STS-135 / ULF7

FD 14 Entry Package

MSG	Page(s)	Title
105A	1 - 12	FD14 - EOM+2 Flight Plan Revision
106B	13	Deorbit Prep Updates
107	14 - 15	Entry Checklist Deltas
108	16 - 17	Entry Summary
109	---	Entry Summary Blank Template *(Not distributed)*
110	---	Deorbit Star Pairs Blank Template *(Not distributed)*
111	18 - 19	KSC 200 Deorbit Maneuver Pad and Ground Track
112	20 - 21	KSC 201 Deorbit Maneuver Pad and Ground Track
113	22 - 25	EFD 201 and 202 Pads and Ground Tracks
114	---	Sunday Funnies *(Not distributed)*

Approved by FAO:
F. Fisher Reynolds

Last Updated: Jul 20 2011 7:53 AM GMT
JEDI *(**J**oint **E**xecute package **D**evelopment and **I**ntegration), v3.0*

The Execute Package has been a staple of Space Shuttle operations since the early missions of the program. Complied by the Flight Activities Officer's (FAO) back room, each package contains updated timelines, procedures and other messages for the crew and ground controllers. We have found examples dating back to STS-7.

Throughout the years, the Execute Package has also been adorned with some type of comic picture on the cover. Some were generic pictures, and some were created to reflect specific mission or current events. As the program went on, Execute Package comedy became practically a requirement. It is a very rare occasion when the package is printed without some type of comedy on the cover. The comedy has included top-ten-lists, and has had fun with crews, Flight Directors, MCC controllers, payloads, other NASA centers and projects. In a few instances, apologies were provided to those who were offended.

What is "funny" is in the eye of the reader. In retrospect, the comedy over the years could be known as "the good, the bad, and the ugly". Be it laugh, or groan, controllers have waited in anticipation to see what would come out with the next Execute Package.

So, here is the final Execute Package of the Space Shuttle program. We, the Space Shuttle Flight Planners, hope we have served you well producing this document and the comedy. Godspeed, Space Shuttle program!

From Alpha to Omega

The world is round and the place which may seem like the end may also be the beginning.
Ivy Baker Priest

Only in the agony of parting do we look into the depths of love.
George Eliot

Farewell, my sister, fare thee well.
The elements be kind to thee, and make
Thy spirits all of comfort: fare thee well.
William Shakespeare

Some people come into our lives and leave footprints on our hearts and we are never ever the same.
Flavia Weedn

MSG INDEX

MSG NO.	TITLE
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106	DEORBIT PREP UPDATES
107	ENTRY CHECKLIST DELTAS
108	ENTRY SUMMARY
109	ENTRY SUMMARY BLANK TEMPLATE
110	DEORBIT STAR PAIRS BLANK TEMPLATE
111	KSC 200 DEORBIT MANEUVER PAD AND GROUND TRACK
112	KSC 201 DEORBIT MANEUVER PAD AND GROUND TRACK
113	EFD 201 AND 202 PADS AND GROUND TRACKS
114	STS-135 SUNDAY FUNNIES

1. For today's cryo config, O2 and H2 tanks 1 & 2 will be active.

R1 O2,H2 MANF VLV TK1 (two) - OP (tb-OP)
O2 TK2 HTR A - AUTO
TK3 HTR A - OFF
H2 TK2 HTRS A,B (two) - AUTO
TK3 HTRS A,B (two) - OFF

2. REPLACE PAGES 2-47 THROUGH 2-52 AND 3-150 THROUGH 3-154.

07/20/11 02:15:21 **REPLANNED**

FD13

GMT 07/20/11 (201) 16 17 18 19 20 21 22 23 07/21 01 02 03

MET Day 012 012/00 01 02 03 04 05 06 07 08 09 10 11 12

STS-135

CDR FERGUSON	PRE SLEEP	SLEEP	**FD14** POST SLEEP	PMC A/G; POST SLEEP
PLT HURLEY	PRE SLEEP	SLEEP	POST SLEEP	
MS1 MAGNUS	PRE SLEEP	SLEEP	POST SLEEP	
MS2 WALHEIM	PRE SLEEP	SLEEP	LOG; POST SLEEP	

DAY/NIGHT

ORBIT 189 190 191 192 193 194 195 196

TDRS W E Z

ORB ATT -ZLV -XVV

NOTES

2

07/20/11 02:15:21 **REPLANNED**

FD14

GMT 07/21/11 (202) 04 05 06 07 08 09 10 11 12 13 14 15

MET Day 012 12 13 14 15 16 17 18 19 20 21 22 23 013/00

STS-135

CDR FERGUSON	POST SLEEP	GRP B PWRUP	IMU ALIGN & VERIF	TRK -XSI	DEORBIT PREP																		DEORBIT BACKOUT	L-1 COMM CHK WSS	PMC A/G	PRE SLEEP
PLT HURLEY	POST SLEEP	GRP B PWRUP	POST SLEEP	OCAC STOW	DEORBIT PREP																		DEORBIT BACKOUT	OCAC SETUP	MCIU	PRE SLEEP
MS1 MAGNUS	POST SLEEP	SAMPL	GIRA STOW	MSDTLK*	MFLRMVL	MADS^	DEORBIT PREP																DEORBIT BACKOUT	GIRA INSTALL		PRE SLEEP
MS2 WALHEIM	POST SLEEP	CUBLAB@	TEPC PWRDN	PGSC STOW PART II	WATCH	DEORBIT PREP																	DEORBIT BACKOUT	MFLR INSTL	TEPC ON	MDDK	AEMSTATUS	CHECK	WATCH	PRE SLEEP

