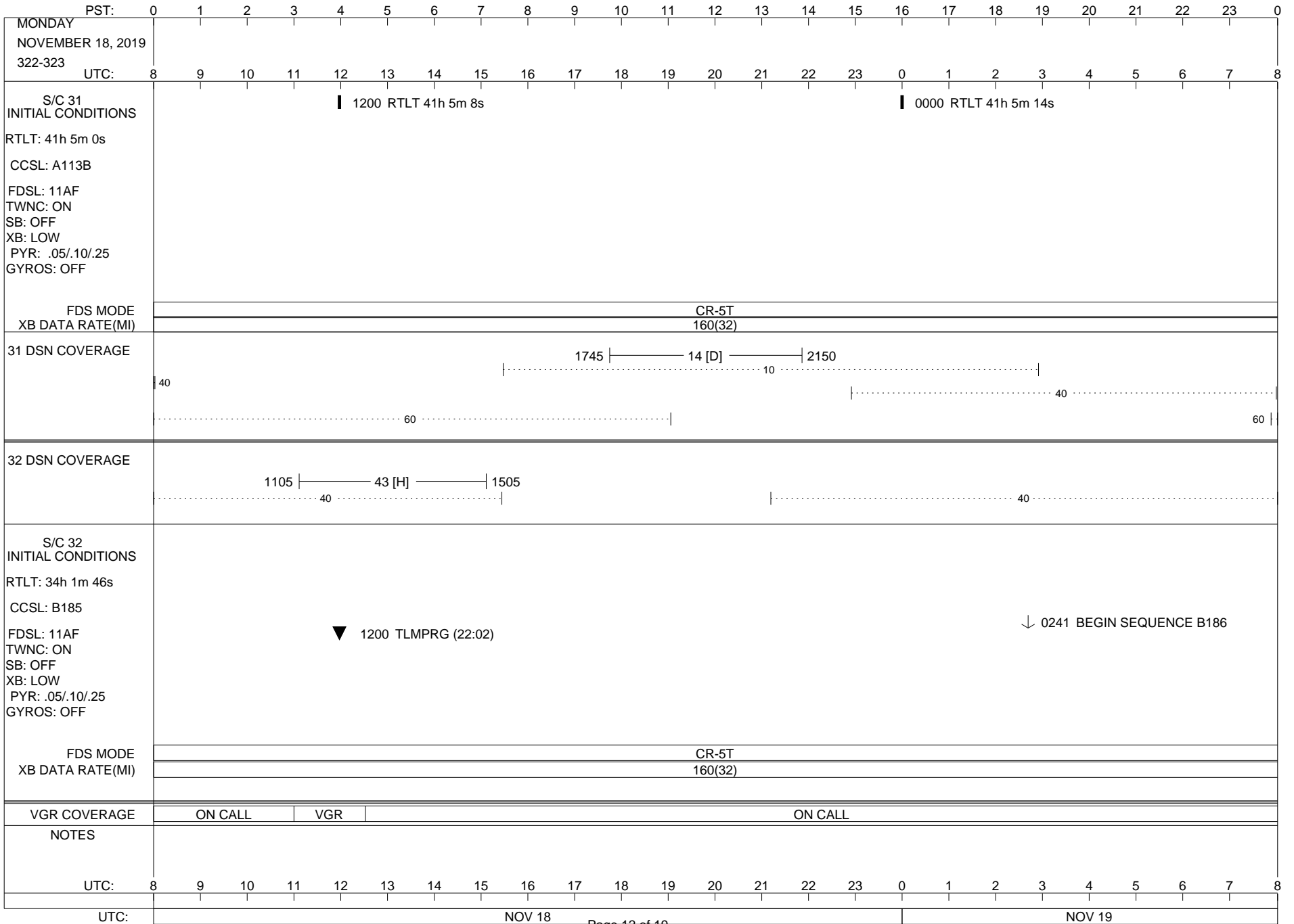
ISSUE DATE: 11/06/19 11:30



ISSUE DATE: 11/06/19 11:30



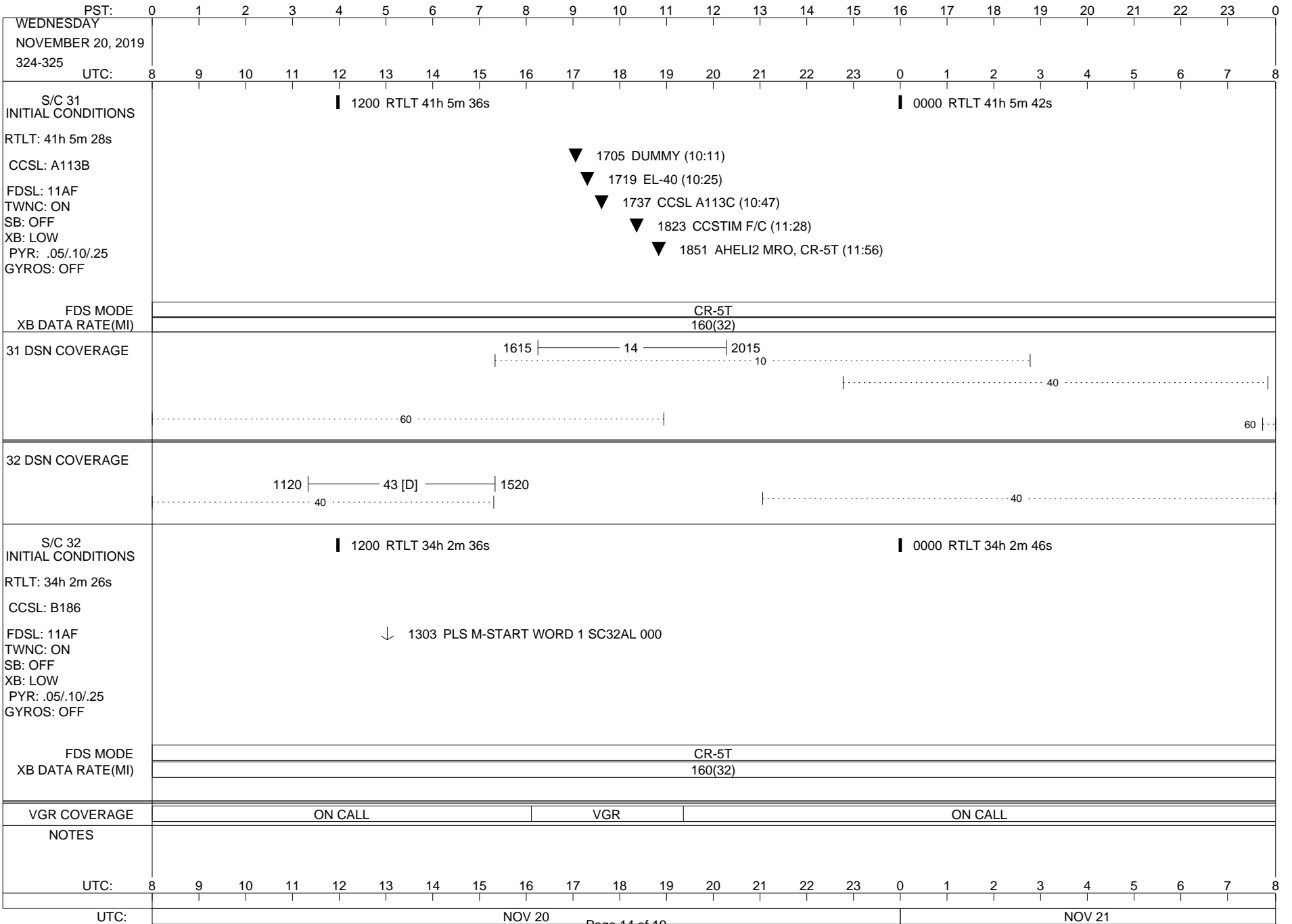
ISSUE DATE: 11/06/19 11:30



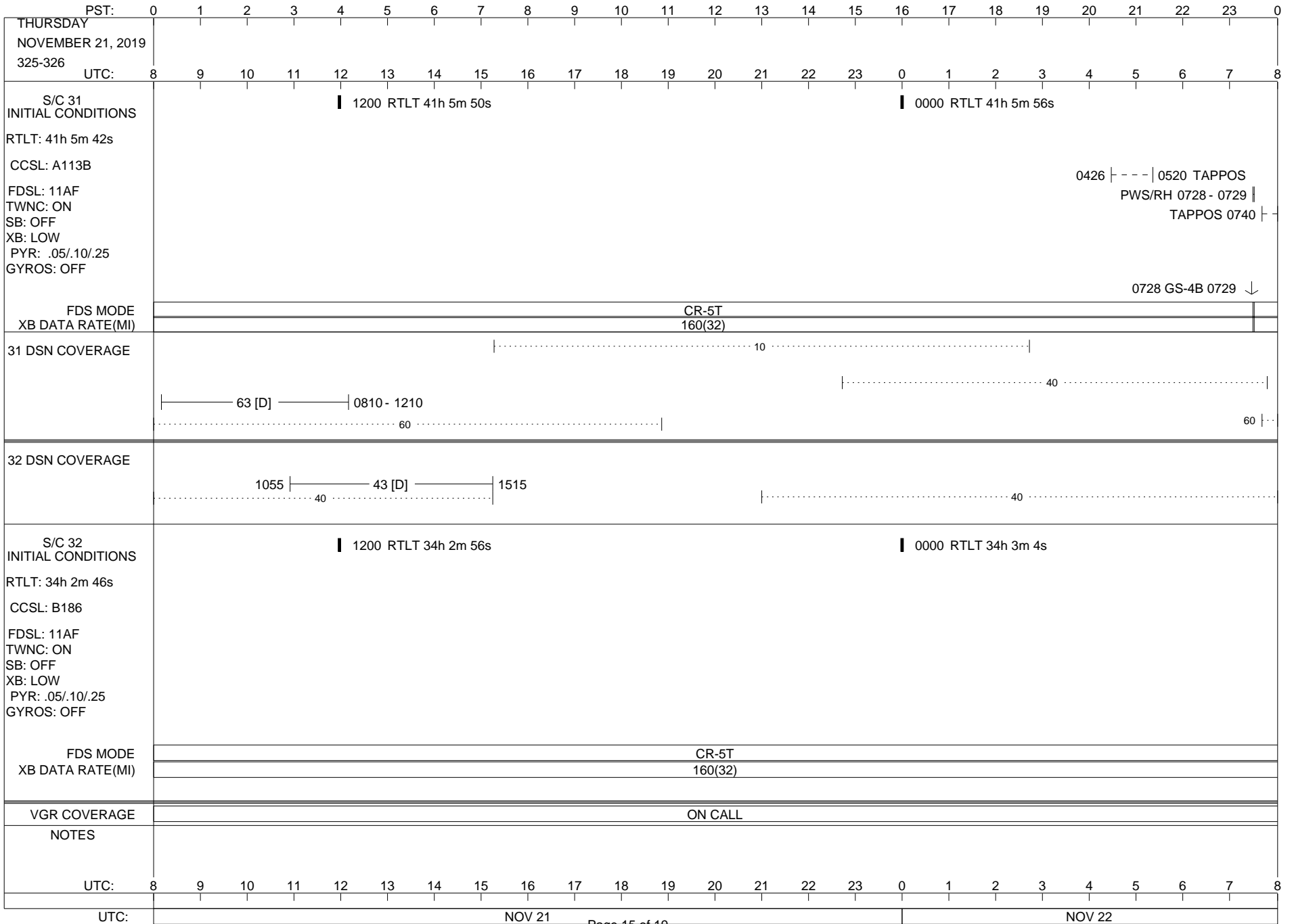
ISSUE DATE: 11/06/19 11:30

PST:	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	0
TUESDAY NOVEMBER 19, 2019 323-324	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	0	1	2	3	4	5	6	7	8
S/C 31 INITIAL CONDITIONS RTLT: 41h 5m 14s CCSL: A113B FDSL: 11AF TWNC: ON SB: OFF XB: LOW PYR: .05/.10/.25 GYROS: OFF	1200 RTLT 41h 5m 22s												0000 RTLT 41h 5m 28s												
FDS MODE	CR-5T												CR-5T												
XB DATA RATE(MI)	160(32)												160(32)												
31 DSN COVERAGE	.....60.....												2250  ----- 14 [D] -----  0250 .....40.....												
32 DSN COVERAGE	1000  ----- 36 [DAR] -----  1355 1000  ----- 34 [DA] -----  1355 .....40.....												2110  ----- 43 [D] -----  0125 .....40.....												
S/C 32 INITIAL CONDITIONS RTLT: 34h 1m 46s CCSL: B186 FDSL: 11AF TWNC: ON SB: OFF XB: LOW PYR: .05/.10/.25 GYROS: OFF	1200 RTLT 34h 2m 16s												0000 RTLT 34h 2m 26s												
FDS MODE	CR-5T												EL-40				CR-5T								
XB DATA RATE(MI)	160(32)												40(30)				160(32)								
VGR COVERAGE	ON CALL												VGR				ON CALL								
NOTES	[1] S/C 31=EL-40 @ 2128 XB=40(30) [2] S/C 31=CR-5T @ 2351 XB=160(32)																								
UTC:	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	0	1	2	3	4	5	6	7	8
UTC:	NOV 19												NOV 20												

