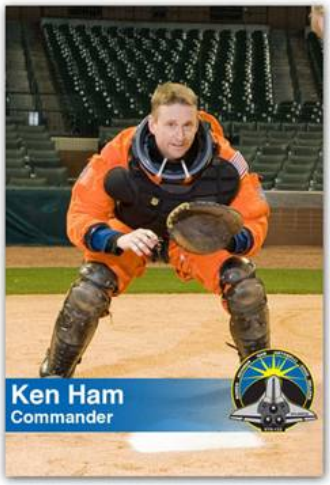
STS-132 / ULF4

FD 08 Execute Package

MSG	Page(s)	Title
066	1 - 17	FD08 Flight Plan Revision
067	18 - 19	FD08 Mission Summary
068	20	FD07 MMT Summary
069	21	FD08 Transfer Message
070	22	Big Picture for Myco Experiment During ULF4
071	23 - 26	FD8 EVA3 Tool Config

Approved by FAO:
F. Reynolds

Last Updated: May 21 2010 3:43 AM GMT
JEDI *(**J**oint **E**xecute package **D**evelopment and **I**ntegration), v3.0*



MLB Transactions for May 20th, 2010

HOUSTON - The Houston Astros announced today that they have recalled CDR Ken Ham (pictured) from Triple-A Atlantis. To make room on the 25 man roster, the Astros optioned 2B Kazuo Matsui to Triple-A Atlantis. Ham is batting 1.000 in simulated Shuttle landings, and has 12 CWC-I fills, 65 messages printed, 32 items transferred, 157 A/G calls, and 1 docking this flight. He is expected to start Friday against the Tampa Bay Rays. Matsui is batting .141 this season and will fill in for Ham during PAO events.

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MSG INDEX

MSG NO.	TITLE
066	FD08 Flight Plan Revision (23-0664)
067	FD08 Mission Summary
068	FD07 MMT Summary
069	FD08 Transfer Message (23-0665)
070	Big Picture for Myco Experiment During ULF4 (23-0628)
071	FD8 EVA3 Tool Config (23-0667)

1. Post-Sleep Cryo Config

   For today's post-sleep cryo config, O2 and H2 tanks 2 and 4 will be active.

   R1 O2,H2 MANF VLV TK2 (two) - OP (tb-OP)

   Pre-Sleep Cryo Config

   √MCC for deltas prior to configuring for pre-sleep.

   For tonight's pre-sleep cryo config, manifold 1 will be closed with O2 and H2 tanks 1 and 4 active.

   R1 O2,H2 TK1 HTRS A,B (four) - AUTO
   TK2 HTRS A,B (four) - OFF
   MANF VLV TK1 (two) - CL (tb-CL)

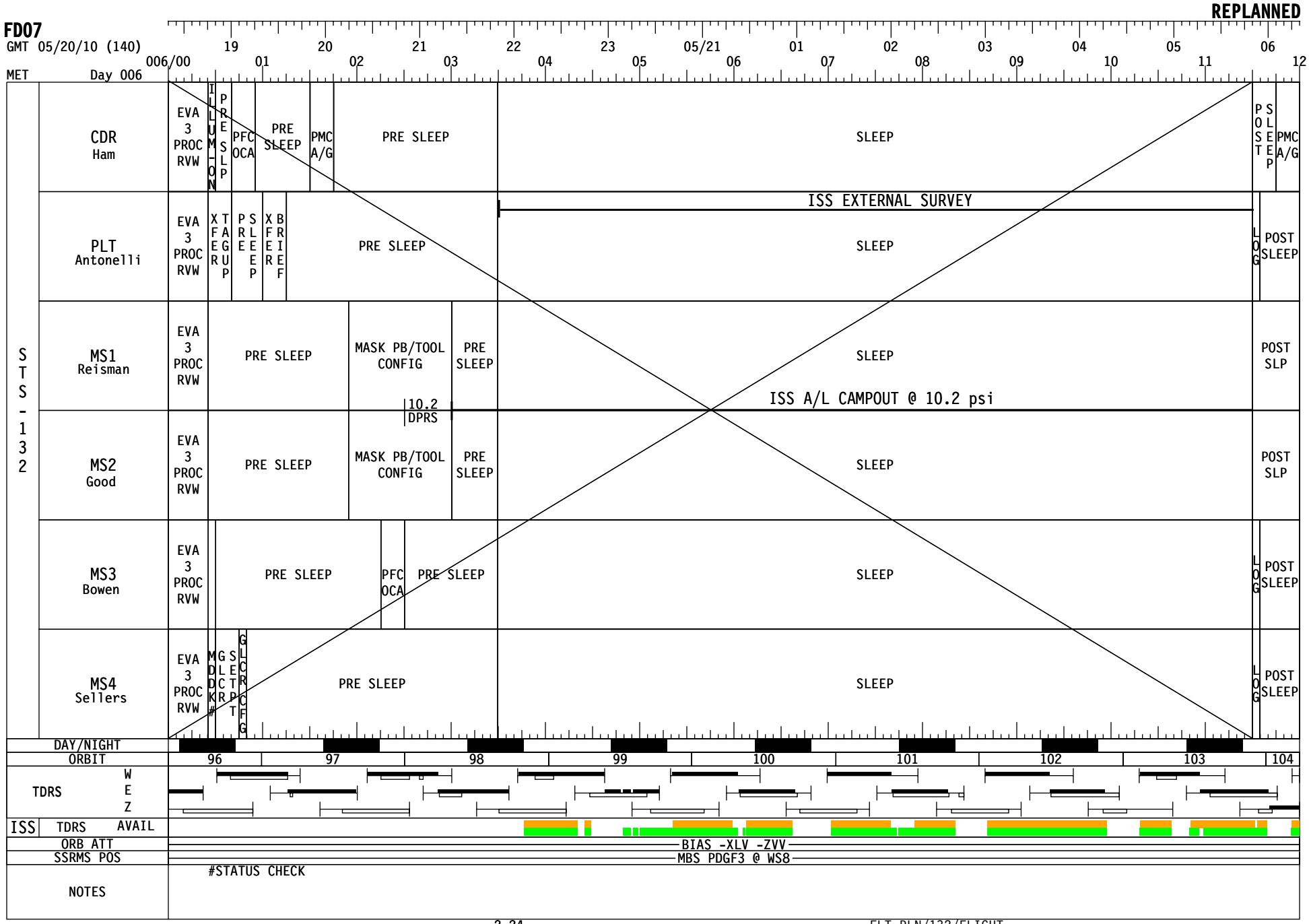
2. Crew Choice Downlink Opportunities

TDRS	AOS	LOS	Delta (min)	Notes
W	07/01:16	07/01:36	20	
E	07/01:43	07/01:53	10	
W	07/02:42	07/02:54	12	

3. MSG 132-071 (23-0667) is the updated EVA3 Tool Config with post EVA2 Tool changes incorporated. You can disregard previous MSG 132-061 (23-0653). Also included is updated Truss/Pallet Bag Inventories for Page FS 7-69. No pre-EVA changes are required. Please let us know of any discrepancies.

4. Piers, to assist the ground in troubleshooting the onboard print problem, please measure the diameter of the holes that are in the printer paper and inform MCC. These holes should be 1/4 inch in diameter. Larger diameter holes might contribute to the printer problems we've experienced on the flight.