ORBIT	TIG
KSC 200	12/17:20
KSC 201	12/18:56
EDW 202	12/20:27
NOR 202	12/20:29
EDW 203	12/22:04
NOR 203	12/22:06

DAY/NIGHT

ORBIT 197 198 199 200 201 202 203 204

TDRS W E Z

ORB ATT IMU -XSI COMM ENTRY -ZLV -XVV

NOTES

@DEACT 2 ^STRAIN GAGE ENABLE

*ENTRY PREP

***DEORBIT TIG ~012/17:20**

***LANDING ~012/18:28**

3

FD14

GMT 07/21/11 (202) 16 17 18 19 20 21 22 23 07/22 01 02 03

MET Day 013 013/00 01 02 03 04 05 06 07 08 09 10 11 12

STS-135

CDR FERGUSON	PRE SLEEP	SLEEP	**FD15 EOM+1** POST SLEEP	PMC A/G; POST SLEEP; GRP B PWRUP; IMU ALIGN & VERIF
PLT HURLEY	PRE SLEEP	SLEEP	POST SLEEP	GRP B PWRUP; POST SLEEP
MS1 MAGNUS	PRE SLEEP	SLEEP	POST SLEEP	GIRASTOW
MS2 WALHEIM	PRE SLEEP	SLEEP	LOG; POST SLEEP	MDDK; SAMPL

DAY/NIGHT

ORBIT 204 205 206 207 208 209 210 211 212

TDRS W E Z

ORB ATT -ZLV -XVV I

NOTES

4

FD15 EOM+1

GMT 07/22/11 (203)

MET Day 013 — 12 13 14 15 16 17 18 19 20 21 22 23 014/00 — 04 05 06 07 08 09 10 11 12 13 14 15

STS-135

CDR FERGUSON	♣ TRK -XSI	DEORBIT PREP			-ZLV +YVV^ DEORBIT BACKOUT	OCAC SETUP / TEPCON / PRE SLEEP
PLT HURLEY	POST SLEEP / OCAC STOW	DEORBIT PREP			DEORBIT BACKOUT	WASTE INIT / MCIU / PRE SLEEP
MS1 MAGNUS	GIRA STOW / MFLR RMVL / MADS^	DEORBIT PREP			DEORBIT BACKOUT	GIRA INSTALL
MS2 WALHEIM	TEPC PWRDN / WATCH	DEORBIT PREP			DEORBIT BACKOUT	MFLR INSTL / AEM STATUS / CHECK MDK / WATCH / PRE SLEEP

ORBIT	TIG
KSC 215	13/16:20
KSC 216	13/17:55
EDW 217	13/19:26
NOR 217	13/19:28
EDW 218	13/21:03
NOR 218	13/21:06
EDW 219	13/22:41

DAY/NIGHT

ORBIT: 212 213 214 215 216 217 218 219 220

TDRS W E Z

ORB ATT: -XSI — COMM — DO — ENTRY — -ZLV +YVV

NOTES:
♣IMU ALIGN & VERIF
^STRAIN GAGE ENABLE

***DEORBIT TIG ~013/16:20**

***LANDING ~013/17:28**

07/20/11 02:15:21 **REPLANNED**

FD15 EOM+1

GMT 07/22/11 (203)

MET Day 014

014/00 16 17 18 19 20 21 22 23 07/23 01 02 03 01 02 03 04 05 06 07 08 09 10 11 12

STS-135

CDR FERGUSON	PRE SLEEP	MNVR -ZLV	PMC A/G	PRE SLEEP	SLEEP					**FD16 EOM+2** POST SLEEP	PMC A/G	POST SLEEP
PLT HURLEY	PRE SLEEP	WASTE TERM	PRE SLEEP	SLEEP						POST SLEEP		
MS1 MAGNUS	*	PRE SLEEP	SLEEP							POST SLEEP		
MS2 WALHEIM	PRE SLEEP		SLEEP							LOG	POST SLEEP	

DAY/NIGHT

ORBIT: 220 | 221 | 222 | 223 | 224 | 225 | 226 | 227 | 228

TDRS W E Z

ORB ATT: -ZLV -XVV

NOTES: *GIRA INSTALL

FD16 EOM+2

GMT 07/23/11 (204)

MET Day 014

04 05 06 07 08 09 10 11 12 13 14 15

12 13 14 15 16 17 18 19 20 21 22 23 015/00

STS-135

CDR FERGUSON	POST SLEEP; GRP B PWRUP; IMU ALIGN & VERIF; TRK-XSI	DEORBIT PREP
PLT HURLEY	POST SLEEP; GRP B PWRUP; POST SLEEP; OCAC STOW	DEORBIT PREP
MS1 MAGNUS	POST SLEEP; GIRA STOW; MFR RMVL; MADS^	DEORBIT PREP
MS2 WALHEIM	POST SLEEP; MDK; SAMPL; TEPC PWRDN; WATCH	DEORBIT PREP

ORBIT	TIG
KSC 231	14/16:54
NOR 232	14/18:27
KSC 232	14/18:31
EDW 233	14/20:02
NOR 233	14/20:03
EDW 234	14/21:38
KSC 236	15/01:02*

*DESCENDING

DAY/NIGHT

ORBIT: 228 229 230 231 232 233 234 235

TDRS W E Z

ORB ATT: I — -XSI — COMM — DO — ENTRY

^STRAIN GAGE ENABLE

NOTES

***DEORBIT TIG ~014/16:54**

***LANDING ~014/18:02**

STS-135/ULF7 FD14

GMT Date 07/20 (201) | W | TDRSE | Z | D/N | ORB | MET Day 012 | STS ATI | CDR Ferguson | PLT Hurley | NOTES

