

STS-127/2JA

FD 07 Execute Package



MSG	Page(s)	Title
047A	1 - 14	FD7 Flight Plan Revision (pdf)
048	15 - 16	FD7 Mission Summary (pdf)
049	17 - 21	FD7 EVA Deltas (pdf)

A handwritten signature in black ink, which appears to read 'T. Melroy', is centered on a light yellow rectangular background.

Approved by FAO: T. Melroy

Last Updated: Jul 21 2009 9:08AM GMT

JEDI (Joint Execute package **D**evelopment and **I**ntegration), v2.04.0003

MSG 047A - FD07 FLIGHT PLAN REVISION

1 MSG INDEX

2

3 <u>MSG NO.</u>	4 <u>TITLE</u>
5 047A	6 FD7 Flight Plan Revision
7 048	8 FD7 Mission Summary
9 049	10 FD7 EVA Deltas
11 050	12 FD7 PAO Event Summary Message

13

14 1. POST SLEEP CRYO CONFIG

15 For today's cryo config, O2 tanks 1 and 2 and H2 tank 5 will be active.

16 **R1 O2,H2 MANF VLV TK2 (two) - OP (tb-OP)**
17 **O2 TK1 HTRS A,B (two) - AUTO**

18 **A15 CRYO TK5 HTRS O2 A,B (two) - OFF**

19 2. SSRMS SAFING UPDATES

20 **For Koichi and Doug:** We believe that the SSRMS safing event you encountered after
21 derigidizing the LEE during the JEF Install can be attributed to the use of reduced
22 rigidization parameters for this task. Safing was due to the mechanism not moving
23 enough to lose the Retract microswitch, while the software still expected the microswitch
24 to be 'false' as a post-condition for the Derigidize command. The Robotics Advisory
25 log dumped to the Ground shows the two messages below going in and out of alarm,
26 which would appear to confirm this theory:

27 **R30 - SSRMS LEEMM Cmd Termination Msw Consistency Fail**
28 **R9B - SSRMS LEE Inval LEEMM Cmd**

29 This behaviour could possibly reoccur during the JLE Install (4.101 Stp 8) on FD7 and
30 JLE Retrieval (4.201 Stp 5) on FD12. If it does, MCC-H will confirm whether the
31 signature is the same the one observed of FD4. If so, the same recovery actions can be
32 taken to continue with operations:

33 -Cancel Safing, Remove Brakes, Limp the SSRMS.

34 Also note that the JEM EF F camera will not be available for the JLE Install (4.101 Stp 7)
35 as the camera was not installed during EVA 2.

36 3. N2 REPRESS USING PAYLOAD N2 VLVS

37 Steps 1 and 13 of the procedure are not required because the H/W Caution and Warning
38 are already inhibited and MCC will TMBU the s/w limits.

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END OF PAGE 1 OF 14, MSG 047A

MSG 047A - FD07 FLIGHT PLAN REVISION

1 4. POST SLEEP LIOH CHANGEOUT

2

3 Perform your post sleep LiOH changeout per your cue card. STS-124 can in POS B. It
4 was decided to not use Russian LiOH and to keep to the nominal changeout plan.

5 Report can decal number to MCC.

6

7 5. WATER TRANSFER PLAN UPDATE

8

9 Today is the last planned CWC-I fill of the flight. After fill termination, place the entire
10 CWC-I Fill Assembly in a ziploc bag and stow in the window shade bag.

11 Remaining water transfer will be accomplished via CWC and PWR fills. A CWC/PWR
12 Water Ops Cue Card will be uplinked in the FD8 Execute Package.

13

14 6. EVA UPDATES

15

16 Great EVA2! There are a few minor deltas to EVA3. FPP sleeves install on LAB are now
17 timed for EV1 and not just a get-ahead. Due to your progress on earlier EVAs and
18 tether issues, we have a few updates to Tools Management and Egress. Changeout
19 pages are included in Msg 049. We believe you do not want to use safety tether #73 as
20 prime, so we have replaced it with the 55' from the STP. Time permitting, there are some
21 trouble shooting steps to determine if you want to keep it as a spare.

22

23 7. ACO TRANSFER STATUS

24

25 No updates to transfer today. Please continue to reference the Transfer List electronic
26 file, titled FD06_Transfer_List_STS127.xls, that has been uplinked to **C:\OCA-**
27 **up\transfer (KFX machine).**

28

29 8. REPLACE PAGES 2-22 THROUGH 2-25 AND 3-68 THROUGH 3-75.

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END OF PAGE 2 OF 14, MSG 047A

	12	13	14	15	16	17	18	19	20	21	22	23	24
CDR POLANSKY	POST SLEEP	RMS JLE GRPL UNBRTH	RMS JLE UNBRTH	RMS JLE GRPL UNBRTH	RMS JLE UNBRTH	RMS JLE UNBRTH	RMS JLE UNBRTH	RMS JLE UNBRTH	RMS JLE UNBRTH	RMS JLE UNBRTH	RMS JLE UNBRTH	RMS JLE UNBRTH	RMS JLE UNBRTH
PLT HURLEY	POST SLEEP	EXERCISE	JGR EPL	JGR EPL	JGR EPL	JGR EPL	JGR EPL	JGR EPL	JGR EPL	JGR EPL	JGR EPL	JGR EPL	JGR EPL
MS1 CASSIDY	POST SLEEP	POST SLEEP	POST SLEEP	POST SLEEP	POST SLEEP	POST SLEEP	POST SLEEP	POST SLEEP	POST SLEEP	POST SLEEP	POST SLEEP	POST SLEEP	POST SLEEP
MS2 PAYETTE	POST SLEEP	RMS JLE UNBRTH	RMS JLE UNBRTH	RMS JLE UNBRTH	RMS JLE UNBRTH	RMS JLE UNBRTH	RMS JLE UNBRTH	RMS JLE UNBRTH	RMS JLE UNBRTH	RMS JLE UNBRTH	RMS JLE UNBRTH	RMS JLE UNBRTH	RMS JLE UNBRTH
MS3 MARSHBURN	POST SLEEP	POST SLEEP	POST SLEEP	POST SLEEP	POST SLEEP	POST SLEEP	POST SLEEP	POST SLEEP	POST SLEEP	POST SLEEP	POST SLEEP	POST SLEEP	POST SLEEP
MS4 WOLF	POST SLEEP	POST SLEEP	POST SLEEP	POST SLEEP	POST SLEEP	POST SLEEP	POST SLEEP	POST SLEEP	POST SLEEP	POST SLEEP	POST SLEEP	POST SLEEP	POST SLEEP
DAY/NIGHT ORBIT	88	89	90	91	92	93	94	95	96				
TDRS W E Z													
ORB ATT													
SSRMS_POS													
NOTES													

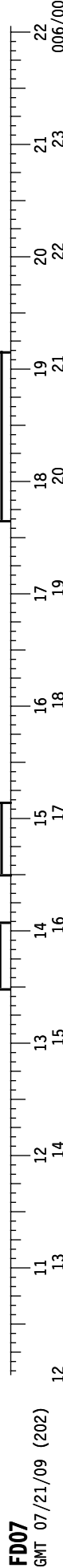
NO UNISOLATED EXERCISE

[MT XLATE]

NO UNISOLATED EXERCISE

[MT XLATE]

