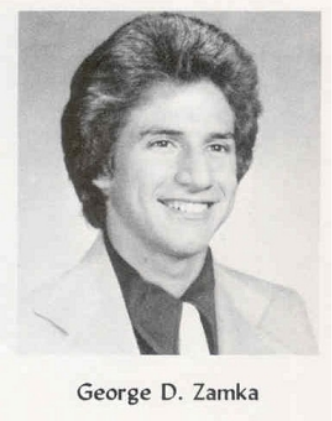
STS-130 / 20A

FD 10 Execute Package

MSG	Page(s)	Title
122B	1 - 14	FD10 Flight Plan Revision (Not Printed Onboard)
123	15 - 16	FD10 Mission Summary (Not Printed Onboard)
124	---	Daily Summary (Electronic Only. Not Printed Onboard)
125A	17 - 23	FD10 Transfer Message (Printed Onboard)
126	---	Stowage Locations for FD10 (GMT 048) (Electronic Only. Not Printed Onboard)
127	24 - 35	1.162 Cupola Audio Terminal Unit (ATU) Installation (Printed Onboard)
128	---	IMMT Results - 2/16/10 (Electronic Only. Not Printed Onboard)
130	36	FD10 Crew Choice Downlink (Not Printed Onboard)
131	37	Shuttle Tonopen Calibration Procedure (Printed Onboard)

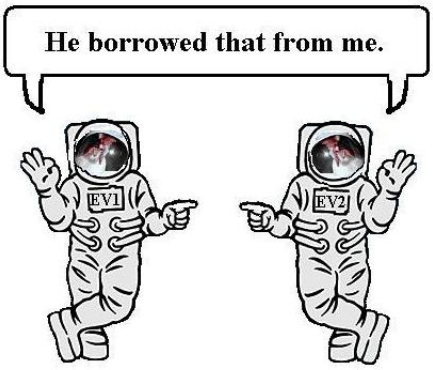
Approved by FAO:
R. Smith

Last Updated: Feb 16 2010 8:42 PM GMT
JEDI *(**J**oint **E**xecute package **D**evelopment and **I**ntegration), v3.0*



After Saturday Night Fever

After the Corps



Record 3 EMU swaps for a single flight w/ 2 EV crewmen?

MSG INDEX

MSG NO.	TITLE
MSG-122	FD10 Flight Plan Revision
MSG-123	FD10 Mission Summary
MSG-124	Daily Summary
MSG-125	FD10 Transfer Message
MSG-126	Stowage Locations for FD10 (GMT 048)
MSG-127	1.162 Cupola Audio Terminal Unit (ATU) Installation
MSG-128	IMMT Results - 2/16/10
MSG-130	FD10 Crew Choice Downlink
MSG-131	Shuttle Tonopen Calibration Procedure

1. Post-Sleep Cryo Config

For today's Post-Sleep cryo config, O2 tanks 1, 3 & 4 and H2 tanks 1 and 4 will be active.

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

A11 CRYO TK4 HTR O2 A - AUTO

A15 CRYO TK5 HTR O2 A - OFF

Pre-Sleep Cryo Config

√MCC for deltas prior to configuring for Pre-Sleep.

For tonight's Pre-Sleep cryo config, Manifold 2 will be closed with O2 tanks 2 and 5 and H2 tanks 2 and 4 active.

A15 CRYO TK5 HTR O2 A - AUTO

A11 CRYO TK4 HTR O2 A - OFF

R1 O2 TK1 HTR A - OFF
TK2 HTR A - AUTO
TK3 HTR A - OFF

H2 TK1 HTRS A,B (two) - OFF
TK2 HTRS A,B (two) - AUTO

O2,H2 MANF VLV TK2 (two) - CL (tb-CL)

2. <u>O2 Transfer via ORCA</u>
   Tonight the ground will be performing O2 xfer via ORCA. Recall that due to accoustic constraints, we can not have any of you sleeping in the A/L tonight. Sorry for the inconvenience.

3. <u>Cupola ATU Install</u>
   Kay, we wanted to give you a heads up that a window numbering error was caught in the Cupola ATU installation procedure that affects location coding in several points. Since the procedure needed to be updated, we also removed the call down for you to ask which location to install the ATU. The RWS is definitely going to be installed at Windows 2/3 (ISS Fwd), so the ATU install procedure correspondingly now has you install the ATU at Window 6.

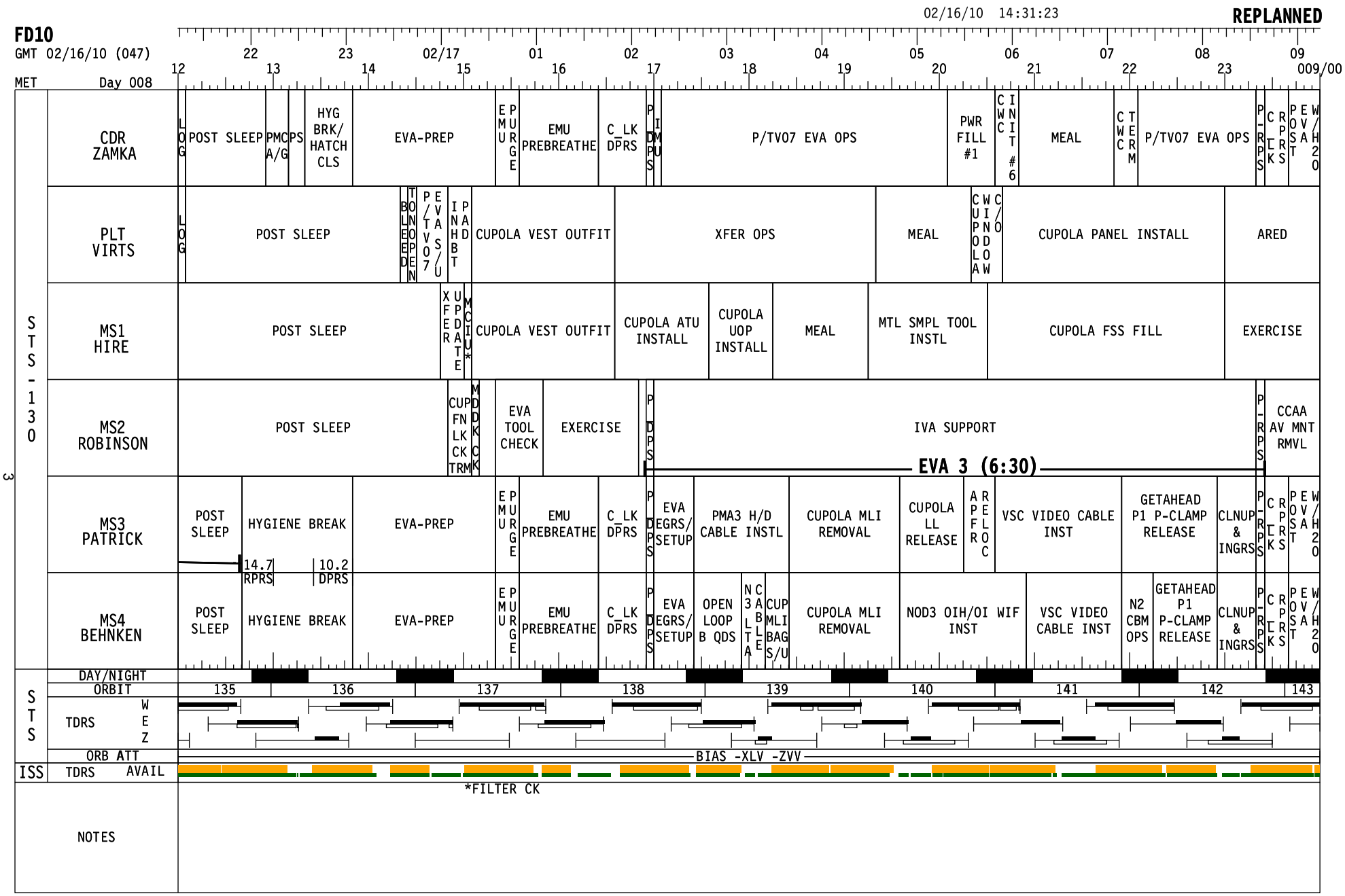
   No other technical updates were made, and we uplinked a corrected version to you as MSG 127 (JEDI 22-0695) 1.162 Cupola Audio Terminal Unit (ATU) Installation. Please make sure to use this corrected version during the activity.

