STS-116 / 12A.1

FD 02 Execute Package

MSG	Page(s)	Title
009	1 - 2	FD02 Summary Timeline **(pdf)**
003B	3 - 13	FD02 Flight Plan Revision **(pdf)**
004A	14 - 15	FD02 Mission Summary **(pdf)**
006	16 - 18	Port Upper Carrier Tile ITVC Survey **(pdf)**
007A	19	FD02 Water Summary Message **(pdf)**
008A	20 - 76	FD02 Transfer Message **(pdf)**
010	77	FD02 SpaceHab Viewport Violations **(pdf)**

Approved by FAO: *Terry Clancy*

Last Updated: Dec 10 2006 7:10PM GMT
JEDI *(**J**oint **E**xecute package **D**evelopment and **I**ntegration), v2.04.0003*

12/10/06 04:36:38 **REPLANNED**

GMT 12/10/06 (344) 14 15 16 17 18 19 20 21 22 23 12/11 01

MET Day 000 12 13 14 15 16 17 18 19 20 21 22 23 001/00

STS-116

FD02

CDR POLANSKY	SLEEP	POST SLEEP	NC2Δ OMS BURN	OBSS UNBERTH	FLAT FIELD	MNVR STBD	OBSS STBD SURVEY	MNVR NOSE	NOSE CAP SURVEY	MEAL	MNEVAL	OBSS PORT SURVEY	MNVR	BERTH
PLT OEFELEIN	SLEEP	SDBI POST SLEEP	LOAD DAPS	OMS BURN	MNVR FLTFLD	CRYO O2 SNSR CK	FESTI	FLAT FIELD	OBSS STBD SURVEY	NOSE CAP SURVEY	MEAL	OBSS PORT SURVEY	♣
MS1 PATRICK	SLEEP	SDBI POST SLEEP		OBSS UNBERTH	FLAT FIELD	OBSS STBD SURVEY	NOSE CAP SURVEY	MEAL	OBSS PORT SURVEY	BERTH			
MS2 CURBEAM	SLEEP	POST SLEEP		P/TV01 VIDEO SETUP	EMU C/O PREP	EMU C/O	ETVCG ASSBLY	C/L CAMR INST	ODS RING EXT	MEAL	EMU & EVA XFER PREP		
MS3 FUGLESANG	SLEEP	POST SLEEP	PGSC SETUP (PART II)	TPS IMAGERY	DM/AL P/TV01 VIDEO SETUP	EMU C/O PREP	EMU C/O	ETVCG ASSBLY	C/L CAMR INST	ODS RING EXT	MEAL	EMU & EVA XFER PREP	
MS4 HIGGINBOTHAM	SLEEP	POST SLEEP - SHAB		TRANSFER PREP		ERG SETUP	EXERCISE	MEAL					
MS5 WILLIAMS	SLEEP	POST SLEEP	PGSC SETUP (PART II)		TRANSFER PREP	EMU C/O	ERG SETUP	MEAL	H2O CWC S/U				

DAY/NIGHT

ORBIT 9 10 11 12 13 14 15 16

TDRS W -171 E -46 Z -275

ORB ATT -ZLV -XVV | NC2 | BIAS -ZLV +XVV | BIAS +YSI | BIAS +XSI | BIAS -YSI

NOTES

♣EMU & EVA

GMT 12/11/06 (345) 02 03 04 05 06 07 08 09 10 11 12 13

MET Day 001 001/00 01 02 03 04 05 06 07 08 09 10 11 12

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FD02

CDR POLANSKY	BERTH	UPPER SURFACE SURVEY				O2 REPRESS		IMU	PRE SLEEP	NC3Δ RCS BURN	-ZLV	FUT MVR	PRE	SLEEP	PMC A/G	PRE SLEEP	SLEEP						
PLT OEFELEIN	EMU & EVA XFER PREP		FESLT	WSB*	FC*	HATCH RCFG	HATCH RCFG	MNVR	PRE SLEEP		RCS BURN	FCMS OPS		PRE SLEEP			SLEEP						
MS1 PATRICK	BERTH	UPPER SURFACE SURVEY					SURVEY PLBK		OMS POD SURV	PRE SLEEP							SLEEP						
MS2 CURBEAM	EMU & EVA XFER PREP			EXERCISE				OIU ACT	PRE SLEEP		OIU*	PRE SLEEP					SLEEP						
MS3 FUGLESANG	EMU & EVA XFER PREP				EXERCISE					PRE SLEEP							SLEEP						
MS4 HIGGINBOTHAM		FILTER CLEANING				TRANSFER	UPDATE	WLES	HHL C/O	RNDZ TOOLS C/O		PRE SLEEP - SHAB					SLEEP						
MS5 WILLIAMS										PRE SLEEP							SLEEP						

DAY/NIGHT

ORBIT 17 18 19 20 21 22 23 24

TDRS W -171 E -46 Z -275

ORB ATT BIAS -ZLV +XVV -ZLV -XVV NC3 -ZLV -XVV

*MANUAL PURGE
*CNTLR SWAP
*DEACT

NOTES

MSG INDEX

MSG NO.	TITLE
003	FD02 Flight Plan Revision
004	FD02 Mission Summary
006	Port Upper Carrier Tile ITVC Survey
007	FD02 Water Summary Message
008	FD02 Transfer Message (14-0528)
009	FD02 Summary Timeline
010	SpaceHab Viewport Violations

1. RCS JET REPRIORITIZATION

Per pre-flight agreements for Tin Whisker mitigation please perform the following jet reprioritizations.

GNC 23 RCS

ITEM 1 EXEC (Fwd Page)
ITEM 24 EXEC - twice (Places F3D in last priority)
ITEM 28 EXEC - twice (Places F4D in last priority)
ITEM 4+3 EXEC (Increase the Pri Jet Fail Limit)

2. LOMS TO RCS INTERCONNECT

During Post Sleep, please set-up a LOMS to RCS Interconnect.

OPCL pg 8-3 I'CNCT: L OMS to RCS

3. RHC 10V FAILURE

During EE checkout it was determined that the 10v release contact in the RHC has failed off. This results in loss of EE auto release capability. Reference FIW PDRS-01. We suggest that you update the starred blocks in procedures P5 Ungrapple (FS 1-12), OBSS Berth (FS 8-14) and OBSS Handoff From SRMS to SSRMS (FS 8-23) to note that the C/W 'RELEASE' is expected during EE RELEASE. After operations are complete, this light can be cleared by commanding EE CAPTURE on the RHC with EE mode OFF.

4. SPACEHAB VIEWPORT VIOLATION

MSG 010 contains the SPACEHAB viewport violation for today. Please post this next to the viewport. There is no callout in the FLIGHT PLAN referencing this time.

5. FES TROUBLESHOOTING

During crew sleep, at approximately MET 0/09:45, FES PRI B did not come out of standby as expected. In post sleep we will ask for a cycle of FES PRI B for troubleshooting. Depending on temperatures, we may be initiating the FES Dump (currently scheduled for MET 0/17:45 using FES PRI A) early using FES PRI B to gain more information.

6. REPLACE PAGES 3-08 THROUGH 3-17.

STS-116 FD02

REPLANNED

GMT Date 12/10 (344) | TDRS W E | Z | ORB 9 10 11 | MET Day 000 | STS ATI | CDR Polansky | PLT Oefelein | MS1 Patrick | Notes

12:00 — 13:00 — 14:00 — 15:00 — 16:00

SLEEP

SLEEP

SLEEP

FD02 EZ ACTIVITES
Check TEPC Status
Hard Reboot PGSCs (Except WVS and RSAD)

-ZLV

-XVV

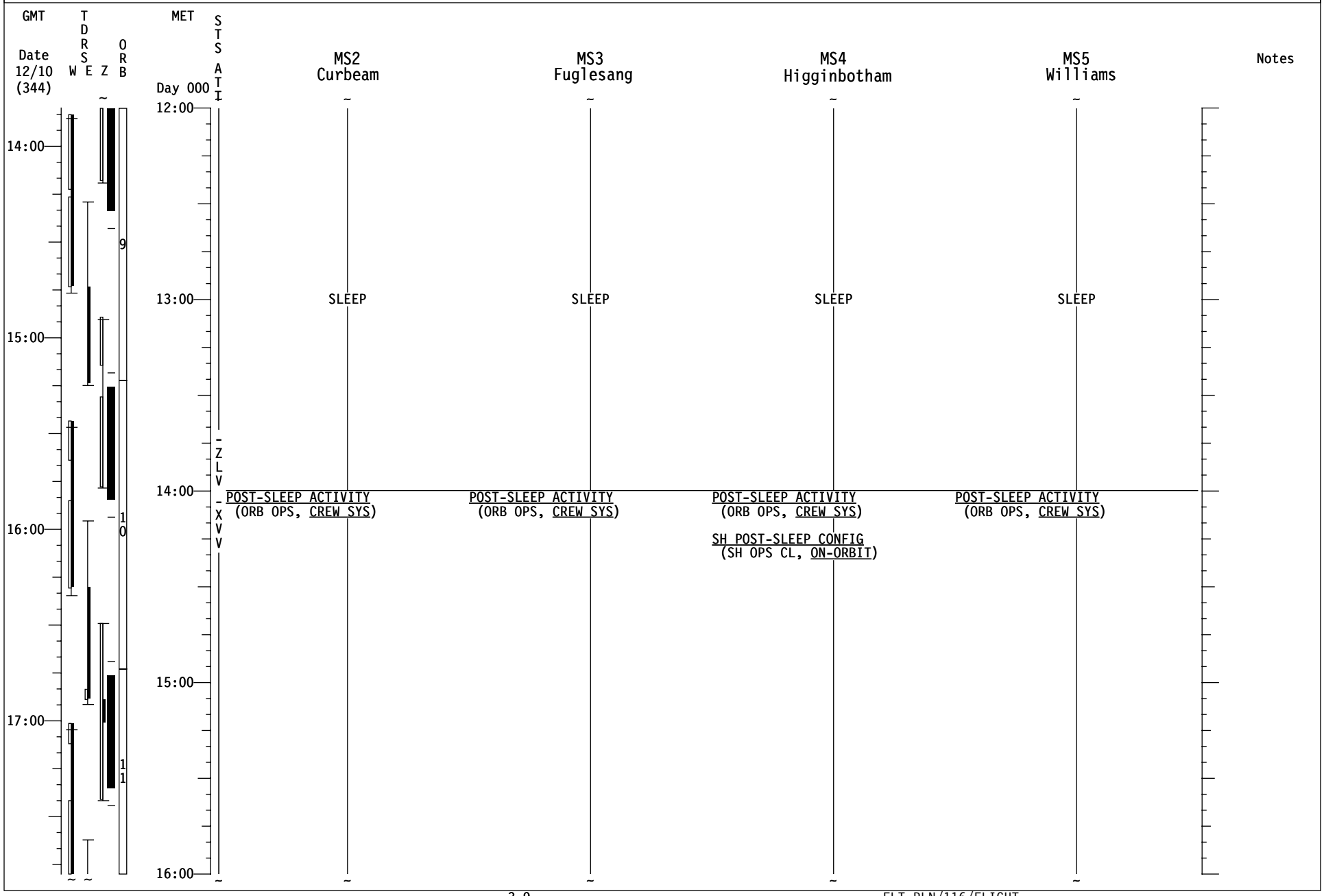
POST-SLEEP ACTIVITY (ORB OPS, CREW SYS)

SALIVA COLL & SLEEP LOG (ORB OPS, SDBI)
POST-SLEEP ACTIVITY (ORB OPS, CREW SYS)

SALIVA COLL & SLEEP LOG (ORB OPS, SDBI)
POST-SLEEP ACTIVITY (ORB OPS, CREW SYS)

STS-116 FD02

REPLANNED



STS-116 FD02

REPLANNED

GMT Date 12/10 (344) | TDRS W E Z | ORB 11 12 13 14 | MET Day 000 | STS ATI

MET	CDR Polansky	PLT Oefelein	MS1 Patrick	Notes
16:00	POST-SLEEP ACTIVITY (ORB OPS, CREW SYS)	POST-SLEEP ACTIVITY (ORB OPS, CREW SYS)	POST-SLEEP ACTIVITY (ORB OPS, CREW SYS)	
		STS-116 DAP A(B) CONFIGS (ORB OPS, DAP TABLE) Load Flight Specific A&B DAPS		
	ON-ORBIT OMS BURN (ORB OPS, OMS)	ON-ORBIT OMS BURN (ORB OPS, OMS)		UPDATE ORBITAL MNVR PAD
NC2	< NC2 TIG (16:56)			
17:00	OBSS UNBERTH (PDRS, OBSS NOM OPS)	MNVR (TRK) BIAS -ZLV +XVV (FLAT FIELD) TG=2 BV=3 OM=140 A14/AUTO/VERN Init TRK	OBSS UNBERTH (PDRS, OBSS NOM OPS)	UPLINK β21 + Box A2 -90<AZ<110 -90<EL<0
		CRYO O2 TK HTR SNSR CK (ORB OPS, EPS)		
BIAS -ZLV +XVV		SUPPLY WATER DUMP USING FES F		F SUPPLY WATER DUMP USING FES (ORB OPS, ECLS) On MCC GO: Step 1 using FES PRI A
18:00	OBSS ITVC/LDRI FLAT FIELDS (PDRS, OBSS NOM OPS)	OBSS ITVC/LDRI FLAT FIELDS (PDRS, OBSS NOM OPS)	OBSS ITVC/LDRI FLAT FIELDS (PDRS, OBSS NOM OPS)	
	MNVR BIAS +YSI (STARBOARD) TG=4 BV=5 P=0 Y=40 OM=66 A14/AUTO/VERN Init TRK	OBSS LDRI RCC SURVEY - STBD (PDRS, OBSS NOM OPS)	OBSS LDRI RCC SURVEY - STBD (PDRS, OBSS NOM OPS)	UPLINK β21 + Box A3 -120<AZ<80 - 90<EL<45
	OBSS LDRI RCC SURVEY - STBD (PDRS, OBSS NOM OPS)			
BIAS +YSI 19:00				
	MNVR BIAS +XSI (NOSE CAP) TG=4 BV=5 P=315 Y=0 OM=120 A14/AUTO/VERN Init TRK			
20:00		OBSS LDRI RCC SURVEY - NOSE CAP (PDRS, OBSS NOM OPS)	OBSS LDRI RCC SURVEY - NOSE CAP (PDRS, OBSS NOM OPS)	UPLINK β21 + Box A4 -36<AZ<70,-48<EL<32

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GMT Date 12/10 (344) | T D R S W E Z | O R B | MET Day 000 | STS ATI

MS2 Curbeam

16:00 POST-SLEEP ACTIVITY (ORB OPS, CREW SYS)

17:00 P/TV01 VIDEO SETUP (PHOTO/TV, SCENES)

18:00 EMU CHECKOUT PREP (EVA, AIRLOCK CONFIG)

19:00 EMU CHECKOUT (EVA, CHECKOUTS) Perform for 2 EMUs In step 70, stow SCOFs in EMU SYS TRANSFER BAG #2

20:00

MS3 Fuglesang

16:00 POST-SLEEP ACTIVITY (ORB OPS, CREW SYS)

PGSC SETUP (PART II) Setup and run Late Update on remaining PGSCs PGSC NETWORK (ORB OPS, PGSC)

17:00 UMBILICAL WELL TPS CAM IMGRY D/L (ORB OPS, PGSC)

P/TV01 VIDEO SETUP (PHOTO/TV, SCENES)

18:00 EMU CHECKOUT PREP (EVA, AIRLOCK CONFIG)

19:00 EMU CHECKOUT (EVA, CHECKOUTS) Perform for 2 EMUs In step 70, stow SCOFs in EMU SYS TRANSFER BAG #2

20:00

MS4 Higginbotham

16:00 POST-SLEEP ACTIVITY (ORB OPS, CREW SYS)

SH POST-SLEEP CONFIG (SH OPS CL, ON-ORBIT)

18:00 TRANSFER PREP REF MDDK Transfer List: Item 4 REF SH Transfer List: Items 137, 150,151,154

MS5 Williams

16:00 POST-SLEEP ACTIVITY (ORB OPS, CREW SYS)

PGSC SETUP (PART II) Setup and run Late Update on remaining PGSCs PGSC NETWORK (ORB OPS, PGSC)

18:00 TRANSFER PREP

19:00 EMU CHECKOUT (EVA, CHECKOUTS) Perform for 2 EMUs In step 70, stow SCOFs in EMU SYS TRANSFER BAG #2

Notes

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REPLANNED

GMT Date 12/10 (344) | TDRS W E Z | ORB 14 15 16 | MET Day 000 | STS ATI

CDR Polansky | PLT Oefelein | MS1 Patrick | Notes

20:00 — 21:00 — 22:00 — 23:00 — 00:00 — 01:00

BIAS +XSI

OBSS LDRI RCC SURVEY - NOSE CAP (PDRS, OBSS NOM OPS)

MEAL

MNVR BIAS -YSI (PORT) [A]

OBSS LDRI RCC SURVEY - PORT (PDRS, OBSS NOM OPS)

BIAS -YSI

[A] MNVR BIAS -YSI (PORT)
TG=4 BV=5 P=0 Y=315 OM=155
A14/AUTO/VERN Init TRK

[B] MNVR BIAS -ZLV +XVV (UPPER SURFACE)
TG=2 BV=3 OM=145
A14/AUTO/VERN Init TRK

MNVR BIAS -ZLV +XVV (UPPER SURFACE) [B]