REPLANNED



GMT	Day	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
ISS	TDRS	AVAIL																				
D N	FE-2 WAKATA	POST SLEEP	PMDPC PW	EXERCISE TVIS	JGLE	SSRMS JLE INSTL	JGLE	HANDOVER	DP RP	MIDDAY-MEAL	HANDOVER	OFF DUTY	OFF DUTY	PRE SLEEP								
		ISS	CDR	PADALKA	TOPY-OBT	VELO	MIDDAY-MEAL	COX MNT	PM	EXERCISE TVIS	TVIS HYG											
1 9	FE-1 BARRATT	POST SLEEP	PMDPC PW	EXERCISE CEVIS	REB	EMU-I	EVA TOOL STOW	MIX-T	DSXU	MIDDAY-MEAL	OFF DUTY	DZXS CAMR	OFF DUTY	IRE								
		ISS	FE-2 EXP20	KOPRA	ADAPT	HANDOVER	MIDDAY-MEAL	HANDOVER	OFF DUTY	OFF DUTY												
U P	FE-3 ROMANENKO	POST SLEEP	PMDPC PW	TOPY-OBT	IRE	MIDDAY-MEAL	PM	IMS	TVIS													
		ISS	FE-4	THIRSK	EXERCISE ARE	ARE	MIDDAY-MEAL	OFF DUTY	EXERCISE CEVIS	PW												
E X P	FE-5 DE WINNE	POST SLEEP	PMDPC PW	RAM INSTL	CFWICLIL	CFWICLIL	EXERCISE CEVIS	OFF DUTY	OFF DUTY	OFF DUTY	OFF DUTY	OFF DUTY	OFF DUTY	OFF DUTY	OFF DUTY	OFF DUTY	OFF DUTY	OFF DUTY	OFF DUTY	OFF DUTY	OFF DUTY	
		ISS	DAY/NIGHT	ORBIT	SSRMS POS	88	89	90	91	92	93	94	95	96								

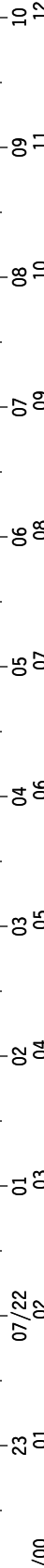
PROC REV... *SALIVA

REPLANNED

FD07

GMT 07/21/09 (202)

MET Day_006



CDR POLANSKY	EVA 3%	DM AU PS	PRE SLEEP	PMC A/G	PRE SLEEP	SLEEP			
PLT HURLEY	EVA 3%	M U S	PRE SLEEP	PFC OCA	PRE SLEEP	SLEEP			
MS1 CASSIDY	EVA 3%	PFC OCA	PRE SLEEP	MASK PB/TOOL CONFIG	PRE SLEEP	SLEEP			
MS2 PAYETTE	EVA 3%	M U S	PRE SLEEP	10.2 DPRS	ISS A/L CAMPOUT @ 10.2 psi	SLEEP			
MS3 MARSHBURN	EVA 3%	M U S	PRE SLEEP	PRE SLEEP	SLEEP	SLEEP			
MS4 WOLF	EVA 3%	M U S	PRE SLEEP	MASK PB/TOOL CONFIG	PRE SLEEP	SLEEP			
DAY/NIGHT ORBIT	96	97	98	99	100	101	102	103	104
TDRS W E Z									
ORB ATT SSRMS_POS									
NOTES									

%PROC RVW *UPDATE

BIAS -XLV -ZVW
MBS PDGF3 @ WS8

REPLANNED

MET		Day 006		006/00		23 01		07/22 02		01 03		02 04		03 05		04 06		05 07		06 08		07 09		08 10		09 11		10 12	
ISS	TDRS	AVAIL	EVA 3%	DPC PW	EXERCISE ARED	PRE SLEEP	SLEEP	SLEEP	SLEEP	SLEEP	SLEEP	SLEEP	SLEEP	SLEEP	SLEEP	SLEEP	SLEEP	SLEEP	SLEEP	SLEEP	SLEEP	SLEEP	SLEEP	SLEEP	SLEEP	SLEEP	SLEEP	SLEEP	
D	FE-2	WAKATA																											
E	ISS CDR	PADALKA																											
X	FE-1	BARRATT																											
P	FE-2 EXP20	KOPRA																											
1	FE-3	ROMANENKO																											
9	FE-4	THIRSK																											
U	FE-5	DE WINNE																											
P	DAY/NIGHT	ORBIT																											
2	SSRMS	POS																											
0	MBS PDGF3 @ MS8																												
96 97 98 99 100 101 102 103 104																													
%PROC REVIEW																													
NOTES																													

STS-127 FD (07)

GMT	Date 07/21 (202)	DRS W E Z	DRS D O R / R B	MET Day 005 T	CDR POLANSKY	PLT HURLEY	MS2 PAYETTE	NOTES
11:00								
12:00								
13:00								
14:00								
15:00								
16:00								

FD07 EZ ACTIVITIES:
 TEPC (ORB OPS, CREW SYS)
 CHECK STATUS
 VOCAC FILTER & MDDK DUCT SCREEN
 HARD REBOOT ALL PGSCs EXCEPT:
 STS-7(WLES), STS-6(RPOP2),
 & OCA ROUTER.

POST-SLEEP ACTIVITY
 (ORB OPS, CREW SYS)

POST-SLEEP ACTIVITY
 (ORB OPS, CREW SYS)

L17 Check MCIU filter screen
 JLE GRAPPLE IN PLB
 (PDRS, JLE NOMINAL)

TV (ILLUMINATOR OPS) (PHOTO/TV, CC)
 ILLUMINATORS OFF - ALL

JLE UNBERTH
 (PDRS, JLE NOMINAL)

EXERCISE

JLE HANDOFF TO SSRMS
 (PDRS, JLE NOMINAL)