4. <u>Question for Kay</u>
   The CBCS Powerdown and Stow activities were not marked completed yesterday. Can you please confirm that these activities are complete?

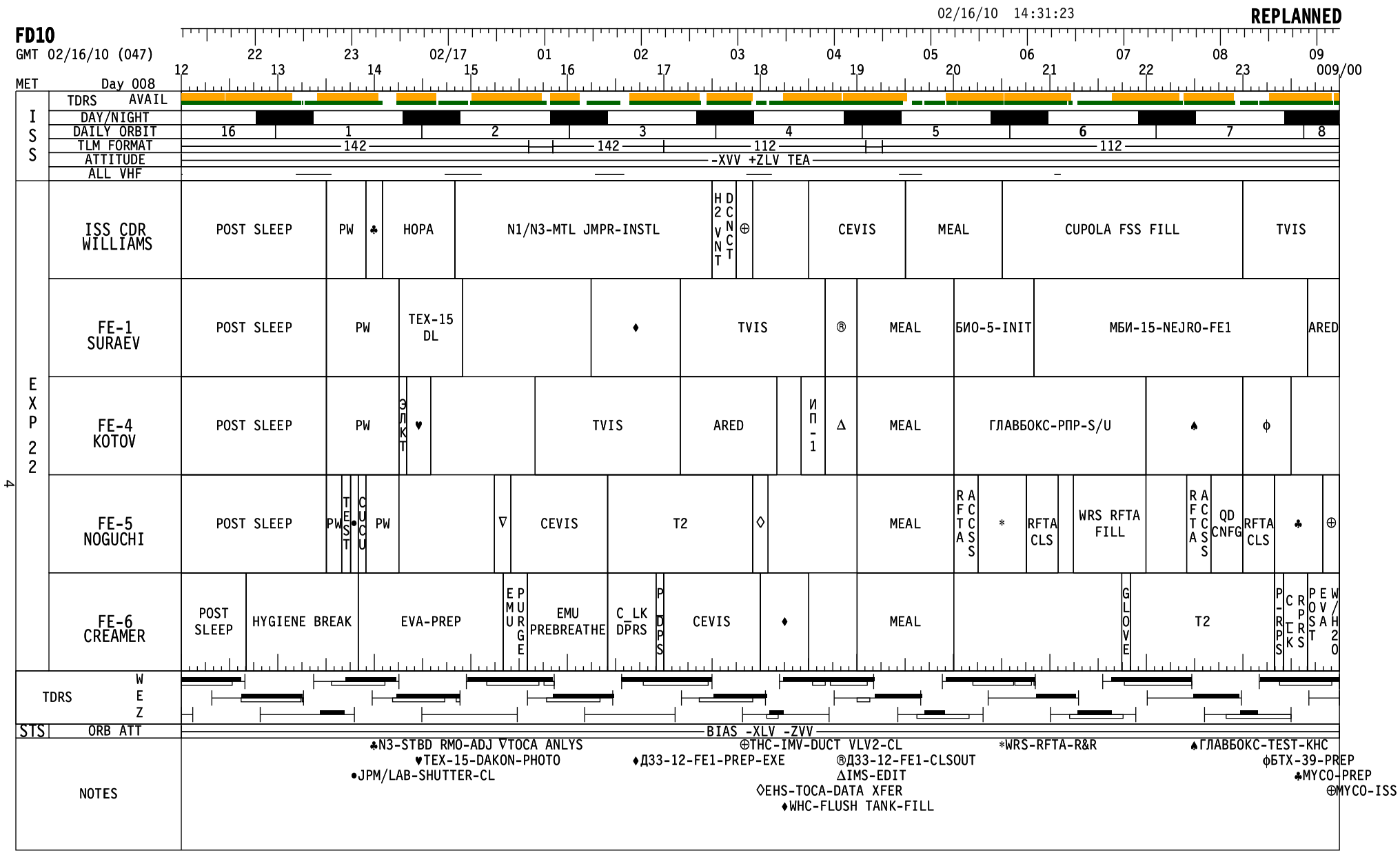
5. <u>Photo/TV Config</u>
   Please configure the D2Xs camera (s/n 1147) light meter to "Matrix".

6. <u>Food Ops for Extra Docked Day</u>
   Each of you should eat one day's worth of ISS food to cover the extra docked day. The ISS crew has been informed of this in the Daily Summary. Note that the SOLO food transferred on FD04 is for Tracy's experiment during her increment.

7. REPLACE PAGES 2-34 THROUGH 2-37 and 3-104 THROUGH 3-111.


02/16/10 14:31:23
REPLANNED
FD10
GMT 02/16/10 (047)
MET Day 008
22 23 02/17 01 02 03 04 05 06 07 08 09
12 13 14 15 16 17 18 19 20 21 22 23 009/00
STS-130
CDR ZAMKA
LOG
POST SLEEP
PMC A/G
PS
HYG BRK/ HATCH CLS
EVA-PREP
EMU PURGE
EMU PREBREATHE
C_LK DPRS
PDPS
IMU
P/TV07 EVA OPS
PWR FILL #1
CWC INIT #6
MEAL
CWC TERM
P/TV07 EVA OPS
P-RPS
C_LK RPRS
POST EVA W/H20
PLT VIRTS
LOG
POST SLEEP
BLEED
TONOPEN
P/TV07 EVA S/U
INHBT PAD
CUPOLA VEST OUTFIT
XFER OPS
MEAL
CUPOLA WINDOW C/O
CUPOLA PANEL INSTALL
ARED
MS1 HIRE
POST SLEEP
XFER UPDATE
MCIU*
CUPOLA VEST OUTFIT
CUPOLA ATU INSTALL
CUPOLA UOP INSTALL
MEAL
MTL SMPL TOOL INSTL
CUPOLA FSS FILL
EXERCISE
MS2 ROBINSON
POST SLEEP
CUP FN LK CK TRM
MDDK CK
EVA TOOL CHECK
EXERCISE
PDPS
IVA SUPPORT
EVA 3 (6:30)
P-RPS
CCAA AV MNT RMVL
MS3 PATRICK
POST SLEEP
HYGIENE BREAK
14.7 RPRS
10.2 DPRS
EVA-PREP
EMU PURGE
EMU PREBREATHE
C_LK DPRS
PDPS
EVA EGRS/ SETUP
PMA3 H/D CABLE INSTL
CUPOLA MLI REMOVAL
CUPOLA LL RELEASE
APFR RELOC
VSC VIDEO CABLE INST
GETAHEAD P1 P-CLAMP RELEASE
CLNUP & INGRS
P-RPS
C_LK RPRS
POST EVA W/H20
MS4 BEHNKEN
POST SLEEP
HYGIENE BREAK
EVA-PREP
EMU PURGE
EMU PREBREATHE
C_LK DPRS
PDPS
EVA EGRS/ SETUP
OPEN LOOP B QDS
N3 LTA CABLE
CUP MLI BAG S/U
CUPOLA MLI REMOVAL
NOD3 OIH/OI WIF INST
VSC VIDEO CABLE INST
N2 CBM OPS
GETAHEAD P1 P-CLAMP RELEASE
CLNUP & INGRS
P-RPS
C_LK RPRS
POST EVA W/H20
STS
DAY/NIGHT
ORBIT
135 136 137 138 139 140 141 142 143
TDRS
W
E
Z
ORB ATT
BIAS -XLV -ZVV
ISS
TDRS AVAIL
*FILTER CK
NOTES