OBSS BERTH (PDRS, OBSS NOM OPS)

EMU & EVA TRANSFER PREP (EVA, AIRLOCK CONFIG)

UPLINK
β21 +
Box A5
-25<AZ<65
-90<EL<0

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REPLANNED

GMT Date 12/10 (344) | T D R S W E Z | O R B | MET Day 000 | STS ATI

MS2 Curbeam

- 20:00 EMU CHECKOUT (EVA, CHECKOUTS)
- EXTERNAL TV CAM GROUP ASSMBLY (ASSY OPS, S&M) Perform Steps 1-3
- C/L CAMR INSTALL (PHOTO/TV, C/L CAMR)
- DOCKING MECH INITIALIZATION; DOCKING MECH POWERUP; DOCKING RING EXTENSION; DOCKING MECH POWERDOWN (RNDZ, APDS)
- MEAL
- EMU & EVA TRANSFER PREP (EVA, AIRLOCK CONFIG)

MS3 Fuglesang

- EMU CHECKOUT (EVA, CHECKOUTS)
- EXTERNAL TV CAM GROUP ASSMBLY (ASSY OPS, S&M) Perform Steps 1-3
- C/L CAMR INSTALL (PHOTO/TV, C/L CAMR)
- DOCKING MECH INITIALIZATION; DOCKING MECH POWERUP; DOCKING RING EXTENSION; DOCKING MECH POWERDOWN (RNDZ, APDS)
- MEAL
- EMU & EVA TRANSFER PREP (EVA, AIRLOCK CONFIG)

MS4 Higginbotham

- CYCLE ERGOMETER OPS (ORB OPS, CREW SYS) Perform SETUP
- EXERCISE
- MEAL

MS5 Williams

- EMU CHECKOUT (EVA, CHECKOUTS)
- CYCLE ERGOMETER OPS (ORB OPS, CREW SYS) Perform SETUP
- MEAL
- SHUTTLE/ISS H2O CNTR FILL (ORB OPS, ECLS) Perform EQUIP PREP and WATER TRANSFER HOSE PURGE

Notes

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GMT Date 12/11 (345) | TDRS W E Z | ORB | MET Day 001 | STS ATI

CDR Polansky

00:00 OBSS BERTH (PDRS, OBSS NOM OPS)

BIAS -ZLV +XVV

SRMS EE CAM UPPER SURFACE SURVEY (PDRS, OBSS NOM OPS)

01:00 S66 ENVIRONMENT
C5 DIRECT O2 vlv - OP
Repress time is ~20min

When S66 CABIN P = 14.60
C5 DIRECT O2 vlv - CL

-ZLV -XVV

02:00 IMU STAR OF OPPTY ALIGN (ORB OPS, GNC)
PRE-SLEEP ACTIVITY (ORB OPS, CREW SYS)

ON-ORBIT +X RCS BURN (ORB OPS, RCS)

NC3

03:00 < NC3 TIG (03:03)

MNVR (TRK) -ZLV -XVV
TG=2 BV=3 OM=0 A1/AUTO/VERN Init TRK
FUTURE LOADED MNVR -ZLV +YVV (SIMO DUMP)
TG=2 BV=3 OM=270 A1/AUTO/VERN(1/14:00) Init TRK
PRE-SLEEP ACTIVITY (ORB OPS, CREW SYS)

-ZLV -XVV

04:00 06 √UHF MODE - OFF
PRIVATE MEDICAL CONFERENCE

PLT Oefelein

EMU & EVA TRANSFER PREP (EVA, AIRLOCK CONFIG)

SUPPLY WATER DUMP USING FES F
R2 BLR CNTLR/HTR (three) - B
FC PURGE - MANUAL (ORB OPS, EPS)

CONFIG B POD HTRS A
ML86B:C cb MNB EXT AIRLK HTR LN ZN 1,2 (two) - cl
cb MNA EXT AIRLK HTR LN ZN 1,2 (two) - op

MNVR (TRK) -ZLV -XVV
TG=2 BV=3 OM=0
A1/AUTO/VERN Init TRK (01:40)
PRE-SLEEP ACTIVITY (ORB OPS, CREW SYS)

ON-ORBIT +X RCS BURN (ORB OPS, RCS)

FC MONITORING SYS (FCMS) OPS (ORB OPS, EPS)

PRE-SLEEP ACTIVITY (ORB OPS, CREW SYS)

MS1 Patrick

OBSS BERTH (PDRS, OBSS NOM OPS)

SRMS EE CAM UPPER SURFACE SURVEY (PDRS, OBSS NOM OPS)

A A14 RCS/OMS HTRS L POD A-OFF
B-AUTO
R POD A-OFF
B-AUTO

PLAYBACK (DIGITAL) (PHOTO/TV, CUE CARD)
OBSS & EE SURVEYS
KU TDRE (01:53-02:24)

P/TV08 EXTERNAL SURVEY (S/U) (P/TV, SCENES) Step 1
P/TV08 EXTERNAL SURVEY (OPS) (P/TV, SCENES) Item 1

PRE-SLEEP ACTIVITY (ORB OPS, CREW SYS)

√HUM SEPs for H2O Accumulation

Notes

UPLINK
β21 +
Box A6
-134<AZ<67
-65<EL<82

F SUPPLY WATER DUMP USING FES
(ORB OPS, ECLS)
On MCC GO: Step 2
w/FES PRI A reqd

UPLINK
β21 + Mask

STS-116 FD02

REPLANNED

GMT Date 12/11 (345) | TDRS W E Z | ORB | MET Day 001 | STS ATI

MS2 Curbeam | MS3 Fuglesang | MS4 Higginbotham | MS5 Williams | Notes

00:00
- EMU & EVA TRANSFER PREP (EVA, AIRLOCK CONFIG) — MS2
- EMU & EVA TRANSFER PREP (EVA, AIRLOCK CONFIG) — MS3
- FILTER CLEANING (IFM, SCHEDULED MAINTENANCE) — MS4

BIAS-ZLV+XVV

01:00
- EXERCISE — MS2
- DAILY TRANSFER LIST UPDATE REF MSG 008 — MS4

ZLV-XVV

02:00
- SSP1 OIU PWR - OIU 1 ON, √tb-UP — MS2
- EXERCISE — MS3
- PREP WLES-RNDZ TLS C/O (ORB OPS, WLES) — MS4
- HAND-HELD LIDAR C/O (RNDZ, RNDZ TOOLS) — MS4
- RNDZ TOOLS CHECKOUT (RNDZ, RNDZ TOOLS) — MS4
- PRE-SLEEP ACTIVITY (ORB OPS, CREW SYS) — MS2, MS5

NC3

03:00
- SSP1 OIU PWR - OIU 1 OFF, √tb-bp — MS2
- PRE-SLEEP ACTIVITY (ORB OPS, CREW SYS) — MS3
- PRE-SLEEP ACTIVITY (ORB OPS, CREW SYS) — MS2
- PRE-SLEEP ACTIVITY (ORB OPS, CREW SYS) — MS4
- SH PRE-SLEEP CONFIG (SH OPS CL, ON-ORBIT) — MS4

ZLV-XVV

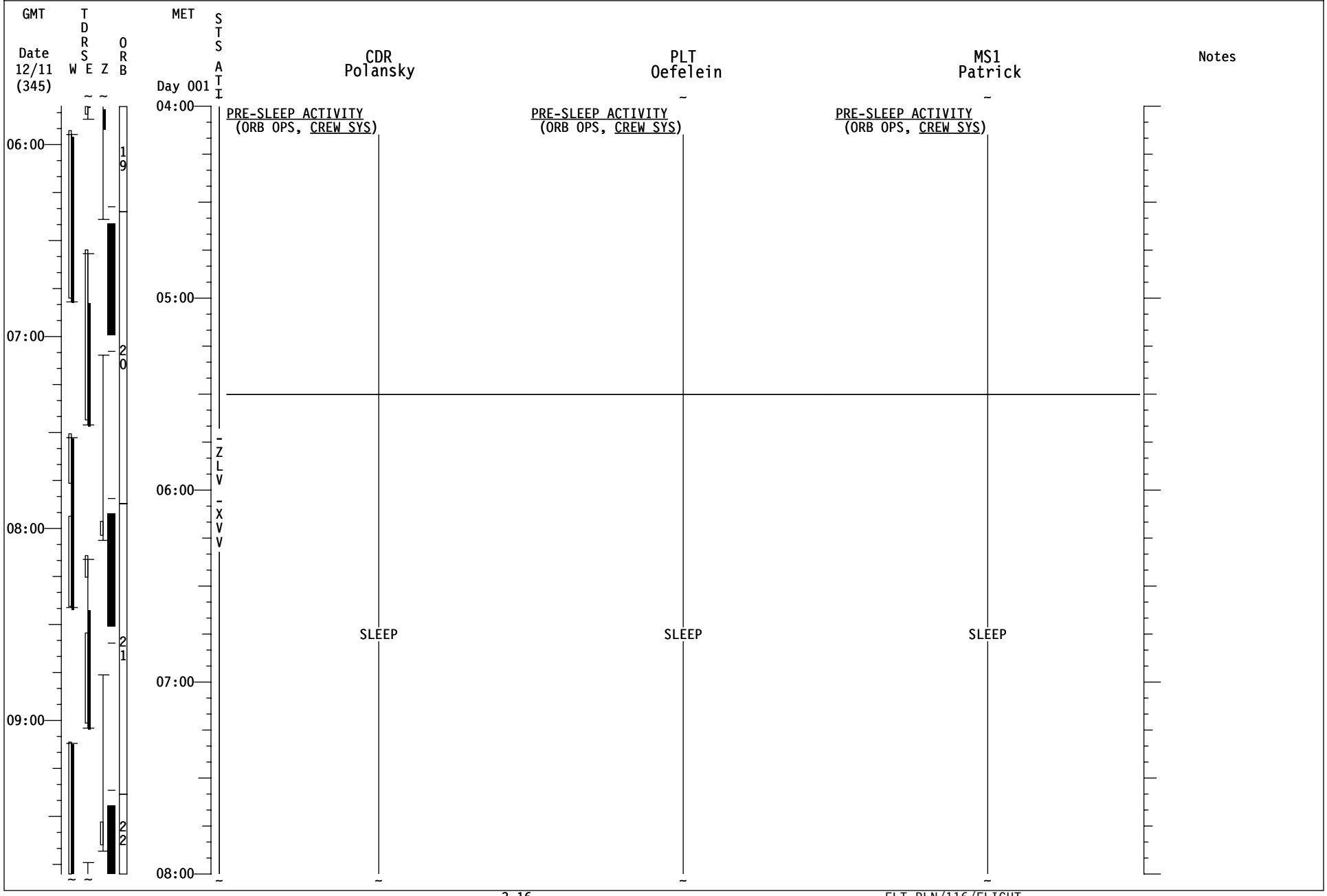
04:00

02:00 03:00 04:00 05:00

17 18 19

STS-116 FD02

REPLANNED



STS-116 FD02

REPLANNED

GMT Date 12/11 (345) | TDRS W E Z | ORB | MET Day 001 | STS ATI

MS2 Curbeam | MS3 Fuglesang | MS4 Higginbotham | MS5 Williams | Notes

04:00 — PRE-SLEEP ACTIVITY (ORB OPS, CREW SYS)

PRE-SLEEP ACTIVITY (ORB OPS, CREW SYS)

PRE-SLEEP ACTIVITY (ORB OPS, CREW SYS)

SH PRE-SLEEP CONFIG (SH OPS CL, ON-ORBIT)

PRE-SLEEP ACTIVITY (ORB OPS, CREW SYS)

06:00 — 19

05:00

07:00 — 20

-ZLV-XVV

06:00

08:00 — 21

SLEEP | SLEEP | SLEEP | SLEEP

07:00

09:00 — 22

08:00

MSG 004A - FD02 MISSION SUMMARY

Good Morning Discovery!

Congratulations on a spectacular launch! What a magnificent sight it was for us yesterday evening, as you turned night into day for a few brief moments! Station has reported to us that they have turned on their porch light so you will be sure to find them!

Have a great inspection day!

YOUR CURRENT ORBIT IS: 181 X 134 NM

NOTAMS:

EDWARDS (EDW) – 18L UNUSABLE DUE TO ADDITIONAL DAMAGE THROUGH 4000'
FROM ORBITER THRESHOLD
– 15/33 ELS ONLY – NEW TACAN 1.0 KW
WHITE SANDS (NOR) – 17/23 GREEN (TOW WAY WET ON SOUTH END OF 17)
AMBERLY (AMB) – CLOSED
ANDERSEN (GUA) – 06L/24R CLOSED, ALTERNATE 06R/24L
GANDER TACAN (74X) – AZIMUTH OUT OF SERVICE
KEFLAVIK (IKF) – UNUSABLE
ORMOND BEACH TACAN (73X) – AZIMUTH OUT OF SERVICE
OCEANA (NTU) – 32R/14L CLOSED
RIO GALLEGOS (AWG) – UNUSABLE
SALSBURY TACAN (49X) – AZIMUTH OUT OF SERVICE
STEPHENVILLE TACAN (78X) – UNUSABLE
WAKE ISLAND (WAK) – CLOSED

NEXT 2 PLS OPPORTUNITIES:

NOR17 ORB 17 – 1/00:54 (SKC, 320@03P05)
EDW22 ORB 33 – 2/01:11 (SCT050 SCT200, 240@10P15)

OMS TANK FAIL CAPABILITY:

L OMS FAIL: YES R OMS FAIL: YES

LEAKING OMS PRPLT BURN:

L OMS LEAK: ALWAYS BURN OUT OF PLANE
R OMS LEAK: ALWAYS BURN OUT OF PLANE

OMS QUANTITIES(%)

L OMS OX = 48.1 R OMS OX = 47.7
FU = 48.1 FU = 48.2

SUBTRACT I'CNCT COUNTER FOR CURRENT OMS QUANTITIES

DELTA V AVAILABLE:

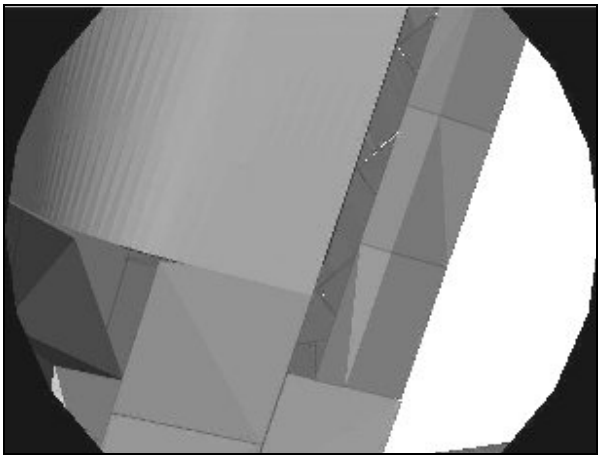
OMS	400 FPS
ARCS (TOTAL ABOVE QTY1)	60 FPS
TOTAL IN THE AFT	460 FPS
ARCS (TOTAL ABOVE QTY2)	89 FPS
FRCS (ABOVE QTY 1)	52 FPS
AFT QTY 1	92 %
AFT QTY 2	54 %

SYSTEM	FAILURE	IMPACT	WORK AROUND
DPS-01	PASS reported single I/O Error during reasignment of IDP 4 from BFS to PASS (Error can occur during the reassignment of an IDP from BFS to PASS without first deassigning the IDP from the BFS)	None. System responded per requirements.	None required. Resume nominal use of the IDP.
PDRS-01	RHC Auto Release Switch	Loss of auto release capability. Ref RMS EE C/O FAILURE MATRIX line 20 cause 1 (PDRS, REF DATA) 9-22	-Execute starred blocks in procedures for manual payload releases. -Expect C/W 'RELEASE' during manual release.