A1 N2 REPRESS USING PAYLOAD N2 VLVS
 (ORB OPS, ECLS) Steps 3-7
 Ref. MSG 047, item 3

IMU STAR OF OPPTY ALIGN (ORB OPS, GNC)
 ROBO: 4, 101 JLE INSTALL
 Steps 1-4 EXERCISE CONSTRAINT

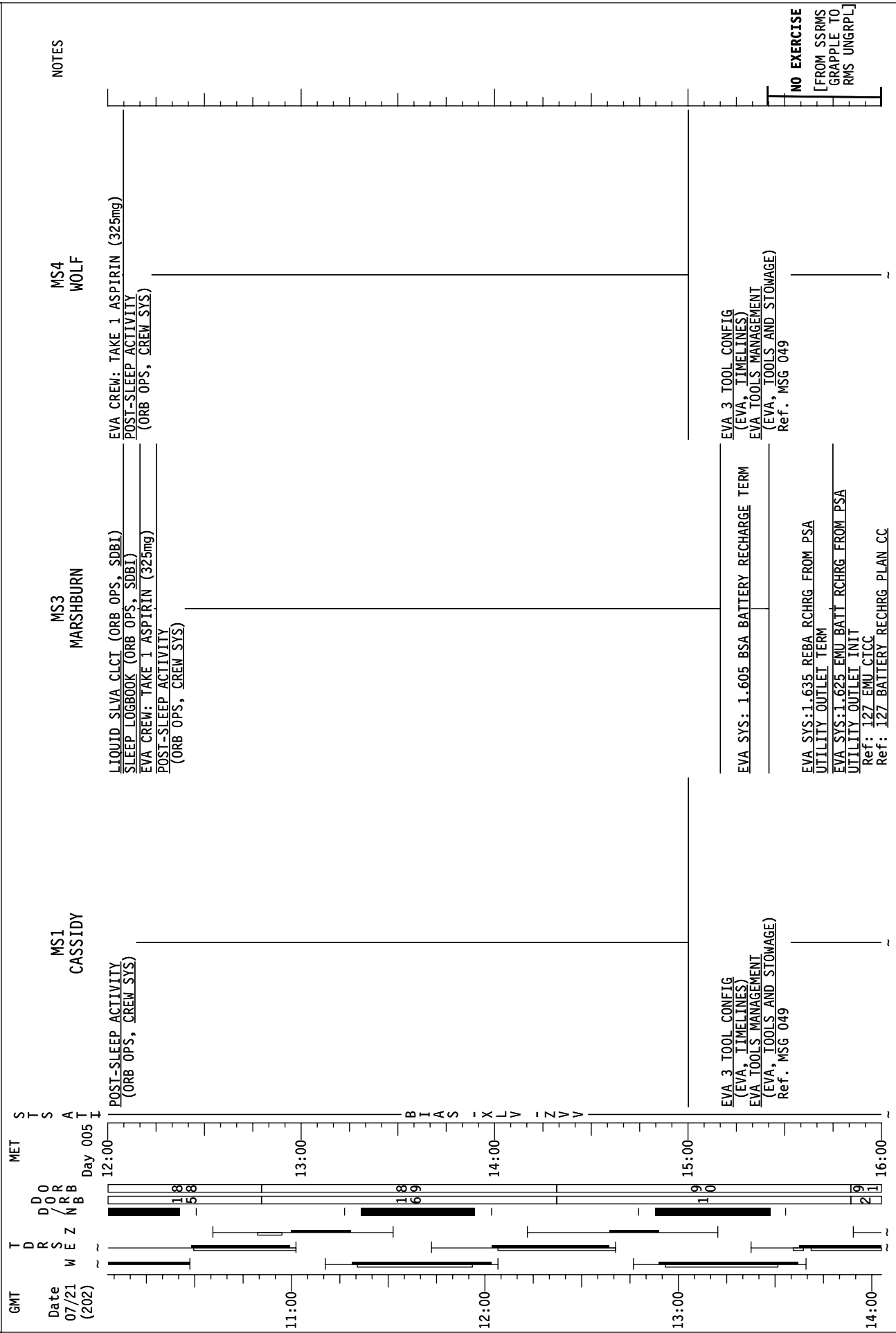
N2 REPRESS USING PAYLOAD N2 VLVS [A]
 JLE UNGRAPPLE
 (PDRS, JLE NOMINAL)

JLE UNGRAPPLE
 (PDRS, JLE NOMINAL)

EXERCISE CONSTRAINT

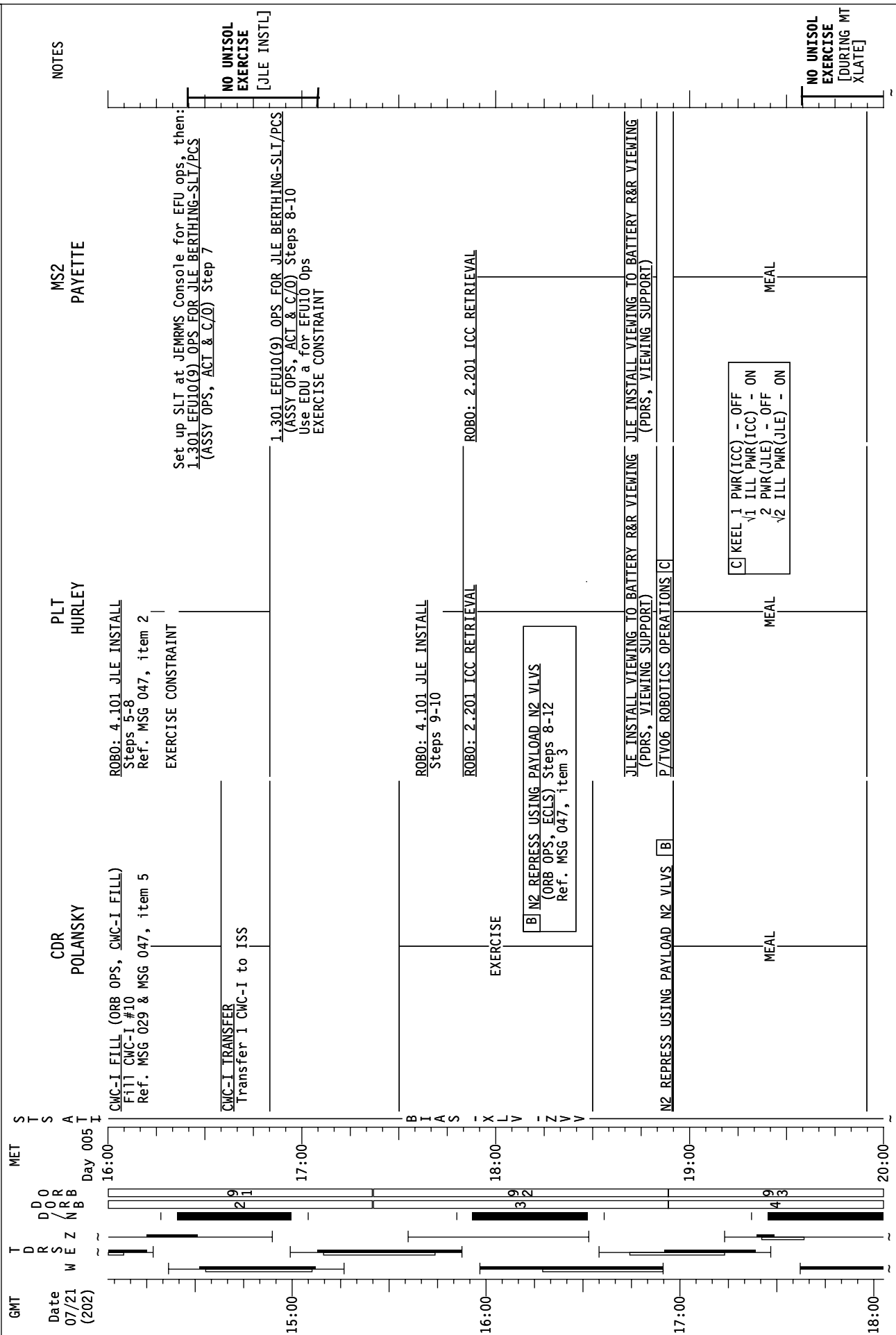
NO EXERCISE
 [FROM SSRMS
 GRAPPLE TO
 RMS UNGRPL]

STS-127 FD (07)



REPLANNED

STS-127 FD (07)