ISSUE DATE: 11/06/19 11:30



ISSUE DATE: 11/06/19 11:30

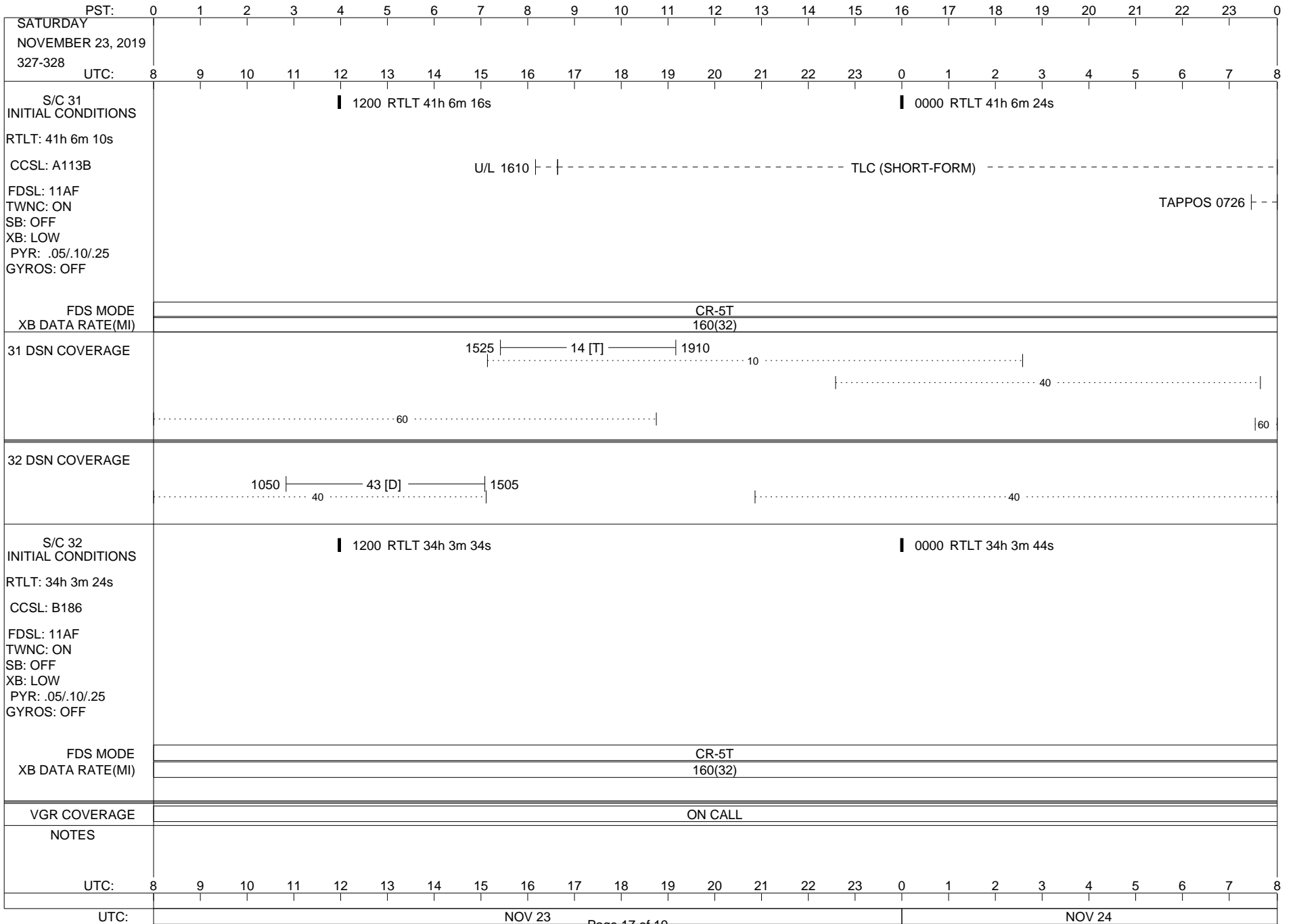




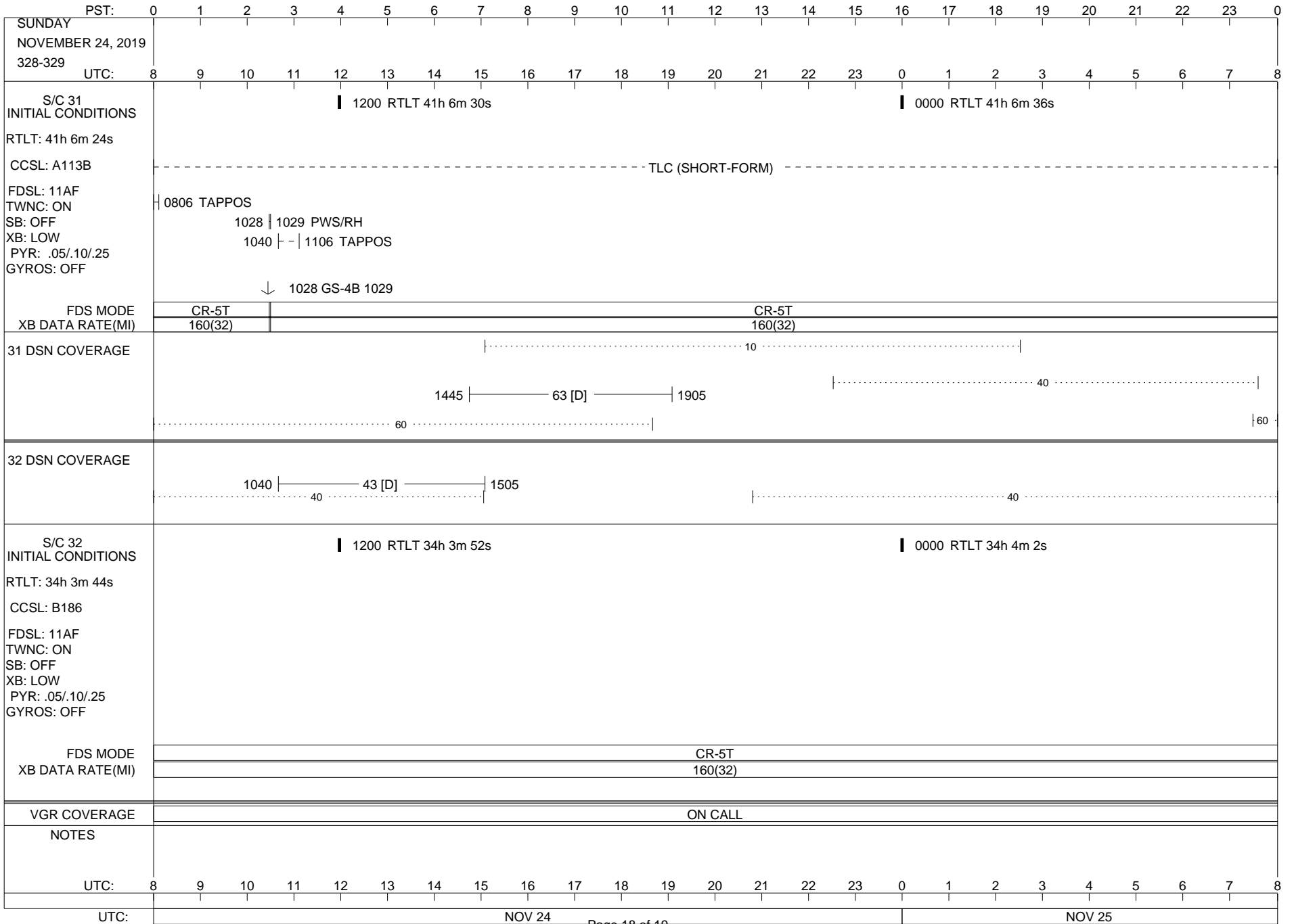
ISSUE DATE: 11/06/19 11:30

PST:		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	0			
FRIDAY																													
NOVEMBER 22, 2019																													
326-327																													
UTC:		8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	0	1	2	3	4	5	6	7	8			
S/C 31 INITIAL CONDITIONS		1200 RTLT 41h 6m 4s														0000 RTLT 41h 6m 10s													
RTLT: 41h 5m 56s																													
CCSL: A113B																													
FDSL: 11AF																													
TWNC: ON																													
SB: OFF																													
XB: LOW																													
PYR: .05/10/.25																													
GYROS: OFF																													
FDS MODE		CR-5T														EL-40													
XB DATA RATE(MI)		160(32)														40(30)													
31 DSN COVERAGE		<div style="display: flex; justify-content: space-between;"> <span>63 [D]   0835 - 1235</span> <span>1810   63 [D]   1910</span> </div>																											