08:00 | 09:00 | 10:00 | 11:00 | 12:00

00:00 | 01:00 | 02:00 | 03:00

194 | 195 | 196

-ZLV -XVV

SLEEP

SLEEP

FD14 EZ ACTIVITIES:
√OCAC FILTER
TEPC STATUS CHECK
Verify display is backlit
Stow CSA-CP

POST-SLEEP ACTIVITY
(ORB OPS, CREW SYSTEMS)

POST-SLEEP ACTIVITY
(ORB OPS, CREW SYSTEMS)

06 √UHF MODE - OFF
PRIVATE MEDICAL CONFERENCE VIA A/G 2

POST-SLEEP ACTIVITY
(ORB OPS, CREW SYSTEMS)

8

REPLANNED

STS-135/ULF7 FD14

GMT Date 07/20 (201) | W | TDRSE | Z | D/N | ORB | MET Day 012 | STS ATI | MS1 Magnus | MS2 Walheim | NOTES

00:00 — 01:00 — 02:00 — 03:00

194 — 195 — 196

08:00 — 09:00 — 10:00 — 11:00 — 12:00

-ZLV -XVV

MS1 Magnus: SLEEP

MS2 Walheim: SLEEP

POST-SLEEP ACTIVITY (ORB OPS, CREW SYSTEMS)

SLEEP LOGBOOK (SDBI 1634)

POST-SLEEP ACTIVITY (ORB OPS, CREW SYSTEMS)

STS-135/ULF7 FD14

GMT Date 07/21 (202) | W | TDRSE | Z | D/N | ORB | MET Day 012 | STS ATI

CDR Ferguson

POST-SLEEP ACTIVITY
(ORB OPS, CREW SYSTEMS)

PRIORITY PWRUP GRP B
(ORB PKT, PRIOR PWRDN)
Steps 12 (IMU 2),10,9,6 (Dual G2),2

MNVR IMU STAR ALIGN ATT A (pg 3-154)
A1/AUTO/VERN, (12/12:41), Init MNVR
IMU ALIGN - S TRK (ORB OPS, GNC)
MNVR IMU VERIF ATT B (pg 3-154)
A1/AUTO/VERN, Init MNVR
IMU ALIGN - S TRK (ORB OPS, GNC)

MNVR (TRK) BIAS -XSI
TG=4 BV=5 P=180 Y=315 OM=90
A1/AUTO/VERN, Init TRK

PLT Hurley

POST-SLEEP ACTIVITY
(ORB OPS, CREW SYSTEMS)

PRIORITY PWRUP GRP B
(ORB PKT, PRIOR PWRDN)
Steps 12 (IMU 2),10,9,6 (Dual G2),2

POST-SLEEP ACTIVITY
(ORB OPS, CREW SYSTEMS)

OCAC STOWAGE
(ORB OPS, CREW SYS)

NOTES

GO TO DEORBIT PREP AT 12/13:20

Time scale: 04:00, 05:00, 06:00, 07:00; 12:00, 13:00, 14:00, 15:00, 16:00

197, 198, 199

IMU, -XSI, COMM

10

STS-135/ULF7 FD14

GMT Date 07/21 (202) | W | TDRSE | Z | D/N | ORB | MET Day 012 | STS ATI | MS1 Magnus | MS2 Walheim | NOTES

12:00

POST-SLEEP ACTIVITY
(ORB OPS, CREW SYSTEMS)

POST-SLEEP ACTIVITY
(ORB OPS, CREW SYSTEMS)

CUBE LAB MODULE-7 DEACTIVATION (ASSY OPS, PAYLOADS)
All 3 LMA Packs; ONLY deactivate Syringes
with "EOM" or "ULF7" for labeled arrows on back of tray.

04:00

AIR SAMPLE - Rcd MET and location on bottle

TISSUE EQUIVALENT PROPORTIONAL COUNTER (TEPC)
(ORB OPS, CREW SYSTEMS)
B. POWERDOWN

GIRA STOWAGE
(ORB OPS, ECLS)

PGSC NETWORK
(ORB OPS, PGSC)
B.TEARDOWN
Stow remaining PGSCs

13:00

CGBA UNIT #1,2 STATUS CK (CC),GLACIER STATUS CHECK (CC)

STL ENTRY PREP (ASSY OPS, PAYLOADS)

AEM MUFFLER STOW-Rmv muffler from each AEM & stow in Seat Bag 5

A6L MADS STRAIN GAGE - PCM ENA

SDBI 1634, SLEEP-WAKE ACTIGRAPHY
(ORB OPS, SDBI)
B. DOFF ACTIWATCH

197

IMU

GO TO DEORBIT PREP AT 12/13:20

05:00

14:00

XSI

198

06:00

15:00

COMM

07:00

199

16:00

11

A IMU STAR ALIGN PAD

ID: -Y: 43 RASALHAGUE
MET (12/12:49 TO 12/13:36)

ID: -Z: 15 HADAR
MET (12/12:41 TO 12/13:30)

ANG DIFF: 84.1

DUAL S TRKR ALIGNMENT		2nd ATTITUDE (SINGLE S TRKR) -Z: 43 -Y: 15	
R	349	R	265	78
P	23	P	32	33
Y	338	Y	345	343

REQD ID:

-Y: _____, -Z: _____, ANG ERR____,____ ____

ANG:	1	2	3
ΔX	( )___,___ ___	( )___,___ ___	( )___,___ ___
ΔY	( )___,___ ___	( )___,___ ___	( )___,___ ___
ΔZ	( )___,___ ___	( )___,___ ___	( )___,___ ___

EXECUTION TIME: ____/___:___:___MET

B IMU VERIFICATION STAR ALIGN PAD

ID: -Y: 26 FOMALHAUT
MET (12/13:02 TO 12/13:47)