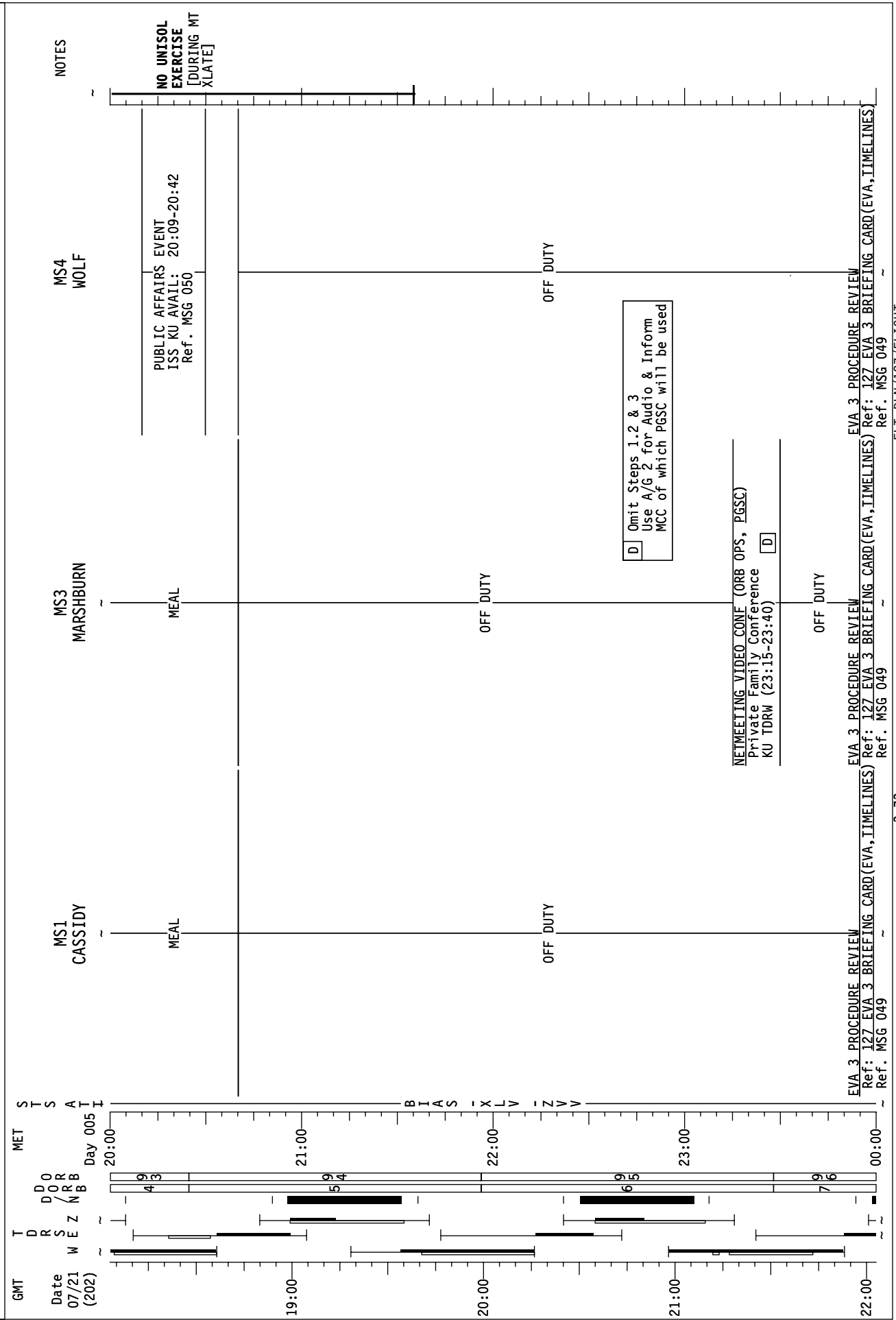
STS-127 FD (07)

GMT	Date 07/21 (202)	W E Z	T D S	D O R / R B	MET	ST S	MS1 CASSIDY	MS3 MARSHBURN	MS4 WOLF	NOTES
15:00					Day 005 T		EVA 3 TOOL CONFIG (EVA, TIMELINES) EVA TOOLS MANAGEMENT (EVA, TOOLS AND STORAGE) Ref. MSG 049	EVA SYS: 1.625 EMU BATT RCHRG FROM PSA UTILITY OUTLET INIT Ref: 127 EMU CTCC Ref: 127 BATTERY RECHRG PLAN CC EVA 3 TOOL CONFIG (EVA, TIMELINES) EVA TOOLS MANAGEMENT (EVA, TOOLS AND STORAGE) Ref. MSG 049	EVA 3 TOOL CONFIG (EVA, TIMELINES) EVA TOOLS MANAGEMENT (EVA, TOOLS AND STORAGE) Ref. MSG 049	
16:00							EMU SWAP FOR EVA 3 (EVA, AIRLOCK CONFIG)	EMU SWAP FOR EVA 3 (EVA, AIRLOCK CONFIG)		NO UNISOL EXERCISE [JLE INSTL]
17:00							EVA SYS: 1.515 EMU METOX/LI0H/BATTERY REPLACEMENT Ref: 127 EMU CTCC	EVA SYS: 1.515 EMU METOX/LI0H/BATTERY REPLACEMENT Ref: 127 EMU CTCC	EXERCISE	
18:00							EVA SYS: 1.307 REBA INSTL/RMV Install in EMU 3018 Ref: 127 EMU CTCC	EVA SYS: 1.307 REBA INSTL/RMV Install in EMU 3018 Ref: 127 EMU CTCC		
19:00							EVA SYS: 1.403 REBA POWERED HARDWARE C/O Perform on EMU 3018	EVA SYS: 1.403 REBA POWERED HARDWARE C/O Perform on EMU 3018		
20:00							EVA SYS: 1.305 EQUIPMENT LK PREP Steps 1-3 not req'd, In Step 27, Use Vacuum Manometer s/n 05 Ref: 127 EMU CTCC	EVA SYS: 1.305 EQUIPMENT LK PREP Steps 1-3 not req'd, In Step 27, Use Vacuum Manometer s/n 05 Ref: 127 EMU CTCC	MEAL	NO UNISOL EXERCISE [DURING MT XLATE]