3


02/16/10 14:31:23
REPLANNED
FD10
GMT 02/16/10 (047)
MET Day 008
22 23 02/17 01 02 03 04 05 06 07 08 09
12 13 14 15 16 17 18 19 20 21 22 23 009/00
ISS
TDRS AVAIL
DAY/NIGHT
DAILY ORBIT 16 1 2 3 4 5 6 7 8
TLM FORMAT 142 142 112 112
ATTITUDE -XVV +ZLV TEA
ALL VHF
EXP 22
ISS CDR WILLIAMS
POST SLEEP
PW
♣
HOPA
N1/N3-MTL JMPR-INSTL
H2 VNT
DCNCT
⊕
CEVIS
MEAL
CUPOLA FSS FILL
TVIS
FE-1 SURAEV
POST SLEEP
PW
TEX-15 DL
♦
TVIS
®
MEAL
БИО-5-INIT
МБИ-15-NEJRO-FE1
ARED
FE-4 KOTOV
POST SLEEP
PW
ЭЛКТ
♥
TVIS
ARED
ИП-1
Δ
MEAL
ГЛАВБОКС-РПР-S/U
♠
ϕ
FE-5 NOGUCHI
POST SLEEP
PW
TEST
CUCU
PW
∇
CEVIS
T2
◊
MEAL
RFTA ACCSS
*
RFTA CLS
WRS RFTA FILL
RFTA ACCSS
QD CNFG
RFTA CLS
♣
⊕
FE-6 CREAMER
POST SLEEP
HYGIENE BREAK
EVA-PREP
EMU PURGE
EMU PREBREATHE
C_LK DPRS
PDPS
CEVIS
♦
MEAL
GLOVE
T2
P-RPS
C_LK
RPRS
POST
EVA
W/H2O
TDRS
W
E
Z
STS
ORB ATT
BIAS -XLV -ZVV
NOTES
♣N3-STBD RMO-ADJ ∇TOCA ANLYS
♥TEX-15-DAKON-PHOTO
•JPM/LAB-SHUTTER-CL
♦Д33-12-FE1-PREP-EXE
⊕THC-IMV-DUCT VLV2-CL
®Д33-12-FE1-CLSOUT
ΔIMS-EDIT
◊EHS-TOCA-DATA XFER
♦WHC-FLUSH TANK-FILL
*WRS-RFTA-R&R
♠ГЛАВБОКС-TEST-KHC
ϕБТХ-39-PREP
♣MYCO-PREP
⊕MYCO-ISS

4

FD10 02/16/10 14:31:23 **REPLANNED**

GMT 02/17/10 (048)

MET Day 009 009/00 10 11 12 13 14 15 16 17 18 19 20 21 01 02 03 04 05 06 07 08 09 10 11 12

| | | |

FD10

GMT 02/17/10 (048)

MET Day 009

009/00 10 11 12 13 14 15 16 17 18 19 20 21 01 02 03 04 05 06 07 08 09 10 11 12

ISS

TDRS AVAIL	
DAY/NIGHT	
DAILY ORBIT	8 9 10 11 12 13 14 15 1
TLM FORMAT	112
ATTITUDE	-XVV +ZLV TEA
ALL VHF	

EXP 22

ISS CDR WILLIAMS	TVIS	PW	PRE SLEEP-ISS	SLEEP
FE-1 SURAEV	ARED	PW	PRE SLEEP-ISS ⊕ ♣	SLEEP
FE-4 KOTOV	♦ ®	PW	PRE SLEEP-ISS Δ ♠ ♥	SLEEP
FE-5 NOGUCHI	O2 CONFIG TO XFER	O2 INIT CAMR RCNFG	PRE SLEEP-ISS	SLEEP
FE-6 CREAMER	POST EVA W/H2O	ϕ PW	PRE SLEEP-ISS	SLEEP

TDRS W E Z

STS ORB ATT: BIAS -XLV -ZVV

NOTES

♦СОГС-ЭЛЕК-АФ-БЖ-MON
®СОГС-ВОЗДУХ-БВК-RPLC
ϕMYCO-ISS CREW-REVIEW
♣PRE SLEEP-ISS
⊕СОГС-ЭЛЕКТР-БД-MONTR
♥PRE SLEEP-ISS
ΔБИТС-ТМИ-РАЗЪЁМ-CNCT
♠СОГС-ВОЗДУХ-ON

STS-130 FD10

GMT Date 02/16 (047) | W | TDRSE | Z | D/N | ORB | MET Day 008 | STS ATT | CDR ZAMKA | PLT VIRTS | MS1 HIRE | Notes

Time: 22:00, 23:00, 00:00, 01:00

Orbit: 135, 136, 137

Time: 12:00, 13:00, 14:00, 15:00, 16:00

STS ATT: BIAS - XLV - ZVV

CDR ZAMKA

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

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

POST-SLEEP ACTIVITY
(ORB OPS, CREW SYS)

EVA SYSTEMS: 1.211 HYGIENE BREAK

EVA SYSTEMS: 1.216 EVA PREP

EVA SYSTEMS: 1.220 EMU PURGE

EVA SYSTEMS: 1.225 EMU PREBREATHE

PLT VIRTS

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

MO69M LEH O2 8 vlv - OP
TONOPEN - Ref. MSG 131
P/TV07 EVA (PHOTO/TV, SCENES)
Perform SETUP

EVA 3 INHIBIT PAD
(EVA, TIMELINES)

1.156 VESTIBULE OUTFITTING N3-CUPOLA
(ASSY OPS, ACT&C/O)
Steps 23-24
Ref. MSG 093

MS1 HIRE

POST-SLEEP ACTIVITY
(ORB OPS, CREW SYS)

