

VOYAGER

Space Flight Operations Schedule (SFOS)

Issue Date: November 30, 2016

For the Period: 12/01/16 to 12/19/16 (16-336 – 16-354)

DSN OPSCHIEF (1) 230-102

DSOT (1) 230-102

*Zsarina.Bulchand@jpl.nasa.gov
 *gdyke@airmail.ftops.jpl.nasa.gov
 *John.M.Grant@jpl.nasa.gov
 *dmcclena@airmail.ftops.jpl.nasa.gov
 *pquach@airmail.ftops.jpl.nasa.gov
 *mrobles@airmail.ftops.jpl.nasa.gov
 *rwilliam@airmail.ftops.jpl.nasa.gov

OTHER

* KMassey@jgld.gdscc.nasa.gov
 * Belinda.Arroyo@jpl.nasa.gov
 *DL-DSSN-MPSETA@dsn.nasa.gov

SCIENCE

CRS *bryant@mail630.gsfc.nasa.gov
 LECP *r.decker@jhuapl.edu
 UVS *holburg@argus.lpl.arizona.edu
 MAG *u2mha@lepvox.gsfc.nasa.gov
 PLS *vgr@space.mit.edu
 PWS *wsk@space.physics.uiowa.edu
 *Leonard.F.Burlaga@nasa.gov
 *Donald-Gurnett@uiowa.edu

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

ISSUE DATE: 12/02/16 13:20

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
THURSDAY DECEMBER 1, 2016 336-337																									
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: 38h 9m 50s CCSL: A101 FDSL: 11AF TWNC: ON SB: OFF XB: LOW PYR: .05/.10/.25 GYROS: OFF	1200 RTLTL 38h 9m 56s												0000 RTLTL 38h 10m 2s												
													0346 0358 TAPPOS PWS/RH 0648 0649 TAPPOS 0700 0701												
													0648 GS-4B 0649 ↓												
FDS MODE	CR-5T												CR-5T												
XB DATA RATE(MI)	160(32)												160(32)												
31 DSN COVERAGE	-----10-----												-----40-----												
	1130 -----63 [D]----- 1625												-----60-----												
32 DSN COVERAGE	0930 -----43 [D]----- 1420												-----40-----												
S/C 32 INITIAL CONDITIONS RTLTL: 31h 28m 0s CCSL: B174 FDSL: 11AF TWNC: ON SB: OFF XB: LOW PYR: .05/.10/.25/ GYROS: OFF	1200 RTLTL 31h 28m 8s												0000 RTLTL 31h 28m 18s												
FDS MODE	CR-5T												CR-5T												
XB DATA RATE(MI)	160(32)												160(32)												
VGR COVERAGE	ON CALL												ON CALL												
NOTES	[1] S/C 31=GS-4B @ 0648 XB=2.8K(41) NOT RECOVERABLE																								
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:	DEC 01												DEC 02												

ISSUE DATE: 12/02/16 13:20

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 DECEMBER 2, 2016 337-338	
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: 38h 10m 2s CCSL: A101 FDSL: 11AF TWNC: ON SB: OFF XB: LOW PYR: .05/.10/.25 GYROS: OFF	<div style="display: flex; justify-content: space-between;"> <div>1200 RTLTL 38h 10m 8s</div> <div>0000 RTLTL 38h 10m 12s</div> </div>
FDS MODE XB DATA RATE(MI)	CR-5T 160(32)
31 DSN COVERAGE	<div style="display: flex; justify-content: space-between;"> <div>1745 ----- 14 [D] ----- 2145</div> <div>10 ----- 40</div> <div>60 ----- 60</div> </div>
32 DSN COVERAGE	<div style="display: flex; justify-content: space-between;"> <div>1010 ----- 43 [D] ----- 1415</div> <div>40 ----- 40</div> <div>0535 - 0720 ----- 34 [o] ----- </div> </div>
S/C 32 INITIAL CONDITIONS RTLTL: 31h 28m 18s CCSL: B174 FDSL: 11AF TWNC: ON SB: OFF XB: LOW PYR: .05/.10/.25/ GYROS: OFF	<div style="display: flex; justify-content: space-between;"> <div>1200 RTLTL 31h 28m 26s</div> <div>0000 RTLTL 31h 28m 36s</div> </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:	DEC 02 ----- DEC 03