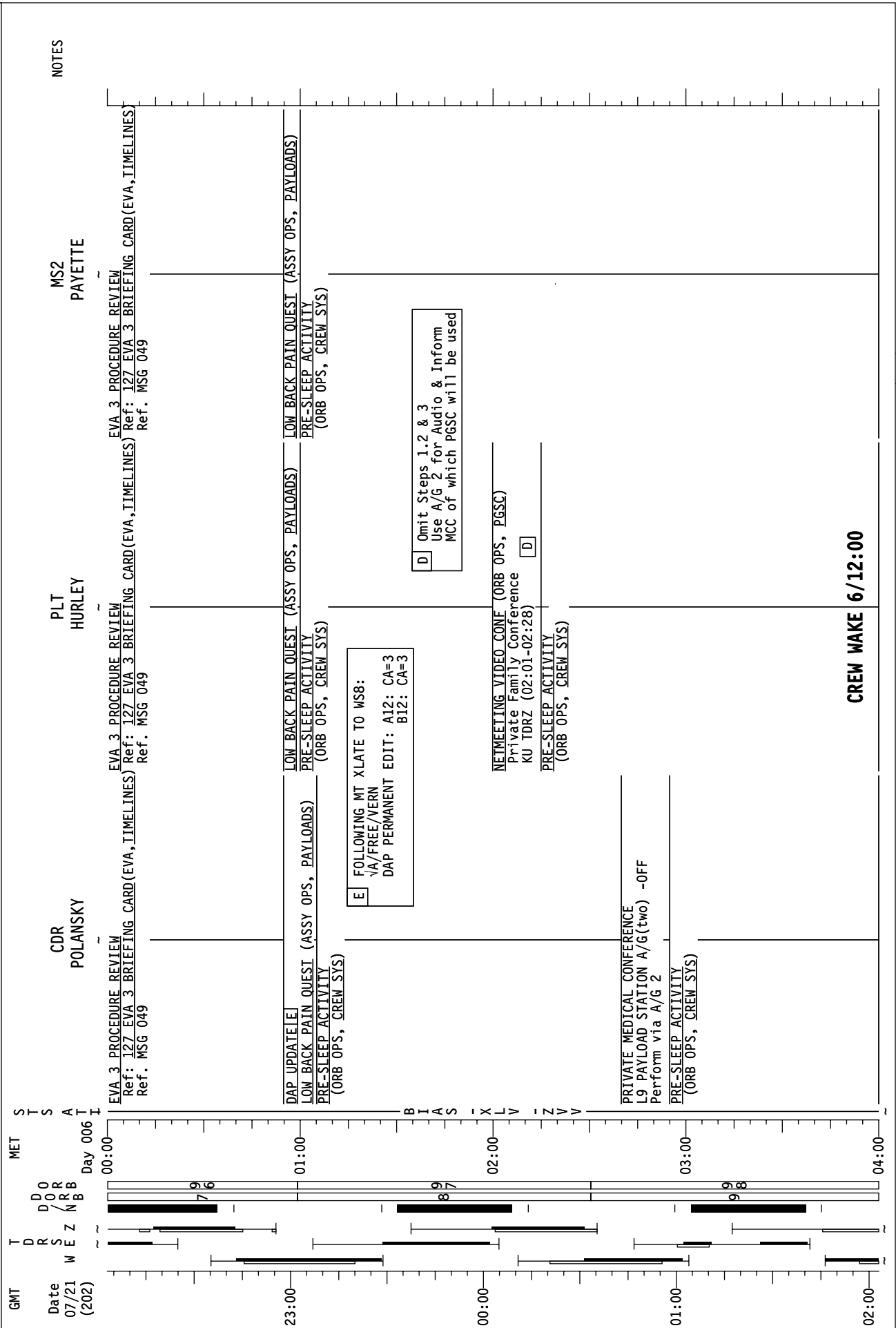
STS-127 FD (07)

GMT	Date 07/21 (202)	DRS W E Z	TDRS M E Z	MET Day 005 I	CDR POLANSKY	PLT HURLEY	MS2 PAYETTE	NOTES
19:00				20:00	PUBLIC AFFAIRS EVENT ISS KU AVAIL: 20:09-20:42 Ref. MSG 050	PUBLIC AFFAIRS EVENT ISS KU AVAIL: 20:09-20:42 Ref. MSG 050	PUBLIC AFFAIRS EVENT ISS KU AVAIL: 20:09-20:42 Ref. MSG 050	NO UNISOL EXERCISE [DURING MT XLATE]
20:00				21:00	OFF DUTY	OFF DUTY	OFF DUTY	
21:00				22:00	NETMEETING VIDEO CONF (ORB OPS, PGSC) Private Family Conference KU TDRM (21:38-22:12) [D]	OFF DUTY	NETMEETING VIDEO CONF (ORB OPS, PGSC) Private Family Conference KU TDRZ (22:32-22:47) [D]	
22:00				23:00	OFF DUTY	OFF DUTY	OFF DUTY	
23:00				00:00	EVA 3 PROCEDURE REVIEW Ref: 127 EVA 3 BRIEFING CARD (EVA, TIMELINES) Ref. MSG 049	EVA 3 PROCEDURE REVIEW Ref: 127 EVA 3 BRIEFING CARD (EVA, TIMELINES) Ref. MSG 049	EVA 3 PROCEDURE REVIEW Ref: 127 EVA 3 BRIEFING CARD (EVA, TIMELINES) Ref. MSG 049	

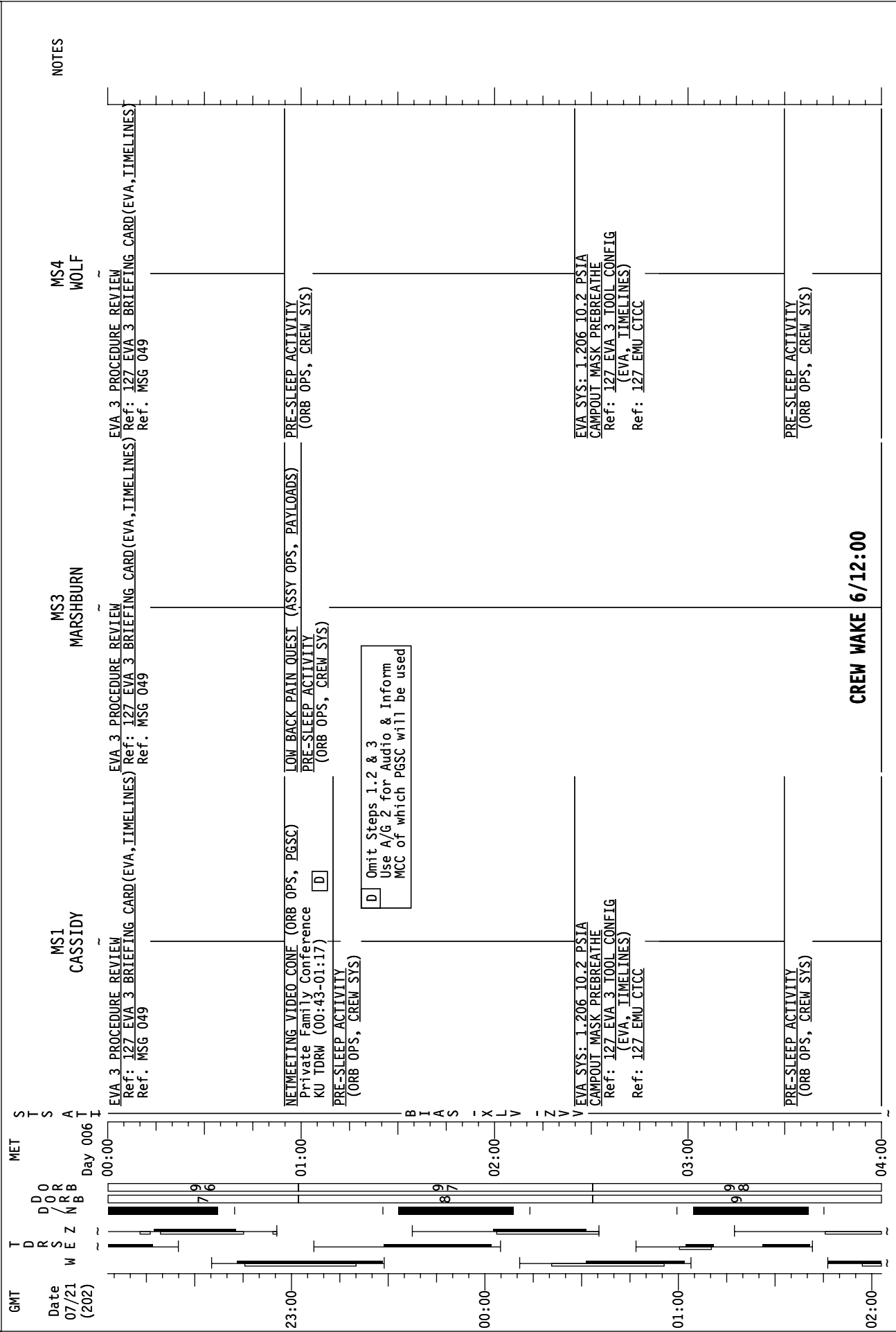
STS-127 FD (07)



STS-127 FD (07)



STS-127 FD (07)



MSG 048 - FD07 MISSION SUMMARY

1 Good Morning Endeavour!!!

4 Yesterday was yet another stellar performance day by all of you!

6 The shuttle arm took one small step to support the viewing of your outstanding EVA2 while
7 the station arm made several giant leaps to accomplish the ORU transfers.

