

# VOYAGER

## Space Flight Operations Schedule (SFOS)

Issue Date: July 27, 2016

For the Period: 07/28/16 to 08/14/16 (16-210 – 16-227)

**DSN OPSCHIEF (1) 230-102**

**DSOT (1) 230-102**

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**FLIGHT TEAM (14) 600-100**

Dodd, S.  
 Hall, J.  
 Howard, S. (3)  
 Ludwig, R. (2)  
 Matsumoto, S.  
 Medina  
 Peralta, F.  
 Weeks, T.  
 Wong, R.  
 Yang, L.  
 Zottarelli, L.  
 \*odivers@san.rr.com

**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

\*Electronic Copy Only  
 (16 – Dist/N: Paper Copies)  
 09/08/10

PDT:	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											
THURSDAY JULY 28, 2016 210-211	UTC: 7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	0	1	2	3	4	5	6	7											
S/C 31 INITIAL CONDITIONS RTLTL: 37h 27m 4s CCSL: A100 FDSL: 11AF TWNC: ON SB: OFF XB: HI PYR: .05/.10/.25 GYROS: BC ON	1200 RTLTL 37h 27m 14s												0000 RTLTL 37h 27m 24s																							
FDS MODE XB DATA RATE(MI)	CR-5T 160(32)												CR-5T 160(32)																							
31 DSN COVERAGE	14 [D] 1015										0330 14 [D]																									
32 DSN COVERAGE	1035 35 [D] 1755										40																									
S/C 32 INITIAL CONDITIONS RTLTL: 30h 46m 32s CCSL: BASELINE FDSL: 11AF TWNC: ON SB: OFF XB: LOW PYR: .05/.10/.25/ GYROS: OFF	1200 RTLTL 30h 46m 38s												0000 RTLTL 30h 46m 44s																							
FDS MODE XB DATA RATE(MI)	CR-5T 160(32)																																			
VGR COVERAGE	ONVGRLL												ON CALL												VGR											
NOTES	[1] S/C 31=GS-4B @ 1714 XB=2.8K(41) NOT RECOVERABLE																																			
UTC:	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	0	1	2	3	4	5	6	7											
UTC:	JUL 28												JUL 29																							