-Z: 30 ANTARES
MET (12/12:43 TO 12/13:33)

ANG DIFF: 82.9

DUAL S TRKR ALIGNMENT		2nd ATTITUDE (SINGLE S TRKR) -Z: 26 -Y: 30	
R	290	R	203	8
P	100	P	104	115
Y	28	Y	43	23

REQD ID:

-Y: _____, -Z: _____, ANG ERR____,____ ____

ANG:	1	2	3
ΔX	( )___,___ ___	( )___,___ ___	( )___,___ ___
ΔY	( )___,___ ___	( )___,___ ___	( )___,___ ___
ΔZ	( )___,___ ___	( )___,___ ___	( )___,___ ___

If any ΔX, ΔY, OR ΔZ > 0.1 Check MCC

EXECUTION TIME: ____/___:___:___MET

ASSEMBLY OPS DELTAS

PAGE	PROCEDURE	ACTION
337	Payload Deactivation, step 2	WAS: MPLM KEEL CAM PWR - OFF IS: √MPLM KEEL CAM PWR – OFF
337	Payload Deactivation, step 3	WAS: PRI MNC – OFF (tb-OFF) IS: √PRI MNC – ctr (tb-OFF)
339	Payload Reactivation, step 1	WAS: PRI MNC – ON (tb-ON) IS: ~~PRI MNC – ON (tb-ON)~~

DEORBIT PREP CHECKLIST UPDATES

NOMINAL DEORBIT PREP CHECKLIST DELTAS

PAGE	TIG	CHANGE
1-21	-02:40	**AUTO PLB CLOSING,** DETAILED PLBD CLOSING PROCEDURES, Block 9 In steps 1, 7: Delete A7 and L10 (VTR) callouts Delete step 14
1-25	N/A	**MANUAL PLB CLOSING,** DETAILED PLBD CLOSING PROCEDURES Delete steps 1, 12 and 33
1-32	-03:50	**MS MIDDECK ACTIVITIES**, ENT AIRLOCK CONFIG, Block 3A was started on FD12. Perform the following to complete Block 3A: **ML86B:F cb MNA FLOODS MIDDECK 9 – op** **cb MNB FLOODS MIDDECK 10 – op**
1-32	-00:30	**MD AUD SPKR CONFIG,** BLOCK 29 MO42F √ MIDDECK AUD SPKR PWR - ON
1-33	-02:55	**MS MIDDECK ACTIVITIES** , CONFIG FOR PLBD CLOSING, Block 7 Delete steps 5 through 20
1-34	-02:25	**MS MIDDECK ACTIVITIES** , POST CLOSING CONFIG, Block 10 Delete "If radiator hose exhibits bend" block (steps 1-4), pick up with CONFIG STBD RMS/OBSS actions

ENTRY SWITCH LIST VERIFICATION DELTAS

PAGE	PANEL	NOMENCLATURE	NEW ENTRY SWITCH POSITION
3-23	R14	ROW A, MN B AUDIO MID DECK SPKR	Op

END OF PAGE 1 OF 1, MSG 106B

ENTRY CHECKLIST DELTAS

PAGE	PROCEDURE	ACTION
5-8	NH3 ACT (ENT, POST LDG)	Use the following NH3 Controller: L1 NH3 CNTLR B – SEC/ON
5-22	NH3 RECONFIG (ENT, ASP EXT PWR UP)	Use the following NH3 Controller: L1 NH3 CNTLR A – SEC/ON

THIS TABLE MAY BE CUT AND PASTED OVER THE OLD OMS He PRESS/ΔV/BURN TIME TABLE, ENT PG FS 2-6.

OMS He PRESS/ΔV/BURN TIME				
OMS% GAGE	OMS He Press	OMS ΔV	RCS ΔV	RCS BURN MIN:SEC
37.3	2780	186	152	5:16
36	2730	179	146	5:04
34	2650	168	137	4:45
32	2570	156	128	4:25
30	2490	145	119	4:06
28	2410	134	110	3:47
26	2330	123	100	3:28
24	2250	111	91	3:09
22	2170	100	82	2:49
20	2090	89	73	2:30
18	2010	78	63	2:11
16	1930	66	54	1:52
14	1850	55	45	1:33
12	1770	44	36	1:13
10	1690	32	26	0:54
8	1610	21	17	0:35
6	1530	9	8	0:16

Uses vehicle weight of 235226 lbs.

]