5. Replace pages 2-24 through 2-29 and 3-78 through 3-87.


REPLANNED
FD07
GMT 05/20/10 (140)
MET Day 006
19 20 21 22 23 05/21 01 02 03 04 05 06
006/00 01 02 03 04 05 06 07 08 09 10 11 12
STS-132
CDR Ham
EVA 3 PROC RVW
ILLUM-ON
PRE SLP
PFC OCA
PRE SLEEP
PMC A/G
PRE SLEEP
SLEEP
POST SLEEP
PMC A/G
PLT Antonelli
EVA 3 PROC RVW
XFER TAGUP
PRE SLEEP
XFER BRIEF
PRE SLEEP
ISS EXTERNAL SURVEY
SLEEP
LOG
POST SLEEP
MS1 Reisman
EVA 3 PROC RVW
PRE SLEEP
MASK PB/TOOL CONFIG
PRE SLEEP
SLEEP
POST SLP
10.2 DPRS
ISS A/L CAMPOUT @ 10.2 psi
MS2 Good
EVA 3 PROC RVW
PRE SLEEP
MASK PB/TOOL CONFIG
PRE SLEEP
SLEEP
POST SLP
MS3 Bowen
EVA 3 PROC RVW
PRE SLEEP
PFC OCA
PRE SLEEP
SLEEP
LOG
POST SLEEP
MS4 Sellers
EVA 3 PROC RVW
MDDK#
GLCR
SETPT
GLCR CFG
PRE SLEEP
SLEEP
LOG
POST SLEEP
DAY/NIGHT
ORBIT
96 97 98 99 100 101 102 103 104
TDRS
W
E
Z
ISS
TDRS AVAIL
ORB ATT
BIAS -XLV -ZVV
SSRMS POS
MBS PDGF3 @ WS8
NOTES
#STATUS CHECK

FD07 **REPLANNED**

GMT 05/20/10 (140)

MET Day 006

ISS	TDRS AVAIL	006/00	19	20	21	22	23	05/21	01	02	03	04	05	06	12

ISS	ISS CDR Kotov	ARED, PW	DPC	PRE SLEEP-ISS		SLEEP	ЭЛКТБЖ	POST SLEEP
ISS	FE-1 Skvortsov	TEX-15, DNLD, PW	DPC	PRE SLEEP-ISS		SLEEP		POST SLEEP
ISS	FE-2 Caldwell-Dyson	EVA 3 PROC RVW	DPC	PRE SLEEP-ISS	RXN	SLEEP		POST SLEEP
ISS	FE-3 Kornienko	ГРОСУМБОЛИС, ЭЛКТБЖ	DPC	PRE SLEEP-ISS	Ф2-Т, КПТ-I	SLEEP		POST SLEEP
ISS	FE-5 Noguchi	EVA 3 PROC RVW, VDSCAP	DPC	PRE SLEEP-ISS	RXN	SLEEP		POST SLEEP
ISS	FE-6 Creamer	PROC RVW, MPC	DPC	PRE SLEEP-ISS	MPC, RXN	SLEEP		POST SLEEP

DAY/NIGHT									
ORBIT	96	97	98	99	100	101	102	103	104
SSRMS POS	MBS PDGF3 @ WS8								
ALL VHF	—	—	—	—					
NOTES									

3

NO UNISOLATED EXERCISE
[P6 BATT R&R, NH3 JUMPER INSTALL]

REPLANNED

FD08
GMT 05/21/10 (141)
MET Day 006

07 08 09 10 11 12 13 14 15 16 17 18
12 13 14 15 16 17 18 19 20 21 22 23 007/00

STS-132

CDR Ham	POST SLEEP; HYG BRK/HATCH CLS; EVA PREP; EMU PURGE; EMU PREBREATHE; C_LK DPRS; P DPS; PWR FILL #1; PWR FILL #2; PWR FILL #3; PWR XFER (3); MEAL; FLTR CLEAN -INSPECT; CWC #2 INIT; MDDK XFER; CWC TERM; CWC XFER; MDDK XFER; P-RPS; RPRS; POST EVA W/H2O
PLT Antonelli	POST SLEEP; IMU; ILUM-OFF; INHIB PAD; EXERCISE; XFER UPDATE; P/TV 07 S/U; EVA 3 IVA SUPPORT; MDDK XFER; XFR TAG
MS1 Reisman	POST SLP; HYG BRK/ PREBREATHE (14.7 RPRS, 10.2 DPRS); EVA PREP; EMU PURGE; EMU PREBREATHE; C_LK DPRS; P DPS; EGRS; SETUP; NH3 JMPR INSTL; BATTERY 5 R&R; BATTERY E/6 R&R; BATTERY F R&R; INSTL BATT ON PALLET; P6 CLEANUP; EOTP; RETRIEVE PDGF; GET AHEADS; CLNUP & INGRS; P-RPS; RPRS; POST EVA W/H2O
MS2 Good	POST SLP; HYG BRK/ PREBREATHE; EVA PREP; EMU PURGE; EMU PREBREATHE; C_LK DPRS; P DPS; EGRS; SETUP; NH3 JMPR INSTL; BATTERY 5 R&R; BATTERY E/6 R&R; BATTERY F R&R; INSTL BATT ON PALLET; P6 CLEANUP; RETRIEVE PDGF; GET AHEADS; CLNUP & INGRS; P-RPS; RPRS; POST EVA W/H2O
MS3 Bowen	POST SLEEP; HYG BRK/ HATCH CLS; EVA PREP; EMU PURGE; EMU PREBREATHE; C_LK DPRS; P DPS; BSA-T; P/TV 07 EVA SUPT; MEAL; P/TV 07 EVA SUPT; P-RPS; RPRS; POST EVA W/H2O
MS4 Sellers	POST SLEEP; EXERCISE; MDDK #; SSRMS ICC MVR EVA WS; SSRMS EVA 3 SUPT; SSRMS ICC TO POA; SSRMS ICC RLS; MDDK #

EVA 3 - 6:30

DAY/NIGHT
ORBIT 104 105 106 107 108 109 110 111
TDRS W E Z
ISS TDRS AVAIL
ORB ATT BIAS -XLV -ZVV
SSRMS POS MBS PDGF3 @ WS8
NOTES #STATUS CHECK #STATUS CHECK

NO UNISOLATED EXERCISE
[P6 BATT R&R, NH3 JUMPER INSTALL]

REPLANNED

FD08
GMT 05/21/10 (141)
MET Day 006

12 13 14 15 16 17 18 19 20 21 22 23 007/00
07 08 09 10 11 12 13 14 15 16 17 18

ISS TDRS AVAIL

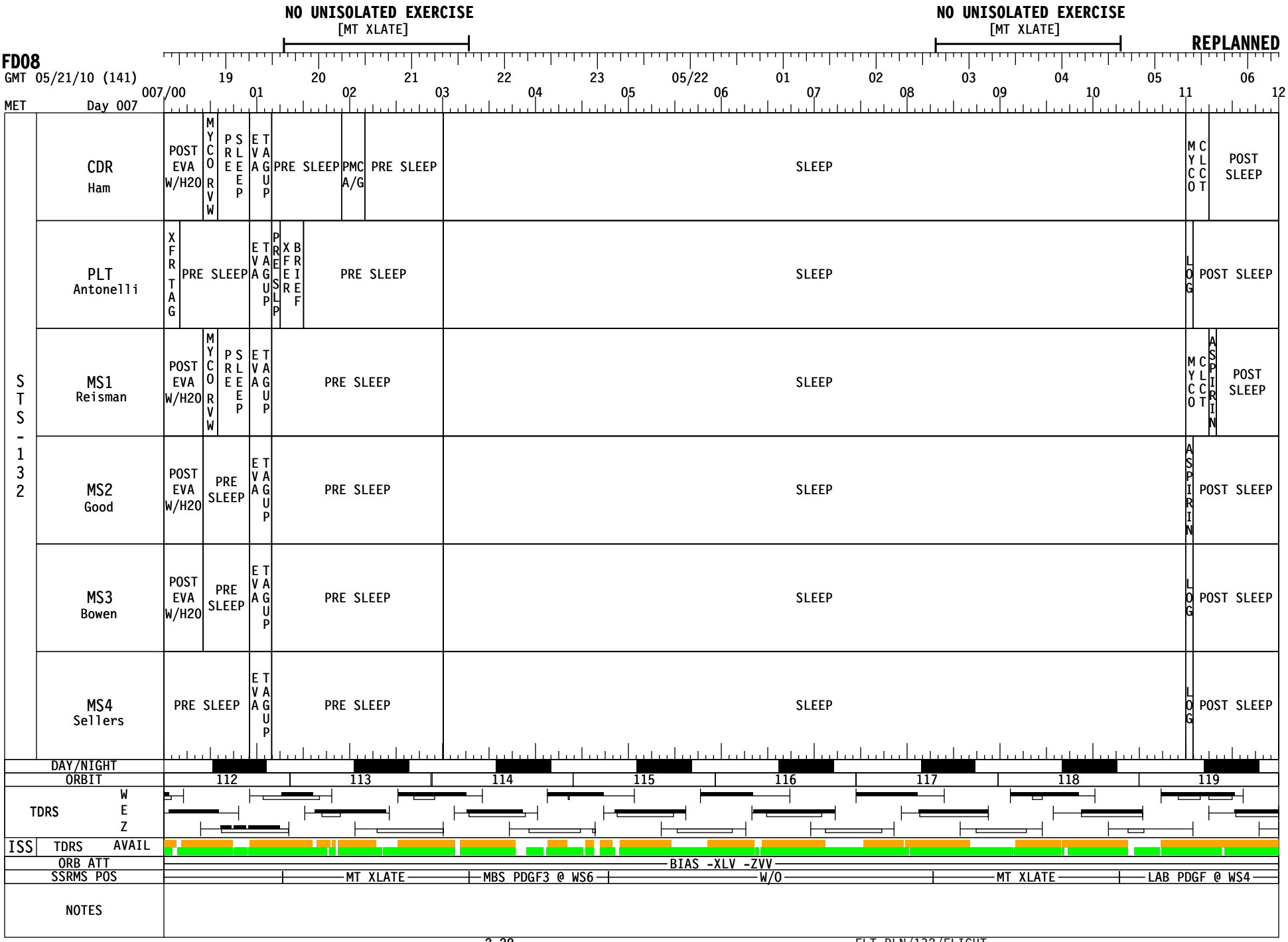
ISS	ISS CDR Kotov	POST SLEEP; PW; DPC; DPART PREP; R PAO; СОЖ; ПФП ОДНТ CDR; TVIS; ИП-1 MNT; MIDDAY MEAL; КПТ-2-EXE_23/24; SYMBOLIC PREP; PW
	FE-1 Skvortsov	POST SLEEP; TBUCK; PW; DPC; CB-A-MNT; R PAO; VELO; M1-IMS-XFER; IMS; TEX-15; MIDDAY MEAL; PL CHRON P/V; РБО-3-2 INIT_23/24; PW; TVIS
	FE-2 Caldwell-Dyson	POST SLEEP; PW; DPC; ARED; FFQ; SSRMS ICC MVR EVA WS; SSRMS EVA 3 SUPT; SSRMS ICC TO POA; SSRMS ICC RLS; CEVIS; MYCOC PREP; MYCOC*
	FE-3 Kornienko	POST SLEEP; PW; DPC; KПT-2; R PAO; M1 IMS XFER; ПФП ОДНТ CDR; M1-IMS-XFER; TVIS; MIDDAY MEAL; КПТ-2-EXE_23/24; VELO; PW
	FE-5 Noguchi	POST SLEEP; HAM-P/D; TEST; P/TV-A; CUCU-INH; DPC; PW; ICEBRCK; PHS S/U; HMS-PHS; WBLD-CMO; PHS DATA ENTRY; PWD-T/S; PWD-TEST; MCD/CFM T+2; DPART PREP; MIDDAY MEAL; FFQ; WIN SCAT; GLOVE; ARED; T2
	FE-6 Creamer	POST SLEEP; PW; DPC; DPART PREP; HMS-PHS; WBLD-SUBJ; ERNOBOX INSTALL; VIS MAIN INSTL; IMAK; UNPACK; ARED; MIDDAY MEAL; SLEEP-AW-B2/D2/I4 P1; T2; PW; P/TV-D