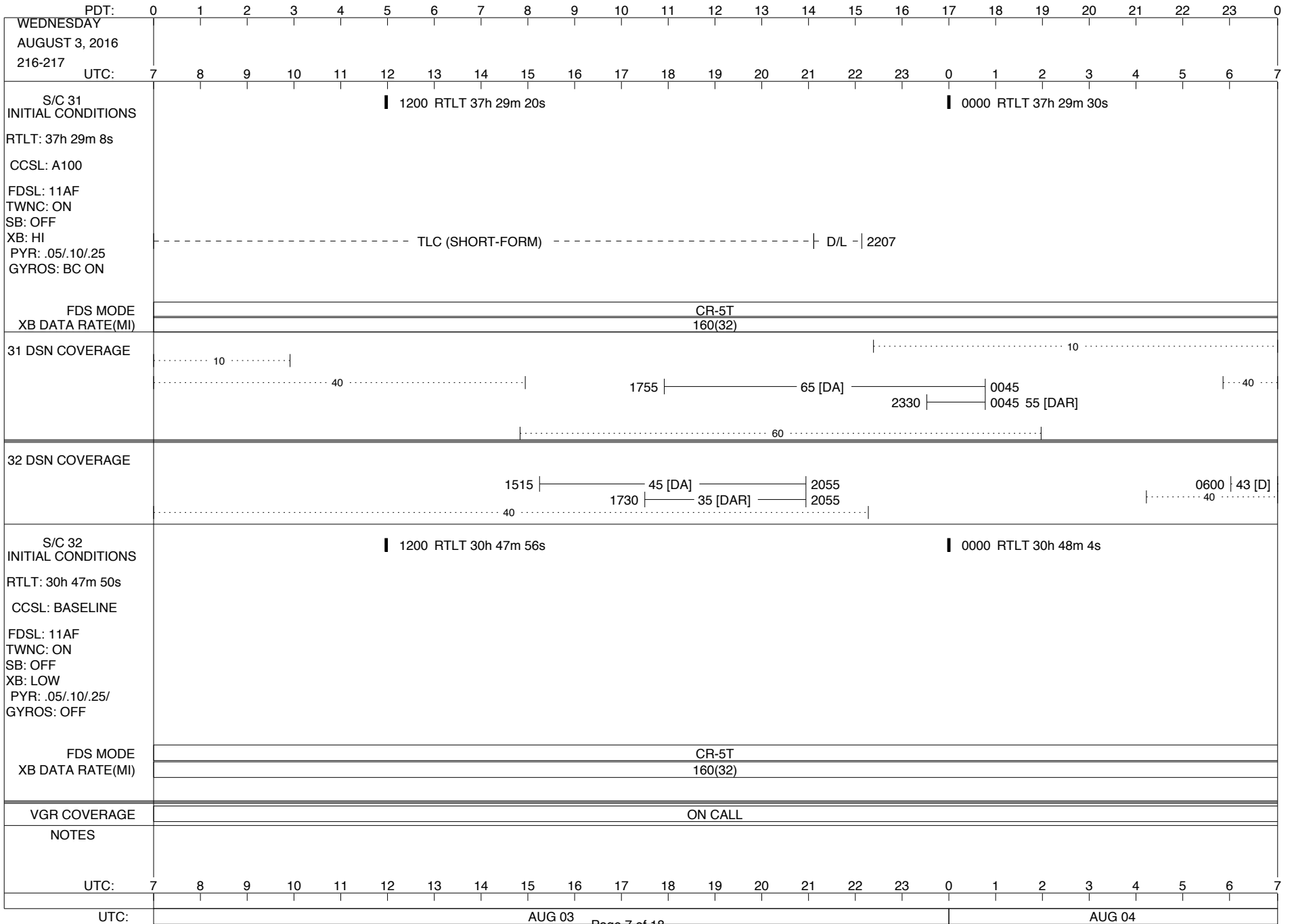
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SATURDAY JULY 30, 2016 212-213	UTC: 7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	0	1	2	3	4	5	6	7
S/C 31 INITIAL CONDITIONS RTLTL: 37h 27m 44s CCSL: A100 FDSL: 11AF TWNC: ON SB: OFF XB: HI PYR: .05/.10/.25 GYROS: BC ON	1200 RTLTL 37h 27m 54s												0000 RTLTL 37h 28m 6s												
	1713   TAPPOS   1848												2015   2016 PWS/RH 2027   TAPPOS   2148												
													↓ 2015 GS-4B 2016												
FDS MODE XB DATA RATE(MI)	CR-5T 160(32)												CR-5T 160(32)												
31 DSN COVERAGE	.....10 .....												.....10 ..... 14 [D] 0605												
	.....40 .....												.....40 ..												
	.....60 .....																								
32 DSN COVERAGE	1240  -----34 [o]-----  1745												1735  -----45 [DAR]-----  2145 1735  -----35 [DA]-----  2145												
	.....40 .....												.....40 ..												
S/C 32 INITIAL CONDITIONS RTLTL: 30h 46m 56s CCSL: BASELINE FDSL: 11AF TWNC: ON SB: OFF XB: LOW PYR: .05/.10/.25/ GYROS: OFF	1200 RTLTL 30h 47m 4s												0000 RTLTL 30h 47m 10s												
FDS MODE XB DATA RATE(MI)													CR-5T 160(32)												
VGR COVERAGE													ON CALL												
NOTES	[1] S/C 31=GS-4B @ 2015 XB=2.8K(41) NOT RECOVERABLE																								
UTC:	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	0	1	2	3	4	5	6	7
UTC:	JUL 30												JUL 31												

PDT:	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
SUNDAY JULY 31, 2016 213-214	UTC: 7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	0	1	2	3	4	5	6	7
S/C 31 INITIAL CONDITIONS RTLT: 37h 28m 6s CCSL: A100 FDSL: 11AF TWNC: ON SB: OFF XB: HI PYR: .05/.10/.25 GYROS: BC ON	1200 RTLT 37h 28m 16s												0000 RTLT 37h 28m 26s												
FDS MODE XB DATA RATE(MI)													CR-5T 160(32)												
31 DSN COVERAGE	14 [D]   1005												0445   14 [D]												
	10												10												
	40												40												
													60												
32 DSN COVERAGE	1545   34 [D]   1745												1830   43 [D]   2230												
	40												40												
S/C 32 INITIAL CONDITIONS RTLT: 30h 47m 10s CCSL: BASELINE FDSL: 11AF TWNC: ON SB: OFF XB: LOW PYR: .05/.10/.25/ GYROS: OFF	1200 RTLT 30h 47m 16s												0000 RTLT 30h 47m 24s												
FDS MODE XB DATA RATE(MI)													CR-5T 160(32)												
VGR COVERAGE	ON CALL																					VGR			
NOTES																									
UTC:	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	0	1	2	3	4	5	6	7
UTC:	JUL 31												AUG 01												