END OF PAGE 2 OF 2, MSG 107

MSG 108 - ENTRY SUMMARY

```
ORBIT IS 210 X 202 NM
DEORBIT DELTA V WILL BE APPROXIMATELY 332 FPS IN-PLANE

AT THE DEORBIT BURN, YOU WILL HAVE (%):
    L  OX = 37.9     R  OX = 37.7
    L  FU = 38.0     R  FU = 37.3

THE PREDICTED POST DEORBIT BURN OMS QUANTITIES ARE AS FOLLOWS (%):
    L  OX = 8.6     R  OX = 8.5
    L  FU = 9.0     R  FU = 8.1

FORWARD RCS DUMP: FU TO 0 %

CG AT EI:      X = 1091.4
CG AT M2.5:    X = 1090.3
               Y = 0.4

ATMOS ITEM: 22
ELEV. SCHED: AUTO
BODY BENDING FILTER:  ALT
-----------------------------------------------------------------------
 SITE: KSC    REV: 200                    |  SITE: KSC  REV: 201
                                          |
CROSS RANGE WILL BE 382 NM L              | CROSS RANGE WILL BE 508 NM R
                                          |
ROLL REVERSAL HISTORY:                    | ROLL REVERSAL HISTORY:
        V=  16600 FPS                     |        V= 14900 FPS
        V=    8600 FPS                    |        V=   7400 FPS
        V=    3700 FPS                    |        V=   3600 FPS
                                          |
                                          |
DEORBIT TIG:    12/17:20:00               | DEORBIT TIG:    12/18:56:40
LANDING APPROX: 12/18:27                  | LANDING APPROX: 12/20:03
                                          |
WX FCST:FEW020 FEW070 SCT250              | WX FCST: FEW020 FEW070 SCT250
                                          |
                                          |
WIND FCST:                                | WIND FCST:
         50K    050/25                    |        50K    050/25
         38K    040/10                    |        38K    040/10
         28K    050/05                    |        28K    050/05
         20K    250/05                    |        20K    250/05
         12K    240/05                    |        12K    240/05
          7K    190/10                    |         7K    190/10
          3K    230/10                    |         3K    230/10
          1K    240/10                    |         1K    240/10
         SFC    240/06p09                 |        SFC    240/ 06p09
                                          |
ALTIMETER: 30.01                          | ALTIMETER: 30.01
DENSITY ALTITUDE: 1297 FT                 | DENSITY ALTITUDE: 1297 FT
                                          |
HAC PROCEDURES:                           | HAC PROCEDURES:
  L OVHD TO KSC15                         |   L OVHD TO KSC15
```

END OF PAGE 1 OF 2, MSG 108

```
 TURN ANGLE 240 DEG                    |  TURN ANGLE 270 DEG
 AIM POINT: NOM                        |  AIM POINT: NOM
 SPEEDBRAKE: NOM                       |  SPEEDBRAKE: NOM
 TD 2500 FT AT 205 KTS                 |  TD 2500 FT AT 205 KTS
 3K SPEEDBRAKE: 18%                    |  3K SPEEDBRAKE: 18%
 NAV AIDS STATUS: Green                |  NAV AIDS STATUS: Green
-----------------------------------------------------------------------
CONUS NOTAMS:
        EDWARDS (EDW) –LAKEBED RUNWAYS GREEN
        WHITE SANDS (NOR) – LAKEBED RUNWAYS GREEN

24 HOUR DELAYED DEORBIT: SITE KSC ORBIT 215 TIG 13/16:19 MET

-----------------------------------------------------------------------
```

DEORBIT MANEUVER PAD FOR KSC200

File | Print | Save image | Edit view

OMS BOTH 1	x
L 2	
R 3	
RCS SEL 4	
TV ROLL 5	180
TRIM LOAD P 6	(+) 0.2
LY 7	(-) 5.7
RY 8	(+) 5.7
WT 9	235300
TIG 10	12/17:20:00.0