MSG 006 - Port Upper Carrier Tile ITVC Survey (Replaces pgs 8-74 and 8-75)

PAN/TILT to match LDRI view shown below

Note PAN/TILT: _____, _____



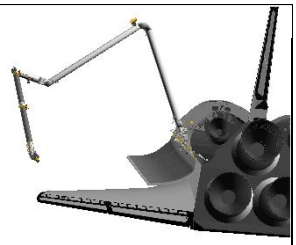
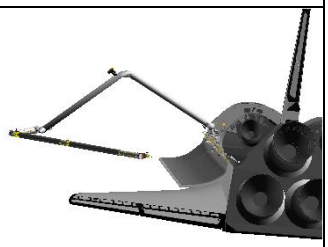
LDRI (135,-110)

MON2 ← not PL2

NOTE
Time between Pts 115 and 121 ~ 3:50 min

L10(VTR) REC pb – push, hold
PLAY pb – push, simo (red ●)

AUTO SEQ – PROCEED (IN PROG lt on)

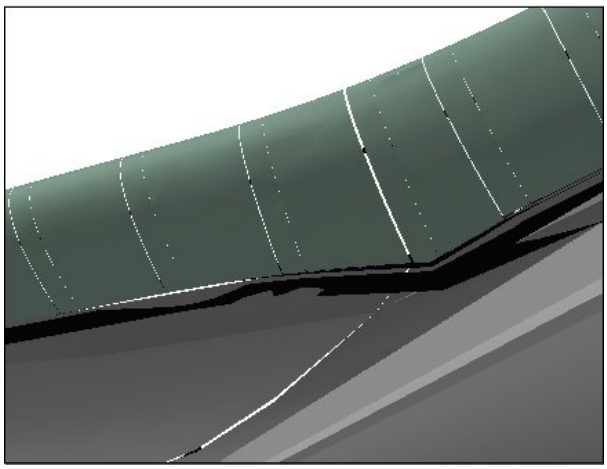
Pt	X	Y	Z	PITCH	YAW	ROLL	●	
115P Δ	**-1338** -55	**-476** -23	**-389** +2	**345** 0	**357** 10	**254** 9	¼	
116 Δ	-117	-113	+1	0	0	0		
117 Δ	-53	-55	-4	0	14	0		
118 Δ	-42	-1	-10	3	-2	-28		
119 Δ	-21	-5	+9	-4	0	-2		
120 Δ	-65	0	-1	0	1	-8		
121P	**-985**	**-279**	**-386**	**1**	**331**	**281**	1	

When AUTO SEQ IN PROG lt – off:
BRAKES – ON (tb-ON)

A7U MUX 1 L ← MIDDECK
LDRI MODE 2 pb – push (ITVC video displayed)
MON2 ← PL2

PAN: +176 (right)
TILT: -140 (down)

PAN/TILT to match OBSS ITVC image shown below



OBSS ITVC (176,-140)

Record OBSS ITVC image for 30 seconds, then:
L10(VTR) STOP pb – push (no red ●)

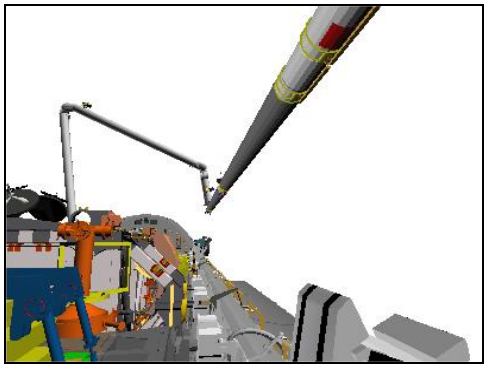
9. <u>MNVR TO OBSS HOVER/PARK POSN</u>
RHC RATE – as reqd (VERN within 10 ft)
BRAKES – OFF (tb-OFF)
MODE – as desired

Mnvr to OBSS HOVER posn:

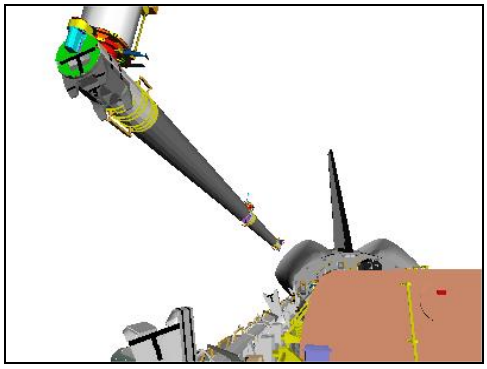
	SY	SP	EP	WP	WY	WR	
PORT LDRI ACAS End	+120.7	+42.9	-62.9	+32.8	-58.9	-67.5	
1: WY +					-0.5		
2: WR +						+30.0	
3: SP +		+80.0					
4: SY –	-89.8						
5: EP –			-123.3				
6: WP –				-55.2			
7: WR +						+109.8	
OBSS HOVER	-89.8	+80.0	-123.3	-55.2	-0.5	+109.8	
	X	Y	Z	PITCH	YAW	ROLL	PL ID
	-1271	+128	-506	359.5	0	11	3

BRAKES – ON (tb-ON)

MSG 006 - Port Upper Carrier Tile ITVC Survey (Replaces pgs 8-74 and 8-75)



CCTV C (10,10)



CCTV D (-10,15)

Go to OBSS BERTH >>

Today you will perform a Supply Water Dump using the FES and CWC Fill Equipment Prep and Water Transfer Hose Purge.

FES Dump Details

FES Dump duration will be approximately 7 hours. The following details are required for the dump:

> At MET 0/17:45, initiate SUPPLY WATER DUMP USING FES (ORB OPS, ECLS), p. 5-9, Step 1 DUMP INITIATION, using FES PRI A.
>
> At approximately MET 1/00:55, terminate the FES dump on MCC call using Step 2, DUMP TERMINATION; FES PRI A is req'd.

Shuttle/ISS H2O Container Fill Equipment Prep and Water Transfer Hose Purge

Per the timeline at MET 0/22:55, perform "Equipment Preparation" and "Water Transfer Hose Purge" from the Shuttle/ISS H2O Container Fill procedure (ORB OPS, ECLS) p. 5-25. The Sample/Purge Kit can be found in MF43H.

Good morning Joanie, Patrick…uh, I mean Nick, and STS-116 crew!

Welcome to your first transfer activities! Today you'll be moving some items around in Spacehab to access the ETVCG hardware required for today's ETVCG assembly. In addition the EVA crew will gather some EVA items in preparation for EVA hardware transfer on FD03. And last, but not least, you'll incorporate the Resupply change pages, Swap tab, and the entire Return list/layouts into your Middeck and Spacehab Transfer books.

The Transfer List Excel file, FD02_Transfer_List_STS116.xls, is located on the KFX machine in **C:\OCA-up\transfer.**

For ISS, the Transfer List Excel file, FD02_Transfer_List_STS116.xls, is located in **K:\OCA-up\transfer.**

<u>FD02 Choreography</u>

- **SH Transfer Prep:**
  - Loosen/remove straps on bags in prep for transfer.
  - **Item 154**: Remove AGB foam from SF13. Transfer AGB to MDDK, and temp stow foam in SH.
  - Remove MESS Rack rack-front stowage from top 2 stowage trays, and remove trays to access ETVCG hardware.
  - **Items 150 & 151**: Remove ETVCG hardware (PTU/CTVC and TVCIC) from MESS rack for assembly in MDDK.
  - **Item 137**: Relocate PMDIS/TRAC bag from SH to MDDK for transfer with IELK on FD03.
- **MDDK Transfer Prep:**
  - Sort thru 5MLE bags; gather items to transfer on FD03.
  - **Item 4**: Temp stow the empty leg sizing ring pouch from the Ext A/L Floor Bag in MA9G.
- The following items are removed from SH per EMU AND EVA TRANSFER PREP:
  - FC07: EVA power jumpers (qty 3)
  - FP04: FMS Thermal Protection Shrouds
  - AC01: RETs, AETs, QD BDTs, Gap Spanners, Velcro/Tape Caddy
  - AC04: Torque wrench and bag
  - AS01: Vent Tool Extension Bag, Pump Module Jumper Bag

Please incorporate uplink pages as follows (call us with any questions):

MIDDECK TRANSFER BOOK
LAYOUTS tab
Add the following page:
L-2

RESUPPLY tab
Replace the following pages:
Page Resupply 2 thru 5

MDDK RSPLY REALTIME ADDITIONS tab
Replace the following page:
Page Resupply 6

SWAP tab
Replace all pages with the following:
Page Swap 1 thru 6

RETURN tab
Add the following pages:
Page Return 1 thru 7

MDDK RTN REALTIME ADDITIONS tab
Add the following page:
Page Return 8

SPACEHAB TRANSFER BOOK
LAYOUTS tab
Add the following pages:
L-5 thru L-8

RESUPPLY tab
Replace the following pages:
Page Resupply 8
Page Resupply 10 thru 15
Page Resupply 18

SWAP tab
Replace all pages with the following:
Page Swap 8 thru 16

RETURN tab
Add the following pages:
Page Return 10 thru 21

SPACEHAB RTN REALTIME ADDITIONS tab
Add the following page:
Page Return 22

Enjoy!

- The Transfer Team

MODULAR LOCKER LAYOUT DESCENT

CDR	MARK POLANSKY
PLT	WILLIAM OEFELEIN
M/S #1	NICHOLAS PATRICK
M/S #2	ROBERT CURBEAM
M/S #3	CHRISTER FUGLESANG
M/S #4	JOAN HIGGINBOTHAM
M/S #5 (UP)	SUNITA WILLIAMS
M/S #5 (DN)	THOMAS REITER

LEADER:	OMAR HASHEM
DATE:	12–9–06
LAUNCH:	12–9–06
FLIGHT:	STS–116 ISS 12A.1
VEHICLE:	OV–103
CREW:	7 PERSON 12 + 0 + 2 DAYS
RQMTS:	NO RCRS, SLEEPING BAGS, EXT A/L, ERGOMETER, RMS, LW MAR, SRMS

LW MAR

PANTRY FOOD 1622–308 | MF57A 1622–308 PANTRY FOOD | PANTRY FOOD 1622–302

MF43C | MF57C 6020–TBD HYGIENE (BAGS FROM SPACEHAB) HCTB | MS#5 DN CLOTHING HCTB | MF57E 4033–313 DC VACUUM CLEANER

MIDDECK FORWARD

MF14E 2760–TBD ITEM #634: ITCS ZIP /CWC H2O SAMPLE PURGE BAGS | MF28E/G | MF43E | MF57E | MF71E

MF14G | MF43G 6250–345 6300–337 IFM TOOLS 2163–302 2161–305 2162–306 MULTIMETER | MF57G | MF71G 9893–TBD ITEM #431: SODF CAM BRKTS TPS HDWE EVA OHMTR HCTB

MF14H | MF28H 7521–324 SHUTTLE CSA–CP USED SUPA/FMK CONDENSATE COL INGRESS HARDWARE ALTIMETER | MF43H | MF57H | MF71H

MF14K | MF28K | MF43K 6299–311 COAS/BTA FLUOR LT/LT SHIELDS/DCS760 AUDIO DOSIMETER | MF57K TBD RESERVED FOR FEET | MF71K TBD RESERVED FOR FEET

MF14M | MF28M TBD | MF43M | MF57M | MF71M

MCIU | PDI

MF14O | MF28O | MF43O | MF57O TBD TROPI/IMMUNO SAMPLES COLDBAG | MF71O

MIDDECK AFT

MA9D | MA16D

MA9F | MA16F

MA9G 9007–TBD STS–4 'WORLDMAP' ITEM #636: A31P A31P PWR SPLYS (4) | MA16G 9009–TBD STS–6 'DOUG' STS–7 'WYS' ITEM #635: 760XD WLES

MA9J | MA16J 9010–TBD ITEM #632: A31P CD CASE PCS CARDS/CABLES PGSC ACCESSORIES

MA9L 6269–307 5962–303 PRINTER TRAYS IODINE REMOVAL 6256–303 | MA16L

MA9N SOFT STWG BAGS | MA16N

MD CEIL (PORT 1) — E

MD CEIL (PORT 2) 6665–TBD IELK — B

MD CEIL (STBD 1) — G

MD CEIL (STBD 2) — H

MD FLOOR (PORT 2) TBD
ACES (W)/G–SUIT/EMPTY HCTB
LAUNCH FOAM/#408: POEMS CSH
CTB#412: CONTROL ASSY/MAS RSP/CSA–CP RESPLY KIT
HCTB#415: CEVIS RESPLY/SSK MEDIA CASES/DSTs/BIOCIDE KT
HCTB#423: CSA–02 RESPLY KIT/ URINE TUBE DISP ASSY

MD FLOOR (PORT 1) TBD
(BAG FROM SPACEHAB)
LAUNCH FOAM/HCTB#428: RUSSN
HCTB#402: GSCs(7)/SAMPLES
HCTB#414: IMAKS/PCBA CART KT
HCTB#421: GSCs(6)/CHK LISTS
HCTB#606: AIR SIEVE PK/PUMP N2 DRYER/O2 SCRUB/RECIRC
HCTB#614: ISS PHOTO/VIDEO KIT — F

MD FLOOR (STBD 2) TBD
LAUNCH FOAM
SPACEHAB DUCT
RCC BOLTS
ITEM #624: SWAB RTN KIT
EMU H2O PROCESS KIT
HCTB#413: TRQ WRCH/HRM/IV PMP BATT/MIC/CSA BATTS

MD FLOOR (STBD 1) TBD
LAUNCH FOAM/CD WALLET
ITEM #633: COLDBAG: AMBIENT ICEPACS
ITEM #625: CSA–CP STWG KIT
ALSP IMAK
CTB#427: RUSSIAN HDW CONTAMIN DETECN KIT — D, C

VOL B (MA4D/J) DRY TRASH

VOL 3B (MA75J)

A16 | A17 | VOL D (MD52C) | VOLUME F (MD76M) | VOLUME G (MD80R) | VOLUME H (MD23R) EVA ACCESS (INBD) EMU SERV KIT, MWC FLT CVRS (2), SCOF (2) | WMC (MA82H) | EXT AIRLOCK EXT A/L FLOOR 9017–TBD EMU BATT/CHGR CCCs (2)/TETHERS MINI WORKSTATION SAFER HCM/PGT CBL CCAs/LEG RING POUCH CTB#615: 3 LCVGs

ONLY THOSE LOCATIONS THAT CHANGE FOR RETURN ARE SHOWN

LIOH BOX

SPACEHAB STOWAGE 18 LiOH

WINDOW SHADE BAG

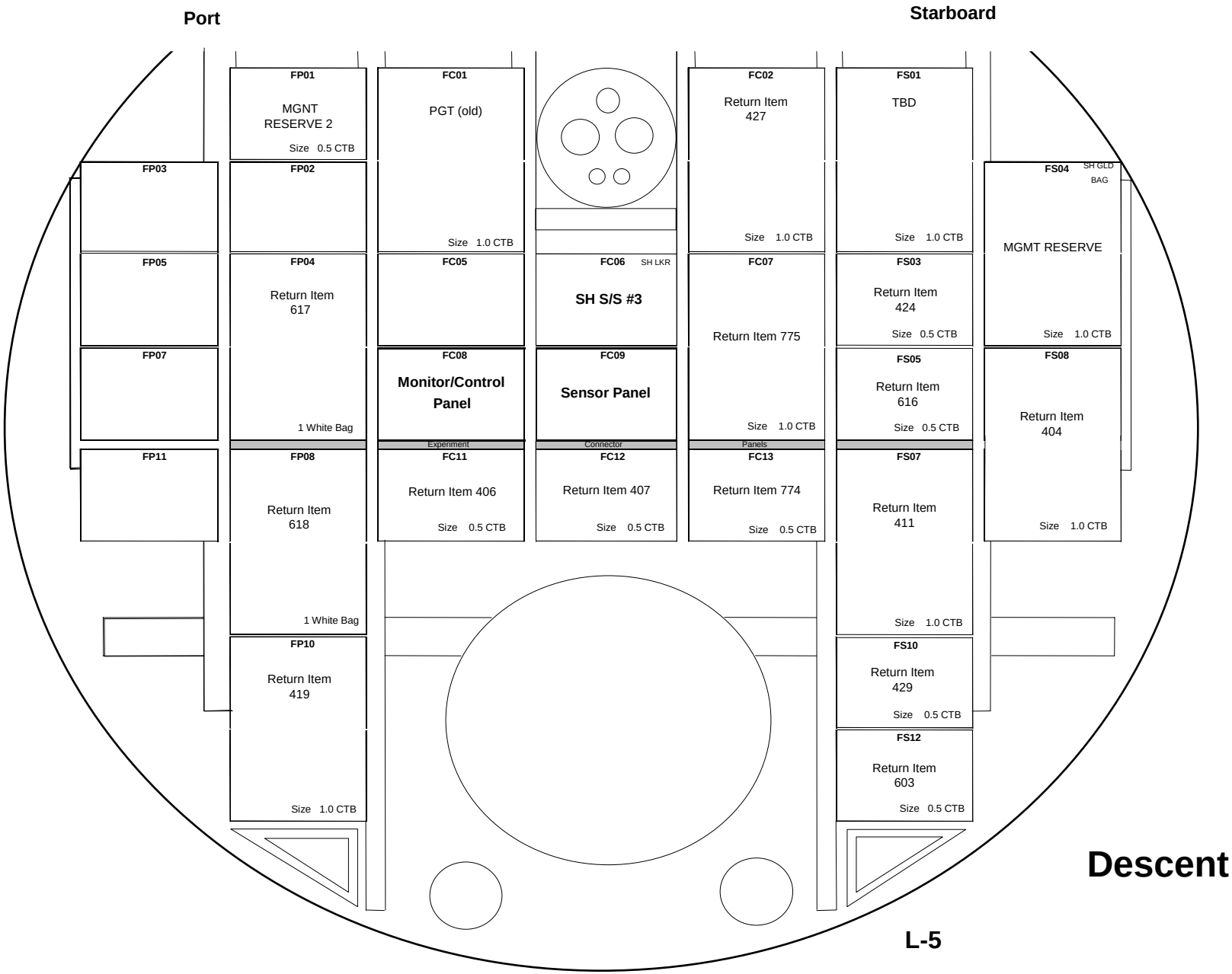
L10A1:
L10A2:
L11:
L11A2; A3
L12A1:
L12A2:
L12A3:
R12A1:
R12A2:

* NOT APPROVED
CTB CARGO TRANSFER BAG
HCTB HALF CARGO TRANSFER BAG
SWAP

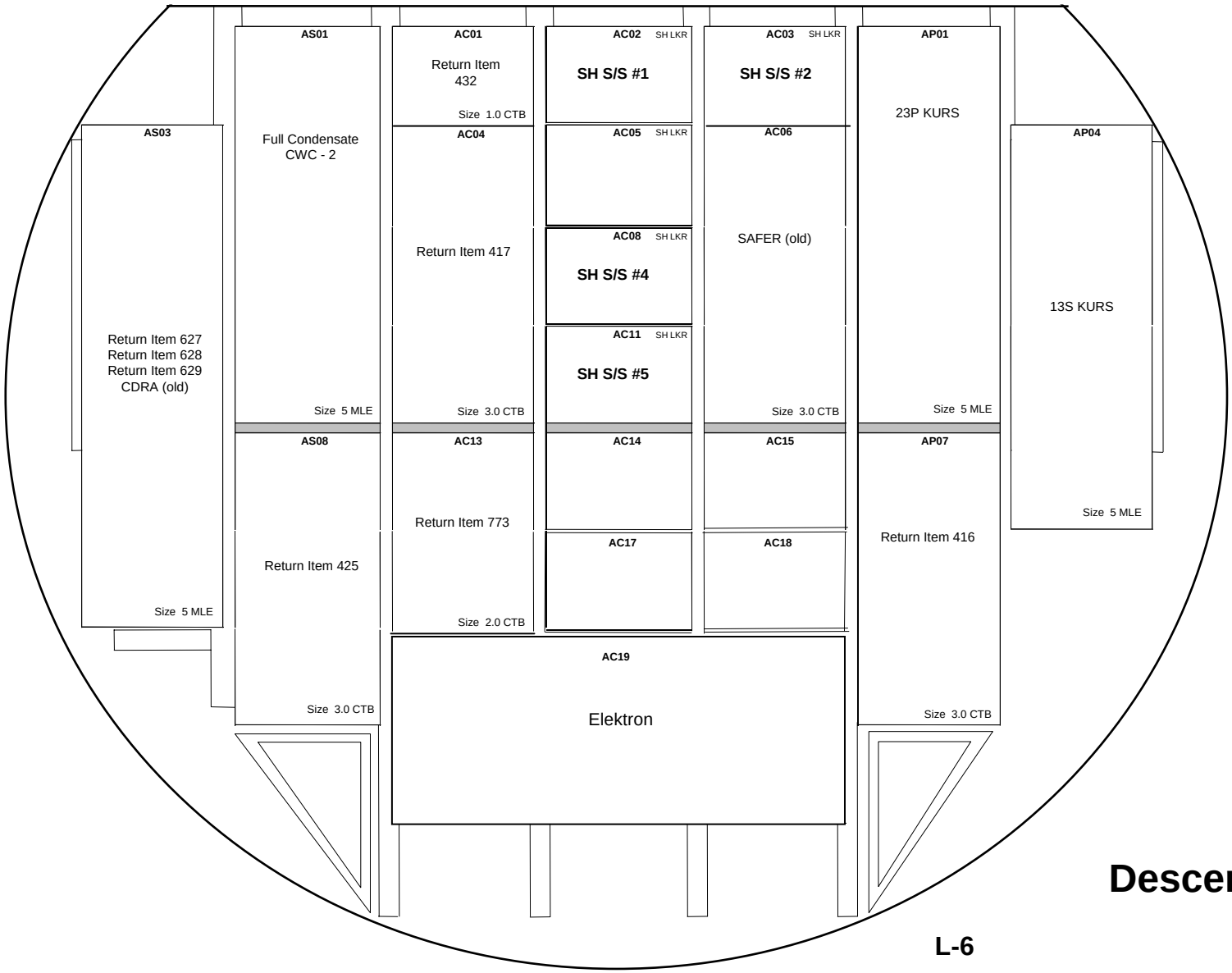
DWG NO. SGD32104439
CCMM: YVETTE CARMONA
(281) 483–3744
/USR/DWGS/LOCKER/STS116

NOTE: LOCKER LAYOUTS ARE FOR REFERENCE ONLY & ARE NOT RELEASED DWGS. FOR RELEASED DRAWING, PLEASE REFER TO THE CREW COMPARTMENT CONFIGURATION DRAWING FOR THIS FLIGHT (SGD32104439)

SPACEHAB Module Layout
Forward Bulkhead



SPACEHAB Module Layout
Aft Bulkhead



Descent

SPACEHAB Double Rack
Starboard Side

SF01 LiOH BAG 1 Size 1.0 CTB			**SF02** LiOH BAG 2 Size 1.0 CTB			1.0 MLE Deep
SF03A Return Item 600 Size 0.5 CTB	**SF03B** Return Item 403 Size 0.5 CTB	**SF03C** Return Item 601 Size 0.5 CTB	**SF04A** Return Item 623 Size 0.5 CTB	**SF04B** Return Item 612 1 Bundle	**SF04C** Return Item 608 1 Bundle	1.5 MLE Deep
SF05A Return Item 422 Size 1.0 CTB		**SF05C** Return Item 602 Size 0.5 CTB	**SF06A** Return Item 400 Size 0.5 CTB	**SF06B** Return Item 610 1 Bundle	**SF06C** Return Item 611 1 Bundle	1.5 MLE Deep
SF07A Return Item 622 Size 0.5 CTB	**SF07B** LiOH BAG 3 Size 1.0 CTB		**SF08A** PGT (old) Size 1.0 CTB		**SF08C** Return Item 609 1 Bundle	1.5 MLE Deep
SF09A LiOH BAG 4 Size 1.0 CTB		**SF09C** Return Item 619 Size 0.5 CTB	**SF10A** Return Item 428 (Russian Hardware) Size 0.5 CTB	**SF10B** Return Item 607 1 Bundle	**SF10C** Return Item 613 1 Bundle	1.5 MLE Deep
SF11 LiOH BAG 5 Size 1.0 CTB			**SF12** LiOH BAG 6 Size 1.0 CTB			1.0 MLE Deep

SPACEHAB Double Rack
Starboard Side
Rack Front Stowage

SF13 ADJUSTABLE GRAPPLE BAR FOAM	
SF21 Return Item 604 Size 1.0 CTB	**SF22** Return Item 433 Size 3.0 CTB
SF25 TCCS CHARCOAL BED Charcoal Bed Foam Box	

Descent

SPACEHAB MESS Rack
Port Side

PF01

foam

TVCIC
[ETVCG]
[old]

PTU/CTVC
[ETVCG]
[old]

PF02

GYROSCOPE
[old]

PF04

foam

ORCA
[old]

SPACEHAB MESS Rack
Port Side
Rack Front Stowage

PF13

Return Item 401

PF16

Return Item
410

Size 1.0 CTB

PF17

ETVCG LIGHT
[old]

Size 2.0 CTB

PF19

Unuseable

PF20

Unuseable

PF21

Return Item 405

Size 3.0 CTB

PF24

Unuseable

PF25

Return Item 620

Size 1.0 CTB

PF27

Return Item 430

Size 1.0 CTB

Descent

STS-116/12A.1 Resupply Transfer List

Chg Flag	☑	FD	Crew Initials	Item #	Item Name	Qty	Initial Stowage	Temp Stowage	Stowage at Undock	Wt (lbs)	PROCEDURES/**Constraints**/ **Comments
X				7	A31p Laptop [labeled STS5-RSAD] [s/n 1073]	1	MA9G	~~MDDK~~ AFD Deployed	NOD1P4_A1	8.00	**Transfer on FD09.** **Remove shuttle tag "RSAD" before transfer to ISS. **Only laptop and internal components transfer; no associated cables/power supplies.
				8	A31p Laptop [labeled STS9-SPARE] [s/n 1082]	1	MA16G		NOD1P4_A1	8.00	**Transfer on FD09.** **Remove shuttle tag "SPARE" before transfer to ISS. **Only laptop and internal components transfer; no associated cables/power supplies.
				9	A31p 120VDC POWER SUPPLY [s/n 1328]	1	MA16G		NOD1P4_A1	4.50	
				10	A31p Laptop [AFD PCS]	1	MA16J	AFD Deployed	NOD1P4_A1	8.00	**Transfer on FD09.** **Remove grey tape label "PCS" before transfer to ISS. **Only laptop and internal components transfer; no associated cables/power supplies.
			See Swap Tab - CD XFR	11	CD LIBRARY	1	MA16J	See Swap Tab		3.00	
X				12	CDRA	1 5 MLE	MD FLOOR PORT 1 (Bag A)		AS03	20.00	**After removing CDRA from 5 MLE bag, swap this bag with the 5 MLE bag in SH AS03 (ref item 117) ~~(verify items 627 thru 629 are complete prior to bag swap)~~. **Photo ops with foam.
X				12.1	CDRA DESSICANT/ADSORBENT BED ASSEMBLY, LAUNCH CONFIGURATION	1	MD FLOOR PORT 1 (in 5 MLE)		LAB1D6	~~114~~ 94.00	**Transfer by FD08 for timelined procedure CDRA Dessicant/Sorbent Bed 202 R&R.**

[ ] - notes included by transfer team, - not on actual label

STS-116/12A.1 Resupply Transfer List

Chg Flag	☑	FD	Crew Initials	Item #	Item Name	Qty	Initial Stowage	Temp Stowage	Stowage at Undock	Wt (lbs)	PROCEDURES/**Constraints**/ **Comments
			See Swap Tab - IELK	13	IELK [S. Williams]	1	MD FLOOR PORT 2 (Bag B)	See Swap Tab		80.00	
				14	S. WILLIAMS ATHLETIC SHOES	1 pair	MD FLOOR PORT 2 (Bag B)		Suni crew pref	1.50	
X				15	CONTAMINATION DET. KIT/MICROBIAL AIR SAMPLE KIT	1.0 CTB	MD FLOOR STBD 1 (Bag C)		LAB1O6 Rack Front	~~35~~ 27.00	**Contamination Detection Kit removed from this CTB per FD02 timelined procedure EMU AND EVA TRANSFER PREP. **Contains ziplock of stuff for L-A.
X				~~15.1~~	~~ALTEA Biosensors (4)~~	~~1 ziplock~~	~~MD FLOOR STBD 1 (in 1.0 CTB)~~	~~LAB~~		~~1.00~~	~~**Transfer by FD09 for timelined procedure ALTEA CENTRAL NERVOUS SYSTEM MONITORING SET UP.~~ ~~**Remove biosensors ziplock from 1.0 CTB while gathering the Contamination Detection Kit on FD02 per timelined procedure EMU AND EVA TRANSFER PREP.~~
X				16	CEVIS ISOLATOR/CSA-CP/CSA-O2	1.0 CTB	MD FLOOR STBD 1 (Bag C)		LAB1O6 Rack Front	~~35~~ 26.00	**Transfer by FD09 for timelined procedure CSA-CP Resupply Kit Checkout.** **Ensure CTB is accessible for CSA-CP checkout. **CSA-O2 monitors (qty 2) removed from this CTB per FD02 timelined procedure EMU AND EVA TRANSFER PREP.
			See Swap Tab - ALSP	17	ALSP [new]	1	MD FLOOR STBD 1 (Bag C)	See Swap Tab		37.00	

[ ] - notes included by transfer team, - not on actual label

STS-116/12A.1 Resupply Transfer List

Chg Flag	☑	FD	Crew Initials	Item #	Item Name	Qty	Initial Stowage	Temp Stowage	Stowage at Undock	Wt (lbs)	PROCEDURES/**Constraints**/ **Comments
			See Swap Tab - EMU H2O	18	EMU WATER PROCESSING KIT (Transfer Contents Only)	1	MD FLOOR STBD 1 (Bag C)	See Swap Tab		23.70	
			See Swap Tab - EMU H2O	18.1	contents of CTB	all	MD FLOOR STBD 1 (in 1.0 CTB)	See Swap Tab		(in above item)	
				19	OGS TOOLS	1.0 CTB	MD FLOOR STBD 2 (Bag D)		LAB1D2 Rack Front	41.00	
				20	Ammonia Respirator Kit	5 orange kits	MD FLOOR STBD 2 (Bag D)		FGB Deck	50.00	**Report FGB panel where these are stowed.
X			See Swap Tab - RCC	21	~~Attach Bolt Body Half (Bottom) - 2~~ ~~Plug Attach Bolt - 4~~ FEMALE BOLT HOUSING - 1 MALE BOLT HOUSING - 1 DRIVE BOLT - 4	1 ziplock	MD FLOOR STBD 2 (Bag D)	See Swap Tab	~~NOD1P4_C1 (in 1.0 CTB s/n 1239)~~	2.00	
X			See Swap Tab - RCC	21.1	FEMALE BOLT HOUSING P/N TD103859-02 s/n 0004	1 ziplock	MD FLOOR STBD 2 (Bag D)	See Swap Tab		(in above item)	
X			See Swap Tab - RCC	21.2	MALE BOLT HOUSING P/N TD103859-01 s/n 0003	1 ziplock	MD FLOOR STBD 2 (Bag D)	See Swap Tab		(in above item)	
X			See Swap Tab - RCC	21.3	DRIVE BOLTS P/N TD103856-02 s/n 0000030-0000033	4 ziplocks	MD FLOOR STBD 2 (Bag D)	See Swap Tab		(in above item)	
				22	BPSMU cables 4 FT BPSMU CABLE [P/N SED16102418-315] 22 FT BPSMU CABLE [P/N SED16102418-321] BPSMU/ODS ADAPTER [P/N SED16102418-309]	1 ASSY	MDDK prerouted	ISS and STS Deployed	LAB FWD ENDCONE (in 0.5 CTB s/n 1397)	2.00	**Transfer on FD10 per timelined procedure DRAG THROUGH QD DEACT.** **Hardware deployed on FD03 per timelined P/TV05 SETUP.
X				23	BPSMU cables [BACKUP] 4 FT BPSMU CABLE [P/N SED16102418-315] 22 FT BPSMU CABLE [P/N SED16102418-321] BPSMU/ODS ADAPTER [P/N SED16102418-309]	1 ASSY	MDDK prerouted	~~ISS and STS Deployed~~	LAB FWD ENDCONE (in 0.5 CTB s/n 1397)	2.00	**Transfer backup ~~on~~ by FD10 ~~per timelined procedure DRAG THROUGH QD DEACT.~~** ~~**Hardware deployed on FD03 per timelined P/TV05 SETUP~~.

[ ] - notes included by transfer team, - not on actual label

STS-116/12A.1 Resupply Transfer List

Chg Flag	☑	FD	Crew Initials	Item #	Item Name	Qty	Initial Stowage	Temp Stowage	Stowage at Undock	Wt (lbs)	PROCEDURES/**Constraints**/ **Comments
				24	IMV O-RING KIT	1 ziplock	MF28H		PMA2 installed	3.00	**Transfer on FD10 for timelined activity FD10 HATCH-CLOSE.**
			See Swap Tab - Multimeter	25	Multimeter [new] [b/c 00059824J]	1	MF43G	See Swap Tab		1.40	
				26	MODIFIED DIDB	1 ASSY	MF57C		A/L1O1 (in lid of M-O2 bag, s/n 1038)	2.00	**6 DIDBs taped together. **These are not needed for STS-116 EVAs.
				27	CHeCS	0.5 CTB	MF57K		LAB1O6 Rack Front	14.00	**Ensure this CTB is easily accessible when stowed on ISS. **Suni will need to access CEVIS Resupply Kit prior to FD09 CEVIS exercise.
				28	CREW CARE PACKAGE	0.5 CTB	MF57K		ISS crew pref	17.00	
X				29	SWAB EXPERIMENT KIT	1 blue kit	MF57O		LAB1S4_G1 rack front	25.00	
				30	SODF	0.5 CTB	MF71G		LAB1P6 Rack Front	27.00	**Transfers per FD03 timelined activity SODF Transfer.
				31	CGBA-4	1	MF71K		LAB1P2_G1 installed	58.00	**Transfer for FD07 timelined procedure CGBA TRANSFER TO ISS.**

[ ] - notes included by transfer team, - not on actual label

STS-116/12A.1 Resupply Transfer List

Chg Flag	☑	FD	Crew Initials	Item #	Item Name	Qty	Initial Stowage	Temp Stowage	Stowage at Undock	Wt (lbs)	PROCEDURES/**Constraints**/ **Comments
			Middeck Resupply Real Time Additions								
X				800	BCR BATTERY - 4	1 ziplock	MD FLOOR STBD 2 (Bag D)		NOD1O4 A1 (in 0.5 CTB s/n 1189)		
X				801	LARGE CUTTER [p/n SEG33106915-303]	1	MD FLOOR STBD 1 (Bag C)		A/L1O1 (in lid of M-O2 bag, s/n 1038)		

[ ] - notes included by transfer team, - not on actual label

STS-116/12A.1 Resupply Transfer List

Chg Flag	☑	FD	Crew Initials	Item #	Item Name	Qty	Initial Stowage	Temp Stowage	Stowage at Undock	Wt (lbs)	PROCEDURES/**Constraints**/ **Comments
X				106	HCOR/CGBA/EPS/ALTEA	2.0 CTB	AC15		LAB1D2 Rack Front	62.00	**~~TBD.1~~ 106.1 will be removed from CTB for FD07 timelined procedure CGBA TRANSFER TO ISS.
				106.1	CGBA Muffler [2 pcs]	1 ziplock	AC15 (in 2.0 CTB)		LAB1P2_G1 installed	7.00	**Transfer for FD07 timelined procedure CGBA TRANSFER TO ISS.**
				107	CHeCS / IWIS	1.0 CTB	AC16		LAB1O6 Rack Front	15.00	**RSP will be removed from CTB and transferred for FD07 timelined procedure.
				107.1	RESPIRATORY SUPPORT PACK	1 Kit	AC16 (in 1.0 CTB)		LAB1D4_D1	10.00	**Transfer for FD07 timelined procedure Respiratory Support Pack - Checkout.** **If transferred before FD07, temp stow in LAB.
			See Swap Tab - ELEKTRON	108	RPCM Outer Hatch Window Cover Assembly	1.0 CTB	AC19 (in Elektron foam)	See Swap Tab		50.00	
			See Swap Tab - ELEKTRON	109	Satellite - 1 SPHERES CO2 Tank - 12 SPHERES Batt Pack - 12	1.0 CTB	AC19 (in Elektron foam)	See Swap Tab		38.00	**PENETRATOR (CO2 tanks)**
				110	VENT TOOL / DEBRIS COVER	1 5 MLE Bag	AP01	NOD1D1		185.00	**5 MLE bag transfers to ISS per FD03 timelined procedure EMU AND EVA TOOL TRANSFER AND RECONFIGURATION. **Leave all foam in 5 MLE bag for return. Ref item 750 for return configuration.
				110.1	Meteoroid Debris Cover	1	AP01 (in 5 MLE bag)	NOD1D1	NOD1D2	37.50	**Remove this item from 5 MLE bag and stow on ISS. All other items in this 5 MLE are needed for EVA.