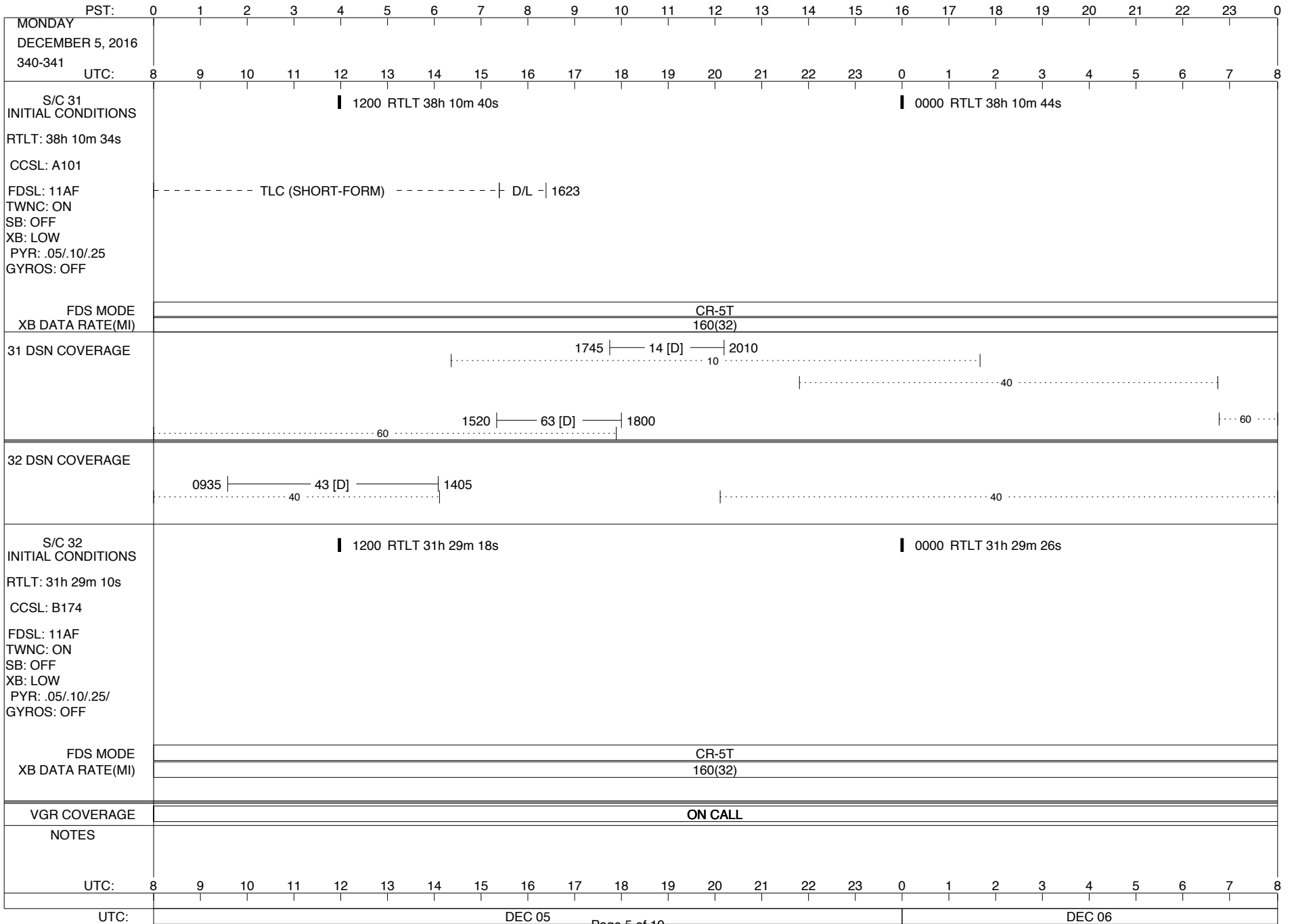
ISSUE DATE: 12/02/16 13:20

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
SATURDAY DECEMBER 3, 2016 338-339	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: 38h 10m 12s CCSL: A101 FDSL: 11AF TWNC: ON SB: OFF XB: LOW PYR: .05/.10/.25 GYROS: OFF	1200 RTLTL 38h 10m 18s												0000 RTLTL 38h 10m 24s												
FDS MODE	CR-5T												CR-5T												
XB DATA RATE(MI)	160(32)												160(32)												
31 DSN COVERAGE	2020 ----- 14 [T] ----- 0135 10 ----- 40												60 ----- 60												
32 DSN COVERAGE	0930 ----- 43 [D] ----- 1410 40 ----- 40																								
S/C 32 INITIAL CONDITIONS RTLTL: 31h 28m 36s CCSL: B174 FDSL: 11AF TWNC: ON SB: OFF XB: LOW PYR: .05/.10/.25/ GYROS: OFF	1200 RTLTL 31h 28m 44s												0000 RTLTL 31h 28m 52s												
FDS MODE	CR-5T												CR-5T												
XB DATA RATE(MI)	160(32)												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:	DEC 03												DEC 04												