BURN ATT

R 24	348
P 25	274
Y 26	038
REI:	4405
TFF:	32:57

ΔVTOT	331.9
TGO	03:17
VGO X	(+) 319.8
VGO Y	(+) 0-0.0
VGO Z	(+) 089.4

	HA	HP
TGT	210	(+) 025

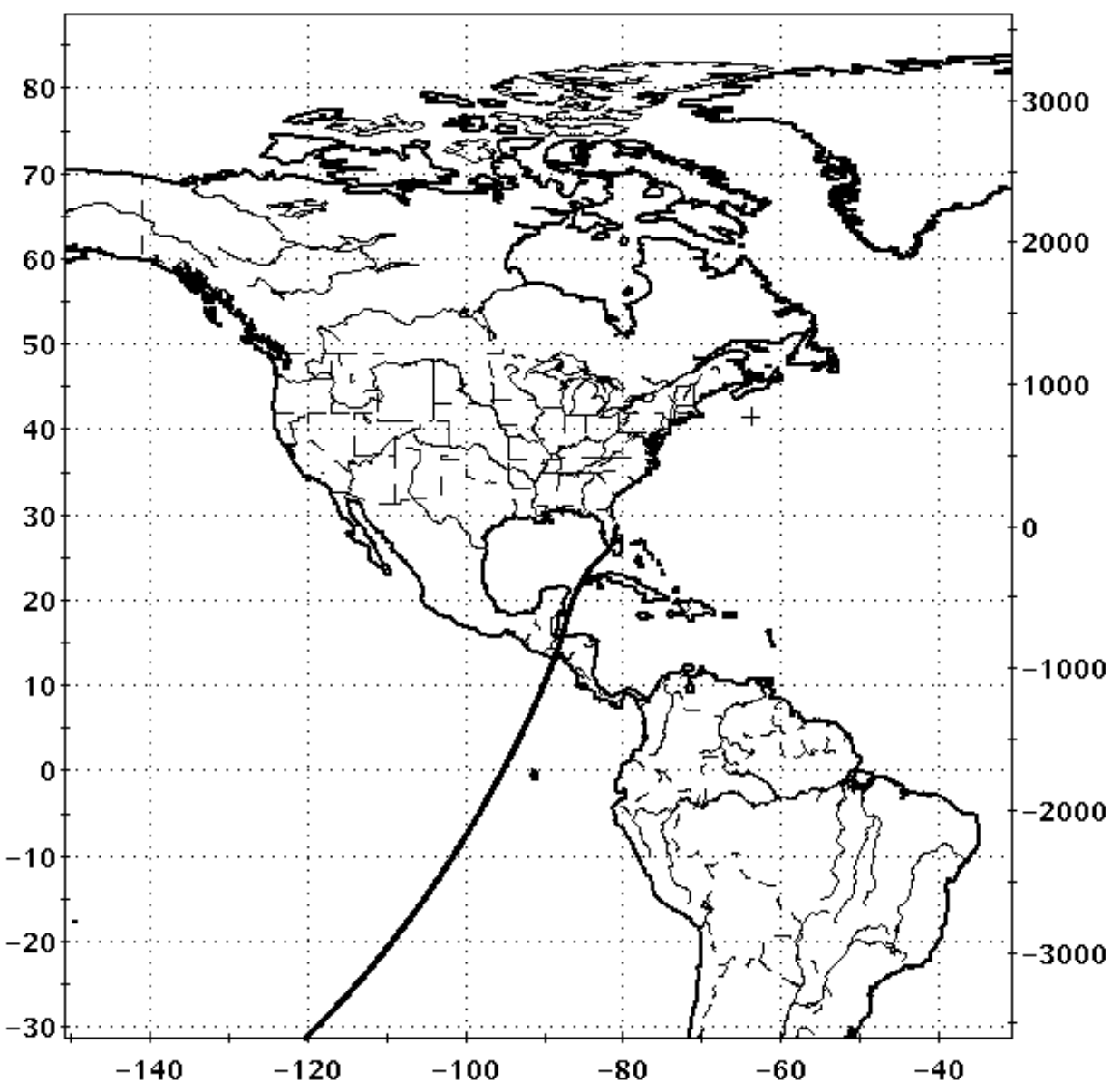
TGT PEG 4D

C1 14	14594
C2 15	(-) 0.5827
HT 16	065.832
θ T 17	147.994
PRPLT 18	(+) 00000

NOTES

RCS I'CNCT:
- [ ] L OMS -> RCS
- [ ] R OMS -> RCS
- [x] NONE

FLIGHT NOTES:


80
70
60
50
40
30
20
10
0
−10
−20
−30
3000
2000
1000
0
−1000
−2000
−3000
−140
−120
−100
−80
−60
−40

DEORBIT MANEUVER PAD FOR KSC201

File | Print | Save image | Edit view

OMS BOTH 1 [x]
L 2 [ ]
R 3 [ ]
RCS SEL 4 [ ]