DAY/NIGHT
ORBIT: 104 105 106 107 108 109 110 111
SSRMS POS: MBS PDGF3 @ WS8
ALL VHF

NOTES

*REVIEW

5


NO UNISOLATED EXERCISE
[MT XLATE]
NO UNISOLATED EXERCISE
[MT XLATE]
REPLANNED
FD08
GMT 05/21/10 (141)
19 20 21 22 23 05/22 01 02 03 04 05 06
007/00 01 02 03 04 05 06 07 08 09 10 11 12
MET Day 007
STS-132
CDR Ham
POST EVA W/H20
MYCO RVW
PRE SLEEP
EVA TAGUP
PRE SLEEP
PMC A/G
PRE SLEEP
SLEEP
MYCO
CLCT
POST SLEEP
PLT Antonelli
XFR TAG
PRE SLEEP
EVA TAGUP
PRESLP
XFER BRIEF
PRE SLEEP
SLEEP
LOG
POST SLEEP
MS1 Reisman
POST EVA W/H20
MYCO RVW
PRE SLEEP
EVA TAGUP
PRE SLEEP
SLEEP
MYCO
CLCT
ASPIRIN
POST SLEEP
MS2 Good
POST EVA W/H20
PRE SLEEP
EVA TAGUP
PRE SLEEP
SLEEP
ASPIRIN
POST SLEEP
MS3 Bowen
POST EVA W/H20
PRE SLEEP
EVA TAGUP
PRE SLEEP
SLEEP
LOG
POST SLEEP
MS4 Sellers
PRE SLEEP
EVA TAGUP
PRE SLEEP
SLEEP
LOG
POST SLEEP
DAY/NIGHT
ORBIT
112 113 114 115 116 117 118 119
TDRS
W
E
Z
ISS
TDRS AVAIL
ORB ATT
BIAS -XLV -ZVV
SSRMS POS
MT XLATE
MBS PDGF3 @ WS6
W/O
MT XLATE
LAB PDGF @ WS4
NOTES

FD08

GMT 05/21/10 (141)

MET Day 007

NO UNISOLATED EXERCISE [MT XLATE] — NO UNISOLATED EXERCISE [MT XLATE] — REPLANNED

007/00 19 20 21 22 23 05/22 01 02 03 04 05 06 01 02 03 04 05 06 07 08 09 10 11 12

ISS TDRS AVAIL

ISS	ISS CDR Kotov	PW	DPC	3JKT 5X	PRE SLEEP-ISS	SLEEP	POST SLEEP
ISS	FE-1 Skvortsov	TVIS	DPC		PRE SLEEP-ISS	SLEEP	POST SLEEP
ISS	FE-2 Caldwell-Dyson	MYCO*	DPC		PRE SLEEP-ISS	SLEEP	MYCO COLLECT / MYCO INS / POST SLEEP
ISS	FE-3 Kornienko	PW	DPC		PRE SLEEP-ISS	SLEEP	3JKT 5X / POST SLEEP
ISS	FE-5 Noguchi	T2	DPC	MPC	PRE SLEEP-ISS MPC	SLEEP	POST SLEEP
ISS	FE-6 Creamer	VDSCAP	DPC	IMAGE	PRE SLEEP-ISS	SLEEP	POST SLEEP

DAY/NIGHT

ORBIT: 112 | 113 | 114 | 115 | 116 | 117 | 118 | 119

SSRMS POS: MT XLATE | MBS PDGF3 @ WS6 | W/O | MT XLATE | LAB PDGF @ WS4

ALL VHF

NOTES: *REVIEW

7

STS-132 FD (07) **REPLANNED**

GMT Date 05/21 (141) | W | TDRSE | Z | D/N | DORB 12 | DORB 13 | DORB 14 | DORB 15 | ORB 101 | ORB 102 | ORB 103 | ORB 104 | MET Day 006 | STS ATI | CDR | PLT ANTONELLI | MS1 REISMAN | NOTES

08:00 — 09:00 — 10:00 — 11:00 — 12:00

03:00 — 04:00 — 05:00 — 06:00

BIAS -XLV -ZVV

SLEEP | SLEEP | SLEEP

FD08 EZ ACTIVITIES:
- √OCAC FILTER
- √MDDK DUCT SCREEN
- TEPC (STATUS CHECK) (ORB OPS, CREW SYS)
- HARD REBOOT ALL PGSCs EXCEPT: STS-1(OCA ROUTER), STS-6(WLES) & STS-5(RPOP2)