PDT:	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 AUGUST 1, 2016 214-215	UTC: 7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	0	1	2	3	4	5	6	7		
S/C 31 INITIAL CONDITIONS RTLT: 37h 28m 26s CCSL: A100 FDSL: 11AF TWNC: ON SB: OFF XB: HI PYR: .05/.10/.25 GYROS: BC ON	1200 RTLT 37h 28m 36s												0000 RTLT 37h 28m 48s														
FDS MODE XB DATA RATE(MI)													CR-5T 160(32)														
31 DSN COVERAGE	14 [D]   1000 ----- ----- 10												0600   14 [T] ----- ----- 10														
32 DSN COVERAGE	43 [o]   1155 ----- ----- 40												1930   43 [B]   2225 ----- ----- ----- 40														
S/C 32 INITIAL CONDITIONS RTLT: 30h 47m 24s CCSL: BASELINE FDSL: 11AF TWNC: ON SB: OFF XB: LOW PYR: .05/.10/.25/ GYROS: OFF	1200 RTLT 30h 47m 30s												0000 RTLT 30h 47m 36s														
FDS MODE XB DATA RATE(MI)													CR-5T 160(32)														
VGR COVERAGE	VGR			ON CALL									VGR			ON CALL									VGR		
NOTES																											
UTC: 7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	0	1	2	3	4	5	6	7			
UTC:	AUG 01													AUG 02													

PDT:	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 AUGUST 2, 2016 215-216																									
UTC:	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	0	1	2	3	4	5	6	7
S/C 31 INITIAL CONDITIONS RTLT: 37h 28m 48s CCSL: A100 FDSL: 11AF TWNC: ON SB: OFF XB: HI PYR: .05/.10/.25 GYROS: BC ON	1200 RTLT 37h 28m 58s U/L   0710-     0857     0910 RAI     0926 GYRO FAULT TEST    ----- TLC (SHORT-FORM) -----    1038   1039 PWS/RH     1038 GS-4B 1039												0000 RTLT 37h 29m 8s   0021 AAI     0022   0054 ASCAL     0056 RAI     0107 ROLL=.25     0108 GYRO FAULT TEST     0109 GYRO INIT     2349     0101												
FDS MODE XB DATA RATE(MI)	CR-5T 160(32)						CR-5T 160(32)						EL-40 40(30)			CR-5T 160(32)									
31 DSN COVERAGE	14 [T]   1000										2320   14 [D]   0120														
	..... 40 .....										..... 10 .....														
	..... 60 .....										..... 40 .....														
32 DSN COVERAGE	1445   34 [D]   1735												1735   43 [D]   2140												
	..... 40 .....												..... 40 .....												
S/C 32 INITIAL CONDITIONS RTLT: 30h 47m 36s CCSL: BASELINE FDSL: 11AF TWNC: ON SB: OFF XB: LOW PYR: .05/.10/.25/ GYROS: OFF	1200 RTLT 30h 47m 44s												0000 RTLT 30h 47m 50s												
FDS MODE XB DATA RATE(MI)	CR-5T 160(32)																								
VGR COVERAGE	VGR												ON CALL												
NOTES	[1] S/C 31=GS-4B @ 1038 XB=2.8K(41) NOT RECOVERABLE [2] S/C 31=EL-40 @ 2349 XB=40(30) [3] S/C 31=CR-5T @ 0101 XB=160(32)																								
UTC:	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	0	1	2	3	4	5	6	7
UTC:	AUG 02												AUG 03												