9 Enjoy some quality time off today. You have certainly earned it!

14 YOUR CURRENT ORBIT IS: 188 X 186 NM

16 NOTAMS:

18 **NOTAMS – ONE ADDITION**

- 20 EDW - EDW IN USE. EDT ELS DAY / VFR ONLY.
- 21 EDW - LAKEBED RWY 15/33 - GREEN. RWY 18L - UNUSABLE.
- 22 NOR - LAKEBED RUNWAYS GREEN.
- 23 FMH - RWY 05/23 CLOSED.
- 24 GUA - RWY 24R END LIGHTS OTS.
- 25 GUA - RWY 06R/24L CLOSED.
- 26 INN - CLOSED.
- 27 IKF - NOT USABLE. NO AGREEMENT.
- 28 BEN - NOT RECOMMENDED/NOT SUPPORTED.
- 29 **KBO - RWY 14L/32R CLOSED.**

31 NEXT 2 PLS OPPORTUNITIES:

33 EDW22 ORB 95 – 5/22:47 FEW120 7 250/16P21 (REV 96 240/21P28)
34 EDW22 ORB 111 – 6/23:12 FEW100 BKN 250 7 230/16P23

36 OMS TANK FAIL CAPABILITY:

38 L OMS FAILS: NO
39 R OMS FAILS: NO

41 LEAKING OMS PRPLT BURN:

43 L OMS LEAK: ALWAYS BURN RETROGRADE
44 R OMS LEAK: ALWAYS BURN RETROGRADE

46 OMS QUANTITIES(%)

48 Subtract interconnect counter for current OMS quantities.

50 L OMS OX = 39.5 R OMS OX = 39.7
51 FU = 39.1 FU = 39.4

END OF PAGE 1 OF 2, MSG 048

MSG 048 - FD07 MISSION SUMMARY

1 DELTA V AVAILABLE:

2		
3	OMS	408 FPS
4	<u>ARCS (TOTAL ABOVE QTY1)</u>	<u>44 FPS</u>
5		
6	TOTAL IN THE AFT	452 FPS
7		
8	ARCS (TOTAL ABOVE QTY2)	76 FPS
9	FRCS (ABOVE QTY 1)	29 FPS
10		
11	AFT QTY 1	81 %
12	AFT QTY 2	43 %

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15 THERE ARE NO FAILURE/IMPACT/WORK AROUNDS FOR TODAY.

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END OF PAGE 2 OF 2, MSG 048

EVA 3 SUMMARY TIMELINE

EVA 3			
PET TIME (HR : MIN)	IV/SSRMS	EV1 – Wolf (FF)	EV2 – Cassidy (FF)
00:00	(00:00-00:30) JEM RMS grappled to ICS-EF	EGRESS/SETUP (00:30) <input type="checkbox"/> Post Depress And Egress (00:15) <input type="checkbox"/> Setup (00:15)	EGRESS/SETUP (00:30) <input type="checkbox"/> Post Depress And Egress (00:15) <input type="checkbox"/> Setup (00:15)
01:00	(00:30-01:00) SSRMS at WS 8 with ICC-VLD at P6 (01:00-05:45)	WIF 14 RELOCATE/JEM OIH & OIW INSTALL (00:30) <input type="checkbox"/> NOD2 WIF 14 move to COL WIF2 <input type="checkbox"/> JPM OIH & OIW Installation <input type="checkbox"/> STP Relocate P6 BATTERY R&R (04:45) <input type="checkbox"/> Stow battery 1	JLE PYLD PREP (00:30) <input type="checkbox"/> ICS-EF <input type="checkbox"/> SEDA-AP <input type="checkbox"/> STP Relocate P6 BATTERY R&R (04:45) <input type="checkbox"/> Stow battery 1
02:00	FPP Sleeves (Ref 7-189 Steps 1, 2, 4 - 7)	<input type="checkbox"/> Install battery A	<input type="checkbox"/> Install battery A
		<input type="checkbox"/> Install battery B	<input type="checkbox"/> Install battery B
		<input type="checkbox"/> Install battery C	<input type="checkbox"/> Install battery C
		<input type="checkbox"/> Install battery D	<input type="checkbox"/> Install battery D
04:00		<input type="checkbox"/> Install battery 1	<input type="checkbox"/> Install battery 1
05:00		<input type="checkbox"/> Prep for EVA 4	<input type="checkbox"/> Prep for EVA 4
06:00		CLEANUP/INGRESS (00:45) • Cleanup (00:30) • Ingress and Pre Repress (00:15)	CLEANUP/INGRESS (00:45) • Cleanup (00:30) • Ingress and Pre Repress (00:15)
Total EVA Time 6:30			

Get-aheads: FPP sleeves, NOD2 gap spanner install, LAB cable tie down

FS 7-77

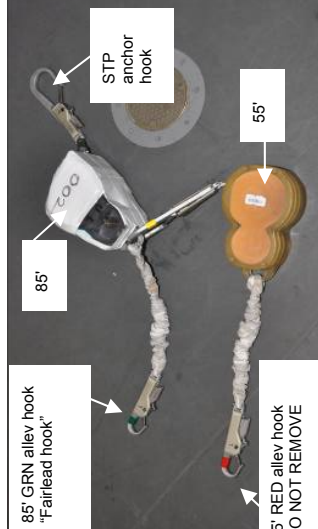
EVA/127/FIN 1
Uplink

EVA 3 TOOL CONFIG

- EVI**
EMU D-rings
 Ext on left side
 Ext on right side
 Waist Tether (right EXT, \locked)
- MWS**
 Small Trash Bag
 Wire Tie
 1 – Wire tie as tether loops
 RET (with PIP pin)
 RET sm-sm
 3 – AETs
 Swing Arm (right side)
 2 – RET sm-sm (Attach to PGT)
 PGT s/n _____
 6-in ext
 BRT (left side)
 RET sm-sm
 V/B Bag pack
 3 – wire ties

- EV2**
EMU D-rings
 Ext on left side
 55' **RED** alleviator hook
 Ext on right side
 Waist Tether (right Ext to MWS, \locked)
- MWS**
 RET w/PIP pin (R D-ring)
 RET sm-sm (L D-ring)
 AET (b/w D-rings)
 55' **YEL** anchor hook
 Swing Arm (right side)
 2-RET sm-sm (Attach to PGT)
 PGT s/n _____
 Camera w/bracket
 RET sm-sm
 BRT (left side)
 RET sm-sm
 AET (wrap @ top loop)
 2 – long wire ties
 2 – short wire ties