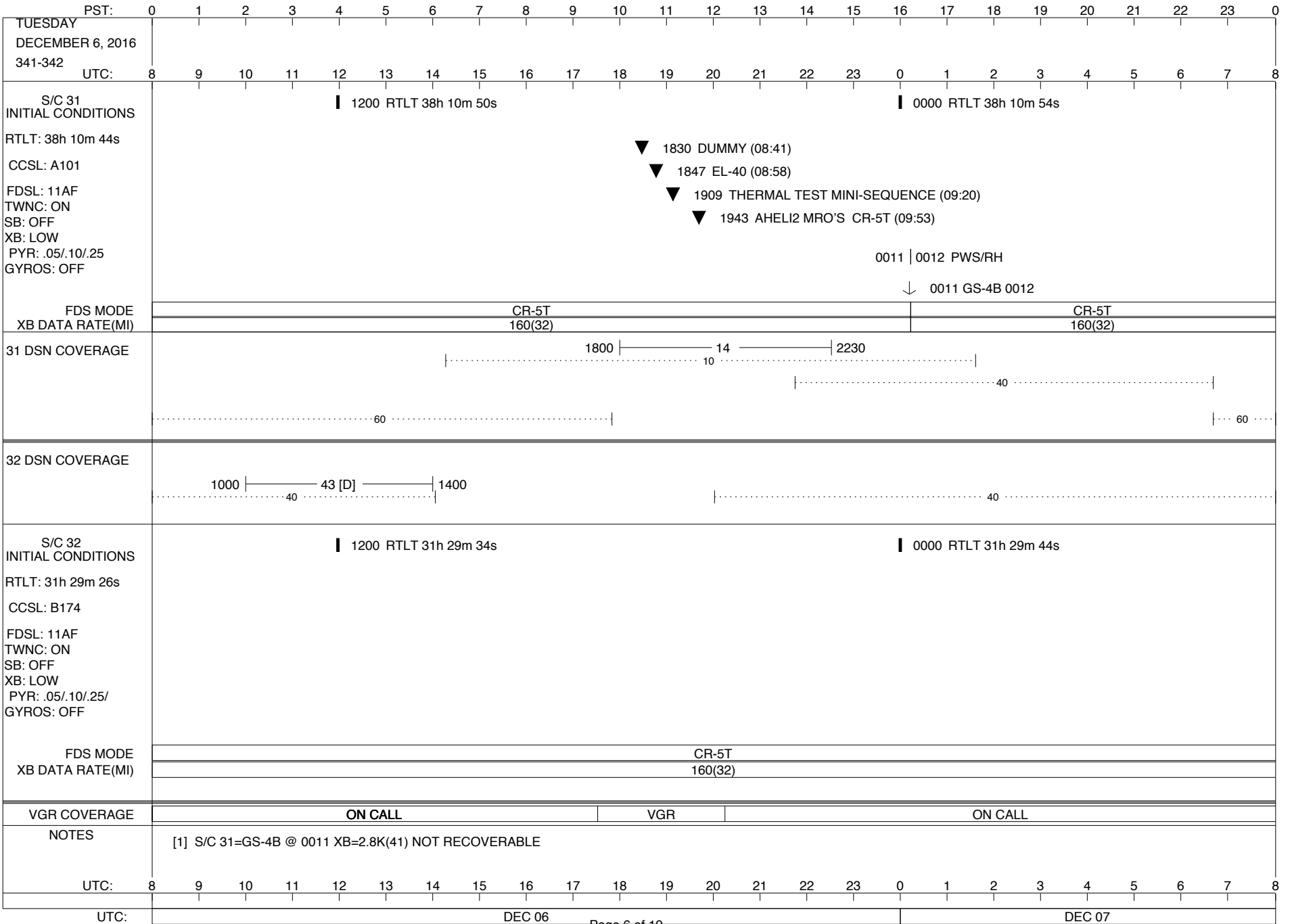
ISSUE DATE: 12/02/16 13:20

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
SUNDAY DECEMBER 4, 2016 339-340	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: 38h 10m 24s CCSL: A101 FDSL: 11AF TWNC: ON SB: OFF XB: LOW PYR: .05/.10/.25 GYROS: OFF	1200 RTLTL 38h 10m 28s												0000 RTLTL 38h 10m 34s												
FDS MODE XB DATA RATE(MI)	CR-5T 160(32)												CR-5T 160(32)												
31 DSN COVERAGE	1605 ----- 25 [DA] ----- 2105 1605 ----- 26 [DAR] ----- 2105 ----- 10 ----- ----- 40 ----- ----- 60 -----												----- 40 ----- ----- 60 -----												
32 DSN COVERAGE	0930 ----- 43 [D] ----- 1410 ----- 40 -----												----- 40 -----												
S/C 32 INITIAL CONDITIONS RTLTL: 31h 28m 52s CCSL: B174 FDSL: 11AF TWNC: ON SB: OFF XB: LOW PYR: .05/.10/.25/ GYROS: OFF	1200 RTLTL 31h 29m 2s												0000 RTLTL 31h 29m 10s												
FDS MODE XB DATA RATE(MI)	CR-5T 160(32)												CR-5T 160(32)												
VGR COVERAGE	ON CALL																								
NOTES	[1] S/C 31=GS-4B @ 0948 XB=2.8K(41) NOT RECOVERABLE																								
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:	DEC 04												DEC 05												