TRANSFER UPDATE
Ref. Transfer List & MSG 125

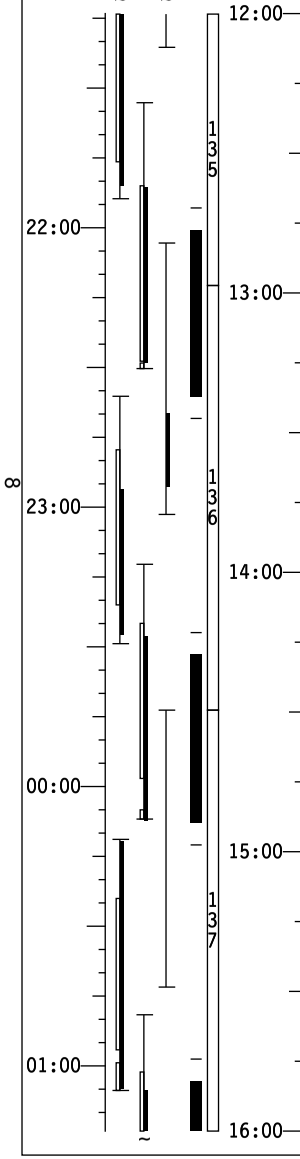
L17 Check MCIU filter screen

1.156 VESTIBULE OUTFITTING N3-CUPOLA
(ASSY OPS, ACT&C/O)
Steps 23-24
Ref. MSG 093

FD10 EZ ACTIVITIES:
√OCAC FILTER & MDDK DUCT SCREEN
TEPC (STATUS CHECK)
(ORB OPS, CREW SYS)
HARD REBOOT ALL PGSCs EXCEPT:
STS-6(WLES),STS-5(RPOP2),&
OCA ROUTER.
Return all Shuttle IFM tools
used on ISS, per MSG 052, to
Endeavour prior to sleep.

STS-130 FD10

GMT Date 02/16 (047) | W | TDRSE | Z | D/N | ORB | MET Day 008 | STS ATI



12:00 13:00 14:00 15:00 16:00

BIAS - XLV - ZVV

MS2 ROBINSON

POST-SLEEP ACTIVITY (ORB OPS, CREW SYS)

1.188 CUPOLA FINE LEAK CHECK ON NODE3 DECK (ASSY OPS, ACT&C/O) Steps 2.3,2.5,7.5-end Step 8-VAJ/ISA setup will be temp stowed for PMA2 depress use. 35Ft VAJ to be used for FSS Fill ops today.

GLACIER STATUS CHECK (ASSY OPS,CC)

EVA TOOL CHECK
Ref. EVA 3 TOOL CONFIG (EVA, TIMELINES)

EXERCISE

MS3 PATRICK

POST-SLEEP ACTIVITY (ORB OPS, CREW SYS)

EVA SYSTEMS: 1.211 HYGIENE BREAK

EVA SYSTEMS: 1.216 EVA PREP

EVA SYSTEMS: 1.220 EMU PURGE

EVA SYSTEMS: 1.225 EMU PREBREATHE

MS4 BEHNKEN

POST-SLEEP ACTIVITY (ORB OPS, CREW SYS)

EVA SYSTEMS: 1.211 HYGIENE BREAK

EVA SYSTEMS: 1.216 EVA PREP

EVA SYSTEMS: 1.220 EMU PURGE

EVA SYSTEMS: 1.225 EMU PREBREATHE

Notes

STS-130 FD10

GMT Date 02/17 (048) | W | TDRSE | Z | D/N | ORB | MET Day 008 | STS ATI

CDR ZAMKA	PLT VIRTS	MS1 HIRE	Notes
EVA SYSTEMS: 1.225 EMU PREBREATHE	1.156 VESTIBULE OUTFITTING N3-CUPOLA (ASSY OPS, ACT&C/O) Steps 23-24 Ref. MSG 093	1.156 VESTIBULE OUTFITTING N3-CUPOLA (ASSY OPS, ACT&C/O) Steps 23-24 Ref. MSG 093	
EVA SYSTEMS: CREWLOCK DEPRESS/REPRESS (CC)	TRANSFER OPS Ref. Transfer List & MSG 125	1.162 CUPOLA AUDIO TERMINAL UNIT (ATU) INSTALLATION Ref. MSG 122, Item 3 Ref. MSG 127	
EVA SYSTEMS: CREWLOCK POST DEPRESS (CC)			
IMU STAR OF OPPTY ALIGN (ORB OPS, GNC)			
P/TV07 EVA (PHOTO/TV, SCENES) Perform OPS		1.158 CUPOLA UTILITY OUTLET PANEL INSTALL (ASSY OPS, ACT&C/O)	
		MEAL	
	MEAL	1.128 NODE 3 ITCS SAMPLING ADAPTER INSTALL -MTL (NOD306) (ASSY OPS, ACT&C/O)	

Time scale: 02:00, 03:00, 04:00, 05:00; 16:00, 17:00, 18:00, 19:00, 20:00

Orbits: 138, 139, 140

STS ATI: BIAS-XLV-ZVV

9

STS-130 FD10

GMT Date 02/17 (048) | W | TDRSE | Z | D/N | ORB | MET Day 008 | STS ATI

16:00 17:00 18:00 19:00 20:00

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

138 139 140

BIAS - XLV - ZVV

MS2 ROBINSON	MS3 PATRICK	MS4 BEHNKEN	Notes
	EVA SYSTEMS: 1.225 EMU PREBREATHE	EVA SYSTEMS: 1.225 EMU PREBREATHE	
EXERCISE	EVA SYSTEMS: CREWLOCK DEPRESS/REPRESS (CC)	EVA SYSTEMS: CREWLOCK DEPRESS/REPRESS (CC)	
EVA SYSTEMS: CREWLOCK POST DEPRESS (CC)	EVA SYSTEMS: CREWLOCK POST DEPRESS (CC)	EVA SYSTEMS: CREWLOCK POST DEPRESS (CC)	
	EVA 3 SETUP	EVA 3 SETUP	
		OPEN LOOP B QDS	
	PMA 3 HEATER/DATA CABLE INSTALL	NODE3 LTA CABLE	
		CUPOLA MLI BAG SETUP	
IVA SUPPORT FOR EVA			
	CUPOLA MLI REMOVAL	CUPOLA MLI REMOVAL	
	CUPOLA LL RELEASE	NODE 3 OIH/OI WIF INSTALL	

STS-130 FD10

GMT Date 02/17 (048) | W | TDRSE | Z | D/N | ORB | MET Day 008 | STS ATT

CDR ZAMKA	PLT VIRTS	MS1 HIRE	Notes
P/TV07 EVA (PHOTO/TV, SCENES) Perform OPS		1.128 NODE 3 ITCS SAMPLING ADAPTER INSTALL -MTL (NOD306) (ASSY OPS, ACT&C/O)	
PWR FILL (ORB OPS, ECLS) Init Fill #1 Fill dur ~30 min Ref. MSG 027	MEAL		
	1.176 CUPOLA WINDOW SHUTTER TEST (ASSY OPS, ACT&C/O)		
CWC FILL (ORB OPS, CWC OPS) Init Fill #6 Ref. MSG 027		1.140 CUPOLA & NODE 3/NODE 1 ITCS FILL USING FSS (ASSY OPS, ACT&C/O) Steps 1-19 Do not perform steps 4.8 and 19.6	
	1.168 CUPOLA CORNER PANEL INSTALL (ASSY OPS, ACT&C/O) Steps 2-end		
MEAL			
CWC FILL (ORB OPS, CWC OPS) Perform FILL TERMINATION			
P/TV07 EVA (PHOTO/TV, SCENES) Perform OPS			
	MED OPS: 2.1.175 ARED - EXERCISE Login as ARED Guest and refer to MSG 030 how to deviate using the ARED Display. Verify X-Rotation Dashpot Inspection Complete.		
EVA SYSTEMS: PRE REPRESS (CC)			
EVA SYSTEMS: CREWLOCK DEPRESS/REPRESS (CC)		EXERCISE	
EVA SYSTEMS: 1.240 POST EVA Perform Water Recharge, No Metox Regen Ref. STS-130 Consumables Tracking CC(EVA)			