[ ] - notes included by transfer team, - not on actual label

STS-116/12A.1 Resupply Transfer List

Chg Flag	☑	FD	Crew Initials	Item #	Item Name	Qty	Initial Stowage	Temp Stowage	Stowage at Undock	Wt (lbs)	PROCEDURES/**Constraints**/ **Comments
				111	CDRA	1 bundle	AP04 (in 5 MLE bag)		NOD1D2	96.00	**Leave all foam in 5 MLE bag for return of 13S KURS (ref item 751).
X				112	3.0 CTB [empty]	1	AP04 (in 5 MLE bag)	~~Crew Pref~~	LAB1O5_G	4.50	~~**Temp stow this CTB for return items 630 and 631.~~ ~~**Label empty CTB as return item 776.~~
			See Swap Tab - SAFER	113	SAFER	3.0 CTB	AP07	See Swap Tab		147.00	**PENETRATOR**
			See Swap Tab - SAFER	113.1	SAFER [new] [s/n 1006]	1	AP07 (in 3.0 CTB)	See Swap Tab		(in above item)	**PENETRATOR**
			See Swap Tab - SAFER	113.2	SAFER Cue Card [new]	1 ziplock	AP07 (in 3.0 CTB)	See Swap Tab		(in above item)	
				114	VENT TOOL EXTENSION BAG ASSY	1	AS01 (in 5 MLE bag)	MDDK	ISS A/L	35.00	**Relocated to MDDK per FD02 timelined procedure EMU AND EVA TRANSFER PREP. **Transfers to ISS per FD03 timelined procedure EMU AND EVA TOOL TRANSFER AND RECONFIGURATION. **Call this item complete after transfer to ISS on FD03.
				115	PUMP MODULE JUMPER BAG	1	AS01 (in 5 MLE bag)	MDDK	ISS A/L	29.50	**Relocated to MDDK per FD02 timelined procedure EMU AND EVA TRANSFER PREP. **Transfers to ISS per FD03 timelined procedure EMU AND EVA TOOL TRANSFER AND RECONFIGURATION. **Call this item completed after transfer to ISS on FD03.
				116	OGS Feedwater System Housing - 1 Fluid Leak Indicator - 2 Inner Hatch Window Shield Kit - 1 Urine Collection Kit - 2 Avionics Air Assy - 1	1 bundle	AS01 (in 5 MLE bag)		LAB1D2 Rack Front	66.00	**Transfer entire housing bundle to ISS.

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STS-116/12A.1 Resupply Transfer List

Chg Flag	☑	FD	Crew Initials	Item #	Item Name	Qty	Initial Stowage	Temp Stowage	Stowage at Undock	Wt (lbs)	PROCEDURES/**Constraints**/ **Comments
X				117	OGS / BEAM ASSY	1 5 MLE Bag	AS03		MDDK FLOOR PORT 2	~~177.1~~ 10.00	**After items 117.1 thru 117.4 have been removed swap this bag with the MDDK CDRA 5 MLE bag (ref item 12). ~~from this 5 MLE bag, relocate bag with foam to MDDK for packing of return items.~~
				117.1	OGS Feedwater System Controller Bracket - 1 Upper Beam Assy - 1 Lower Beam Assy - 1 Modified ISPR Panel - 2	1 jett stow bag	AS03 (in 5 MLE bag)		LAB1D2 Rack Front	19.00	**Retrieve pregathered jettison stowage bag. Ask ISS crew for location. **Remove these items (qty 4) from foam, and stow in jettison stowage bag for transfer. **Remove luggage tag taped to top of Modified ISPR Panels and attach to jettison stowage bag.
				117.2	U.S. / RSA-B Hose Male Hose Adapter EXPRESS Valve Kit Rack Utility Drawer Liner - 2	1 ziplock	AS03 (in 5 MLE bag)		LAB1D2 Rack Front	7.26	
				117.3	P6 STBD PVR THERMAL BLANKET	1 ziplock	AS03 (in 5 MLE bag)		LAB1D2 Rack Front	40.00	
				117.4	WATER DELIVERY ORU	1 ASSY	AS03 (in 5 MLE bag)		LAB1D2 Rack Front	86.30	
				118	EMCS	3.0 CTB	AS08		LAB1D2 Rack Front	87.00	**PENETRATOR (PBA bottles/air mix modules)** **Ensure CTB is accessible.
X				118.1	PBA/HRF	1.0 CTB	AS08 (in 3.0 CTB)		LAB1D2 Rack Front (in 3.0 CTB)	27.00	**Remove this CTB from 3.0 CTB (ref item 118). Then, remove items 118.1.1 and 118.1.2 and restow this CTB back in item 118.
X				118.1.1	PBA Oxygen Reducer/Cylinder Assembly [new] [s/n 1008]	1	AS08 (in 1.0 CTB)		NOD1S2-14 (PEP Locker)	(in above item)	**Transfer on FD05 per timelined activity FDS-PBA-XFER.** **Remove velcro tabbed pin and discard in STS dry trash before stowing. Call MCC-H to confirm pins from 2 PBAs are removed** **Old PBAs return per item 419.1 and 419.2.
X				118.1.2	PBA Oxygen Reducer/Cylinder Assembly [new] [s/n 1013]	1	AS08 (in 1.0 CTB)		LAB1P0 (PEP Locker)	(in above item)	**Transfer on FD05 per timelined activity FDS-PBA-XFER.** **Remove velcro tabbed pin and discard in STS dry trash before stowing. Call MCC-H to confirm pins from 2 PBAs are removed** **Old PBAs return per item 419.1 and 419.2.

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STS-116/12A.1 Resupply Transfer List

Chg Flag	☑	FD	Crew Initials	Item #	Item Name	Qty	Initial Stowage	Temp Stowage	Stowage at Undock	Wt (lbs)	PROCEDURES/**Constraints**/ **Comments
				Forward Bulkhead							
				119	RPCM-E TYPE 4	0.5 CTB	FC01		LAB1D2 Rack Front	12.00	
			See Swap Tab - PGT	120	OGS PWR - 1 PGT - 1 EWIS Cable - 1	1.0 CTB	FC02	See Swap Tab		28.00	
			See Swap Tab - PGT	120.1	PGT	1	FC02 (in 1.0 CTB)	See Swap Tab		(in above item)	
			See Swap Tab - PGT	120.2	EWIS INTERNAL ANT CABLE	1 ziplock	FC02 (in 1.0 CTB)	See Swap Tab		(in above item)	
			See Swap Tab - PGT	120.3	OGS PWR [s/n 2002]	1	FC02 (in 1.0 CTB)	See Swap Tab		(in above item)	
				121	LOWER ARM / MISC HW	0.5 CTB	FC03		NOD1O1	17.00	
				122	GRAVI GROUP 2	0.5 CTB	FC05		LAB1O1_G1	18.50	
X				123	EVA/EPS	1.0 CTB	FC07		NOD1D1	7.00	**Transfer for FD06 timelined activity LAB DDCU CONIG. ~~procedure 12A.1 DDCU RACK 1 RECONFIGURATION.~~** **EVA Power Cables (qty 3: P/Ns 1F15341-1, 1F15343-1, 1F15359-1) removed from this CTB per FD02 timelined procedure EMU AND EVA TRANSFER PREP.

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STS-116/12A.1 Resupply Transfer List

Chg Flag	☑	FD	Crew Initials	Item #	Item Name	Qty	Initial Stowage	Temp Stowage	Stowage at Undock	Wt (lbs)	PROCEDURES/**Constraints**/ **Comments
				124	VIS CONTROLLER	0.5 CTB	FC11	SH temp stow	LAB1D2 Rack Front	16.00	**Remove and temp stow in SH on FD01 to accommodate SEBS deploy at FC11.**
				125	GRAVI GROUP 3	0.5 CTB	FC12		LAB1O1_G2	8.00	
				126	GRAVI GROUP 1	0.5 CTB	FC13		LAB1O1_G2	19.00	
	☑	0		127	MGNT RESERVE 2	0.5 CTB	FP01		FP01	17.00	**DO NOT TRANSFER - launches and returns in this location.**
				128	FEMALE HYGIENE PANTRY	0.5 CTB	FP02		PMA 1	5.00	
				129	ECOMM Hatch Refurbish Kit FSS-91-1 FSS-91-2	1.0 CTB	FP03		LAB1D2 Rack Front	24.00	
				130	FMS MLI/FLAP HW	0.5 CTB	FP04		LAB1D2 Rack Front	16.00	**FMS MLI (qty 2) removed from this CTB per FD02 timelined procedure EMU AND EVA TRANSFER PREP.
				131	S. WILLIAMS CREW PREFERENCE	0.5 CTB	FP06		Suni crew pref	7.00	
X				132	PHOTO/TV 2	0.5 CTB	FP07		LAB1D3	15.00	**New camcorders are in this CTB.
				133	BUTTON DEPRESS TOOL/ON-BOARD TRAINER FEMALE QD	1.0 CTB	FP08		NOD1O1	30.00	
				134	S. WILLIAMS BAG 2	0.5 CTB	FP10		Suni crew pref	11.00	**Contains Suni's STS-116 flight shirts which may be removed during the flight.
X				135	LOCAD	0.5 CTB	FP11		~~NOD1O4_E2~~ LAB1P2_G2	14.00	

STS-116/12A.1 Resupply Transfer List

Chg Flag	☑	FD	Crew Initials	Item #	Item Name	Qty	Initial Stowage	Temp Stowage	Stowage at Undock	Wt (lbs)	PROCEDURES/**Constraints**/ **Comments
				136	L-A CREW PREFERENCE	0.5 CTB	FP12		L-A crew pref	11.00	**Contains black ink printer cartridges.
X				137	PMDIS/TRAC	1.0 CTB	FS01		~~LAB1D2 Rack Front~~ LAB1P2_J1	45.00	**Transfer with IELK on FD03 for FD04 timelined PMDIS activities.** **A CD from this CTB will be burned during PMDIS activities and returned (ref item 603.2). **Use procedure in CTB lid pocket for repackiing bag per PMDIS Stow activity.
			See Swap Tab - LiOH	138	LiOH BAG 6 [unused]	1.0 CTB	FS03	See Swap Tab		27.00	
	☑	0		139	MANAGEMENT RESERVE	SH GOLD BAG	FS04		FS04	26.00	**DO NOT TRANSFER - launches and returns in this location.**
				140	HYGIENE	0.5 CTB	FS07	MDDK	MF57C	23.00	**DO NOT TRANSFER TO ISS - returns in MDDK for STS crew use.** **Stow in locker after G-Suits and Neckrings are removed from locker.
			See Swap Tab - LiOH	141	LiOH BAG 5 [unused]	1.0 CTB	FS08	See Swap Tab		27.00	
			See Swap Tab - LiOH	142	LiOH BAG 2 [unused]	1.0 CTB	FS09	See Swap Tab		27.00	
				143	S. WILLIAMS BAG 1	0.5 CTB	FS12		Suni crew pref	14.00	

STS-116/12A.1 Resupply Transfer List

Chg Flag	☑	FD	Crew Initials	Item #	Item Name	Qty	Initial Stowage	Temp Stowage	Stowage at Undock	Wt (lbs)	PROCEDURES/**Constraints**/ **Comments
				MESS Rack							
				Rack Front Stowage							
				144	EMCH Empty Double CTB	2.0 CTB	PF13		LAB1D1 Rack Front	54.00	**Empty 2.0 CTB will be removed and temp stowed in NODE for CID return (ref item 773).
				144.1	Empty Double CTB	1	PF13 (in 2.0 CTB)	NOD1		4.50	**Remove for FD09 POST EVA3 RECONFIGURATION AND TRANSFER for CID return (ref item 773). **Label empty CTB as return item 773.
				145	THERMAL SHROUD / CCISS / HRF	2.0 CTB	PF15		LAB1D1 Rack Front	32.00	
				146	ETVCG LIGHT	2.0 CTB	PF17	NOD1		40.00	**Transfer for FD03 timelined procedure EXTERNAL TELEVISION CAMERA GROUP ASSEMBLY.** **Temp stow this CTB and foam for return of old light (ref item 758 and 758.1).
				146.1	ETVCG LIGHT [new]	1	PF17 (in 2.0 CTB)		ISS A/L	(in above item)	**Tedlar bags can be trashed after EVA 1 (not required for returning ETVCG Light).
				147	PMA TARGET / EVA CABLES	3.0 CTB	PF21		NOD1D2	79.00	
			See Swap Tab - PGT	148	PGT - 2 PWR - 1	1.0 CTB	PF25	See Swap Tab		29.00	
			See Swap Tab - PGT	148.1	PWR [s/n 1025]	1	PF25 (in 1.0 CTB)	See Swap Tab		(in above item)	
X			See Swap Tab - PGT	148.2	PGT	2	PF25 (in 1.0 CTB)	See Swap Tab		(in above item)	
				149	OGS HARDWARE 2	1.0 CTB	PF27		LAB1D1 Rack Front	16.00	

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STS-116/12A.1 Resupply Transfer List

Chg Flag	☑	FD	Crew Initials	Item #	Item Name	Qty	Initial Stowage	Temp Stowage	Stowage at Undock	Wt (lbs)	PROCEDURES/**Constraints**/ **Comments
				Inside Rack							
			See Swap Tab - LiOH	158	LiOH BAG 1 [unused]	1.0 CTB	SF01	See Swap Tab		47.00	
				159	Silver Biocide Syringe Kit - 2 SPHERES CO2 Tank - 28	1.0 CTB	SF02		LAB1O5_C1/ D1	51.00	**PENETRATOR (CO2 tanks)**
				160	FOOD CONTAINERS - 4	1 bundle	SF03A		FGB Deck	59.00	**Do not handle by the green strap.** **Tape 4 food containers together before transferring to ISS.
	☑	0		161	CWC	1	SF03C		SF03C	3.00	**DO NOT TRANSFER - launches and returns in this location.**
				162	FOOD CONTAINERS - 4	1 bundle	SF04A		FGB Deck	54.00	**Do not handle by the green strap.** **Tape 4 food containers together before transferring to ISS.
X				163	CWC	1	SF04C	MDDK	NOD1P2	3.00	**Transfer to MDDK for FD05 ~~FD04~~ for fill (and xfr to ISS)**
				164	FOOD CONTAINERS - 4	1 bundle	SF05		FGB Deck	55.00	**Do not handle by the green strap.** **Tape 4 food containers together before transferring to ISS.
X				165	CWC	1	SF05C	MDDK	NOD1P2	3.00	**Transfer to MDDK for FD05 ~~FD06~~ for fill (and xfr to ISS)**

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STS-116/12A.1 Return Transfer List

Chg Flag	☑	FD	Crew Initials	Item #	Item Name	Qty	Initial Stowage	Temp Stowage	Stowage at Undock	Wt (lbs)	PROCEDURES/**Constraints**/ **Comments
			Middeck Return								
				Prepacked Bags/Items							
				402	Return Item 402 [GSCs and samples]	0.5 CTB	LAB1D2		MD FLOOR PORT 2 (5 MLE from SH)	12.00	**Item 402.1 will be removed from this CTB and in stowed in MF14E.
				402.1	Water Samples	5	LAB1D2 (in 0.5 CTB)		MF14E	1.00	**Remove all water samples from CTB and stow in empty food trays. Clamshell trays together.
				408	Return Item 408 [POEMS foam cushion]	1	LAB1O2_J2		MD FLOOR PORT 1 (Bag F)	1.50	**Do not stow near a heat source.**
				412	Return Item 412 [RSP, MAS, CONTROL ASSY, CSA-CP RESUPPLY]	1.0 CTB	LAB1D2		MD FLOOR PORT 1 (Bag F)	18.00	**Do not transfer from ISS until old RSP (item 412.1) is added to this CTB on FD07.**
				412.1	Respiratory Support Pack [s/n 1002] [b/c CHCRSP02J]	1 Kit	LAB1D4_D1		MD FLOOR PORT 1 (Bag F) (in 1.0 CTB)	(in above item)	**Do not stow in CTB until new RSP checks out per FD07 timelined procedure RESPIRATORY SUPPORT PACK - CHECKOUT.**
				412.2	CSA-CP RESUPPLY KIT [s/n 1003] [p/n SJG46120020-301]	1 Kit	LAB1D4_C2	LAB1D4 Rack Front	MD FLOOR PORT 1 (Bag F) (in 1.0 CTB)	(in above item)	**Do not stow in CTB until new CSA-CP checks out per FD09 timelined procedure CSA-CP RESUPPLY KIT CHECKOUT.**