POST-SLEEP ACTIVITY (ORB OPS, CREW SYS)
√Hum Seps for H2O Accumulation

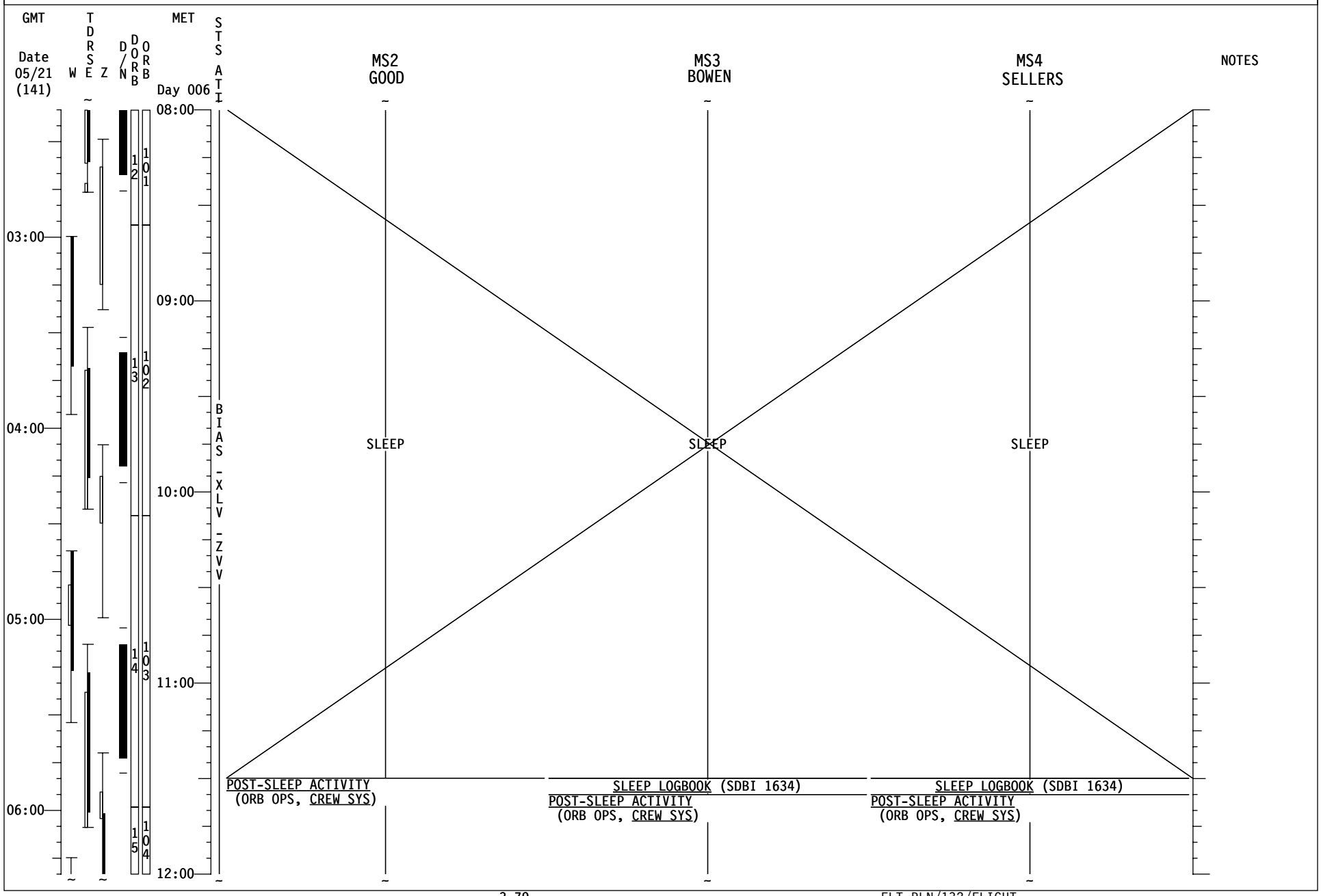
PRIVATE MEDICAL CONFERENCE
L9 PAYLOAD STATION AUDIO A/G (two)-OFF
Perform via A/G2

SLEEP LOGBOOK (SDBI 1634)
POST-SLEEP ACTIVITY (ORB OPS, CREW SYS)

POST-SLEEP ACTIVITY (ORB OPS, CREW SYS)

STS-132 FD (07)

REPLANNED



STS-132 FD (08)

REPLANNED

GMT Date 05/21 (141) | W | TDRSE | Z | D/N | DORB | ORB | MET Day 006 | STS ATI

CDR HAM	PLT ANTONELLI	MS1 REISMAN	NOTES
POST-SLEEP ACTIVITY (ORB OPS, CREW SYS)	POST-SLEEP ACTIVITY (ORB OPS, CREW SYS)	POST-SLEEP ACTIVITY (ORB OPS, CREW SYS)	
√Hum Seps for H2O Accumulation		EVA SYSTEMS: 1.211 HYGIENE BREAK MCC-H performs Steps 1-4, 16-20 & 23 Start NET 8:40 hrs from the end of: 1.206 10.2 PSIA CAMPOUT MASK PREBREATHE	
EVA SYSTEMS: 1.211 HYGIENE BREAK Steps 21-25 MCC-H performs Step 23			
EVA SYSTEMS: 1.216 EVA PREP		EVA SYSTEMS: 1.216 EVA PREP	
	IMU STAR OF OPPTY ALIGN (ORB OPS, GNC) ILLUMINATOR OPS(CUE CARD,TV)ILLUM OFF-ALL EVA 3 INHIBIT PAD (EVA, TIMELINES)		
EVA SYSTEMS: 1.220 EMU PURGE		EVA SYSTEMS: 1.220 EMU PURGE	
EVA SYSTEMS: 1.225 EMU PREBREATHE	EXERCISE	EVA SYSTEMS: 1.225 EMU PREBREATHE	
	DAILY TRANSFER LIST UPDATE Ref. Transfer List & MSG 069		
EVA SYSTEMS: CREWLOCK DEPRESS/REPRESS CUE CARD		EVA SYSTEMS: CREWLOCK DEPRESS/REPRESS CUE CARD	

Time scale: 07:00, 08:00, 09:00, 10:00; MET: 12:00, 13:00, 14:00, 15:00, 16:00

DORB: 15, 104; 1, 105; 2, 106

BIAS - XLV - ZVV

STS-132 FD (08)

REPLANNED

GMT Date 05/21 (141) | W | TDRSE | Z | D/N | DORB | ORB | MET Day 006 | STS ATI

MS2 GOOD	MS3 BOWEN	MS4 SELLERS	NOTES
POST-SLEEP ACTIVITY (ORB OPS, CREW SYS)	POST-SLEEP ACTIVITY (ORB OPS, CREW SYS)	POST-SLEEP ACTIVITY (ORB OPS, CREW SYS)	
EVA SYSTEMS: 1.211 HYGIENE BREAK MCC-H performs Steps 1-4, 16-20 & 23 Start NET 8:40 hrs from the end of: 1.206 10.2 PSIA CAMPOUT MASK PREBREATHE			
	EVA SYSTEMS: 1.211 HYGIENE BREAK Steps 21-25 MCC-H performs Step 23		
EVA SYSTEMS: 1.216 EVA PREP	EVA SYSTEMS: 1.216 EVA PREP		
EVA SYSTEMS: 1.220 EMU PURGE	EVA SYSTEMS: 1.220 EMU PURGE	EXERCISE	
EVA SYSTEMS: 1.225 EMU PREBREATHE	EVA SYSTEMS: 1.225 EMU PREBREATHE		
		GLACIER STATUS CHECK (Cue Card) CGBA STATUS CHECK (Cue Card)	
		ROBO: 3.301 EVA3 SUPPORT Steps 1-4	
EVA SYSTEMS: CREWLOCK DEPRESS/REPRESS CUE CARD	EVA SYSTEMS: CREWLOCK DEPRESS/REPRESS CUE CARD		

Time scale: 07:00, 08:00, 09:00, 10:00; 12:00, 13:00, 14:00, 15:00, 16:00

DORB: 15, 104; 1, 105; 2, 106

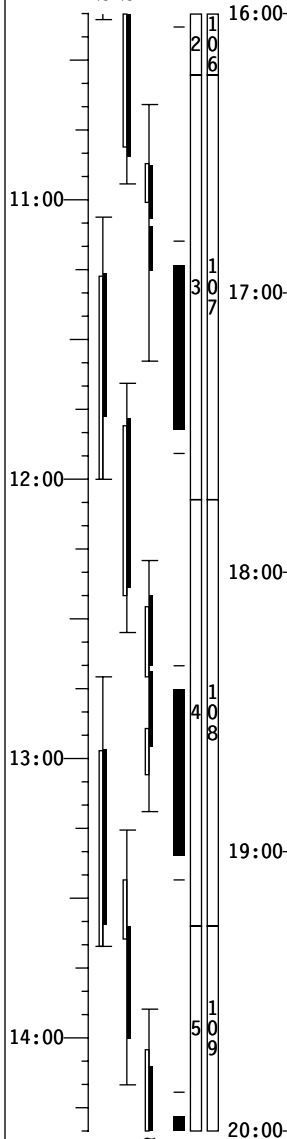
BIAS - XLV - ZVV

FLT PLN/132/FLIGHT

STS-132 FD (08)