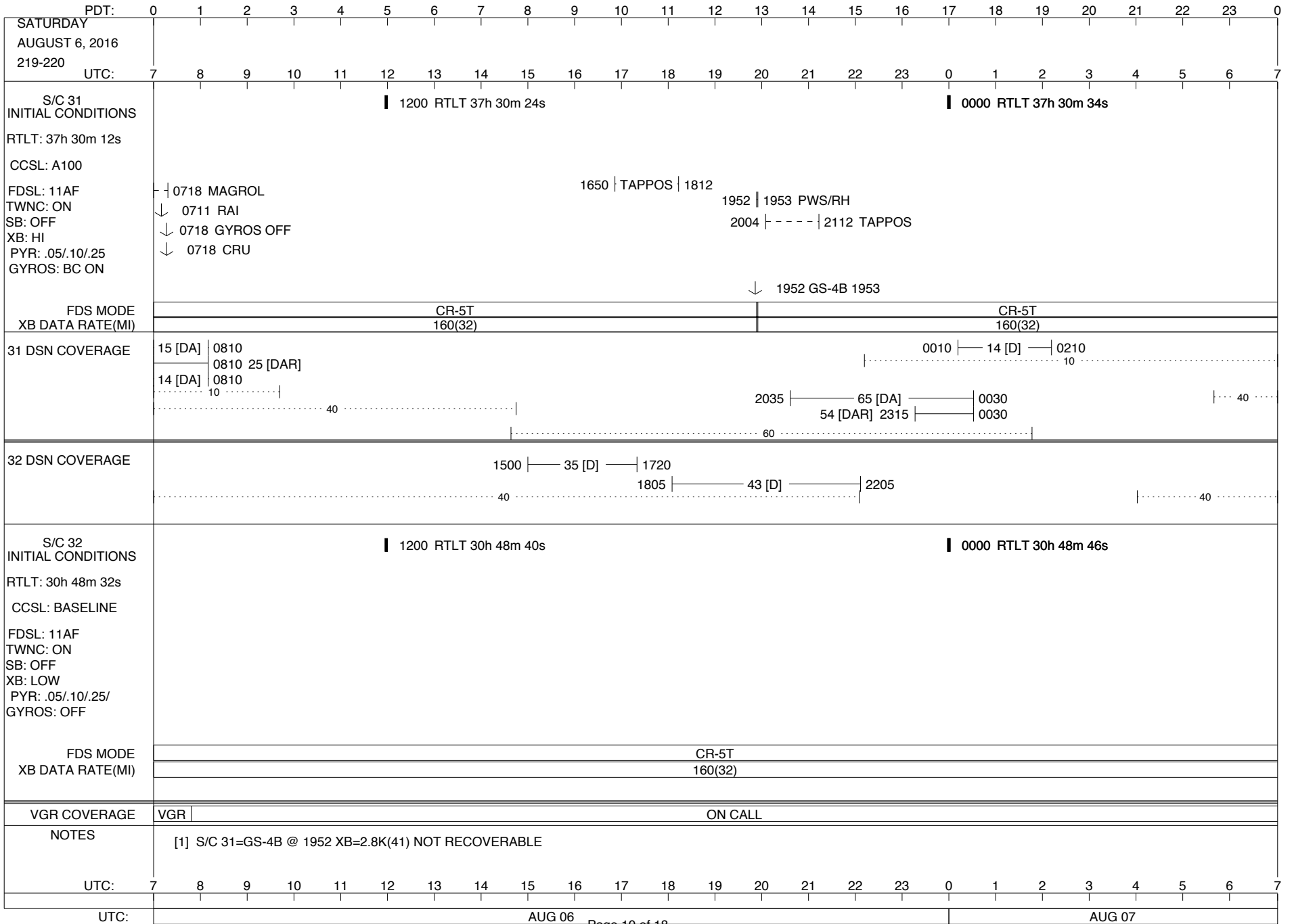
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UTC:	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	0	1	2	3	4	5	6	7			
THURSDAY AUGUST 4, 2016 217-218																												
S/C 31 INITIAL CONDITIONS RTLT: 37h 29m 30s CCSL: A100 FDSL: 11AF TWNC: ON SB: OFF XB: HI PYR: .05/.10/.25 GYROS: BC ON	1200 RTLT 37h 29m 40s 1350   TAPPOS   1525 1652   1653 PWS/RH 1703   TAPPOS   1825 ↓ 1651 GS-4B 1653														0000 RTLT 37h 29m 52s ↓ 2244 AAI 2254   ----- LECP OBS -----   0244 ↓ 0257 RAI ↓ 0313 GYRO FAULT TEST													
FDS MODE XB DATA RATE(MI)	CR-5T 160(32)														CR-5T 160(32)													
31 DSN COVERAGE	..... 10 .....   ..... 40 .....   ..... 60 .....														2230  ----- 14 [D] -----  0330 0545   24 [D]   ..... 10 .....   ..... 40 .....													
32 DSN COVERAGE	----- 43 [D] -----   1000 ..... 40 .....   ..... 40 .....																											
S/C 32 INITIAL CONDITIONS RTLT: 30h 48m 4s CCSL: BASELINE FDSL: 11AF TWNC: ON SB: OFF XB: LOW PYR: .05/.10/.25/ GYROS: OFF	1200 RTLT 30h 48m 10s														0000 RTLT 30h 48m 18s													
FDS MODE XB DATA RATE(MI)	CR-5T 160(32)																											
VGR COVERAGE	ON CALL														VGR							ON CALL						
NOTES	[1] S/C 31=GS-4B @ 1651 XB=2.8K(41) NOT RECOVERABLE																											
UTC:	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	0	1	2	3	4	5	6	7			
UTC:	AUG 04														AUG 05													