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STS-116/12A.1 Return Transfer List

Chg Flag	☑	FD	Crew Initials	Item #	Item Name	Qty	Initial Stowage	Temp Stowage	Stowage at Undock	Wt (lbs)	PROCEDURES/**Constraints**/ **Comments
				413	Return Item 413 [TORQUE WRENCH, HRM, IV PUMP BATTERIES]	0.5 CTB	LAB1D2		MD FLOOR STBD 2	6.00	
				413.1	Chest Strap/Monitor/ Transmitter Assy [p/n KLST410174-302] [in use]	3	ISS Crew Pref		MD FLOOR STBD 2 (in 0.5 CTB)	(in above item)	**Transfer on FD09 following Reiter's last exercise session.** **These item are HRM equipment currently in use by ISS CDR, ISS FE-1 and ISS FE-2. (includes watches, chest straps and transmitters)
				414	Return Item 414 [IMAKs, CPD]	0.5 CTB	LAB1D2		MD FLOOR PORT 2 (5 MLE from SH)	20.00	
				415	Return Item 415 [CEVIS RESUPPLY KIT, SSK, MEDIA SYRINGES, DSTs]	0.5 CTB	LAB1D2		MD FLOOR PORT 1 (Bag F)	8.00	
				415.1	CEVIS PCMCIA cards [p/n WLSJ320226-301] [s/n 1007, 1005]	2	LAB1P3 (in use)		MD FLOOR PORT 1 (Bag F)	1.00	**After L-A downloads CEVIS exercise data on FD9, stow these cards inside ziplock labeled "CHeCS: CEVIS Resupply Kit" inside return item 415.**

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STS-116/12A.1 Return Transfer List

Chg Flag	☑	FD	Crew Initials	Item #	Item Name	Qty	Initial Stowage	Temp Stowage	Stowage at Undock	Wt (lbs)	PROCEDURES/**Constraints**/ **Comments
				421	Return Item 421 [GSCs]	0.5 CTB	LAB1D2		MD FLOOR PORT 2 (5 MLE from SH)	10.00	
				421.1	Water Samples	4	LAB1D2 (in 0.5 CTB)		MF14E	1.00	**Remove all water samples from CTB and stow in empty food trays. Clamshell trays together.
				423	Return Item 423 [CSA-O2 RESUPPLY, SAMPLE TUBE DISPENSER]	0.5 CTB	LAB1D2		MD FLOOR PORT 1 (Bag F)	15.00	
				431	Return Item 431 [SODF]	0.5 CTB	LAB1D2		MF71G	25.00	
			See Swap Tab -CD XFR	605	Return Item 605 [12A CD Transfer Case]	1		See Swap Tab	MA16J	3.00	
				606	Return Item 606 [VOA Supplies]	0.5 CTB	LAB1D2		MD FLOOR PORT 2 (5 MLE from SH)	20.00	
				614	Return Item 614 [ISS Photo TV Resupply Kit]	0.5 CTB	LAB1D3		MD FLOOR PORT 2 (5 MLE from SH)	21.00	
				614.1	PD-100 Camcorders [s/n 1014, 1019]	2	ISS deployed		MD FLOOR PORT 2 (in 0.5 CTB)	5.00	**Pack old camcorders after ops complete (crew pref). **New camcorders are in resupply item 132.

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STS-116/12A.1 Return Transfer List

Chg Flag	☑	FD	Crew Initials	Item #	Item Name	Qty	Initial Stowage	Temp Stowage	Stowage at Undock	Wt (lbs)	PROCEDURES/**Constraints**/ **Comments
				615	Return Item 615 [LCVGs]	1.0 CTB	LAB1D2		EXT A/L FLOOR BAG	26.00	
				624	Return Item 624 [SWAB Return Kit]	1	LAB1D4 Rack Front		MD FLOOR STBD 2 (Bag D)	20.00	
				625	Return Item 625 [CSA-CP Stowage Kit Assy]	1	LAB1D4_C2		MD FLOOR STBD 1 (Bag C)	9.00	
				632	Return Item 632 [A31P laptop] [s/n 1022]	1	LAB1D2 (in mesh bag)		MA16J	8.00	**Leave mesh bag on ISS per ISS Crew Pref.
				633	Return Item 633 [Coldbag w/ Icepacs] [s/n 1009]	1	LAB1O3_D1		MD FLOOR STBD 1 (Bag C)	47.00	**Contains ambient icepac belts and no samples.
				634	Return Item 634 [Return ziplock bag] [ITCS Samples]	1	LAB1D2 (in mesh bag)		MF14E	8.00	**Stow in empty food trays. Clamshell trays together.
				635	Return Item 635 [760XD laptop] [s/n 5036]	1	LAB1D2 (in mesh bag)		MA16G	8.00	**Leave mesh bag on ISS per ISS Crew Pref.
				636	Return Item 636 [A31P laptop] [s/n 1011]	1	LAB1D2 (in mesh bag)		MA9G	8.00	**Leave mesh bag on ISS per ISS Crew Pref.
				637	Return Item 637 [CWC Water Sample]	2	LAB1D2 (in mesh bag)		MF14E		**Leave mesh bag on ISS per ISS Crew Pref.

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STS-116/12A.1 Return Transfer List

Chg Flag	☑	FD	Crew Initials	Item #	Item Name	Qty	Initial Stowage	Temp Stowage	Stowage at Undock	Wt (lbs)	PROCEDURES/**Constraints**/ **Comments
				Non-Prepacked Bags/Items							
			See Swap Tab - ALSP	700	ALSP [old] [s/n 1001]	1		See Swap Tab	MD FLOOR STBD 1 (Bag C)	37.00	
				701	DOUBLE COLDBAG [s/n 1010]	1	AC05 (inside locker)	ISS	MF57O	50.00	**Do not stow near a heat source.** **Filled with icepacs and samples per FD09 timelined PODF procedure 12A.1 SAMPLE TRANSFER TO DOUBLE COLDBAG. **This coldbag launched in SH (ref item 102). Will remain in SH until required for sample gathering to protect against kickloads.
				702	EMU [s/n 3015]	1	ISS A/L		EXT A/L	280	**Configured for return per FD07 timelined procedures PRE EVA3 EMU RESIZE and FD09 POST EVA TRANSFER AND RECONFIG.
			See Swap Tab - EMU H2O	703	EMU WATER PROCESSING KIT [with returning contents]	1.0 CTB		See Swap Tab	MD FLOOR STBD 2	0.50	
			See Swap Tab - EMU H2O	420	Return Item 420 [ISS EMU Water Processing Kit contents]	1 Mesh Bag		See Swap Tab	MD FLOOR STBD 2 (in 1.0 CTB)	24.00	

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STS-116/12A.1 Return Transfer List

Chg Flag	☑	FD	Crew Initials	Item #	Item Name	Qty	Initial Stowage	Temp Stowage	Stowage at Undock	Wt (lbs)	PROCEDURES/**Constraints**/ **Comments
			See Swap Tab - IELK	704	IELK [T. Reiter]	1		See Swap Tab	MD CEILING PORT 2 (Bag B)	64.00	
			See Swap Tab - IELK	704.1	KENTAVR	1		See Swap Tab	MDDK crew worn	3.00	
				705	LEG SIZING RINGS, 1.5" [white nomex pouch]	1		MA9G	EXT A/L FLOOR BAG	0.25	**Pouch launched in MDDK and was temp-stowed on FD02 per item 4. **Stow item 705.1 in this pouch.
				705.1	Leg Sizing Rings [s/n 141 and 142]	1 ziplock	A/L1O1 (staged on outside of M-02 Bag s/n 1010)		EXT A/L FLOOR BAG (inside pouch)	6.00	**Stow leg sizing rings in pouch (ref item 705).
			See Swap Tab - Multimeter	706	Multimeter [old] [Henrietta, b/c 4SS00242J]	1		See Swap Tab	MF43G	1.40	
				707	POEMS foam cushion [s/n 008]	1	LAB1O2_J2		MD FLOOR PORT 1 (Bag F)	0.30	**Do not stow near a heat source.** **Remove POEMS sample (s/n 013) from MELFI on FD09 per timelined procedure PODF POEMS SAMPLE CANISTER REMOVAL FROM MELFI.

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STS-116/12A.1 Return Transfer List

Chg Flag	☑	FD	Crew Initials	Item #	Item Name	Qty	Initial Stowage	Temp Stowage	Stowage at Undock	Wt (lbs)	PROCEDURES/**Constraints**/ **Comments
				708	RE-ENTRY GARMENTS [empty]	0.5 CTB		MDDK	MD FLOOR PORT 1 (Bag F)	13.00	**Do not stow bag until re-entry garments removed.** **Launched in SH (ref item 172), returns empty in MDDK.
				709	Silver Biocide Syringe Kit [s/n 1001]	1	NOD1O1 (in mesh bag)	MDDK	MD FLOOR PORT 1 (Bag F)	1.00	**Needed FD05 on Shuttle for CWC fills.** **Retrieve pregathered kit. Ask ISS crew for location.
			See Swap Tab - RCC	710	FEMALE BOLT HOUSING - 1 MALE BOLT HOUSING - 1 ~~DRIVE BOLT - 4~~	1 ziplock		NODE	MD FLOOR STBD 2 (Bag D)	2.00	
			See Swap Tab - RCC	710.1	FEMALE BOLT HOUSING P/N TD103859-02 s/n unknown	1 ziplock		See Swap Tab	MD FLOOR STBD 2 (Bag D)	(in above item)	
			See Swap Tab - RCC	710.2	MALE BOLT HOUSING P/N TD103899-01 s/n unknown	1 ziplock		See Swap Tab	MD FLOOR STBD 2 (Bag D)	(in above item)	

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STS-116/12A.1 Return Transfer List

Chg Flag	☑	FD	Crew Initials	Item #	Item Name	Qty	Initial Stowage	Temp Stowage	Stowage at Undock	Wt (lbs)	PROCEDURES/**Constraints**/ **Comments
			Middeck Return Realtime Additions								

[ ] - notes included by transfer team, - not on actual label

STS-116/12A.1 Return Transfer List

Chg Flag	☑	FD	Crew Initials	Item #	Item Name	Qty	Initial Stowage	Temp Stowage	Stowage at Undock	Wt (lbs)	PROCEDURES/**Constraints**/ **Comments
			SpaceHab Return								
				Prepacked Bags/Items							
				400	Return Item 400 [RPCMs]	0.5 CTB	LAB1D2		SF06A	29.00	
				401	Return Item 401 [Foam Box /CCAA Water Separator]	1	NOD1P4_D		PF13	28.00	
				403	Return Item 403 [EMU GLOVES]	0.5 CTB	LAB1D2		SF03B	20.00	
				404	Return Item 404 [Empty CWCs]	1.0 CTB	LAB1D2		FS08	32.00	
				405	Return Item 405 [EVA HARDWARE]	3.0 CTB	A/L1D		PF21	56.00	
				405.1	P1 DDCU Thermal Cover [p/n 1F82593-1]	1		ISS A/L	PF21 (in 3.0 CTB)	6.00	**Removed from "Return to Shuttle 2" jett stow bag per item 773.2.
				405.2	S1 DDCU Thermal Cover [p/n 1F82593-1]	1		ISS A/L	PF21 (in 3.0 CTB)	6.00	**Removed from "Return to Shuttle 3" jett stow bag per item 773.3.
				405.3	S0 Port Wedge Face DDCU Thermal Cover [p/n 1F77657]	1		ISS A/L	PF21 (in 3.0 CTB)	6.00	**Removed from "Return to Shuttle 3" jett stow bag per item 773.3.

[ ] - notes included by transfer team, - not on actual label

STS-116/12A.1 Return Transfer List

Chg Flag	☑	FD	Crew Initials	Item #	Item Name	Qty	Initial Stowage	Temp Stowage	Stowage at Undock	Wt (lbs)	PROCEDURES/**Constraints**/ **Comments
				406	Return Item 406 [EVA BOOTS]	0.5 CTB	LAB1D2		FC11	12.00	
				407	Return Item 407 [TREADMILL HARNESS, SAMPLE LOGS, URINE SYRINGE ADAPTER ASSYS]	0.5 CTB	LAB1D2		FC12	10.00	
				410	Return Item 410 [UCKs]	1.0 CTB	LAB1D2		PF16	20.00	
				411	Return Item 411 [EPS/BCSS]	1.0 CTB	LAB1D2		FS07	14.00	
				416	Return Item 416 [21 Progress KURS]	3.0 CTB	FGB FLOOR		AP07	161.00	**Before strapping to Aft Bulkhead, open CTB and ensure the KURS oval "eyes" are facing the port wall.
				417	Return Item 417 [22 Progress KURS]	3.0 CTB	FGB FLOOR		AC04	161.00	**Before strapping to Aft Bulkhead, open CTB and ensure the KURS oval "eyes" are facing the port wall.
				419	Return Item 419 [ECLSS/SEM]	1.0 CTB	LAB1D2		FP10	16.00	**Do not stow until item 419.1 and 419.2 have been added to this CTB.**
				419.1	PBA Oxygen Reducer/Cylinder Assembly [old] [s/n 1009]	1	NOD1S2-14 (PEP Locker)		FP10 (in 1.0 CTB)	3.42	**Transfer on FD05 per timelined activity FDS-PBA-XFER.** **Remove Mask (s/n 1002) from old PBA [s/n 1009]. Attach mask to new PBA [s/n 1008]. Call MCC-H to confirm mask attached to new PBA.** **New PBAs launch as item 118.1.1 and 118.1.2.
				419.2	PBA Oxygen Reducer/Cylinder Assembly [old] [s/n 1012]	1	LAB1P0 (PEP Locker)		FP10 (in 1.0 CTB)	3.42	**Transfer on FD05 per timelined activity FDS-PBA-XFER.** **Remove Mask (s/n 1016) from old PBA [s/n 1012]. Attach mask to new PBA [s/n 1013]. Call MCC-H to confirm mask attached to new PBA.** **New PBAs launch as item 118.1.1 and 118.1.2.

[ ] - notes included by transfer team, - not on actual label

STS-116/12A.1 Return Transfer List

Chg Flag	☑	FD	Crew Initials	Item #	Item Name	Qty	Initial Stowage	Temp Stowage	Stowage at Undock	Wt (lbs)	PROCEDURES/**Constraints**/ **Comments
				422	Return Item 422 [HRF RENAL STONE]	1.0 CTB	LAB1D2		SF05A	40.00	
				424	Return Item 424 [Computer Hardware]	0.5 CTB	LAB1D2		FS03	13.00	
				425	Return Item 425 [12S KURS]	3.0 CTB	FGB FLOOR		AS08	161.00	**Before strapping to Aft Bulkhead, open CTB and ensure the KURS oval "eyes" are facing the port wall.
				427	Return Item 427 [Russian Hardware]	1.0 CTB	LAB1D2		FC02	12.00	
				428	Return Item 428 [Russian Hardware]	0.5 CTB	LAB1D2		SF10A	28.00	
				429	Return Item 429 [Russian Hardware]	0.5 CTB	LAB1D2		FS10	15.00	
				430	Return Item 430 [Lower Arm]	1.0 CTB	LAB1D2		PF27	14.00	
				433	Return Item 433 [CWCs]	3.0 CTB	LAB1D2		SF22		**Pack item 630 in this CTB for return.
				630	Return Item 630 [half full CWC] [S/N 1026]	1	NOD1P2	ISS A/L	SF22 (inside 3.0 CTB)	30.00	**Place CWC in two KBO-M bags (p/n 11Ф615.8715-0A15-01) from NOD1O4_B2 before packing in 5 MLE bag.** **Pack after EVA 3 in item 433.