Time scale: 06:00, 07:00, 08:00, 09:00; 20:00, 21:00, 22:00, 23:00, 00:00

Z: 140, 141, 142, 143

STS ATT: BIAS_XLV_ZVV

11

STS-130 FD10

GMT Date 02/17 (048) | W | TDRS E | TDRS Z | D/N | ORB | MET Day 008 | STS ATI

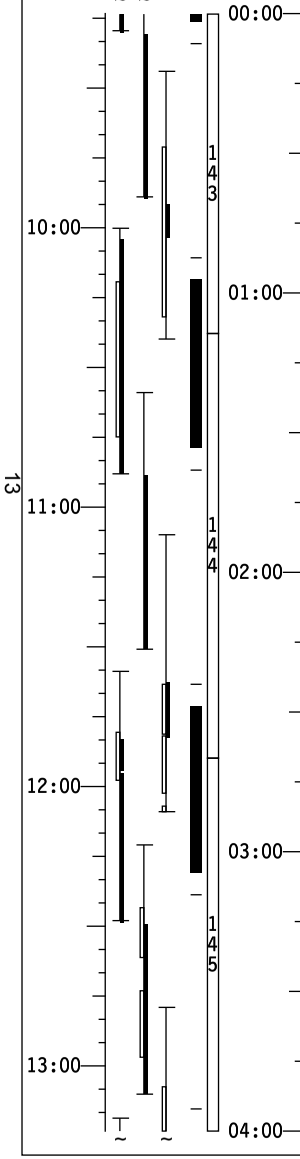
ORB: 140, 141, 142, 143

STS ATI: BIAS-XLV-ZVV

MET	MS2 ROBINSON	MS3 PATRICK	MS4 BEHNKEN	Notes
20:00		CUPOLA LL RELEASE		
		APFR RELOCATE	NODE 3 OIH/OI WIF INSTALL	
06:00				
21:00		VSC VIDEO CABLE INSTALL	VSC VIDEO CABLE INSTALL	
07:00	IVA SUPPORT FOR EVA			
22:00			N2 CBM OPS	
		GETAHEAD - P1 P-CLAMP RELEASE	GETAHEAD - P1 P-CLAMP RELEASE	
08:00				
23:00		EVA CLEANUP & INGRESS	EVA CLEANUP & INGRESS	
	EVA SYSTEMS: PRE REPRESS (CC)	EVA SYSTEMS: PRE REPRESS (CC)	EVA SYSTEMS: PRE REPRESS (CC)	
	1.132 NODE 3 CCAA ANTI-VIBRATION MODULE (AVM)LAUNCH BRACKET REMOVAL (ASSY OPS, ACT&C/O)	EVA SYSTEMS: CREWLOCK DEPRESS/REPRESS (CC)	EVA SYSTEMS: CREWLOCK DEPRESS/REPRESS (CC)	
09:00		EVA SYSTEMS: 1.240 POST EVA Perform Water Recharge, No Metox Regen Ref. STS-130 Consumables Tracking CC(EVA)	EVA SYSTEMS: 1.240 POST EVA Perform Water Recharge, No Metox Regen Ref. STS-130 Consumables Tracking CC(EVA)	
00:00				

STS-130 FD10

GMT Date 02/17 (048) | W | TDRSE | Z | D/N | ORB | MET Day 009 | STS ATT | CDR ZAMKA | PLT VIRTS | MS1 HIRE | Notes



00:00 — 01:00 — 02:00 — 03:00 — 04:00

BIAS-XLV-ZVV

CDR ZAMKA

EVA SYSTEMS: 1.240 POST EVA
Perform Water Recharge, No Metox Regen

Ref. STS-130 Consumables Tracking CC(EVA)

PRE-SLEEP ACTIVITY
(ORB OPS, CREW SYS)

FLIGHT DIRECTOR CONFERENCE

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

PRE-SLEEP ACTIVITY
(ORB OPS, CREW SYS)

PLT VIRTS

JOINT OPS: 3.123 O2 TRANSFER SETUP (POST PREBREATHE USING SHUTTLE O2)
Steps 2-5.8,Ground will perform steps 2.5, 5.6 and 6

On MCC-H GO:
JOINT OPS: 3.128 O2 XFER TO HI P & LO P O2 TANKS Step 2

WCS COMPACTOR OPS (DUAL-VANE)
(ORB OPS, CUE CARD)

PRE-SLEEP ACTIVITY
(ORB OPS, CREW SYS)
√ILLUMINATORS OFF - ALL

MS1 HIRE

TRANSFER TAGUP
Coordinate with transfer counterpart

TRANSFER BRIEF
Call down status to MCC

MYCO BODY SAMPLE COLLECTION
(ASSY OPS, P/L) REVIEW ONLY

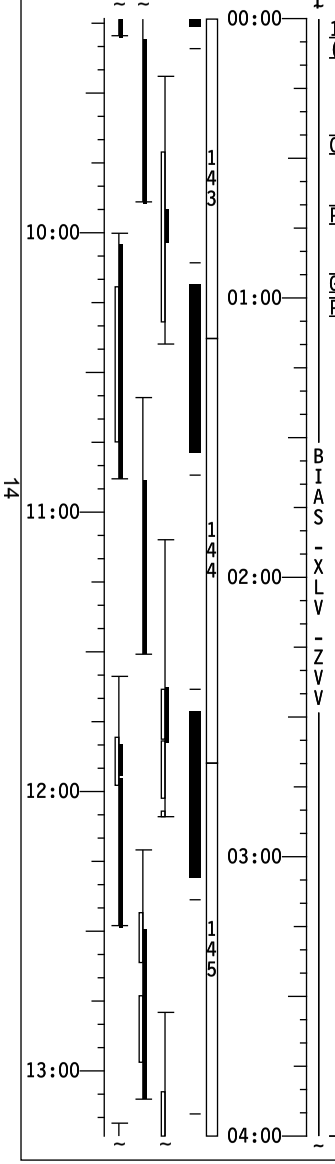
PRE-SLEEP ACTIVITY
(ORB OPS, CREW SYS)

CREW WAKE AT 09/12:00

13

STS-130 FD10

GMT Date 02/17 (048) | W | TDRSE | Z | D/N | ORB | MET Day 009 | STS ATI



MS2 ROBINSON	MS3 PATRICK	MS4 BEHNKEN	Notes
1.132 NODE 3 CCAA ANTI-VIBRATION MODULE (AVM)LAUNCH BRACKET REMOVAL (ASSY OPS, ACT&C/O)	EVA SYSTEMS: 1.240 POST EVA Perform Water Recharge, No Metox Regen Ref. STS-130 Consumables Tracking CC(EVA)	EVA SYSTEMS: 1.240 POST EVA Perform Water Recharge, No Metox Regen Ref. STS-130 Consumables Tracking CC(EVA)	
CWC TRANSFER Transfer CWC to ISS			
PWR TRANSFER Transfer PWR to ISS			
GLACIER STATUS CHECK (ASSY OPS,CC)			
PRE-SLEEP ACTIVITY (ORB OPS, CREW SYS)	PRE-SLEEP ACTIVITY (ORB OPS, CREW SYS)	PRE-SLEEP ACTIVITY (ORB OPS, CREW SYS)	

CREW WAKE AT 09/12:00

Good Morning Endeavour!!!!