- ISS Configuration**
 MT @ WS8 CETA Port/Stbd (Port reconfigured)
 ICC-VLD on SSRMS at P6
 JLE w/payloads installed berthed to JEF
 Port SARJ at 45 degrees, 4A locked at 255 deg
- Safety Tether config (STP = safety tether pack, 55+85)**
 EV1 ST pack (55+85) **85-ft** anchor at S0 HR 3516
 EV2 ST pack (~~55+85~~) **85-ft** anchor at S0 HR 3483 (55' inside)
 Fairlead (AET) at AL HR 0538 (zenith standoff)



- RET Lg-sm (AVL stowage)
 C/L Bag – Battery Temp Stow (B)
 AET (ext D-ring)
 sq scoop (int RET #1)
 sq scoop (int RET #2)
 MUT EE (int RET #3)
 Small Trash Bag (int RET #4)
 Camera w/bracket (bracket RET to int D-ring #1)
 RET sm-sm
 RET sm-sm (int D-ring #2 to handle)
 AET (ext, secure BS/MUT EE to outside of bag)
 Ballstack
 MUT EE
 RET sm-sm (use to secure BS/MUT EE)
 RET sm-sm (in D-ring # 3)
 C/L Bag – Battery VCC Bag (V) – strap to B Bag
 AET (ext D-ring)
 Sq Torque Multiplier (int RET #1)
 7/16" Rec socket
 Ratchet wrench (int RET #2)
 6" ext
 sq scoop (int RET #3)
 sq scoop (int RET #4)

- RET Lg-sm (AVL stowage)
 C/L Bag – JLE Prep (J)
 AET (ext D-ring)
 RET sm-sm (int D-ring #1 to door handle)
 RET sm-sm (int D-ring #2 to door handle)
 Socket Caddy (int RET #1)
 9" ext
 ICS-EF Sensor Cover (int RET #2)

Review PGT ops

- Report "green light" (for torque down ops)
- Report torque and turns
- Expect LOTORQ fault msg, Fault LED and Red LED for bolt release ops

Record:
 EV1 PGT (serial _____, bat # _____)
 EV2 PGT (serial _____, bat # _____)
 Spare PGT (serial _____, bat # _____)

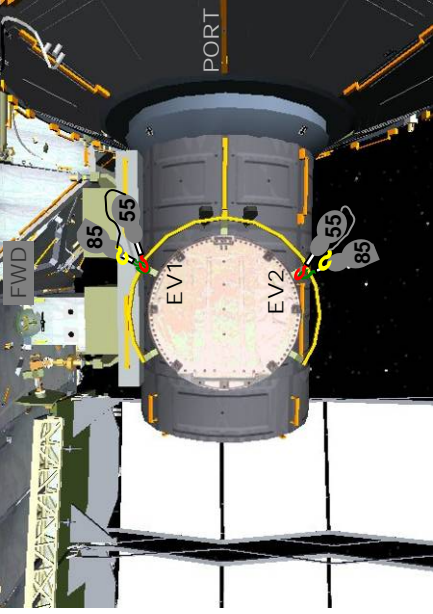
Prior to EVA, perform the following inspections:

- RET cords for fraying
- Inspect safety and waist tethers for damage/discoloration. Verify no red line visible on load alleviation straps
- Inspect ISS trash bags for deformation/damage
- Inspect EMU gloves for damage
- Inspect BRTs and ballstacks for loose fittings/screws
- Use **BLUE** RETs only

EVA 3 TOOL CONFIG (Cont)

	<p><u>Staging Bag</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Fish Stringer #1 <input type="checkbox"/> Wire Tie Caddy (hook #1) <input type="checkbox"/> 9 wire ties <input type="checkbox"/> Velcro/Tape Caddy (hook #2) <input type="checkbox"/> PGT (hook #3) s/n _____ <input type="checkbox"/> PGT Battery s/n _____ <input type="checkbox"/> 7/16-in (wobble) Socket – 6 ext <input type="checkbox"/> Vise Grips (hook #4) <input type="checkbox"/> Ratchet Wrench (hook #5) <input type="checkbox"/> 7/16-in (rigid) Socket – 9 ext <input type="checkbox"/> Cheater Bar (hook #6) <input type="checkbox"/> Hammer (hook #7) <input type="checkbox"/> RET lg-sm <input type="checkbox"/> Bolt Puller <input type="checkbox"/> Fish Stringer #2 <input type="checkbox"/> Spare Torque Wrench w/MLI (hook #1) <input type="checkbox"/> Connector Cleaner Tool Kit (hook #2) <input type="checkbox"/> Pin Straightener Assy (hook #3) <input type="checkbox"/> Probe w/BRS Pin Tool Sheath (hook #4) <input type="checkbox"/> Prybar (hook #5) <input type="checkbox"/> Needlenose Pliers (hook #6) <input type="checkbox"/> MWS Key Strap Assy (on wire tie, to strap) <p><u>Crewlock Zenith Handrail</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Spare STP <input type="checkbox"/> RET lg-sm (lg hook attached outside bag to Zenith) <input type="checkbox"/> GL Handrail & small Hook attached to FPP sleeve <input type="checkbox"/> FPP sleeves (sz 33/37) (FPP stuffed in staging bag) <input type="checkbox"/> RET lg-sm (lg hook attached outside bag to Zenith) <input type="checkbox"/> GL Handrail & small Hook attached to FPP sleeve <input type="checkbox"/> FPP sleeves (sz 33/37) (FPP stuffed in staging bag) <p><u>IV Bag</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> 2 – Towels <input type="checkbox"/> Contamination Detection Kit <input type="checkbox"/> 2 – GP Caddy <input type="checkbox"/> Thermal Mittens (1 pair) <input type="checkbox"/> RET (sm-sm) (Black) <input type="checkbox"/> Socket Caddy <input type="checkbox"/> 1/2-in (wobble) Socket – 8 ext <input type="checkbox"/> 7/16-in (wobble) Socket – 6 ext <input type="checkbox"/> 2 – DCM Plug (SAFER Hardmount) <input type="checkbox"/> 2 – RET (sm-sm, black) 	<p>Tether counts:</p> <table border="1"> <thead> <tr> <th></th> <th>used</th> <th>available</th> </tr> </thead> <tbody> <tr> <td>RET sm-sm -381</td> <td>14</td> <td>16</td> </tr> <tr> <td>RET lg-sm -385</td> <td>5</td> <td>8</td> </tr> <tr> <td>RET sm-sm pp -383</td> <td>2</td> <td>5</td> </tr> <tr> <td>AET sm-sm</td> <td>12</td> <td>8 ISS/8 STS</td> </tr> <tr> <td>AET lg-sm</td> <td>0</td> <td>2</td> </tr> </tbody> </table> <p>ISS EXTERNAL</p> <p>JPM</p> <ul style="list-style-type: none"> <input type="checkbox"/> MLI Bag (Lg ORU) <input type="checkbox"/> AET ext <input type="checkbox"/> AET ext <input type="checkbox"/> Fish stringer #1 (empty) <input type="checkbox"/> Fish stringer #2 (outside bag, under flap) <input type="checkbox"/> Sleeve (size 21/25) <input type="checkbox"/> Sleeve (size 21/25) <input type="checkbox"/> Sleeve (size 21/25) <input type="checkbox"/> Sleeve (size 21/25) <input type="checkbox"/> Wire tie caddy w/ long wire ties (9) <input type="checkbox"/> Fish stringer #3 <input type="checkbox"/> JPM OIH 1116 <input type="checkbox"/> JPM OIH 1204 <input type="checkbox"/> JPM OIH 1206 <input type="checkbox"/> JPM OIW 43 <input type="checkbox"/> JPM OIW 36 <input type="checkbox"/> Gap spanner (72") – split across two hooks 		used	available	RET sm-sm -381	14	16	RET lg-sm -385	5	8	RET sm-sm pp -383	2	5	AET sm-sm	12	8 ISS/8 STS	AET lg-sm	0	2
	used	available																		
RET sm-sm -381	14	16																		
RET lg-sm -385	5	8																		
RET sm-sm pp -383	2	5																		
AET sm-sm	12	8 ISS/8 STS																		
AET lg-sm	0	2																		