[ ] - notes included by transfer team, - not on actual label

STS-116/12A.1 Return Transfer List

Chg Flag	☑	FD	Crew Initials	Item #	Item Name	Qty	Initial Stowage	Temp Stowage	Stowage at Undock	Wt (lbs)	PROCEDURES/**Constraints**/ **Comments
				600	Return Item 600 [EMU GLOVES]	0.5 CTB	LAB1D2		SF03A	28.00	
				601	Return Item 601 [Jeff William's Crew Preference]	0.5 CTB	NOD1S4_C2		SF03C	11.00	
				602	Return Item 602 [Vindogradov Crew Preference]	0.5 CTB	NOD1S4_C2		SF05C	11.00	
				603	Return Item 603 [InSPACE, HRF Laptop]	0.5 CTB	LAB1P2_G1		FS12	17.00	
				603.1	USED EMCS VTR TAPE [Tropi tapes - qty 8] [s/n FM008 thru FM015]	1 ziplock	LAB1O1_D2 (in jett stow bag)		FS12 (in 0.5 CTB)		**Remove one VTR tape (s/n FM007) from ziplock and stow in other ziplock of VTR tapes in same location prior to packing ziplock of 8 used tapes in item 603 for return.**
				603.2	PMDIS CD	1 jewel case	FS01 (in 1.0 CTB item 137)	ISS	FS12 (in 0.5 CTB)	1	**CD burned/used during Suni's PMDIS operations FD04.
				604	Return Item 604 [PFMI THERMAL CHAMBER]	1.0 CTB	LAB1O5_D1		SF21	55.00	

[ ] - notes included by transfer team, - not on actual label

STS-116/12A.1 Return Transfer List

Chg Flag	☑	FD	Crew Initials	Item #	Item Name	Qty	Initial Stowage	Temp Stowage	Stowage at Undock	Wt (lbs)	PROCEDURES/**Constraints**/ **Comments
				607	Return Item 607 [Food Rations Containers - 6]	1 bundle	NOD1S4_D1		SF10B	9.00	
				608	Return Item 608 [Food Rations Containers - 6]	1 bundle	NOD1S4_D1		SF04C	9.00	
				609	Return Item 609 [US Collapsible Food Containers - 6]	1 bundle	NOD1S4_D1		SF08C	9.00	
				610	Return Item 610 [Food Rations Containers - 6]	1 bundle	NOD1S4_D1		SF06B	9.00	
				611	Return Item 611 [US Collapsible Food Containers - 6]	1 bundle	NOD1S4_D1		SF06C	9.00	
				612	Return Item 612 [Food Rations Containers - 6]	1 bundle	NOD1S4_D1		SF04B	9.00	
				613	Return Item 613 [Food Rations Containers - 6]	1 bundle	NOD1S4_D1		SF10C	9.00	
				616	Return Item 616 [Acoustic Countermeasures Kit]	0.5 CTB	LAB1D2		FS05	10.00	
				617	Return Item 617 [KURS AMPS/ANTENNA]	1 White Bag	LAB1D2		FP04	15.00	
				618	Return Item 618 [KURS AMPS/ANTENNA]	1 White Bag	LAB1D2		FP08	20.00	

[ ] - notes included by transfer team, - not on actual label

STS-116/12A.1 Return Transfer List

Chg Flag	☑	FD	Crew Initials	Item #	Item Name	Qty	Initial Stowage	Temp Stowage	Stowage at Undock	Wt (lbs)	PROCEDURES/**Constraints**/ **Comments
				619	Return Item 619 [Reiter Crew Preference]	0.5 CTB	Reiter's Sleep Station		SF09C	11.00	
				620	Return Item 620 [Reiter Crew Preference]	1.0 CTB	Reiter's Sleep Station		PF25	31.00	
				622	Return Item 622 [EMCS ECs]	0.5 CTB	LAB1D2		SF07A	30.00	
				623	Return Item 623 [EMCS ECs]	0.5 CTB	LAB1D2		SF04A	30.00	
				627	Return Item 627 [BBA/LHAs]	1 bundle	LAB1O5_G		AS03 (in 5 MLE Bag)	16.00	**Returns in 5 MLE bag that launched as Bag A at MDDK Floor Port 1.
				628	Return Item 628 [EMCS Air Mix Supply Module] [s/n FM012]	1	LAB1O1_D2		AS03 (in 5 MLE Bag)	16.00	**PENETRATOR** **Returns in 5 MLE bag that launched as Bag A at MDDK Floor Port 1.
				629	Return Item 629 [EMCS Air Mix Supply Module] [s/n FM013]	1	LAB1O1_D2		AS03 (in 5 MLE Bag)	16.00	**PENETRATOR** **Returns in 5 MLE bag that launched as Bag A at MDDK Floor Port 1.
				638	Return Item 638 [DAFT]	1.0 CTB	LAB1P2_G2		AC01	15.00	

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STS-116/12A.1 Return Transfer List

Chg Flag	☑	FD	Crew Initials	Item #	Item Name	Qty	Initial Stowage	Temp Stowage	Stowage at Undock	Wt (lbs)	PROCEDURES/**Constraints**/ **Comments
				Non-Prepacked Bags/Items							
				750	VENT TOOL / DEBRIS COVER	1 5 MLE Bag		NOD1D1	AP01	69.00	**5 MLE bag was temp stowed on ISS per item 110. **Leave all foam in 5 MLE bag for return.
				750.1	23P KURS	1	ISS TEMP STOW		AP01 (in 5 MLE Bag)	154.00	**Before placing in 5 MLE bag, ensure the KURS oval "eyes" are facing the port wall. **Launch foam (without ballast) may be dispersed between 5 MLE bags as needed.
				751	13S KURS	1	FGB_224		AP04 (in 5 MLE Bag)	154.00	**Before placing in 5 MLE bag, ensure the KURS oval "eyes" are facing the port wall. **Launch foam may be dispersed between 5 MLE bags as needed.
				752	AGB FOAM	5 pcs	SF13	SH crew pref	SF13	39.00	**Resecure empty foam to stowage trays for return.
				753	CDRA [old]	1	LAB1D6		AS03 (in 5 MLE Bag)	96.00	**Removed per FD08 timelined procedure CDRA Dessicant/Sorbent Bed 202 R&R.
				754	CWC [full] [labeled: condensate]	1 (inside 2 KBO-M bags)		MDDK	AS01 (in 5 MLE Bag)	100.00	**Place full CWC in two KBO-M bags (p/n 11Φ615.8715-0A15-01) from NOD1O4_B2 before packing in 5 MLE bag.** **This CWC launched in MDDK.
				755	CWC [full] [labeled: condensate]	1 (inside 2 KBO-M bags)		MDDK	AS01 (in 5 MLE Bag)	100.00	**Place full CWC in two KBO-M bags (p/n 11Φ615.8715-0A15-01) from NOD1O4_B2 before packing in 5 MLE bag.** **This CWC launched in MDDK.

[ ] - notes included by transfer team, - not on actual label

STS-116/12A.1 Return Transfer List

Chg Flag	☑	FD	Crew Initials	Item #	Item Name	Qty	Initial Stowage	Temp Stowage	Stowage at Undock	Wt (lbs)	PROCEDURES/**Constraints**/ **Comments
			See Swap Tab - ELEKTRON	757	Elektron	1		See Swap Tab	AC19 (in Elektron foam)	341.00	**PENETRATOR**
				758	ETVCG LIGHT	2.0 CTB		NOD1	PF17	40.00	**Transfer after FD05 timelined procedure EXTERNAL TELEVISION CAMERA GROUP DISASSEMBLY.** **This CTB launched with resupply light (ref item 146). **Pack item 758.1 in this CTB with foam for return.
				758.1	ETVCG LIGHT [old]	1	ISS External	ISS A/L	PF17 (in 2.0 CTB)	(in above item)	**Disassembled from items 772 and 779 on FD05 per EXTERNAL TELEVISION CAMERA GROUP DISASSEMBLY.
				759	GYROSCOPE [old]	1	SM (TVIS)		PF02	101.00	**Do not stow in SH for return until FD07, to allow time for ground to analyze results of activation and checkout of new gyro.** **Removed per FD06 timelined procedure TVIS - TREADMILL COMPONENT REMOVAL AND REPLACEMENT.

[ ] - notes included by transfer team, - not on actual label

STS-116/12A.1 Return Transfer List

Chg Flag	☑	FD	Crew Initials	Item #	Item Name	Qty	Initial Stowage	Temp Stowage	Stowage at Undock	Wt (lbs)	PROCEDURES/**Constraints**/ **Comments
			See Swap Tab - LiOH	760	LiOH BAG 1 [used]	1.0 CTB		See Swap Tab	SF01	54.00	
			See Swap Tab - LiOH	761	LiOH BAG 2 [used]	1.0 CTB		See Swap Tab	SF02	34.00	
			See Swap Tab - LiOH	762	LiOH BAG 3 [used]	1.0 CTB		See Swap Tab	SF07B	34.00	
			See Swap Tab - LiOH	763	LiOH BAG 4 [used]	1.0 CTB		See Swap Tab	SF09A	34.00	
			See Swap Tab - LiOH	764	LiOH BAG 5 [used]	1.0 CTB		See Swap Tab	SF11	34.00	
			See Swap Tab - LiOH	765	LiOH BAG 6 [used]	1.0 CTB		See Swap Tab	SF12	34.00	
	☑	0		766	MANAGEMENT RESERVE	SH GOLD BAG	FS04		FS04	26.00	**DO NOT TRANSFER - launches and returns in this location.**
	☑	0		767	MGNT RESERVE 2	0.5 CTB	FP01		FP01	17.00	**DO NOT TRANSFER - launches and returns in this location.**
			See Swap Tab - ORCA	768	ORCA [old]	1		See Swap Tab	PF04	185.00	**PENETRATOR**

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STS-116/12A.1 Return Transfer List

Chg Flag	☑	FD	Crew Initials	Item #	Item Name	Qty	Initial Stowage	Temp Stowage	Stowage at Undock	Wt (lbs)	PROCEDURES/**Constraints**/ **Comments
			See Swap Tab - PGT	769	PGT [old]	1.0 CTB		See Swap Tab	FC01	16.00	
			See Swap Tab - PGT	769.1	PGT [old] [s/n 1003]	1		See Swap Tab	FC01 (in 1.0 CTB)	(in above item)	
			See Swap Tab - PGT	770	PGT [old]	1.0 CTB		See Swap Tab	SF08A	29.00	
			See Swap Tab - PGT	770.1	PGT [old] [s/n 1006, 1007]	2		See Swap Tab	SF08A (in 1.0 CTB)	(in above item)	
				772	PTU/CTVC [ETVCG] [old]	1	ISS External	Middeck	PF01	57.00	**Disassembled from items 758.1 and 779 on FD05 per timelined procedure EXTERNAL TELEVISION CAMERA GROUP DISASSEMBLY.
				773	Return item 773	2.0 CTB		NOD1	AC13	99.00	**This 2.0 CTB launched empty in SH (ref item 144.1).
				773.1	Return to Shuttle 1	1 jett stow bag		ISS A/L	AC13 (in 2.0 CTB)	(in above item)	**Place jett stow bag and all contents in CTB (ref item 773).
				773.2	Return to Shuttle 2	1 jett stow bag		ISS A/L	AC13 (in 2.0 CTB)	(in above item)	**Remove P1 DDCU Thermal Cover (p/n 1F82593-1) and stow per item 405.1.** **Place jett stow bag and all REMAINING contents in CTB (ref item 773).
				773.3	Return to Shuttle 3	1 jett stow bag		ISS A/L	AC13 (in 2.0 CTB)	(in above item)	**Remove S1 DDCU Thermal Cover (p/n 1F82593-1) and S0 Port Wedge Face DDCU Thermal Cover (p/n 1F77657) and stow per items 405.2 and 405.3.** **Place jett stow bag and all REMAINING contents in CTB (ref item 773).

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STS-116/12A.1 Return Transfer List

Chg Flag	☑	FD	Crew Initials	Item #	Item Name	Qty	Initial Stowage	Temp Stowage	Stowage at Undock	Wt (lbs)	PROCEDURES/**Constraints**/ **Comments
				774	Return item 774	0.5 CTB	ISS		FC13	2.00	**Retrieve empty 0.5 CTB from ISS. Ask ISS crew for location. **Label CTB as Return Item 774. **Pack items 774.1 and 774.2 in CTB.
				774.1	Potassium Citrate Placebo Kit [p/n SJG46118187-301] [s/n 1039] [b/c HRF06200J]	1	SM_245		FC13 (in 0.5 CTB)	3.00	
				774.2	Treadmill Harness [p/n SEG46120250-301] [s/n 1008] [b/c 00052203J]	1	ISS Crew Pref		FC13 (in 0.5 CTB)	5.00	**Stow after Reiter's last TVIS Exercise.
				775	Return item 775	1.0 CTB	ISS		FC07	4.00	**Retrieve empty 1.0 CTB from ISS. Ask ISS crew for location. **Label CTB as Return Item 775. **Pack items 775.1 and 775.2 in CTB.
				775.1	P5 Launch Locks	8	ISS EXT		FC07 (in 1.0 CTB)	8.00	**Brought inside after EVA 1.
				775.2	RJMC Cover [p/n 1F82068-1]	1	NOD1D4_K2 (in 1.0 CTB: Broken/Expired Items, s/n 1080)		FC07 (in 1.0 CTB)	6.00	
				775.3	RJMC Cover [p/n 1F82068-501]	1	NOD1D4_K2 (in 1.0 CTB: Broken/Expired Items, s/n 1080)		FC07 (in 1.0 CTB)	6.00	

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STS-116/12A.1 Return Transfer List

Chg Flag	☑	FD	Crew Initials	Item #	Item Name	Qty	Initial Stowage	Temp Stowage	Stowage at Undock	Wt (lbs)	PROCEDURES/**Constraints**/ **Comments
			See Swap Tab - SAFER	777	SAFER [old] [s/n 1007]	3.0 CTB		See Swap Tab	AC06	147.00	**PENETRATOR**
			See Swap Tab - SAFER	777.1	SAFER [old] [s/n 1007]	1		See Swap Tab	AC06 (in 3.0 CTB)	(in above item)	**PENETRATOR**
			See Swap Tab - SAFER	777.2	SAFER Cue Card [old]	1		See Swap Tab	AC06 (in 3.0 CTB)	(in above item)	
			See Swap Tab - SAFER	777.3	Torque Wrench Bag	1		See Swap Tab	AC06 (in 3.0 CTB)	5.00	
				778	TCCS CHARCOAL BED	1	LAB1D6 installed		SF25	85.00	**Removed per FD07 timelined procedure TCCS CHARCOAL BED ASSEMBLY R&R. **Wrap returning Charcoal Bed in Tedlar bags from resupply charcoal bed. Pack returning Charcoal Bed in launch foam (ref item 155).
				779	TVCIC [ETVCG] [old]	1	ISS External	Middeck	PF01	42.00	**Disassembled from items 758.1 and 772 on FD05 per timelined procedure EXTERNAL TELEVISION CAMERA GROUP DISASSEMBLY.

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STS-116/12A.1 Return Transfer List

Chg Flag	☑	FD	Crew Initials	Item #	Item Name	Qty	Initial Stowage	Temp Stowage	Stowage at Undock	Wt (lbs)	PROCEDURES/**Constraints**/ **Comments
			SpaceHab Return Realtime Additions								

STS-116/12A.1 Swap List

Chg Flag	☑	FD	Crew Initials	Item #	Item Name	Qty	Initial Stowage	Temp Stowage	Stowage at Undock	Wt (lbs)	PROCEDURES/**Constraints**/ **Comments
			Middeck Swaps								
			ALSP								
				17	ALSP [new]	1	MD FLOOR STBD 1 (Bag C)		LAB1D4_D1	37.00	**Transfers per FD07 timelined procedure 12A.1 ISS ALSP Transfer.
				700	ALSP [old] [s/n 1001]	1	LAB1D4_D1		MD FLOOR STBD 1 (Bag C)	37.00	**Transfers per FD07 timelined procedure 12A.1 ISS ALSP Transfer.

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STS-116/12A.1 Swap List

Chg Flag	☑	FD	Crew Initials	Item #	Item Name	Qty	Initial Stowage	Temp Stowage	Stowage at Undock	Wt (lbs)	PROCEDURES/**Constraints**/ **Comments
			CD XFR								
				11	CD LIBRARY	1	MA16J		LAB1S5_A1	3.00	**Swaps with item 605.
				605	Return Item 605 [12A CD Transfer Case]	1	LAB1S5_A1		MA16J	3.00	**Swaps with item 11.

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STS-116/12A.1 Swap List

Chg Flag	☑	FD	Crew Initials	Item #	Item Name	Qty	Initial Stowage	Temp Stowage	Stowage at Undock	Wt (lbs)	PROCEDURES/**Constraints**/ **Comments
			EMU H2O								
				18	EMU WATER PROCESSING KIT (Transfer Contents Only)	1.0 CTB	MD FLOOR STBD 1 (Bag C)	NODE		23.70	**Remove contents from this CTB and stow per item 18.1. **Use this CTB and foam for return of ISS EMU Water Processing Kit contents (ref item 420 and 703).
				18.1	contents of CTB	all	MD FLOOR STBD 1 (in 1.0 CTB)	NODE	NOD1D2 (in 1.0 CTB: EMU Water Processing Kit, s/n 1372)	(in above item)	**Remove contents from CTB and stow in ISS EMU Water Processing Kit, s/n 1372.
				3	EMU 3-MICRON FILTER - 3	1 ziplock	EXT A/L FLOOR BAG		NOD1D2 (in 1.0 CTB: EMU Water Processing Kit, s/n 1372)	3.00	**These are not needed for STS-116 EVAs. **Stow this item in ISS EMU Water Processing Kit, s/n 1372.
X				703	EMU WATER PROCESSING KIT [with returning contents]	1.0 CTB		NODE	MD FLOOR STBD 2 (Bag D)	23.70	**This CTB launched with resupply EMU Water Processing Kit contents (ref item 18). **Pack item 420 in this CTB with foam for return.
				420	Return Item 420 [ISS EMU Water Processing Kit contents]	1 Mesh Bag	NOD1D2 (in 1.0 CTB: EMU Water Processing Kit, s/n 1372)		MD FLOOR STBD 2 (in 1.0 CTB)	(in above item)	**Remove contents from mesh bag and stow in same CTB that contained new contents for launch (ref item 703). **Leave mesh bag on ISS per ISS Crew Pref.