Congratulations on getting all the outside elements of station moved around and in their proper places!! That took a lot of fancy arm work!

We are all really looking forward to watching you unwrap the new Cupola during your EVA today!!! Like you, we can't wait to see the views!!!

Have a great EVA and observation day!!!!

YOUR CURRENT ORBIT IS: 188 X 180 NM

NOTAMS: ONE CHANGE (ADDED FOK)

EDW -	TEMP RWY IN USE. PERM RWY CLOSED FOR CONSTRUCTION.
EDW -	LAKEBED RWYS RED.
NOR -	LAKEBED RWYS USABLE. DRYING OUT.
FOK -	**CLOSED.**
WAL-	CLOSED.
ZZA -	ARRESTING NET INSTALLED 40M FROM END OF RWY 30L.
ESN -	RWY 03R/21L CLOSED. 03L/21R USABLE.
GUA -	RWY 06L/24R RWY END LIGHTS OUT OF SERVICE.
PTN -	CLOSED FOR RUNWAY CONSTRUCTION.
IKF -	NOT USABLE. NO AGREEMENT.
BEN -	NOT RECOMMENDED/NOT SUPPORTED.

NEXT 2 PLS OPPORTUNITIES:

EDT04L	ORB 141 – 8/21:25	BKN250	7	050/4P6
EDT22R	ORB 157 – 9/21:48	SKC	7	240/3P5

OMS TANK FAIL CAPABILITY:

L OMS FAILS: NO
R OMS FAILS: NO

LEAKING OMS PRPLT BURN:

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

OMS QUANTITIES(%)

L OMS OX = 30.2 R OMS OX = 31.4
FU = 29.9 FU = 31.2

Subtract interconnect counter for current OMS quantities.

DELTA V AVAILABLE:

OMS	321 FPS
ARCS (TOTAL ABOVE QTY1)	44 FPS
TOTAL IN THE AFT	365 FPS
ARCS (TOTAL ABOVE QTY2)	77 FPS
FRCS (ABOVE QTY 1)	32 FPS
AFT QTY 1	82 %
AFT QTY 2	44 %

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

END OF PAGE 2 OF 2, MSG 123

Good morning Kay, Terry, & Steve,

You are doing well on transfer overall, and are now 66 percent complete! Today, Terry has XFER OPS time in the morning. We have provided direction for him in the choreography below.

The Transfer List Excel file, FD10_Transfer_List_STS130.xls, is located on the KFX machine in **C:\OCA-up\transfer** (and available via the **PGSC homepage**).

For ISS, the Transfer List Excel file, FD10_Transfer_List_STS130.xls, is located in **K:\OCA-up\transfer**.

<u>Change Pages</u>
Please incorporate changes as follows:

In the Transfer List **RETURN** tab
- Replace the following pages:
  - Return – 1 and 2
- Pen and Ink the following page:
  - Return – 3
    - For item 702: in the notes field, change “FD12” to “FD11”
- Replace the following page:
  - Return – 4
- Pen and Ink the following page:
  - Return – 7
    - For item 732: in the Initial Stowage column, change “LAB1P4 (WRS2 Rack) installed” to “NOD2D2”
- Replace the following page:
  - Return – 9

FD10 Choreography

- XFER OPS – Terry:
  - Stow available MF57O items: Retrieve an empty 1.0 CTB from ISS (NOD1D2) and record the s/n (please note s/n for Kay to give us at the Transfer Brief). Stow this CTB in MF57O. We expect there are already two items loose in the locker, and a few more can be added today as follows:
    - Already in the locker:
      - GSC (Item 719): wrap this item in a towel and stow in CTB
      - C&W panel (Item 705, in ziplock): stow in CTB
    - Can be added to the locker today:
      - Food warmer (Item 718), move into this CTB (food warmer is currently in Bag D on the middeck)
      - Transfer CSA-O2s anytime after EVA3 A/L egress (Items 707 and 708) – verify serial numbers, wrap in towel or bubble wrap, and stow in CTB
      - Transfer EMU 3-micron filters into this CTB, wrapped in towels (Item 738)
    - Note that on FD12, additional items will be added to the CTB.
  - These items may be done based on previous activities/calls, please verify:
    - EVA cable (Item 48.2)
    - ITCS sample (Item 740) (performed by TJ on FD08)
    - Old CDRA bed (Item 608)
    - PWR CTB with foam (Item 725) (may have been done on FD04)
  - Transfer returning RFTA after Soichi's WRS-RFTA-R&R activity (Item 732)

Have a great day!

- The 20A Transfer Team

20A Transfer Choreography

FD11

- Bob: Transfer SAFER to shuttle per SAFER XFER activity (Item 714)
- Nick & Bob: Transfer EVA items to shuttle per EVA RECONFIG & XFER activity (Items 702, 712, 713, and 715)
- XFER OPS:
  - Per FD08 Transfer Brief, please check on whether item 611 is complete
  - Final stow of items already on MDDK (Items 711, 723)
  - Relocate entry garments (Item 38)
  - Transfer returning P/TV items if ready (Items 403, 403.2, 403.3, 403.4, 727)
  - Continue other available return items (Item 404, 406, 609, 610)

FD12

- Jeff: Transfer returning blood sample per BLD STW activity (Item 704)
- TJ: Transfer returning saliva sample per SLV STW activity (Item 728)
- Steve: Transfer AFD PCS per AFT PCS XFER activity (Item 39)
- Steve: Transfer SSC back to ISS during SSC RETURN activity (Item 804)
- Soichi: Transfer returning RAMs to shuttle per RAM INSTALL activity (Item 726)
- Soichi: Transfer DCBs to shuttle per DCB-TRANSFER activity (Item 709 and 710)
- XFER OPS:
    - Complete water hardware transfers (Items 24, 25, 801, 729, and 735)
    - Transfer remaining 5 MLE bags (Items 408 and 701)

5 MLE Bag Plan (9 total)

- Bags B & H: to Columbus for temp stow (as needed)
- Bag F: to Columbus permanently (return prepacked 5 MLE in its place)
- Bags C, D & E: remain on shuttle for unpacking/repacking
- Bag A: contains UPA DA, temp stow in JEM for FD04
- Bags G & I: handled via EVA procedures (G will be temp stowed in Node 1)