PDT:	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 AUGUST 5, 2016 218-219																									
UTC:	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	0	1	2	3	4	5	6	7
S/C 31 INITIAL CONDITIONS RTLT: 37h 29m 52s CCSL: A100 FDSL: 11AF TWNC: ON SB: OFF XB: HI PYR: .05/.10/.25 GYROS: BC ON	1200 RTLT 37h 30m 2s												0000 RTLT 37h 30m 12s												
FDS MODE	CR-5T																								
XB DATA RATE(MI)	160(32)																								
31 DSN COVERAGE	0715 24 [D] .....10.....  .....40.....  .....60.....  .....40.....												0040  -----15 [DA]----- 0040  -----25 [DAR]----- 0055  -----14 [DA]----- .....10.....  .....40.....												
32 DSN COVERAGE	.....1100  -----34 [o]----- 1725 .....40.....												.....40.....												
S/C 32 INITIAL CONDITIONS RTLT: 30h 48m 18s CCSL: BASELINE FDSL: 11AF TWNC: ON SB: OFF XB: LOW PYR: .05/.10/.25/ GYROS: OFF	1200 RTLT 30h 48m 26s												0000 RTLT 30h 48m 32s												
FDS MODE	CR-5T																								
XB DATA RATE(MI)	160(32)																								
VGR COVERAGE	ON CALL																		VGR						
NOTES	[1] S/C 31 - D/L AGC VARIATIONS EXPECTED DURING MAGROL (0122-0718)																								
UTC:	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	0	1	2	3	4	5	6	7
UTC:	AUG 05												AUG 06												



PDT:	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	
SUNDAY AUGUST 7, 2016 220-221	UTC: 7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	0	1	2	3	4	5	6	7	
S/C 31 INITIAL CONDITIONS RTLT: 37h 30m 34s CCSL: A100 FDSL: 11AF TWNC: ON SB: OFF XB: HI PYR: .05/.10/.25 GYROS: OFF	1200 RTLT 37h 30m 46s												0000 RTLT 37h 30m 56s													
FDS MODE XB DATA RATE(MI)													CR-5T 160(32)													
31 DSN COVERAGE	..... 10 .....   0910  — 36 [D] —  1110 ..... 40 .....												..... 10 ..... ..... 60 .....   ..... 40 .....													
32 DSN COVERAGE	1130  ————— 45 [D] —————  1715 ..... 40 .....												1850  ——— 43 [D] ———  2200 ..... 40 .....													
S/C 32 INITIAL CONDITIONS RTLT: 30h 48m 46s CCSL: BASELINE FDSL: 11AF TWNC: ON SB: OFF XB: LOW PYR: .05/.10/.25/ GYROS: OFF	1200 RTLT 30h 48m 54s												0000 RTLT 30h 49m 2s													
FDS MODE XB DATA RATE(MI)													CR-5T 160(32)													
VGR COVERAGE													ON CALL													
NOTES																										
UTC:	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	0	1	2	3	4	5	6	7	
UTC:	AUG 07													AUG 08												