REPLANNED

GMT Date 05/21 (141) | W | TDRSE | Z | D/N | DORB | ORB | MET Day 006 | STS ATI



MET	STS ATI	CDR HAM	PLT ANTONELLI	MS1 REISMAN	NOTES
16:00		EVA SYSTEMS: CREWLOCK DEPRESS/REPRESS CUE CARD	DAILY TRANSFER LIST UPDATE Ref. Transfer List & MSG 069 P/TV07 EVA (PHOTO/TV, SCENES) SETUP	EVA SYSTEMS: CREWLOCK DEPRESS/REPRESS CUE CARD	
		EVA SYSTEMS: CREWLOCK POST DEPRESS (CC)		EVA SYSTEMS: CREWLOCK POST DEPRESS (CC)	
		PWR FILL (ORB OPS, ECLS) Init Fill #1 Fill duration ~20 min Ref. MSG 016		EGRESS	
				SETUP	
17:00		PWR FILL (ORB OPS, ECLS) Init Fill #2 Fill duration ~20 min Ref. MSG 016		P4/P5 NH3 JUMPER INSTALL EXERCISE CONSTRAINT	**NO UNISOL EXERCISE** [P6 BATT R&R & NH3 JMPR INSTALL]
				BATTERY 5 R&R EXERCISE CONSTRAINT	
	BIAS-XLV-ZVV	PWR FILL (ORB OPS, ECLS) Init Fill #3 Fill duration ~20 min Ref. MSG 016			
18:00		PWR TRANSFER Transfer 3 PWRs to ISS	IVA SUPPORT EVA 3	BATTERY E/6 R&R EXERCISE CONSTRAINT	
19:00		MEAL		BATTERY F R&R EXERCISE CONSTRAINT	
				INSTALL TEMP STOWED BATTERY ON PALLET EXERCISE CONSTRAINT	
20:00		FILTER CLEANING (IFM, SCHEDULED MAINTENANCE) Inspect filters and clean as necessary		P6 CLEANUP EXERCISE CONSTRAINT	

STS-132 FD (08)

REPLANNED

GMT Date 05/21 (141) | W | TDRS E | Z | D/N | DORB | ORB | MET Day 006 | STS ATI

MS2 GOOD

- 16:00: EVA SYSTEMS: CREWLOCK DEPRESS/REPRESS CUE CARD
- EVA SYSTEMS: CREWLOCK POST DEPRESS (CC)
- EGRESS
- SETUP
- 17:00: P4/P5 NH3 JUMPER INSTALL
- EXERCISE CONSTRAINT
- BATTERY 5 R&R
- EXERCISE CONSTRAINT
- 18:00: BATTERY E/6 R&R
- EXERCISE CONSTRAINT
- 19:00: BATTERY F R&R
- EXERCISE CONSTRAINT
- INSTALL TEMP STOWED BATTERY ON PALLET
- EXERCISE CONSTRAINT
- 20:00: P6 CLEANUP
- EXERCISE CONSTRAINT

MS3 BOWEN

- EVA SYSTEMS: CREWLOCK DEPRESS/REPRESS CUE CARD
- EVA SYSTEMS: CREWLOCK POST DEPRESS (CC)
- EVA SYSTEMS: 1.605 BSA BATTERY RCHRG TERM
  Ref: 132 BATTERY RECHRG PLAN CC
  Install charged battery in EMU 3004
  per STS-132 CONSUMABLES TRACKING CC
- P/TV07 EVA (PHOTO/TV, SCENES) OPS
- MEAL
- P/TV07 EVA (PHOTO/TV, SCENES) OPS

MS4 SELLERS

- ROBO: 3.301 EVA3 SUPPORT Steps 1-4
- ROBO: 3.301 EVA3 SUPPORT Steps 5-8

NOTES

- **NO UNISOL EXERCISE** [P6 BATT R&R & NH3 JMPR INSTALL]

STS-132 FD (08)

REPLANNED

GMT Date 05/21 (141) | W | TDRSE | Z | D/N | DORB | ORB | MET Day 006 | STS ATI | CDR HAM | PLT ANTONELLI | MS1 REISMAN | NOTES

Time scale: 15:00, 16:00, 17:00, 18:00

Day 006: 20:00, 21:00, 22:00, 23:00, 00:00

Orbit: 5 109, 6 110, 7 111, 8

STS ATI: BIAS-XLV-ZVV

CDR HAM

FILTER CLEANING
(IFM, SCHEDULED MAINTENANCE)
Inspect filters and clean as necessary

SHUTTLE/ISS H2O CNTR FILL
(ORB OPS, ECLS) Init Fill #2
Ref. MSG 016

TRANSFER OPS
Ref. Middeck Transfer List & MSG 069

SHUTTLE/ISS H2O CNTR FILL (ORB OPS, ECLS)
Perform FILL TERMINATION

CWC TRANSFER
Transfer 1 CWC to ISS

TRANSFER OPS
Ref. Middeck Transfer List & MSG 069

EVA SYSTEMS: PRE REPRESS (CC)

EVA SYSTEMS: CREWLOCK REPRESS (CC)

EVA SYSTEMS: 1.240 POST EVA (With H2O)
Steps 37,39 & 68 not req'd
MCC will perform Steps 43 & 67

Ref: STS-132 CONSUMABLES CC

PLT ANTONELLI

IVA SUPPORT EVA 3

TRANSFER OPS
Ref. Middeck Transfer List & MSG 069

TRANSFER TAGUP
Coordinate with transfer counterpart

MS1 REISMAN

P6 CLEANUP
EXERCISE CONSTRAINT

EOPT INPUT DRIVE SPDM MLI

RETRIEVE PDGF

GET AHEADS

EVA 3 CLEANUP AND INGRESS

EVA SYSTEMS: PRE REPRESS (CC)

EVA SYSTEMS: CREWLOCK REPRESS (CC)

EVA SYSTEMS: 1.240 POST EVA (With H2O)
Steps 37,39 & 68 not req'd
MCC will perform Steps 43 & 67

Ref: STS-132 CONSUMABLES CC

NOTES

NO UNISOL EXERCISE

[P6 BATT R&R & NH3 JMPR INSTALL]

STS-132 FD (08)

REPLANNED

GMT Date 05/21 (141) | W | TDRSE | Z | D/N | DORB | ORB | MET Day 006 | STS ATI

MS2 GOOD | MS3 BOWEN | MS4 SELLERS | NOTES

20:00 | 21:00 | 22:00 | 23:00 | 00:00

15:00 | 16:00 | 17:00 | 18:00

5 | 109

6 | 110

7 | 111

8

BIAS - XLV - ZVV

P6 CLEANUP
EXERCISE CONSTRAINT

RETRIEVE PDGF

GET AHEADS

EVA 3 CLEANUP AND INGRESS

EVA SYSTEMS: PRE REPRESS (CC)
EVA SYSTEMS: CREWLOCK REPRESS (CC)
EVA SYSTEMS: 1.240 POST EVA (With H2O)
Steps 37,39 & 68 not req'd
MCC will perform Steps 43 & 67

Ref: STS-132 CONSUMABLES CC

P/TV07 EVA
(PHOTO/TV, SCENES) OPS

EVA SYSTEMS: PRE REPRESS (CC)
EVA SYSTEMS: CREWLOCK REPRESS (CC)
EVA SYSTEMS: 1.240 POST EVA (With H2O)
Steps 37,39 & 68 not req'd
MCC will perform Steps 43 & 67

Ref: STS-132 CONSUMABLES CC

ROBO: 3.301 EVA3 SUPPORT
Steps 5-8

ROBO: 2.301 ICC RETURN TO POA
Steps 1-5

ROBO: 2.301 ICC RETURN TO POA
Steps 6-8

GLACIER STATUS CHECK (Cue Card)
CGBA STATUS CHECK (Cue Card)

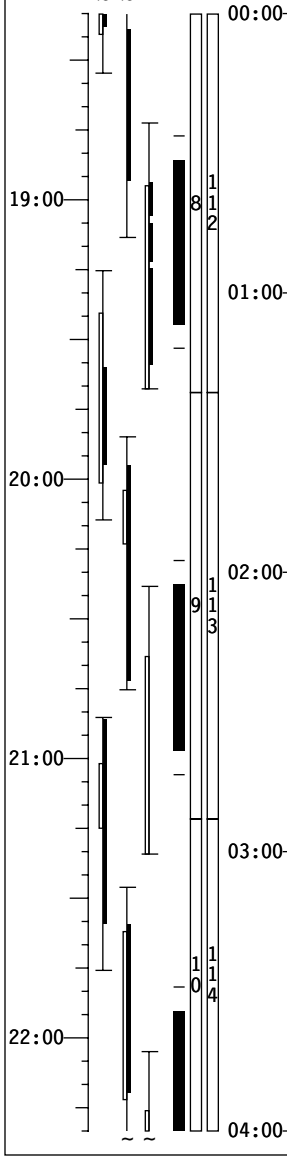
NO UNISOL EXERCISE
[P6 BATT R&R & NH3 JMPR INSTALL]