TV ROLL 5 180
TRIM LOAD P 6 (+)0.2
LY 7 (-)5.7
RY 8 (+)5.7
WT 9 235300
TIG 10 12/18:56:40.0

BURN ATT
R 24 002
P 25 252
Y 26 040
REI: 4377
TFF: 32:15

ΔVTOT 333.3
TGO 03:18
VGO X (+)321.1
VGO Y (+)0-0.0
VGO Z (+)089.8

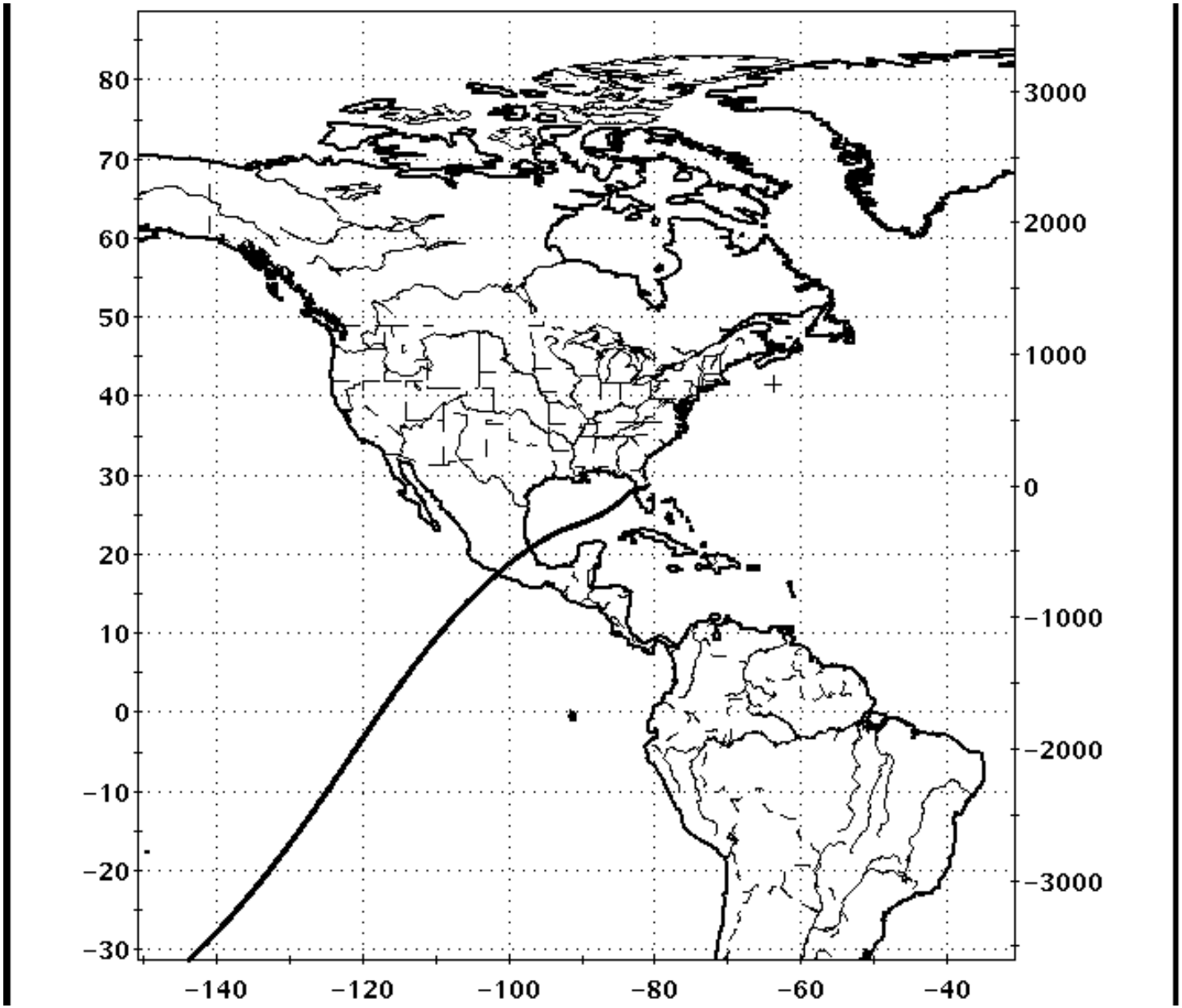
	HA	HP
TGT	210	(+)024

TGT PEG 4D
C1 14 14429
C2 15 (-)0.5773
HT 16 065.832
θ T 17 144.492
PRPLT 18 (+)00000

NOTES

RCS I'CNCT:
[ ] L OMS -> RCS
[ ] R OMS -> RCS
[x] NONE

FLIGHT NOTES:


80
70
60
50
40
30
20
10
0
−10
−20
−30
3000
2000
1000
0
−1000
−2000
−3000
−140
−120
−100
−80
−60
−40

DEORBIT MANEUVER PAD FOR Ellington Field rev 201

File | Print | Save image | Edit view

OMS BOTH 1	x
L 2	
R 3	
RCS SEL 4	
TV ROLL 5	180
TRIM LOAD P 6	(+) 0.5
LY 7	(-) 5.7
RY 8	(+) 5.7
WT 9	236080
TIG 10	12/18:52:55.0

BURN ATT

R 24	351
P 25	269
Y 26	039
REI:	4491
TFF:	32:50

ΔVTOT	327.0
TGO	03:15
VGO X	(+) 315.5
VGO Y	(+) 000.0
VGO Z	(+) 086.5

	HA	HP
TGT	211	(+) 025

TGT PEG 4D

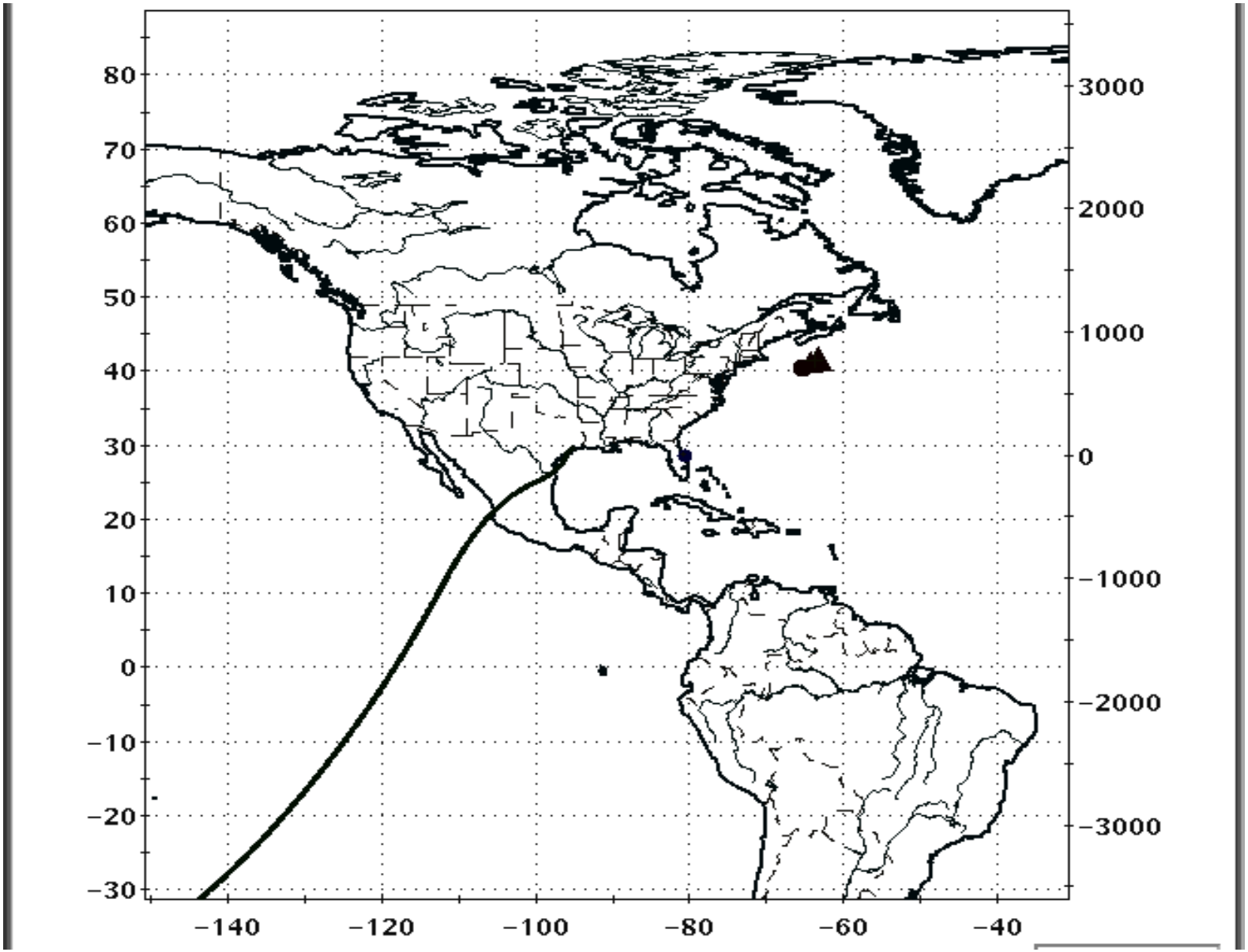
C1 14	14585
C2 15	(-) 0.5824
HT 16	065.832
θ T 17	147.304
PRPLT 18	(+) 00000