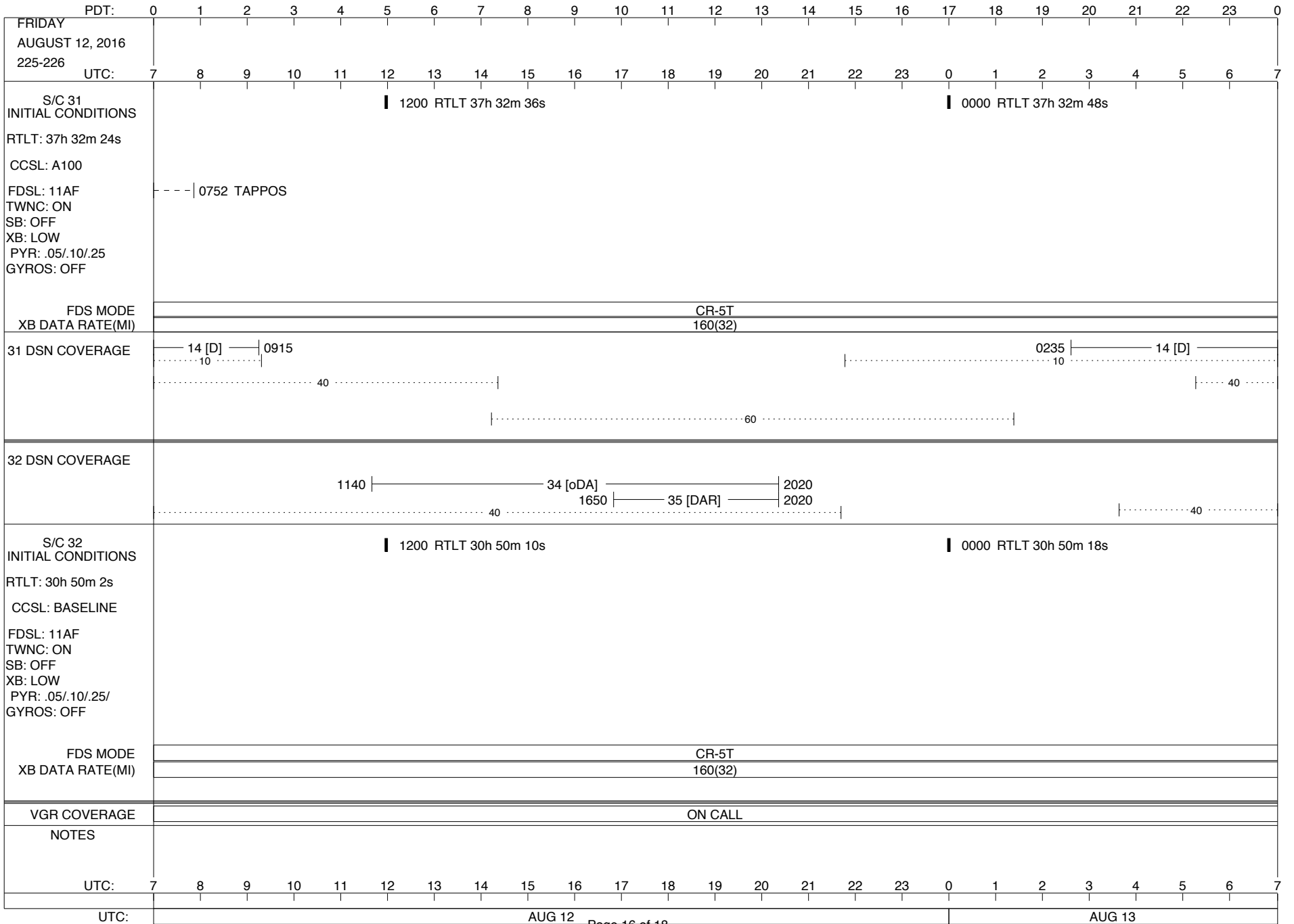
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MONDAY AUGUST 8, 2016 221-222																									
UTC:	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	0	1	2	3	4	5	6	7
S/C 31 INITIAL CONDITIONS RTLT: 37h 30m 56s CCSL: A100 FDSL: 11AF TWNC: ON SB: OFF XB: HI PYR: .05/.10/.25 GYROS: OFF	1200 RTLT 37h 31m 8s												0000 RTLT 37h 31m 18s												
FDS MODE	CR-5T																								
XB DATA RATE(MI)	160(32)																								
31 DSN COVERAGE	..... 10 .....										----- 14 [T] -----														
	----- 34 [DA] -----  0720 - 1230										----- 10 -----														
	----- 35 [DAR] -----  0720 - 1230										----- 40 -----														
	..... 40 .....										----- 60 -----														
32 DSN COVERAGE											0530   43 [H1]														
	1320  ----- 35 [DA] -----  2035										----- 40 -----														
	----- 40 -----										1700  ----- 45 [DAR] -----  2035														
S/C 32 INITIAL CONDITIONS RTLT: 30h 49m 2s CCSL: BASELINE FDSL: 11AF TWNC: ON SB: OFF XB: LOW PYR: .05/.10/.25/ GYROS: OFF	1200 RTLT 30h 49m 8s												0000 RTLT 30h 49m 16s												
FDS MODE	CR-5T																								
XB DATA RATE(MI)	160(32)																								
VGR COVERAGE	ON CALL																						VGR		
NOTES	[1] S/C 32 DSS-43 HP DRV ON >= 05:13																								
UTC:	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	0	1	2	3	4	5	6	7
UTC:	AUG 08												AUG 09												