EGRESS/SETUP (00:30)

IV/RMS	EV1 (FF) WOLF	EV2 (FF) CASSIDY
 <p>1. Post crew egress: WVS Software: Select page – RF camera Set 'Advanced Controls' S-Band Level (two) – Max ✓Verify good WVS video from both EVs</p>	<p>Initial Configuration:</p> <ol style="list-style-type: none"> Waist tether to UIA D-ring <ul style="list-style-type: none"> <input type="checkbox"/> ✓Gate closed <input type="checkbox"/> ✓Hook locked <p><u>EGRESS/INITIAL SETUP</u></p> <ol style="list-style-type: none"> On EV2 GO, release EV2 waist tether from A/L D-ring Transfer J Bag to EV2 Stow bag RET on A/L D-ring <p>5. On EV2 GO, Retrieve waist tether from UIA</p> <p>6. Egress crewlock</p> <p>7. Close hatch thermal cover</p> <p>8. Verify SAFER config <ul style="list-style-type: none"> <input type="checkbox"/> ✓L handle down (MAN ISO Vlv-Open) <input type="checkbox"/> ✓R handle down (HCM-Closed) </p> <p>9. Xlate to S0; Verify safety tether anchor point (S0 HR 3516) <ul style="list-style-type: none"> <input type="checkbox"/> ✓Gates closed <input type="checkbox"/> ✓Hook locked </p> <p>10. Stow V/B Bag Pack on Lab</p> <p>11. Xlate to MLI Bag on LAB</p> <p>12. Perform LAB STBD FPP Sleeve Install (Reference 7-189; Steps 1, 2, 4-7)</p>	<p>Initial Configuration:</p> <ol style="list-style-type: none"> Waist tether to A/L D-ring <ul style="list-style-type: none"> <input type="checkbox"/> ✓Gate closed <input type="checkbox"/> ✓Hook locked <p><u>EGRESS/INITIAL SETUP</u></p> <ol style="list-style-type: none"> Open hatch thermal cover Egress airlock Verify AFT 55-ft RED alleviator hook to D-ring EXT (L) <ul style="list-style-type: none"> <input type="checkbox"/> ✓Gate closed <input type="checkbox"/> ✓Hook locked <input type="checkbox"/> ✓Reel unlocked Attach 55-ft YELLOW anchor hook from MWS to 85-ft ERCM <ul style="list-style-type: none"> <input type="checkbox"/> ✓Gate closed <input type="checkbox"/> ✓Hook locked <input type="checkbox"/> ✓Reel Unlocked <input type="checkbox"/> LAS inspection Attach AFT 85-ft GRN alleviator hook to D-ring EXT (L) <ul style="list-style-type: none"> <input type="checkbox"/> Secure 85' & 55' tethers together with Velcro Receive J Bag; stow on BRT Attach FWD 55-ft RED alleviator hook to EV1 D-ring EXT (L) <ul style="list-style-type: none"> <input type="checkbox"/> ✓Gate closed <input type="checkbox"/> ✓Hook locked <input type="checkbox"/> ✓Reel unlocked <input type="checkbox"/> LAS inspection Attach FWD 85-ft GRN alleviator hook to EV1 D-ring EXT (L) <ul style="list-style-type: none"> <input type="checkbox"/> ✓Gate closed <input type="checkbox"/> ✓Hook locked <input type="checkbox"/> ✓Reel unlocked <input type="checkbox"/> LAS inspection Verify V/B Bag Config on EV1 BRT Verify SAFER config <ul style="list-style-type: none"> <input type="checkbox"/> ✓L handle down (MAN ISO Vlv-Open) <input type="checkbox"/> ✓R handle down (HCM-Closed) Perform translation adaptation Xlate to S0; verify safety tether anchor hook (S0 HR 3483) <ul style="list-style-type: none"> <input type="checkbox"/> ✓Gate closed <input type="checkbox"/> ✓Hook locked Xlate to LAB HR 0246 Xlate to JLE; FL NOD2 HR 0344 (poor man's)

EVA TOOLS MANAGEMENT (Cont)**Flight Day 7 – EVA 2 Tool Deconfig/EVA 3 Tool Config**

1. Deconfigure the following:

M Bag

Item removed	QTY	Stowage
Camera w/bracket and sm-sm RET	<input type="checkbox"/> 1	Stage outside A/L
WIF adapter	<input type="checkbox"/> 1	ISS temp stow
55 ft safety tether (#71)	<input type="checkbox"/> 1	EV2's MWS

J Bag:

Item removed	QTY	Stowage
Ratchet w/2" ext	<input type="checkbox"/> 1	Ratchet to V bag; 2" ext to EVA 4 bag
Socket caddy w/RAD w/2" ext	<input type="checkbox"/> 1	Socket caddy stays in bag; RAD w/2" to EVA 4 bag
Round scoop	<input type="checkbox"/> 1	EVA 4 bag
VE #17 cap	<input type="checkbox"/> 1	EVA 4 bag

EV2 MWS:

Item removed	QTY	Stowage
55 ft safety tether (#73)	<input type="checkbox"/> 1	Stage for trouble shooting
Small trash bag	<input type="checkbox"/> 1	B bag int RET

EV2 PGT:

Item removed	QTY	Stowage
6" ext	<input type="checkbox"/> 1	V bag; Ratchet

2. Retrieve EVA 3 bag and distribute as follows:

Item retrieved	QTY	Stowage
Sq scoops	<input type="checkbox"/> <input type="checkbox"/> 2	V bag int RETs
MUT EE	<input type="checkbox"/> 1	B bag int RET
Ballstack w/MUT EE	<input type="checkbox"/> 1	B bag ext
9" ext	<input type="checkbox"/> 1	J bag socket caddy

3. Perform EVA 3 TOOL CONFIG in EVA 3 Timeline pages (section 7)
 - Stow/retrieve tethers on tether wall as needed
4. Time Permitting: Troubleshoot 55' safety tether #73
 - Fully extend and retract cable. If retracts fully, extend a few feet a couple more times to test. If satisfied with performance, assemble back on 85' ST in crewlock to provide spare STP.
 - If not satisfied with performance, stow in tether staging area, retrieve 85' ST from tether staging area and stow on crewlock handrail with other 85' ST.
 - Report to MCC-H outcome.
5. If Step 4 is not performed, retrieve 85' ST from tether staging area and stow on crewlock handrail with other 85' ST.