FLT PLN/132/FLIGHT

STS-132 FD (08)

REPLANNED

GMT Date 05/21 (141) | W | TDRSE | Z | D/N | DORB | ORB | MET Day 007 | STS ATI | CDR HAM | PLT ANTONELLI | MS1 REISMAN | NOTES



00:00 – 01:00 – 02:00 – 03:00 – 04:00

BIAS-XLV-ZVV

CDR HAM

EVA SYSTEMS: 1.240 POST EVA (With H2O)
Steps 37,39 & 68 not req'd
MCC will perform Steps 43 & 67

Ref: STS-132 CONSUMABLES CC

MYCO BODY SAMPLE CLLCT (ASSY OPS, P/L)
Review Proc & Ref. MSG 070

PRE-SLEEP ACTIVITY
(ORB OPS, CREW SYS)
Air Quality Report

EVA TAGUP
Private Conference via S/G 2

PRE-SLEEP ACTIVITY
(ORB OPS, CREW SYS)
Air Quality Report

PRIVATE MEDICAL CONFERENCE
L9 PAYLOAD STATION AUDIO A/G (two)-OFF
Perform via A/G2

PRE-SLEEP ACTIVITY
(ORB OPS, CREW SYS)

SLEEP

PLT ANTONELLI

TRANSFER TAGUP
Coordinate with transfer counterpart

PRE-SLEEP ACTIVITY
(ORB OPS, CREW SYS)

EVA TAGUP
Private Conference via S/G 2

PRE-SLEEP ACTIVITY (ORB OPS, CREW SYS)

TRANSFER BRIEF
Call down status to MCC

PRE-SLEEP ACTIVITY
(ORB OPS, CREW SYS)

SLEEP

MS1 REISMAN

EVA SYSTEMS: 1.240 POST EVA (With H2O)
Steps 37,39 & 68 not req'd
MCC will perform Steps 43 & 67

Ref: STS-132 CONSUMABLES CC

MYCO BODY SAMPLE CLLCT (ASSY OPS, P/L)
Review Proc & Ref. MSG 070

PRE-SLEEP ACTIVITY
(ORB OPS, CREW SYS)

EVA TAGUP
Private Conference via S/G 2

PRE-SLEEP ACTIVITY
(ORB OPS, CREW SYS)

SLEEP

WAKE UP AT 7/11:00

STS-132 FD (08)

REPLANNED

GMT Date 05/21 (141) | W | TDRS E | Z | D/N | DORB 8 9 10 | DORB 112 113 114 | MET Day 007 | STS ATI

MS2 GOOD

EVA SYSTEMS: 1.240 POST EVA (With H20)
Steps 37,39 & 68 not req'd
MCC will perform Steps 43 & 67

Ref: STS-132 CONSUMABLES CC

PRE-SLEEP ACTIVITY
(ORB OPS, CREW SYS)

EVA TAGUP
Private Conference via S/G 2

PRE-SLEEP ACTIVITY
(ORB OPS, CREW SYS)

SLEEP

MS3 BOWEN

EVA SYSTEMS: 1.240 POST EVA (With H20)
Steps 37,39 & 68 not req'd
MCC will perform Steps 43 & 67

Ref: STS-132 CONSUMABLES CC

PRE-SLEEP ACTIVITY
(ORB OPS, CREW SYS)

EVA TAGUP
Private Conference via S/G 2

PRE-SLEEP ACTIVITY
(ORB OPS, CREW SYS)

SLEEP

MS4 SELLERS

PRE-SLEEP ACTIVITY
(ORB OPS, CREW SYS)

EVA TAGUP
Private Conference via S/G 2

PRE-SLEEP ACTIVITY
(ORB OPS, CREW SYS)

SLEEP

NOTES

WAKE UP AT 7/11:00

Looking forward to watching Bueno & Garrett on EVA 3. Best of luck !

YOUR CURRENT ORBIT IS: 191 X 183 NM

NOTAMS - (TWO CHANGES: DELETED DOV, ADDED YHZ)

EDW -	EDW 22L/04R IN USE. EDT 22R/04L CLOSED FOR CONSTRUCTION.
EDW -	LAKEBED RWYS 15/33 GREEN. 18L RED.
NOR -	LAKEBED RWYS GREEN.
NTU -	RWY 05R/23L CLSD.
FOK -	CLOSED.
FMH -	RWY 23 APCH LTS OTS.
EDF -	TACAN EDF81 OTS.
YHZ -	TACAN UAW38 OTS 1100 - 2100Z.
YYT -	TACAN UYT23 AZIMUTH OTS.
AMB -	RWY 15/33 REQUIRES 30MIN PN TO CLEAR WIP.
PTN -	CLSD.
IKF -	NOT USABLE. NO AGREEMENT.
BEN -	NOT RECOMMENDED/NOT SUPPORTED

NEXT 2 PLS OPPORTUNITIES:

KSC15	ORB109 – 6/20:07	FEW030	7	080/07P10
KSC15	ORB124 – 7/18:57	SCT030	7	060/08P13

OMS TANK FAIL CAPABILITY:

L or R OMS FAILS: NO

LEAKING OMS PRPLT BURN:

L or R OMS LEAK: ALWAYS BURN RETROGRADE

OMS QUANTITIES(%)

L OMS	OX = 36.77	R OMS	OX = 37.23
	FU = 36.79		FU = 36.89

FOR CURRENT QTYS, SUBTRACT INCN’T COUNTER

END OF PAGE 1 OF 2, MSG 067

DELTA V AVAILABLE:

OMS	391 FPS
ARCS (TOTAL ABOVE QTY1)	40 FPS
TOTAL IN THE AFT	431 FPS
ARCS (TOTAL ABOVE QTY2)	73 FPS
FRCS (ABOVE QTY 1)	37 FPS
AFT QTY 1	84 %
AFT QTY 2	46 %

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

END OF PAGE 2 OF 2, MSG 067

STS-132/ULF4 FD07 - MMT Summary

The MMT met today to review the orbiter systems and mission progress.

Atlantis continues to perform well with no new anomalies reported since the MMT yesterday.

The ISSP is looking forward to EVA 3 and completion of both planned and get ahead tasks.

The MMT decided that no additional TPS inspection is required prior to undock. As always, the MMT will make a final assessment of the TPS acceptability for entry after Late Inspection. In the mean time, the TPS is considered safe for Entry.

Good morning Ken and Tony,

You are 76% complete with transfer and still ahead of schedule.

The ground team is looking into returning the Cupola Corner Panels and ISS Trash Foam; however there are a handful of candidate items we're also looking into. Also – some of our return locations are mass constrained, so unfortunately we can't use all of the open volume.

The Transfer List Excel file, FD08_Transfer_List_STS132.xls, is located on the KFX machine in **C:\OCA-up\transfer.**

For ISS, the Transfer List Excel file, FD08_Transfer_List_STS132.xls, is located in **K:\OCA-up\transfer.**

Transfer Questions/Comments

1.) Can you please confirm that Soichi transferred the water sampling bags after his CWQMK activities yesterday? These were items 734 and 735.

2.) Now that all of the CWC-I fills are complete, any additional sample bags (item 15.6) can be transferred from the sample/purge kit at your leisure.

3.) Can you tell us if any of the middeck lockers that you've closed out have open volume? If so, can you estimate how much open volume there is?