NOTES

RCS I'CNCT:
- [ ] L OMS -> RCS
- [ ] R OMS -> RCS
- [x] NONE

FLIGHT NOTES:

END OF PAGE 1 OF 4, MSG 113


80
70
60
50
40
30
20
10
0
−10
−20
−30
3000
2000
1000
0
−1000
−2000
−3000
−140
−120
−100
−80
−60
−40

DEORBIT MANEUVER PAD FOR Ellington Field rev 202

File | Print | Save image | Edit view

OMS BOTH 1 [x]
L 2 [ ]
R 3 [ ]
RCS SEL 4 [ ]

TV ROLL 5: 180
TRIM LOAD P 6: (+) 0.5
LY 7: (-) 5.7
RY 8: (+) 5.7
WT 9: 236080
TIG 10: 12/20:30:25.0

TGT PEG 4D
C1 14: 14776
C2 15: (-) 0.5912
HT 16: 065.832
θ T 17: 142.175
PRPLT 18: (+) 00000

BURN ATT
R 24: 008
P 25: 242
Y 26: 039
REI: 4415
TFF: 31:52

ΔVTOT: 328.5
TGO: 03:16
VGO X: (+) 316.9
VGO Y: (+) 000.0
VGO Z: (+) 086.9

	HA	HP
TGT	210	(+) 024

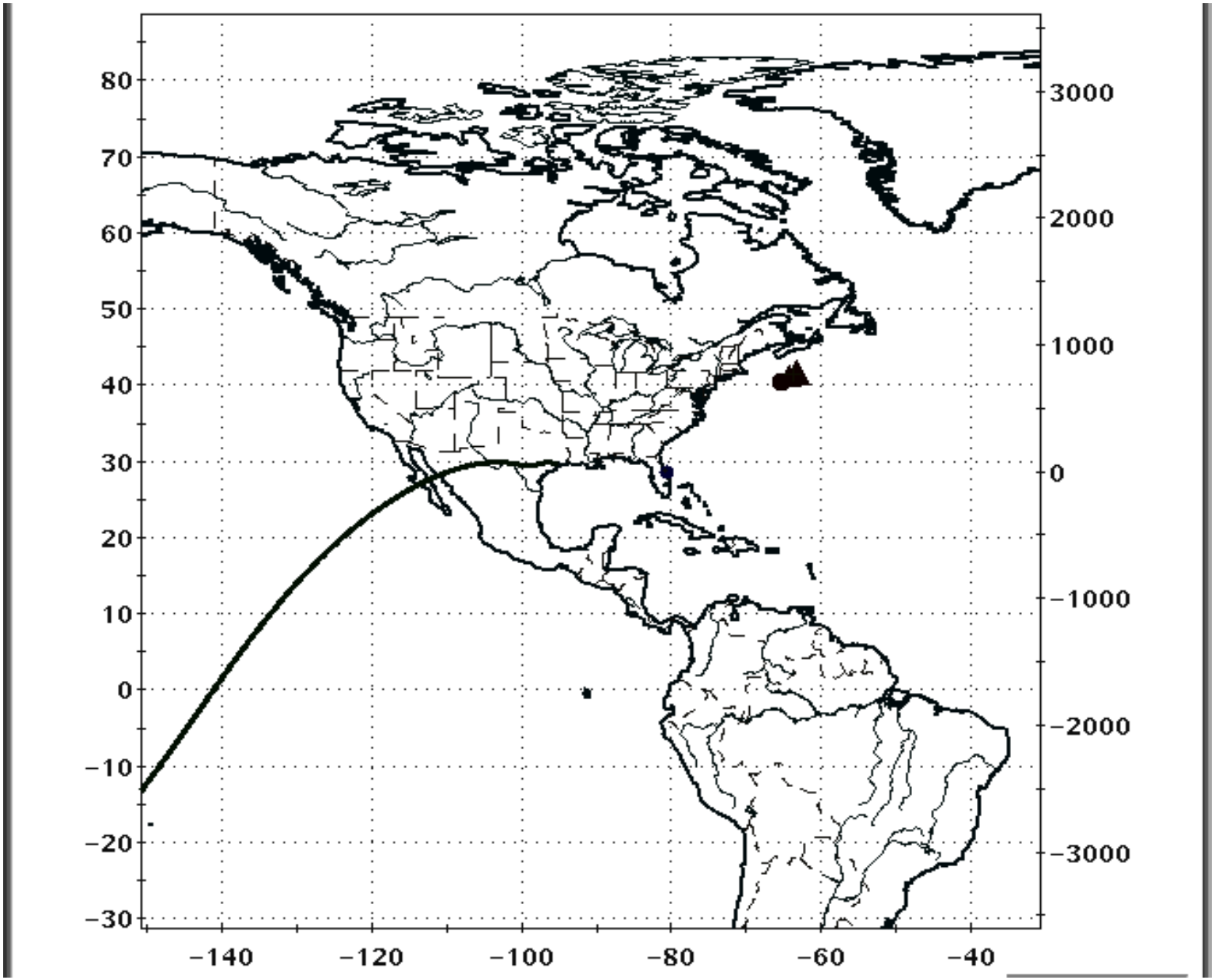
NOTES

RCS I'CNCT:
[ ] L OMS -> RCS
[ ] R OMS -> RCS
[x] NONE

FLIGHT NOTES:

1

MSG 113 – EFD 201 AND 202 PADS AND GROUND TRACKS



END OF PAGE 4 OF 4, MSG 113