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STS-116/12A.1 Swap List

Chg Flag	☑	FD	Crew Initials	Item #	Item Name	Qty	Initial Stowage	Temp Stowage	Stowage at Undock	Wt (lbs)	PROCEDURES/**Constraints**/ **Comments
			IELK								
				13	IELK [S. Williams]	1	MD FLOOR PORT 2 (Bag B)		Soyuz	80.00	**Transfer on FD03 for timelined activity.** **Use launch bag and foam to stow returning IELK (ref Item 704).
				704	IELK [T. Reiter]	1	Soyuz installed		MD CEILING PORT 2 (Bag B)	64.00	**Removed from Soyuz on FD03 per timelined activity. **Return IELK in same bag with foam that contained new IELK for launch (ref item 13). Relocate Bag B to Ceiling. **Remove KENTAVR and take to Middeck for return per item 704.1.
X				704.1	KENTAVR	1	Soyuz (in IELK)		MDDK ~~(Crew worn for landing)~~	3.00	**This was removed from Reiter's IELK (ref item 704). **Report middeck stowage location if Reiter is not going to wear this for return.

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STS-116/12A.1 Swap List

Chg Flag	☑	FD	Crew Initials	Item #	Item Name	Qty	Initial Stowage	Temp Stowage	Stowage at Undock	Wt (lbs)	PROCEDURES/**Constraints**/ **Comments
			Multimeter								
				25	Multimeter [new] [b/c 00059824J]	1	MF43G		ISS crew pref	1.40	**Remove shuttle multimeter from kit and swap with multimeter from ISS (ref Item 706). **Do not transfer kit or leads.
				706	Multimeter [old] [Henrietta, b/c 4SS00242J]	1	ISS crew pref		MF43G (in STS multimeter kit)	1.40	**Swap with shuttle multimeter per item 25.

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STS-116/12A.1 Swap List

Chg Flag	☑	FD	Crew Initials	Item #	Item Name	Qty	Initial Stowage	Temp Stowage	Stowage at Undock	Wt (lbs)	PROCEDURES/**Constraints**/ **Comments
X			**RCC**								
X				21	FEMALE BOLT HOUSING - 1 MALE BOLT HOUSING - 1 DRIVE BOLT - 4	1 ziplock	MD FLOOR STBD 2 (Bag D)	NODE		2.00	**Remove foam block from ziplock. Remove each item from the block and put into block of foam in CTB on ISS which contains the returning bolt housings (ref items 710.1 and 710.2) **Foam block will return in mddk with returning bolt housings (ref item 710)
X				21.1	FEMALE BOLT HOUSING P/N TD103859-02 s/n 0004	1 ziplock	MD FLOOR STBD 2 (Bag D) (in foam in ziplock)		NOD1P4_C1 (in 1.0 CTB s/n 1239) in foam block	(in above item)	**RCC Plug Hdwe - VERY FRAGILE **Remove from ascent foam block and place in cutout in foam block in CTB on ISS.
X				21.2	MALE BOLT HOUSING P/N TD103899-01 s/n 0003	1 ziplock	MD FLOOR STBD 2 (Bag D) (in foam in ziplock)		NOD1P4_C1 (in 1.0 CTB s/n 1239) in foam block	(in above item)	**RCC Plug Hdwe - VERY FRAGILE **Remove from ascent foam block and place in cutout in foam block in CTB on ISS.
X				21.3	DRIVE BOLTS P/N TD103856-02 s/n 0000030 thru 0000033	4 ziplocks	MD FLOOR STBD 2 (Bag D) (in foam in ziplock)		NOD1P4_C1 (in 1.0 CTB s/n 1239) in foam block	(in above item)	**RCC Plug Hdwe - VERY FRAGILE **Remove from ascent foam block and place in cutout in foam block in CTB on ISS.
X				710	FEMALE BOLT HOUSING - 1 MALE BOLT HOUSING - 1 ~~DRIVE BOLT - 4~~	1 ziplock		NODE	MD FLOOR STBD 2 (Bag D)	2.00	**Foam block launched in the mddk with new drive bolts and bolt housings (ref items 21) **Place foam block with returning housings in cutout in 5MLE bag.
X				710.1	FEMALE BOLT HOUSING P/N TD103859-02 s/n unknown	1 ziplock	NOD1P4_C1 (in 1.0 CTB s/n 1239)		MD FLOOR STBD 2 (Bag D) (in foam in ziplock)	(in above item)	**RCC Plug Hdwe - VERY FRAGILE **Remove ziplock from foam cutout. Place in cutout in foam block where new female bolt housing launched (ref item 21.1).
X				710.2	MALE BOLT HOUSING P/N TD103899-01 s/n unknown	1 ziplock	NOD1P4_C1 (in 1.0 CTB s/n 1239)		MD FLOOR STBD 2 (Bag D) (in foam in ziplock)	(in above item)	**RCC Plug Hdwe - VERY FRAGILE **Remove ziplock from foam cutout. Place in cutout in foam block where new male bolt housing launched (ref item 21.2).

[ ] - notes included by transfer team, - not on actual label

STS-116/12A.1 Swap List

Chg Flag	☑	FD	Crew Initials	Item #	Item Name	Qty	Initial Stowage	Temp Stowage	Stowage at Undock	Wt (lbs)	PROCEDURES/**Constraints**/ **Comments

STS-116/12A.1 Swap List

Chg Flag	☑	FD	Crew Initials	Item #	Item Name	Qty	Initial Stowage	Temp Stowage	Stowage at Undock	Wt (lbs)	PROCEDURES/**Constraints**/ **Comments
			Spacehab Swaps								
			ELEKTRON								
				108	RPCM Outer Hatch Window Cover Assembly	1.0 CTB	AC19 (in Elektron foam)		LAB1D1 Rack Front	50.00	**After CTB is removed, resecure velcro straps to hold Elektron foam lid in place.
X				109	Satellite - 1 SPHERES CO2 Tank - 12 SPHERES Batt Pack - 12	1.0 CTB	AC19 (in Elektron foam)		~~LAB1O5_C1/ D1~~ LAB1O3_D1	38.00	**PENETRATOR (CO2 tanks)** **After CTB is removed, resecure velcro straps to hold Elektron foam lid in place.
X				757	Elektron	1	FGB_216		AC19 (in Elektron foam)	341.00	**PENETRATOR** **Reference labeling inside Elektron foam box and Elektron Foam Cheat Sheet in SH Transfer List (Reference Tab) for return configuration. **Secure horizontal straps first, then secure vertical straps.

STS-116/12A.1 Swap List

Chg Flag	☑	FD	Crew Initials	Item #	Item Name	Qty	Initial Stowage	Temp Stowage	Stowage at Undock	Wt (lbs)	PROCEDURES/**Constraints**/ **Comments
			LiOH								
				158	LiOH BAG 1 [unused]	1.0 CTB	SF01	MDDK		47.00	**Transfer to MDDK for FD08 timelined LiOH Swap activity.** **Remove 3 cans from CTB and swap with 3 used cans from MDDK LiOH Box (ref item 760). **This bag contains ballast which remains in CTB for return.
				760	LiOH BAG 1 [used]	1.0 CTB		MDDK	SF01	54.00	**Place 3 used cans in empty LiOH BAG 1 CTB (ref item 158). **Record serial numbers of used cans on the CTB label. **This bag contains ballast which remains in CTB for return.
				142	LiOH BAG 2 [unused]	1.0 CTB	FS09	MDDK		27.00	**Transfer to MDDK for FD08 timelined LiOH Swap activity.** **Remove 3 cans from CTB and swap with 3 used cans from MDDK LiOH Box (ref item 761).
				761	LiOH BAG 2 [used]	1.0 CTB		MDDK	SF02	34.00	**Place 3 used cans in empty LiOH BAG 2 CTB (ref item 142). **Record serial numbers of used cans on the CTB label.

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STS-116/12A.1 Swap List

Chg Flag	☑	FD	Crew Initials	Item #	Item Name	Qty	Initial Stowage	Temp Stowage	Stowage at Undock	Wt (lbs)	PROCEDURES/**Constraints**/ **Comments
				177	LiOH BAG 3 [unused]	1.0 CTB	SF11	MDDK		27.00	**Transfer to MDDK for FD08 timelined LiOH Swap activity.** **Remove 3 cans from CTB and swap with 3 used cans from MDDK LiOH Box (ref item 762).
				762	LiOH BAG 3 [used]	1.0 CTB		MDDK	SF07B	34.00	**Place 3 used cans in empty LiOH BAG 3 CTB (ref item 177). **Record serial numbers of used cans on the CTB label.
				168	LiOH BAG 4 [unused]	1.0 CTB	SF07A	MDDK		27.00	**Transfer to MDDK for FD08 timelined LiOH Swap activity.** **Remove 3 cans from CTB and swap with 3 used cans from MDDK LiOH Box (ref item 763).
				763	LiOH BAG 4 [used]	1.0 CTB		MDDK	SF09A	34.00	**Place 3 used cans in empty LiOH BAG 4 CTB (ref item 168). **Record serial numbers of used cans on the CTB label.

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STS-116/12A.1 Swap List

Chg Flag	☑	FD	Crew Initials	Item #	Item Name	Qty	Initial Stowage	Temp Stowage	Stowage at Undock	Wt (lbs)	PROCEDURES/**Constraints**/ **Comments
				141	LiOH BAG 5 [unused]	1.0 CTB	FS08	MDDK		27.00	**Transfer to MDDK for FD08 timelined LiOH Swap activity.** **Remove 3 cans from CTB and swap with 3 used cans from MDDK LiOH Box (ref item 764).
				764	LiOH BAG 5 [used]	1.0 CTB		MDDK	SF11	34.00	**Place 3 used cans in empty LiOH BAG 5 CTB (ref item 141). **Record serial numbers of used cans on the CTB label.
				138	LiOH BAG 6 [unused]	1.0 CTB	FS03	MDDK		27.00	**Transfer to MDDK for FD08 timelined LiOH Swap activity.** **Remove 3 cans from CTB and swap with 3 used cans from MDDK LiOH Box (ref item 765).
				765	LiOH BAG 6 [used]	1.0 CTB		MDDK	SF12	34.00	**Place 3 used cans in empty LiOH BAG 6 CTB (ref item 138). **Record serial numbers of used cans on the CTB label.

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STS-116/12A.1 Swap List

Chg Flag	☑	FD	Crew Initials	Item #	Item Name	Qty	Initial Stowage	Temp Stowage	Stowage at Undock	Wt (lbs)	PROCEDURES/**Constraints**/ **Comments
			ORCA								
				153	ORCA [new]	1	PF04		ISS A/L installed	185.00	**Transfer for FD07 timelined activity ORCA R&R.**
				768	ORCA [old] [s/n 1003]	1	ISS A/L installed		PF04	185.00	**PENETRATOR** **Transfer after FD07 timelined activity ORCA R&R.

[ ] - notes included by transfer team, - not on actual label

STS-116/12A.1 Swap List

Chg Flag	☑	FD	Crew Initials	Item #	Item Name	Qty	Initial Stowage	Temp Stowage	Stowage at Undock	Wt (lbs)	PROCEDURES/**Constraints**/ **Comments
			PGT								
				120	OGS PWR - 1 PGT - 1 EWIS Cable - 1	1.0 CTB	FC02	ISS A/L		28.00	**Use this CTB and foam for return of old PGT (ref item 769 and 769.1). **Behind the CTB yellow label is a green label. Write 'PGT (old)' on green label and stow in front of yellow label.
				120.1	PGT	1	FC02 (in 1.0 CTB)	ISS A/L	A/L1O10 (in 1.0 CTB: PGT Hardware; s/n 1161).	10.00	**Leave in CTB until reqd for FD09 timelined procedure PGT TOOL CHECKOUT.** **Call item complete after stowing PGT following successful PGT Checkout.
X				120.2	EWIS INTERNAL ANT CABLE	1 ziplock	FC02 (in 1.0 CTB)		LAB1P1 (inside stowage locker)	5.00 ~~(in above item)~~	
				120.3	OGS PWR [s/n 2002]	1	FC02 (in 1.0 CTB)	MDDK	A/L1D1_B2	3.00	**Temp stow on MDDK for FD04 timelined procedure PWR Fill.** **After PWR fill is complete, transfer PWR to ISS.
				769	PGT [old]	1.0 CTB		ISS A/L	PF16	16.00	**This CTB launched with resupply PGT (ref item 120). **Pack item 769.1 in this CTB with foam for return.
				769.1	PGT [old] [s/n 1003]	1		ISS A/L	PF16 (in 1.0 CTB)	10.00	**Verify no battery in PGT; if one is installed, remove it from PGT and stow in M-02 bag (s/n 1038) at A/L1O1.**

[ ] - notes included by transfer team, - not on actual label

STS-116/12A.1 Swap List

Chg Flag	☑	FD	Crew Initials	Item #	Item Name	Qty	Initial Stowage	Temp Stowage	Stowage at Undock	Wt (lbs)	PROCEDURES/**Constraints**/ **Comments
				148	PGT - 2 PWR - 1	1.0 CTB	PF25	ISS A/L		29.00	**Transfer for FD09 timelined procedure PGT CHECKOUT.** **Use this CTB and foam for return of old PGTs (ref item 770 and 770.1).
X				148.1	PWR [s/n 1025]	1	PF25 (in 1.0 CTB)	MDDK	A/L1D1_B2	3.00	**Temp stow on MDDK for FD04 timelined procedure PWR Fill.** **After PWR fill is complete, transfer PWR to ISS
X				148.2	PGT	2	PF25 (in 1.0 CTB)	ISS A/L	A/L1O10 (in 1.0 CTB: PGT Hardware; s/n 1161).	10.00	**Leave in CTB until reqd for FD09 timelined procedure PGT TOOL CHECKOUT.** **Call item complete after stowing PGTs following successful PGT Checkout.
X				770	PGT [old]	1.0 CTB		ISS A/L	SF08A	29.00	**This CTB launched with resupply PGTs (ref item 148). ~~From FD09 timelined procedure PGT CHECKOUT.~~ ~~**Return 2 PGTs in same CTB from new PGTs (ref item 148) launched in.~~
				770.1	PGT [old] [s/n 1006, 1007]	2		ISS A/L	SF08A (in 1.0 CTB)	20.00	**Verify no battery in PGT; if one is installed, remove it from PGT and stow in M-02 bag (s/n 1038) at A/L1O1.**

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STS-116/12A.1 Swap List

Chg Flag	☑	FD	Crew Initials	Item #	Item Name	Qty	Initial Stowage	Temp Stowage	Stowage at Undock	Wt (lbs)	PROCEDURES/**Constraints**/ **Comments
			SAFER								
X				113	SAFER	3.0 CTB	AP07	ISS A/L		147.00	**PENETRATOR** **Transfer for FD05 ~~FD06~~ timelined procedure SAFER CHECKOUT.** **This 3.0 CTB (with foam) will be used for return of old SAFER (ref item 777) after SAFER CHECKOUT.
				113.1	SAFER [new] [s/n 1006]	1	AP07 (in 3.0 CTB)	ISS A/L	ISS A/L (in Safer Stowage Bag; s/n 1013)	(in above item)	**PENETRATOR** **During SAFER CHECKOUT, remove switchguard from new SAFER hand controller, temp stow switchguard in SAFER foam, and secure with tape. **Stow hand controller in HCM tray in starboard side of SAFER (lift HCM DPLY handle to release tray); restow tray in SAFER, close door.
X				113.2	SAFER Cue Card [new]	1 ziplock	AP07 (in 3.0 CTB)	ISS A/L	ISS A/L (in Safer Stowage Bag; s/n 1013)	(in above item)	**Cue card is stowed in ziplock velcroed to inside of SAFER foam lid. **Stow cue card in pocket of SAFER bag (s/n 1013).

[ ] - notes included by transfer team, - not on actual label

STS-116/12A.1 Swap List

Chg Flag	☑	FD	Crew Initials	Item #	Item Name	Qty	Initial Stowage	Temp Stowage	Stowage at Undock	Wt (lbs)	PROCEDURES/**Constraints**/ **Comments
X				777	SAFER	3.0 CTB		ISS A/L	AC06	147.00	**PENETRATOR** **This CTB launched with new SAFER (ref item 113). **Pack ~~old SAFER (item 777.1)~~ items 777.1, 777.2, and 777.3 in this CTB with foam for return.
X				777.1	SAFER [old] [s/n 1007]	1	ISS A/L (in Safer Stowage Bag; S/N 1013)		AC06 (in 3.0 CTB)	(in above item)	**PENETRATOR** **Do not pack until after FD05 ~~FD06~~ timelined procedure SAFER CHECKOUT.** **Retrieve switchguard from slot in foam. Install switchguard on old SAFER hand controller. **Deploy the SAFER hand controller using HCM DPLY lever on starboard side of SAFER. Remove hand controller from tray. **Restow tray (hand controller stays deployed), and route the hand controller cable through notch in corner of door. Close door.
X				777.2	SAFER Cue Card [old]	1	ISS A/L (in Safer Stowage Bag; S/N 1013)		AC06 (in 3.0 CTB)	(in above item)	**Remove cue card from pocket of SAFER bag (s/n 1013) and stow in 3.0 CTB with old SAFER (ref item 777).
X				777.3	Torque Wrench Bag [s/n: 1002]	1	ISS A/L		AC064 (in 3.0 CTB)	(in above item)	**Contains torque wrench (s/n: 1008).

MSG 010 - FD02 SpaceHab Viewport Violations

MET	Constraint	Action
00/22:21:16 - 00/22:29:20	Deep Space	If Viewport open, VP HTR - ON

END OF PAGE 1 OF 1, MSG 010