FD08 Transfer Choreography:

- Soichi: Transfer return MCD after MCD/T+2 activity, if there is growth present (item 725)
- MDDK XFER:
    - Continue return transfers

Change Pages:
Please incorporate changes as follows:

In the Transfer List **RETURN** tab
Replace the following pages:
Return Page – 9

FD09 Transfer Choreography:

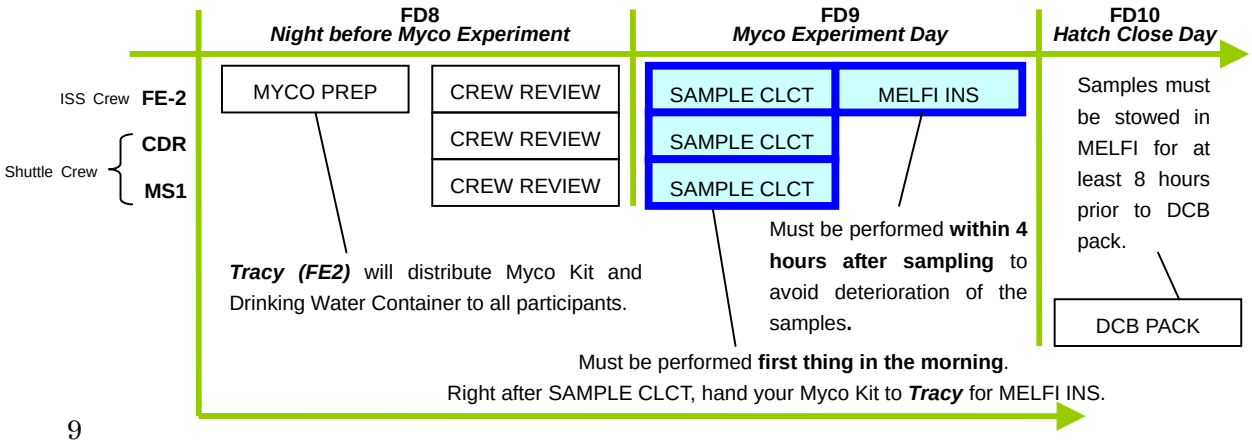
- Mike and Steve: Transfer EVA h/w to Shuttle per EVA XFER TO STS activity (Items 701, 714-719, and 737)
- Steve: Transfer samples per MLF/GLC SAMPLE XFER (Item 726)
- MDDK XFER:
    - Continue return transfers

Let us know if you have any questions!
- The ULF4 Transfer Team

Big Picture for Myco Experiment during ULF4

1. Timeline for Myco Experiment

- Myco Experiment will be performed within 60 hours before hatch close.
- Myco SAMPLE CLCT and the following MELFI INS should be time critical tasks. (Blue marked in the Fig. 1)
- Joint operations between Shuttle crew and ISS crew are very important.



MYCO PREP : Preparation of Myco Kit and *Drinking Water Container*1*.
CREW REVIEW : Procedure review. *Review scientific constraints of the experiment.*
ISS crew procedure is on IPV. STS crew procedure is in the AOP.
SAMPLE CLCT : Collection of body samples. *Hand your Myco Kit to **Tracy (FE-2)**.*
MELFI INS : Insertion of all Myco Kit into MELFI.
DCB PACK : Packing all Myco Kit into DCB.
**1 Drinking Water Container is for rinsing mouth before pharynx sample collection.*

Fig. 1 Big picture for Myco Experiment Operations Flow in ULF4

2. Precautions for Myco Experiment

- The sample collection must be ***performed first thing in the morning*** because we need samples from the body in the "just-wake-up" condition.
- Please do NOT eat, drink (see exception below), wash face, brush teeth, or gargling after wake up to avoid science loss.
  - ✧ A sip of water is OK.

ISS Configuration

MT @ WS8 CETA Port/Stbd
PALLET on SSRMS at P6
SSRMS on PDGF 3

Safety Tether config (STP = safety tether pack, 55+85)

EV1 ST pack (55+85) **85-ft** anchor at P1 HR 3651 **FWD** D-ring
EV2 ST pack (55+85) **85-ft** anchor at P1 HR 3650 **AFT** D-ring

NOTE: Prior to use, inspect the following hardware:
- ❑ Use RED RETs only
- ❑ RET cords for fraying
- ❑ Inspect Load Alleviating Straps and D-ring Extenders; ref CREW TETHER INSPECTIONS, ISS EVA Tasks Checklist 2.230.105:
  1. MMOD/general damage
  2. Discoloration
  3. Tack Stitching
  4. Red Band
- ❑ ISS Trash Bag: Bristle deformation/damage, after having stowed tools in trash bag
- ❑ Shuttle Trash Bag: Inspect frame for damage
- ❑ Inspect MWS End Effector Attachment Screws

Tether counts:	used	total available
RET sm-sm -381	16	16
RET lg-sm -385	4	8
RET sm-sm pp -383	4	5
AET sm-sm	7 (2-Shuttle)	10
AET lg-sm	2	2
Fish Stringer	2	5

EV1 – Good

MWS √Tabs UP
- ☐☐ 2 – Wire ties as tether loops
- ☐☐ RET w/PIP Pin
  - ☐☐ ~~5/8 x 7.8 in ext (stow in trash bag)~~
- ☐☐ RET sm-sm
- ☐■ ISS Trash Bag
- ☐☐ AET
- ☐☐ Swing Arm (right side)
  - ☐☐ RET sm-sm
    - ☐☐ PGT s/n _____ (√MTL 30.5)
      - ☐■ 6-in ext
      - ■☐ 2-in ext
- ☐☐ BRT (left side) √Tab UP
  - ☐☐ RET sm-sm
    - ☐■ Rnd Scoop
      - ☐■ PUMAA
        - ☐■ RET sm-sm
  - ☐☐ 2 – short wire ties

EMU Right D-ring
- ☐☐ 55-ft RED hook, √locked
- ☐☐ D-ring Extender
  - ☐☐ Waist Tether, √locked

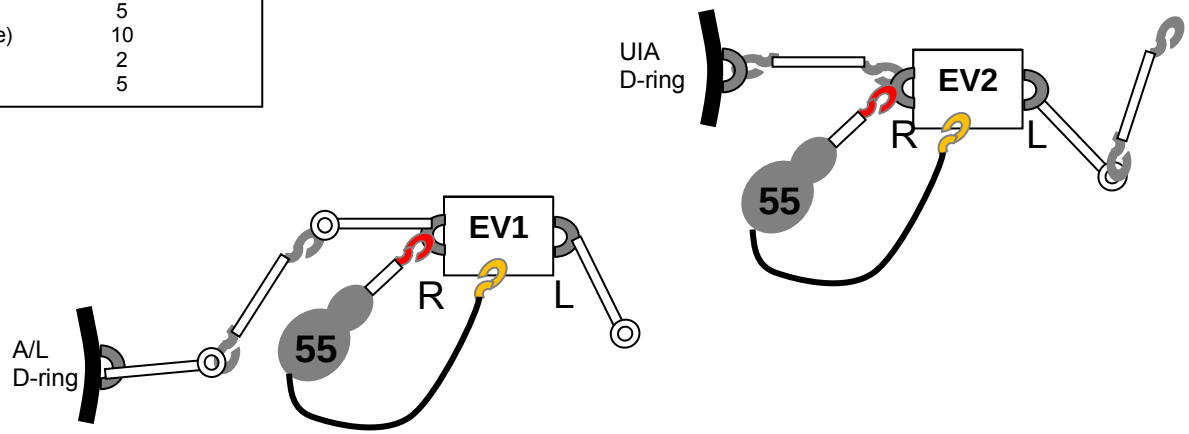
EMU Left D-ring
- ☐☐ D-ring Extender

EV2 – Reisman

MWS √Tabs UP
- ☐☐ 4 – Wire ties as tether loops
- ☐☐ Shuttle Style Trash Bag
- ☐☐ RET w/PIP Pin
- ☐☐ RET w/PIP Pin
- ☐☐ 2 – AET
- ☐☐ Swing Arm (right side)
  - ☐☐ RET sm-sm
    - ☐☐ PGT s/n _____ (√MTL 30.5)
      - ☐☐ 6-in ext
  - ☐☐ Camera w/bracket
- ☐☐ BRT (left side) √Tab UP
  - ☐☐ RET sm-sm
  - ☐☐ 2 – short wire ties

EMU Right D-ring
- ☐☐ 55-ft RED hook, √locked
- ☐☐ Waist Tether, √locked

EMU Left D-ring
- ☐☐ D-ring Extender
  - ☐☐ Waist Tether, √locked



P6 HR 5329

- ■ ☐ **C/L Bag – Truss (T)**
  - Integral RETs
    - ☐ ☐ Ratchet wrench w/o palm wheel
      - ☐ ☐ 2-in ext
    - ■ ☐ MUT EE
    - ■ ☐ MUT EE
    - ■ ☐ ISS Trash Bag
      - ■ ☐ Gap spanners (4)
  - Internal D-rings
    - ■ ☐ RET sm-sm
      - ■ ☐ Ballstack
        - ■ ☐ AET
    - ☐ ☐ RET sm-sm
      - ☐ ☐ ISS Trash Bag
        - ☐ ☐ Tie Wrap Tail, Tether pt
        - ☐ ☐ EVA Scissors
  - External D-rings
    - ☐ ☐ AET lg-sm
    - ■ ☐ AET sm-sm