CHNG	☑	FD	Initials	Item #	Item Name	Qty	Initial Stowage	Temp Stowage	Stowage at Undock	Wt (lbs)	ACTIVITY / **Constraints** / **Comments
			Middeck Return								
			Prepacked Bags/Items								
	☑	8		400	20A Return Bag 400	1.0 CTB	NOD2D2		MF43O	24.80	
	☑	8		401	20A Return Bag 401	0.5 CTB	NOD2D2		MF14G	19.00	
	☑	8		402	20A Return Bag 402	0.5 CTB	NOD2D2		MF14G	12.30	
X				403	20A Return Bag 403	1.0 CTB	NOD2D2		MF14K	22.40	**Bag already contains prepacked items. Items below will be added to this bag.
				403.2	D2Xs Camera [S/N 1108]	1	A/L1_Deployed		MF14K (in CTB)	-	**Remove and temp stow battery, memory card, flash and lens from D2X camera before transfer.**
				403.3	D2Xs Camera [S/N 1106]	1	LAB1_Deployed		MF14K (in CTB)	-	**Remove and temp stow battery, memory card, flash and lens from D2X camera before transfer.**
				403.4	G1 Camcorder [S/N 1010]	1	LAB1_Deployed		MF14K (in CTB)	-	**Remove and temp stow battery, wide angle lens and videotape from G1 Camcorder. If a lens hood is attached, leave it on.**
				404	20A Return Bag 404	1.0 CTB	NOD2D2		MF43H	27.80	**Location already contains samples. Add samples to this CTB and clamshell the trays around the CTB. If CTB does not fit, all samples can be stowed directly into the trays.**
				406	20A Return Bag 406	3.0 CTB	NOD2D2		Middeck Seat 7 Bag	73.80	
				408	20A Return Bag 408	5 MLE Bag	JLP1S1 rack front		MD CEIL PORT 2	110.33	

STS-130 / 20A Return Transfer List

CHNG	☑	FD	Initials	Item #	Item Name	Qty	Initial Stowage	Temp Stowage	Stowage at Undock	Wt (lbs)	ACTIVITY / **Constraints** / **Comments
	☑	8		600	20A Return Item 600 [WRS Recycle Filter Tank Assembly s/n 005]	1	NOD2D2	COL1D3 (in Bag B)		148.00	**Foam cap transfers with item.
					Item Deleted						
	☑	8		602	20A Return Bag 602 [Thirsk for return]	0.5 CTB	NOD2D2		MD CEIL PORT 1 (in Bag E)	11.00	
	☑	8		603	20A Return Bag 603 [Stott for return]	0.5 CTB	NOD2D2		MD CEIL PORT 1 (in Bag E)	11.00	
	☑	8		604	20A Return Bag 604 [DeWinne for return]	0.5 CTB	NOD2D2	NOD1 (in Bag G)		11.00	
	☑	8		605	20A Return Bag 605	1.0 CTB	NOD2D2		MF14E	4.00	
				608	20A Return Item 608 [CDRA Dessicant/Sorbent Bed (old)]	1	NOD2D2	COL1D2 (in Bag H)		102.00	**Contain old CDRA bed in new CDRA bed foam and then wrap in 2 jettison stowage bags. JSBs are pregathered near the CDRA bed.**
				609	20A Return Bag 609	1.0 CTB	NOD2D2		MF57C	4.00	
				610	20A Return Item 610 [Pump/Separator ORU]	1 foam box	NOD2D2		MD FLOOR PORT 2 (in Bag A)	60.80	**Tape the foam cushion clamshell seam, then place the assembly in a Hefty bag. Label Hefty bag "FWD FOR LAUNCH" to match label on foam. Secure, tie open end of bag and grey tape.**
X				611	20A Return Item 611 [Recycle to FCPA]	1	NOD2D2		Shuttle A/L (in Bag D)	3.00	**Item is bagged and taped.

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

CHNG	☑	FD	Initials	Item #	Item Name	Qty	Initial Stowage	Temp Stowage	Stowage at Undock	Wt (lbs)	ACTIVITY / **Constraints** / **Comments
				707	CSA-O2 [s/n 1046]	1	ISS A/L		MF57O (in CTB)	1.40	**Transfer after EVA3 A/L egress. Wrap CSA-O2 in towel or bubble wrap.** **Verify serial number is 1046.**
				708	CSA-O2 [s/n 1063]	1	ISS A/L		MF57O (in CTB)	1.40	**Transfer after EVA3 A/L egress. Wrap CSA-O2 in towel or bubble wrap.** **Verify serial number is 1063.**
				709	Double Coldbag [s/n 1004]	1	ISS deployed		MF43C	52.20	**Transfer on FD12 per DCB XFER activity.**
				710	Double Coldbag [s/n 1006]	1	ISS deployed		MF71C	49.40	**Transfer on FD12 per DCB XFER activity.**
				711	EDV [lid # 897, body # 418]	1		MDDK	Shuttle A/L (in Bag D)	58.40	**Don PPE - Tox 2 fluid contained in EDV. Use bubble wrap to cover metal protrusions on lid. Place into Hefty bag, tie, and grey tape.**
X				712	EMU [S/N 3004, Be]	1		ISS A/L	Shuttle	292.30	**Transfer on <u>FD11</u> ~~FD12~~ per EVA RECONFIG & XFER activity.** **Reference resupply item #34.
X				713	EMU [S/N 3018, Pk]	1	ISS A/L		Shuttle	299.60	**Transfer on <u>FD11</u> ~~FD12~~ per EVA RECONFIG & XFER activity.**
X				714	EVA HARDWARE [contains old SAFER]	3.0 CTB		NOD3 Aft Hatch Bungee Jail	Shuttle A/L (in Bag D)	74.30	**Transfer on <u>FD11</u> ~~FD12~~ per SAFER XFER activity.** **Reference resupply item 41.
X				715	EVA Sys Xfer Bag	1		ISS A/L	Shuttle	8.60	**Transfer on <u>FD11</u> ~~FD12~~ per EVA RECONFIG & XFER activity.** **Reference resupply item #33.

CHNG	☑	FD	Initials	Item #	Item Name	Qty	Initial Stowage	Temp Stowage	Stowage at Undock	Wt (lbs)	ACTIVITY / **Constraints** / **Comments
			Return Realtime Additions								
X				~~901~~	~~EMU Power Harness Assy. [s/n 1042]~~ Item deleted - still returning - will be handled in EVA procedures	~~1~~	~~ISS A/L (in EVA Task Xfer Bag)~~		~~MD FLOOR STBD 2 (in Bag G)~~	~~0.50~~	~~**Remove from mesh bag and wrap with towels, foam or bubble wrap. Bend radius should not be smaller than 6 inches.**~~
X				902	MCA Series Sample Pump Assembly [s/n F0002]	1	NOD1D2 (in 1.0 CTB 1152)		MF57G (in top tray in foam cut-out)	6.90	

22-0695 (MSG 127) 1.162 CUPOLA AUDIO TERMINAL UNIT (ATU) INSTALLATION

(ASSY OPS/20A/FIN 1) Page 1 of 12 pages

OBJECTIVE:
Install Audio Terminal Unit (ATU) in Cupola.