ISSUE DATE: 12/02/16 13:20



ISSUE DATE: 12/02/16 13:20

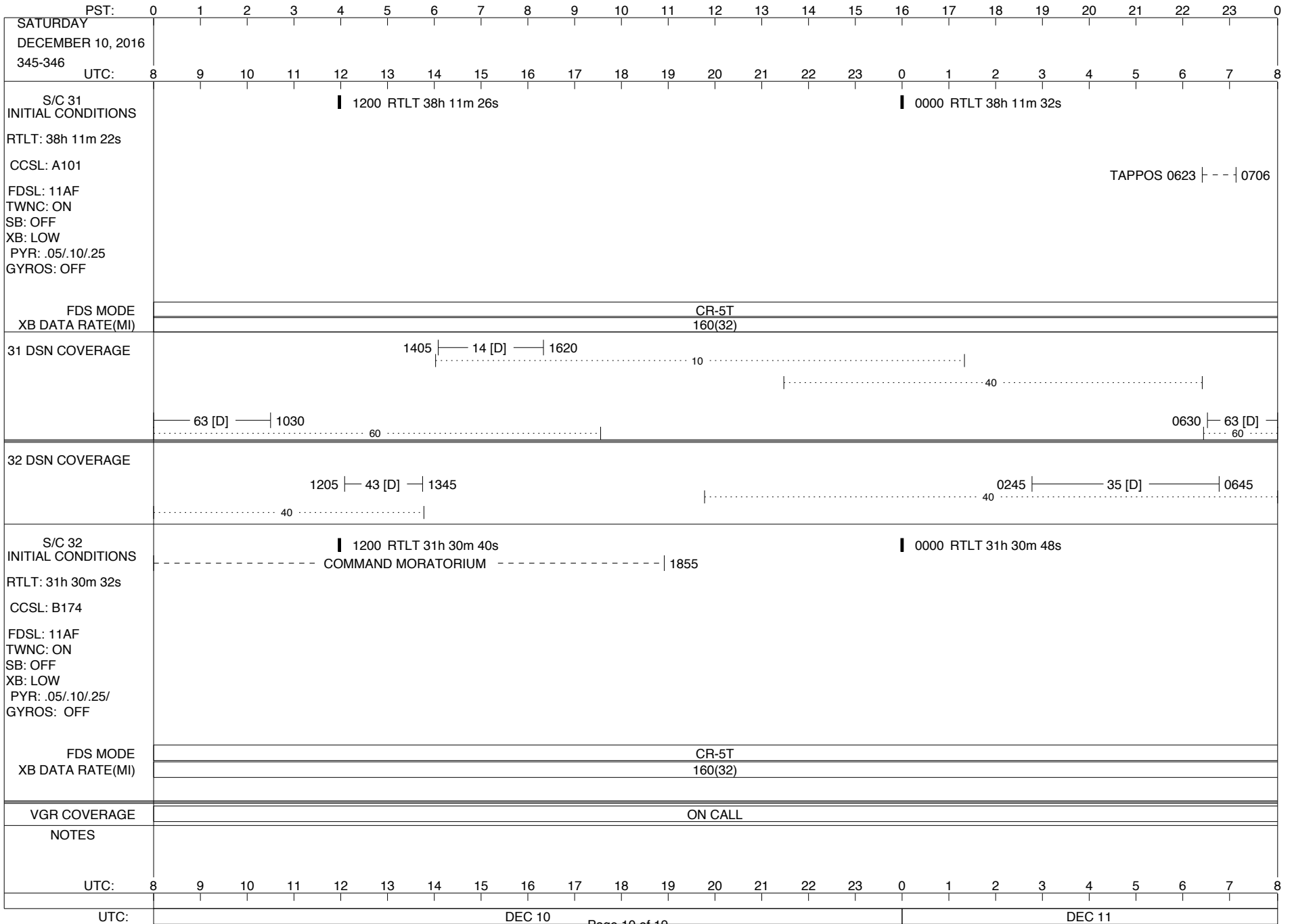


PST:	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	0
THURSDAY DECEMBER 8, 2016 343-344																									
UTC:	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	0	1	2	3	4	5	6	7	8
S/C 31 INITIAL CONDITIONS RTLTL: 38h 11m 4s CCSL: A101 FDSL: 11AF TWNC: ON SB: OFF XB: LOW PYR: .05/.10/.25 GYROS: OFF	1200 RTLTL 38h 11m 8s												0000 RTLTL 38h 11m 14s												
FDS MODE	CR-5T	EL-40																				CR-5T	CR-5T		
XB DATA RATE(MI)	40(30)																				160(32)	160(32)			
31 DSN COVERAGE	63 [D] 1245 0635 63 [D]																								
32 DSN COVERAGE	1005 43 [B] 1350 0100 0200 34 [DAR] 0100 0200 36 [DA]																								
S/C 32 INITIAL CONDITIONS RTLTL: 31h 30m 0s CCSL: B174 FDSL: 11AF TWNC: ON SB: OFF XB: LOW PYR: .05/.10/.25/ GYROS: OFF	1200 RTLTL 31h 30m 8s												0000 RTLTL 31h 30m 16s												
FDS MODE																				CR-5T					
XB DATA RATE(MI)																				160(32)					
VGR COVERAGE	VGR												ON CALL												
NOTES	[3] S/C 31=GS-4B @ 0624 XB=2.8K(41) NOT RECOVERABLE [1] S/C 31=EL-40 @ 08:59 XB=40(30) [2] S/C 31=CR-5T @ 09:59 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:	DEC 08												DEC 09												