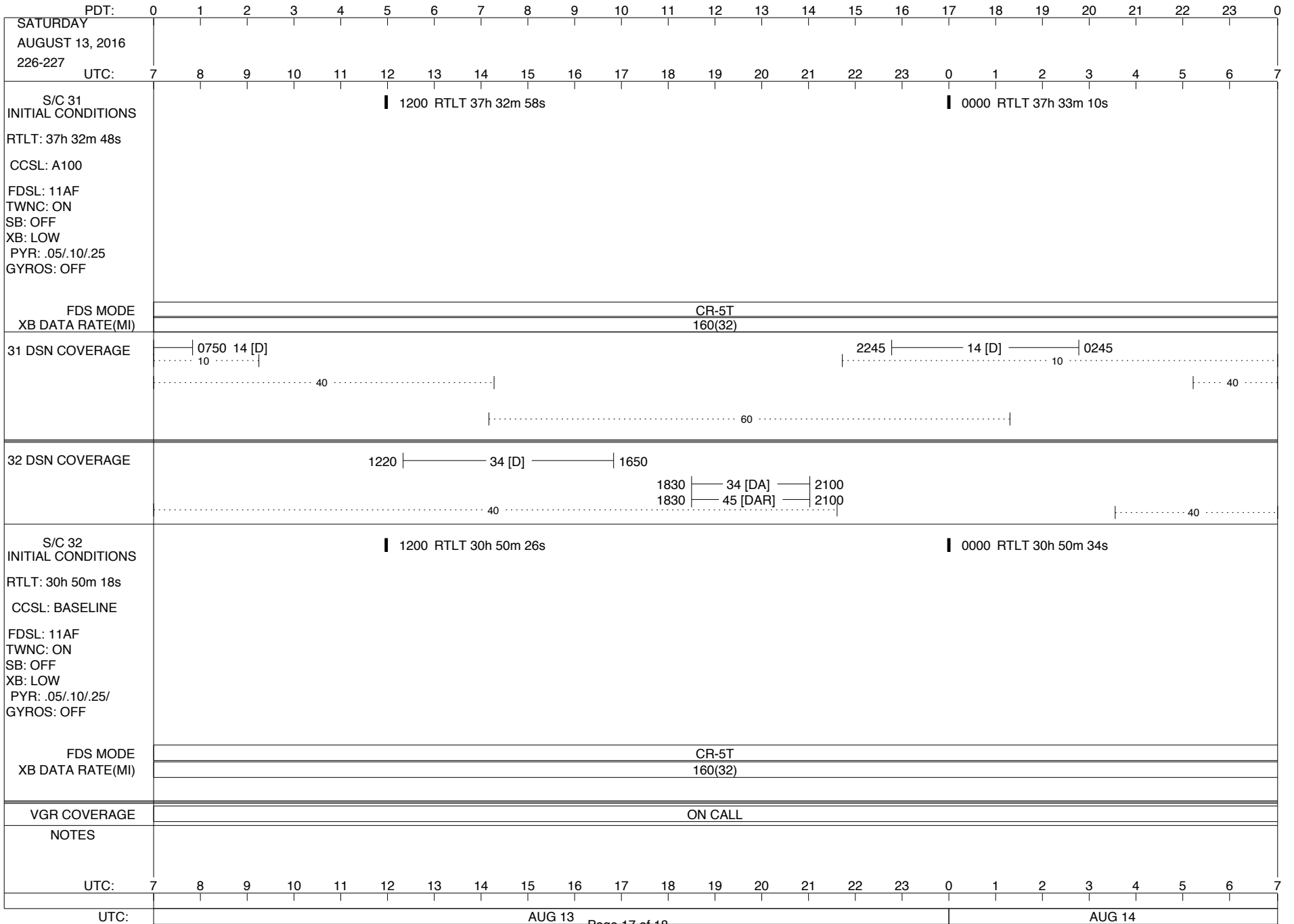


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WEDNESDAY AUGUST 10, 2016 223-224																									
UTC:	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	0	1	2	3	4	5	6	7
S/C 31 INITIAL CONDITIONS RTLTL: 37h 31m 40s CCSL: A100 FDSL: 11AF TWNC: ON SB: OFF XB: HI PYR: .05/.10/.25 GYROS: OFF	1200 RTLTL 37h 31m 52s												0000 RTLTL 37h 32m 2s												
FDS MODE	CR-5T												PB-14												
XB DATA RATE(MI)	160(32)												1.4K(39)												
31 DSN COVERAGE	10 .....  43 [D]   0930 ..... 40 .....  ..... 60 .....  ..... 40 .....												2315   14 [DAR] 2325 - 0625   25 [DA] 2325 - 0625   26 [DA] ..... 10 .....  ..... 40 .....												
32 DSN COVERAGE	1245   45 [D]   1645 ..... 40 .....  1840   43 [D]   2130 ..... 40 .....																								
S/C 32 INITIAL CONDITIONS RTLTL: 30h 49m 32s CCSL: BASELINE FDSL: 11AF TWNC: ON SB: OFF XB: LOW PYR: .05/.10/.25/ GYROS: OFF	1200 RTLTL 30h 49m 40s												0000 RTLTL 30h 49m 46s												
FDS MODE	CR-5T																								
XB DATA RATE(MI)	160(32)																								
VGR COVERAGE	ON CALL						VGR						ON CALL						VGR						
NOTES	[1] S/C 31=PB-14 @ 0008 XB=1.4K(39)																								
UTC:	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	0	1	2	3	4	5	6	7
UTC:	AUG 10												AUG 11												

PDT:	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
THURSDAY AUGUST 11, 2016 224-225																									
UTC:	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	0	1	2	3	4	5	6	7
S/C 31 INITIAL CONDITIONS RTLTL: 37h 32m 2s CCSL: A100 FDSL: 11AF TWNC: ON SB: OFF XB: LOW PYR: .05/.10/.25 GYROS: OFF	1200 RTLTL 37h 32m 14s												0000 RTLTL 37h 32m 24s												
FDS MODE	CR-5T																								
XB DATA RATE(MI)	160(32)																								
31 DSN COVERAGE	0740 14 [DAR]												0435   14 [D]												