32 DSN COVERAGE		<div style="display: flex; justify-content: space-between;"> <span>43 [D]   0830 - 1325</span> <span></span> </div>																											
S/C 32 INITIAL CONDITIONS		1200 RTLT 34h 3m 14s														0000 RTLT 34h 3m 24s													
RTLT: 34h 3m 4s																													
CCSL: B186																													
FDSL: 11AF																													
TWNC: ON																													
SB: OFF																													
XB: LOW																													
PYR: .05/10/.25																													
GYROS: OFF																													
FDS MODE		CR-5T																											
XB DATA RATE(MI)		160(32)																											
VGR COVERAGE		ON CALL							VGR							ON CALL													
NOTES		<p>[1] S/C 31=EL-40 @ 1025 XB=40(30)</p> <p>[2] S/C 31=CR-5T @ 1200 XB=160(32)</p>																											
UTC:		8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	0	1	2	3	4	5	6	7	8			
UTC:		NOV 22														NOV 23													

ISSUE DATE: 11/06/19 11:30



ISSUE DATE: 11/06/19 11:30



ISSUE DATE: 11/06/19 11:30

PST:	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	0
MONDAY NOVEMBER 25, 2019 329-330	UTC: 8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	0	1	2	3	4	5	6	7	8
S/C 31 INITIAL CONDITIONS RTLT: 41h 6m 36s CCSL: A113B FDSL: 11AF TWNC: ON SB: OFF XB: LOW PYR: .05/.10/.25 GYROS: OFF	<div style="text-align: center;">█ 1200 RTLT 41h 6m 44s</div> <div style="text-align: center;">-----  TLC (SHORT-FORM)   D/L -  1044</div>																								
FDS MODE XB DATA RATE(MI)													CR-5T 160(32)												
31 DSN COVERAGE	<div style="text-align: center;">0845  ----- 63 [D] -----  1245</div> <div style="text-align: center;">.....  60 ..... </div>																								
32 DSN COVERAGE	<div style="text-align: center;">.....  1100  ----- 43 [D] -----  1500</div> <div style="text-align: center;">.....  40 ..... </div>																								
S/C 32 INITIAL CONDITIONS RTLT: 34h 4m 2s CCSL: B186 FDSL: 11AF TWNC: ON SB: OFF XB: LOW PYR: .05/.10/.25 GYROS: OFF	<div style="text-align: center;">█ 1200 RTLT 34h 4m 12s</div>																								
FDS MODE XB DATA RATE(MI)													CR-5T 160(32)												
VGR COVERAGE	ON CALL																								
NOTES																									
UTC:	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	0	1	2	3	4	5	6	7	8
UTC:	NOV 25												NOV 26												