ISSUE DATE: 12/02/16 13:20

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 DECEMBER 9, 2016 344-345																										
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: 38h 11m 14s CCSL: A101 FDSL: 11AF TWNC: ON SB: OFF XB: LOW PYR: .05/.10/.25 GYROS: OFF	1200 RTLTL 38h 11m 18s												0000 RTLTL 38h 11m 22s													
FDS MODE XB DATA RATE(MI)													CR-5T 160(32)													
31 DSN COVERAGE	1405 ----- 14 [D] ----- 1805												10 ----- 40 ----- 0630 ----- 63 [D] ----- 60													
63 [D] ----- 0910	60 -----																									
32 DSN COVERAGE	0945 ----- 43 [D] ----- 1345												0200 ----- 43 [DAR] ----- 0530 0230 ----- 36 [DA] ----- 0430 40 -----													
S/C 32 INITIAL CONDITIONS RTLTL: 31h 30m 16s CCSL: B174 FDSL: 11AF TWNC: ON SB: OFF XB: LOW PYR: .05/.10/.25/ GYROS: OFF	1200 RTLTL 31h 30m 24s												0000 RTLTL 31h 30m 32s													
FDS MODE XB DATA RATE(MI)	CR-5T 160(32)												EL-40 40(30)				CR-5T 160(32)									
VGR COVERAGE	ON CALL												VGR				ON CALL									
NOTES	[1] S/C 32=EL-40 @ 0228 XB=40(30) [2] S/C 32=CR-5T @ 0435 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:	DEC 09												DEC 10													

ISSUE DATE: 12/02/16 13:20



ISSUE DATE: 12/02/16 13:20

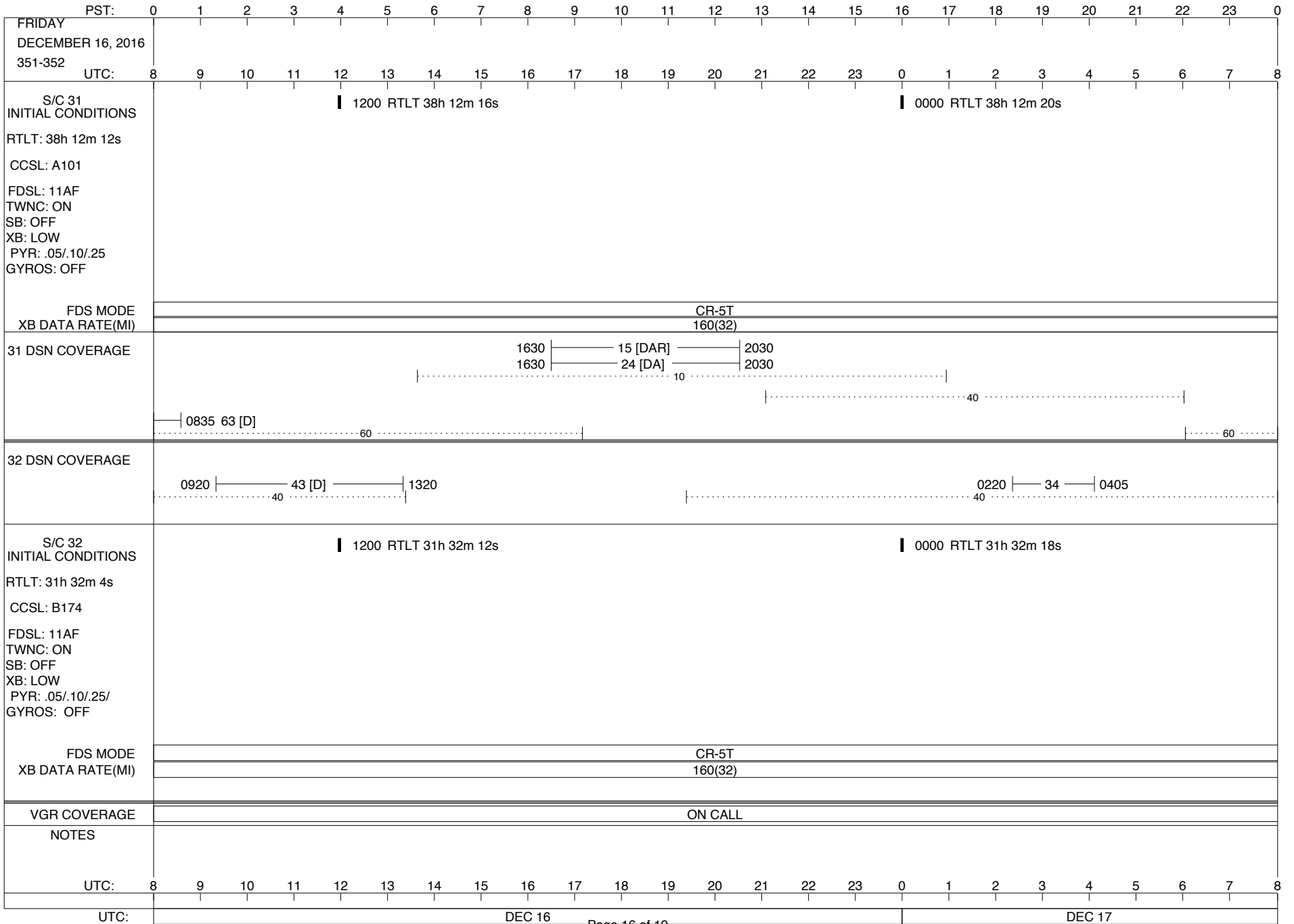
PST:	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	0	
SUNDAY DECEMBER 11, 2016 346-347																										
UTC:	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	0	1	2	3	4	5	6	7	8	
S/C 31 INITIAL CONDITIONS RTLTL: 38h 11m 32s CCSL: A101 FDSL: 11AF TWNC: ON SB: OFF XB: LOW PYR: .05/.10/.25 GYROS: OFF	1200 RTLTL 38h 11m 36s												0000 RTLTL 38h 11m 40s													
0924 0926 PWS/RH 0936 - - - - 1033 TAPPOS ↓ 0924 GS-4B 0926																										
FDS MODE XB DATA RATE(MI)	CR-5T 160(32)												CR-5T 160(32)													
31 DSN COVERAGE10.....40.....													
	63 [D] 113560.....												0625 63 [D]60.....													
32 DSN COVERAGE	0935 43 [D] 134040.....											40.....													
S/C 32 INITIAL CONDITIONS RTLTL: 31h 30m 48s CCSL: B174 FDSL: 11AF TWNC: ON SB: OFF XB: LOW PYR: .05/.10/.25/ GYROS: OFF	1200 RTLTL 31h 30m 56s												0000 RTLTL 31h 31m 4s													
FDS MODE XB DATA RATE(MI)													CR-5T 160(32)													
VGR COVERAGE													ON CALL													
NOTES	[1] S/C 31=GS-4B @ 0924 XB=2.8K(41) NOT RECOVERABLE																									
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:	DEC 11												DEC 12													