P6 HR 5328

- ■ ☐ **C/L Bag – Pallet (P)**
  - Integral RETs
    - ■ ☐ Square Scoop
    - ■ ☐ Square Scoop
    - ■ ☐ Square Scoop
    - ■ ☐ Square Scoop
  - Internal D-rings
    - ☐ ☐ RET sm-sm
      - ☐ ☐ Tie Wrap Assembly
    - ☐ ☐ RET sm-sm
      - ☐ ☐ Tie Wrap Assembly
    - ☐ ☐ RET sm-sm
      - ☐ ☐ Sq Torque Multiplier
        - ☐ ☐ 7/16-in rec socket
    - ☐ ☐ RET sm-sm
      - ☐ ☐ socket caddy
        - ☐ ■ 2-in ext
        - ■ ☐ 6-in ext
    - ☐ ☐ RET sm-sm
      - ☐ ☐ Needle Nose Pliers
  - External D-rings
    - ☐ ☐ AET Lg-sm
- ☐ ☐ ~~RET sm-sm~~

P6 IEA Battery

- ☐ ■ Square Scoop
- ☐ ■ Square Scoop

P6 HR 5329 or 5355

- ☐ ■ MUT EE
  - ☐ ■ Ballstack
    - ☐ ■ RET sm-sm
    - ☐ ■ AET (attached to HR)
    - ☐ ■ MUT EE
      - ☐ ■ P6 Battery
        - ☐ ■ Square Scoop
        - ☐ ■ Square Scoop
          - ☐ ■ AET (H1 Scoop to HR 5338)

Crewlock

- ☐ ☐ Spare safety tether pack
- ☐ ☐ RET Lg-sm (A/L stowage)
  - ■ ☐ Rnd Scoop
    - ■ ☐ PUMAA
      - ■ ☐ RET sm-sm
      - ■ ☐ PDGF
- ☐ ☐ RET Lg-sm (A/L stowage)
  - ■ ☐ **C/L Bag – Truss**
  - ■ ☐ **C/L Bag – Pallet**
- ☐ ☐ RET Lg-sm (A/L stowage)
  - ☐ ☐ Camera w/bracket
- ☐ ☐ RET Lg-sm (A/L stowage)
  - ☐ ☐ **C/L Bag – Tool Stow**

Staging Bag

- ☐ ☐ Fish Stringer #1
  - ☐ ☐ Wire Tie Caddy (hook #1)
    - ☐ ☐ 9 wire ties
  - ☐ ☐ Velcro/Tape Caddy (hook #2)
  - ☐ ☐ PGT (hook #3)s/n ____
    - ☐ ☐ PGT Battery s/n ____
  - ☐ ☐ ~~Vise Grips (hook #4)~~
  - ☐ ☐ Ratchet Wrench (hook #5)
    - ☐ ☐ 6-in (wobble) ext
  - ☐ ☐ 3 – Long duration tie down tethers, hooked together (hook #6)
  - ☐ ☐ WIF Adapter (hook #7)
- ☐ ☐ Fish Stringer #2
  - ☐ ☐ ERAD (hook #1) s/n _____
  - ☐ ☐ Connector Cleaner Tool Kit (hook #2)
  - ☐ ☐ ~~Pin Straightener Assy (hook #3)~~
  - ☐ ☐ ~~Probe (hook #4)~~
  - ☐ ☐ Prybar (hook #5)
  - ☐ ☐ ~~Needle nose Pliers (hook #6)~~
  - ☐ ☐ ~~Cheater bar (hook #7)~~
  - ☐ ☐ MWS Key Strap Assy (on wire tie, to strap)

IV Bag

- ☐ ☐ Ammonia Contamination Cue Card
- ☐ ☐ 2 – Towels
- ☐ ☐ Contamination Detection Kit
- ☐ ☐ RET (sm-sm) (Black)
  - ☐ ☐ 2 – DCM Plug (SAFER Hardmount)
- ☐ ☐ RET (sm-sm) (Black)
  - ☐ ☐ 2 – GP Caddy
    - ☐ ☐ 2 – Thermal Mitten (pair)
- ☐ ☐ RET (sm-sm) (Black)
  - ☐ ☐ Socket Caddy
    - ☐ ☐ 1/2-in (wobble) Socket – 8 ext
      - ☐ ☐ 7/16-in (wobble) Socket – 6 ext

Tool Stow C/L Bag:

Integral RETs

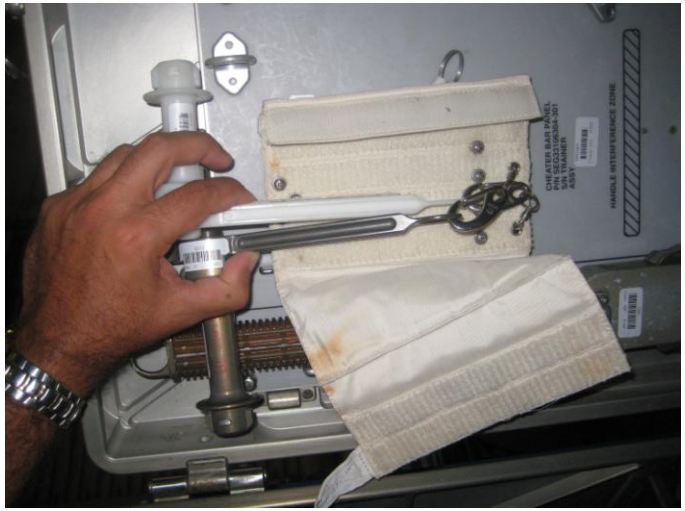
- ☐■ Pin Straightener [**Staging bag, Fish Stinger 2 - hook 3]**
- ☐☐ AET
  - ☐■ Short MMOD T-handle Tool **[A/L1O0 1.0 CTB s/n 1161: EVA Miscellaneous Tools #2]**
  - ☐■ Short MMOD T-handle Tool **[A/L1O0 1.0 CTB s/n 1161: EVA Miscellaneous Tools #2]**
- ☐☐ AET
  - ☐■ Vise Grips **[Staging bag, Fish Stinger 1 - hook 4]**
  - ☐■ Probe [**Staging bag, Fish Stinger 2 - hook 4]**
- ☐■ Ratchet Wrench, w/ palm wheel **[A/L1O0;1.0 CTB s/n 1161: EVA Miscellaneous Tools #2]**

☐☐ RET
- ☐☐ Socket Caddy
  - ☐■ 12” Wobble Socket **[A/L1O0; 1.0 CTB s/n 1161: EVA Miscellaneous Tools #2]**
  - ☐■ RAD **[A/L1O0; 1.0 CTB s/n 1161: EVA Miscellaneous Tools #2]**

☐☐ RET w/ PIP Pin
  - ☐■ 18” Wobble Socket **[A/L1O0; 1.0 CTB s/n 1161: EVA Miscellaneous Tools #2]**

☐☐ RET
- ☐■ Cheater Bar **[Staging bag, Fish Stinger 2 - hook 7]**

☐☐ RET
- ☐■ GP Caddy **[A/L1O0;1.0 CTB s/n 1013: MWS Hardware]**
  - ☐■ Cannon Connector Tool **[Done Mesh Bag]**
  - ☐■ Cannon Connector Tool **[Done Mesh Bag]**
- ■☐ Square Torque Multiplier Board (Will retrieve from Z1 stbd toolbox)



C/L Bag – Pallet

Integral RETs

- ☐ Square Scoop
- ☐ Square Scoop
- ☐ Square Scoop
- ☐ Square Scoop

Internal D-rings

- ☐ RET sm-sm
  - ☐ Tie Wrap Assembly
- ☐ RET sm-sm
  - ☐ Tie Wrap Assembly
- ☐ RET sm-sm
  - ☐ Sq Torque Multiplier w/7/16 rec socket
- ☐ RET sm-sm
  - ☐ socket caddy
    - ☐ 6-in ext
- ☐ RET sm-sm
  - ☐ Needle Nose Pliers

External D-rings

- ☐ AET Lg-sm
- ☐ ~~RET sm-sm~~

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C/L Bag – Truss

Integral RETs

- ☐ Ratchet wrench w/o palm wheel
  - ☐☐ 2-in ext
- ☐ MUT EE
- ☐ MUT EE
- ☐ ISS Trash Bag
  - ☐ Gap spanners (4)

Internal D-rings

- ☐ RET sm-sm
  - ☐ Ballstack
    - ☐ AET
- ☐ RET sm-sm
  - ☐ ISS Trash Bag
    - ☐ Tie Wrap Tail, Tether pt
    - ☐ EVA Scissors

External D-rings

- ☐ AET lg-sm
- ☐ AET sm-sm