	10   40   60												10   40												
32 DSN COVERAGE	1430   35 [D]   1600												1545   34 [D]   1700												
	1745   43 [D]   2145												40   40												
S/C 32 INITIAL CONDITIONS RTLTL: 30h 49m 46s CCSL: BASELINE FDSL: 11AF TWNC: ON SB: OFF XB: LOW PYR: .05/.10/.25/ GYROS: OFF	1200 RTLTL 30h 49m 54s												0000 RTLTL 30h 50m 2s												
FDS MODE	CR-5T																								
XB DATA RATE(MI)	160(32)																								
VGR COVERAGE	ON CALL																								
NOTES																									
UTC:	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	0	1	2	3	4	5	6	7
UTC:	AUG 11												AUG 12												







PDT:	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		
SUNDAY AUGUST 14, 2016 227-228																											
UTC:	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	0	1	2	3	4	5	6	7		
S/C 31 INITIAL CONDITIONS RTLT: 37h 33m 10s CCSL: A100 FDSL: 11AF TWNC: ON SB: OFF XB: LOW PYR: .05/.10/.25 GYROS: OFF	<p style="text-align: center;">█ 1200 RTLT 37h 33m 20s</p>																										
FDS MODE														CR-5T													
XB DATA RATE(MI)														160(32)													
31 DSN COVERAGE	<p>..... 10 ..... </p> <p>..... 40 ..... </p>																										
32 DSN COVERAGE	<p>0815  ----- 43 [D] -----  1125</p> <p>1110  ----- 34 [D] -----  1600</p> <p>..... 40 ..... </p>																										
S/C 32 INITIAL CONDITIONS RTLT: 30h 50m 34s CCSL: BASELINE FDSL: 11AF TWNC: ON SB: OFF XB: LOW PYR: .05/.10/.25/ GYROS: OFF	<p style="text-align: center;">█ 1200 RTLT 30h 50m 42s</p>																										
FDS MODE														CR-5T													
XB DATA RATE(MI)														160(32)													
VGR COVERAGE	ON CALL																										
NOTES																											
UTC:	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	0	1	2	3	4	5	6	7		
UTC:	AUG 14													AUG 15													