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 DECEMBER 13, 2016 348-349																									
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: 38h 11m 48s CCSL: A101 FDSL: 11AF TWNC: ON SB: OFF XB: LOW PYR: .05/.10/.25 GYROS: OFF	1200 RTLT 38h 11m 52s												0000 RTLT 38h 11m 56s												
	1538 THERMAL TEST - 1822 ↓ 1552 BAY 1 HTR OFF ↓ 1554 GYROS BC ON ↓ 1604 PYR DB = .05/.05/.05 ↓ 1804 GYROS OFF ↓ 1806 BAY 1 HTR ON ↓ 1810 PYR DB = .05/.10/.25												2348 2348 PWS/RH												
FDS MODE	CR-5T				EL-40				CR-5T				CR-5T				CR-5T								
XB DATA RATE(MI)	160(32)				40(30)				160(32)				160(32)				160(32)								
31 DSN COVERAGE	1445 ----- 14 [D] ----- 2000 ----- 10 ----- ----- 40 -----												0615- 0745 63 [D] 54 [DA] 0800 55 [DAR] 0800 ----- 60 -----												
32 DSN COVERAGE	1935 ----- 43 [o] ----- 2210 ----- 40 -----												0140 34 [DAR] 0340 0140 ----- 36 [DA] ----- 0545 ----- 40 -----												
S/C 32 INITIAL CONDITIONS RTLT: 31h 31m 18s CCSL: B174 FDSL: 11AF TWNC: ON SB: OFF XB: LOW PYR: .05/.10/.25/ GYROS: OFF	1200 RTLT 31h 31m 26s												0000 RTLT 31h 31m 34s												
FDS MODE	CR-5T																								
XB DATA RATE(MI)	160(32)																								
VGR COVERAGE	ON CALL																								
NOTES	[1] S/C 31=EL-40 @ 1538 XB=40(30) [2] S/C 31=CR-5T @ 1822 XB=160(32) [3] S/C 31=GS-4B @ 2348 XB=2.8K(41) NOT RECOVERABLE																								
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:	DEC 13												DEC 14												

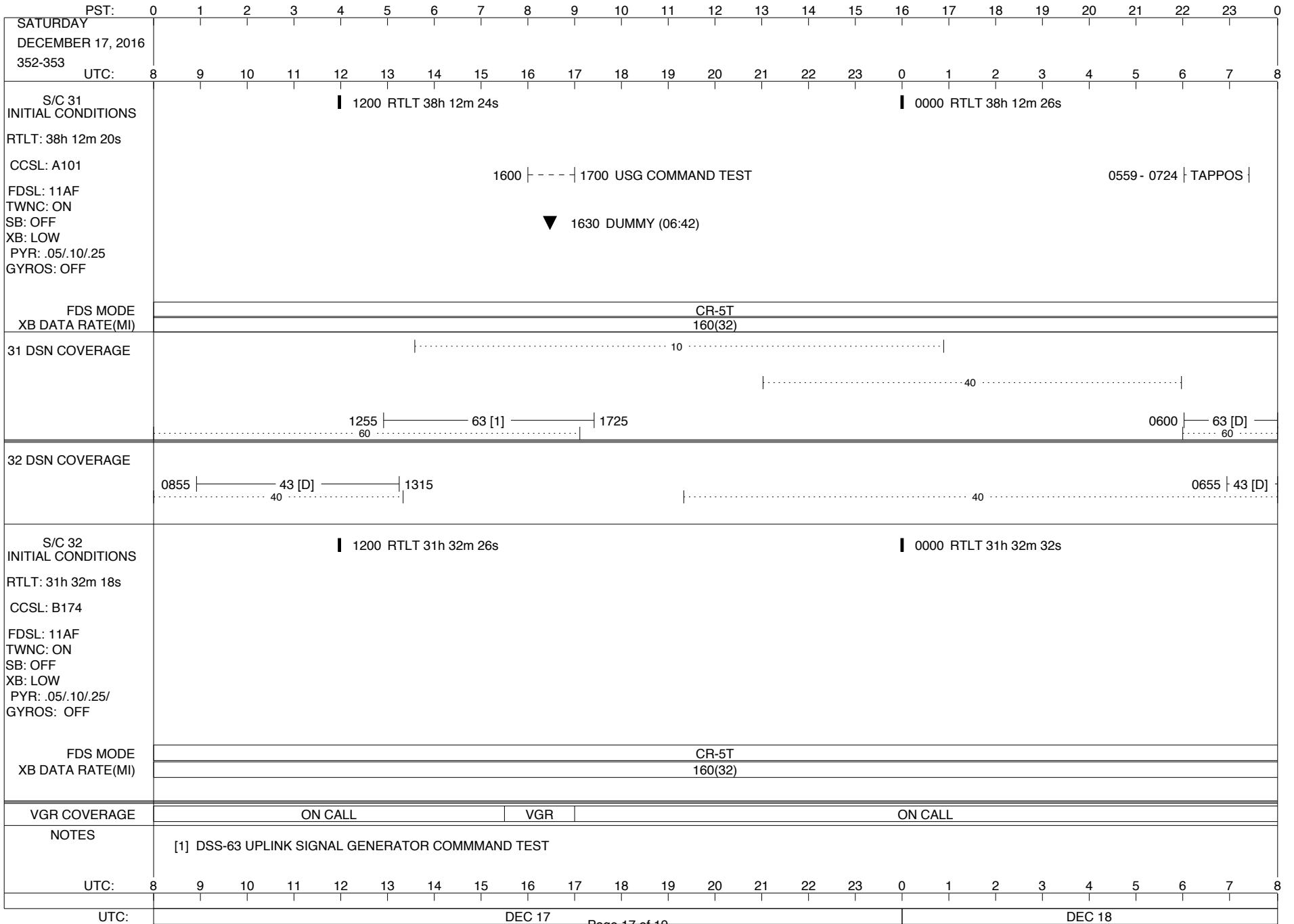
ISSUE DATE: 12/02/16 13:20

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	
THURSDAY DECEMBER 15, 2016 350-351																										
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: 38h 12m 4s CCSL: A101 FDSL: 11AF TWNC: ON SB: OFF XB: LOW PYR: .05/.10/.25 GYROS: OFF	1200 RTLTL 38h 12m 8s												0000 RTLTL 38h 12m 12s													
FDS MODE	CR-5T												CR-5T													
XB DATA RATE(MI)	160(32)												160(32)													
31 DSN COVERAGE	1520 ----- 25 [DAR] ----- 1925 1520 ----- 26 [DA] ----- 1925												0610 ----- 63 [D] ----- 60													
32 DSN COVERAGE	43 [D] ----- 1325												2330 43 [D] 0030 40													
S/C 32 INITIAL CONDITIONS RTLTL: 31h 31m 48s CCSL: B174 FDSL: 11AF TWNC: ON SB: OFF XB: LOW PYR: .05/.10/.25/ GYROS: OFF	1200 RTLTL 31h 31m 56s												0000 RTLTL 31h 32m 4s													
FDS MODE	CR-5T												CR-5T													
XB DATA RATE(MI)	160(32)												160(32)													
VGR COVERAGE	ON CALL												ON CALL													
NOTES	[1] S/C 31=GS-4B @ 0601 XB=2.8K(41) NOT RECOVERABLE																									
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:	DEC 15												DEC 16													

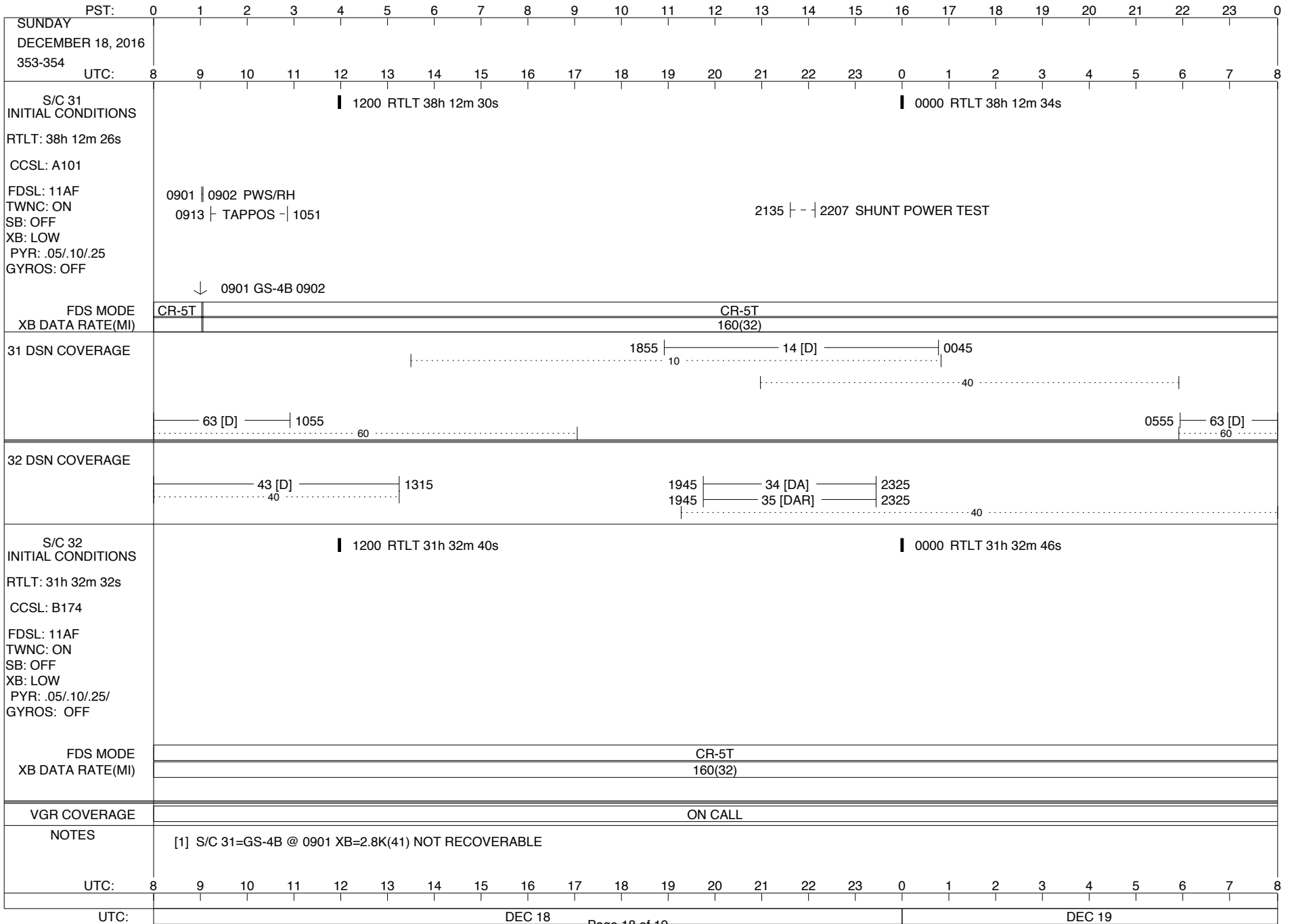
ISSUE DATE: 12/02/16 13:20



ISSUE DATE: 12/02/16 13:20



ISSUE DATE: 12/02/16 13:20



ISSUE DATE: 12/02/16 13:20

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 DECEMBER 19, 2016 354-355	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: 38h 12m 34s CCSL: A101 FDSL: 11AF TWNC: ON SB: OFF XB: LOW PYR: .05/.10/.25 GYROS: OFF	<div style="display: flex; justify-content: space-between;"> █ 1200 RTLT 38h 12m 36s █ 0000 RTLT 31h 33m 0s </div>																								
FDS MODE XB DATA RATE(MI)													CR-5T 160(32)												
31 DSN COVERAGE	<div style="display: flex; justify-content: space-between;"> 1505 15 [DAR] 1905 1505 26 [DA] 1905 </div> <p>0810 63 [D]60</p>																								
32 DSN COVERAGE	<p>43 [D]0810 - 1310</p> <p>.....40</p>																								
S/C 32 INITIAL CONDITIONS RTLT: 31h 32m 46s CCSL: B174 FDSL: 11AF TWNC: ON SB: OFF XB: LOW PYR: .05/.10/.25/ GYROS: OFF	<div style="display: flex; justify-content: space-between;"> █ 1200 RTLT 31h 32m 54s █ 0000 RTLT 31h 33m 0s </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:	DEC 19												DEC 20												