LOCATION:
Cupola

DURATION:
1 Hour

CREW:
One

PARTS:
Audio Terminal Unit P/N 3000001-301
Cupola ATU Coldplate P/N 2000CU301-801
Cupola ATU Bracket P/N 1240CU801-401
Cupola ATU Cnctr P/N 1F15244-501

MATERIALS:
Ziplock (small)
Velcro Straps

TOOLS:
Digital Camera
ISS IVA Toolbox:
Drawer 2:
  Ratchet, 1/4” Drive
  5/32” Hex Head, 1/4” Drive
  (40-200) in-lbs Trq Wrench, 1/4” Drive

REFERENCED PROCEDURE(S):
None

RESTOW:
Ziplock Bag “Cupola ATU Launch Fasteners” with
ATU fasteners, washers (six each)

1. INSTALLING ATU IN ATU BRACKET

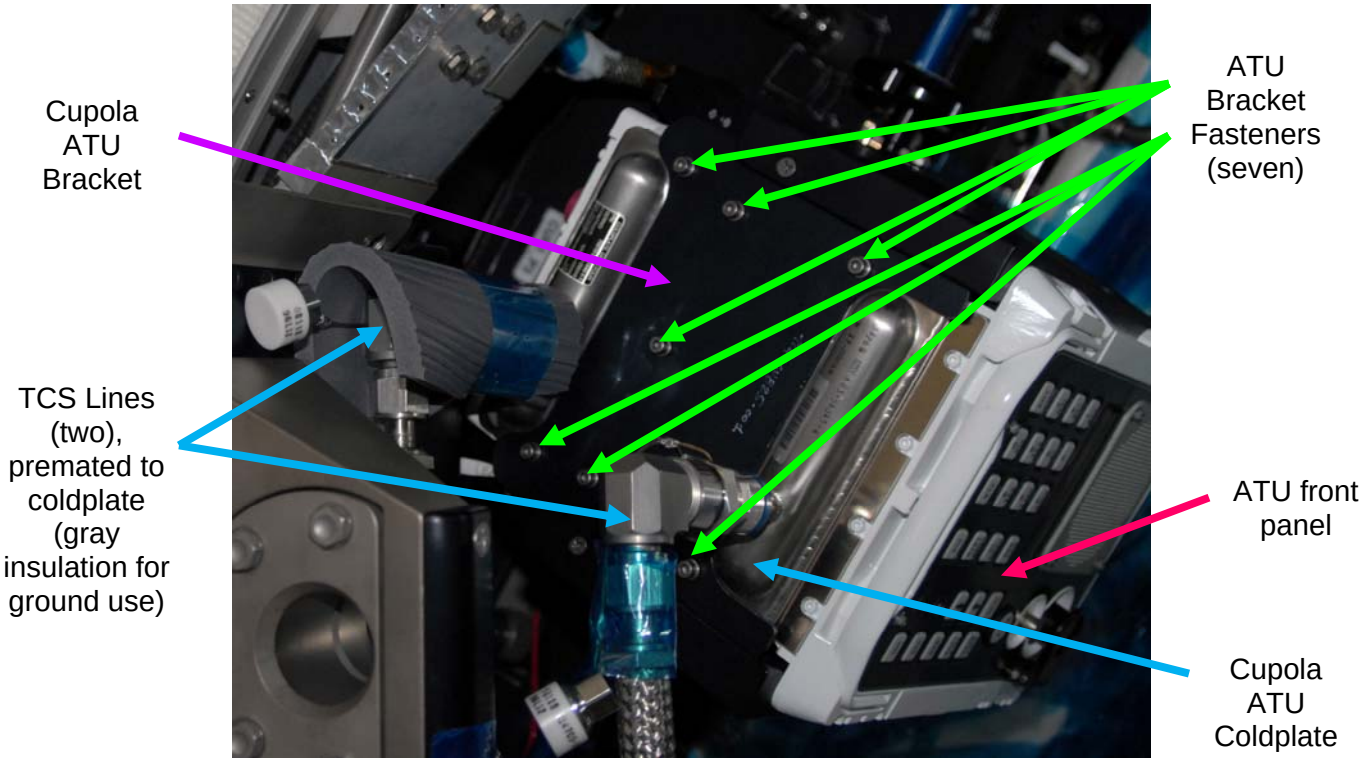


Figure 1. - Bottom View of ATU Installed in Bracket (Ground Photo).

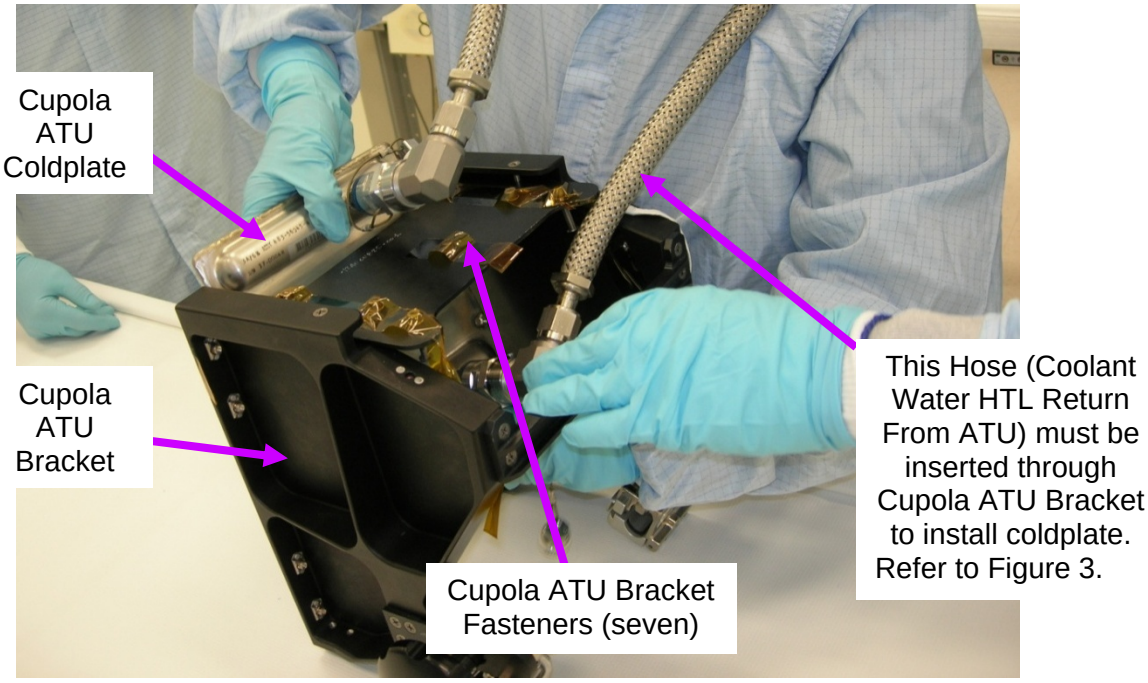


Figure 2.- Cupola ATU Coldplate Installation into Cupola ATU Bracket.

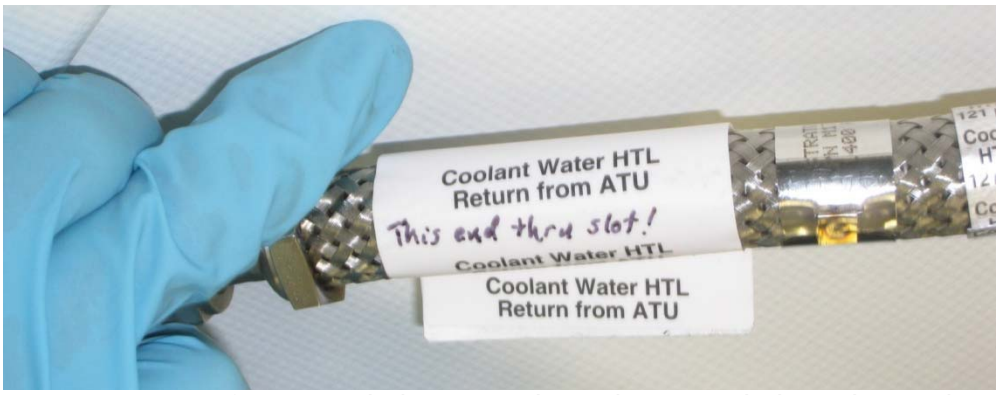


Figure 3. - Crew Preference Label on HTL Line to be Routed Through Cupola ATU Bracket.

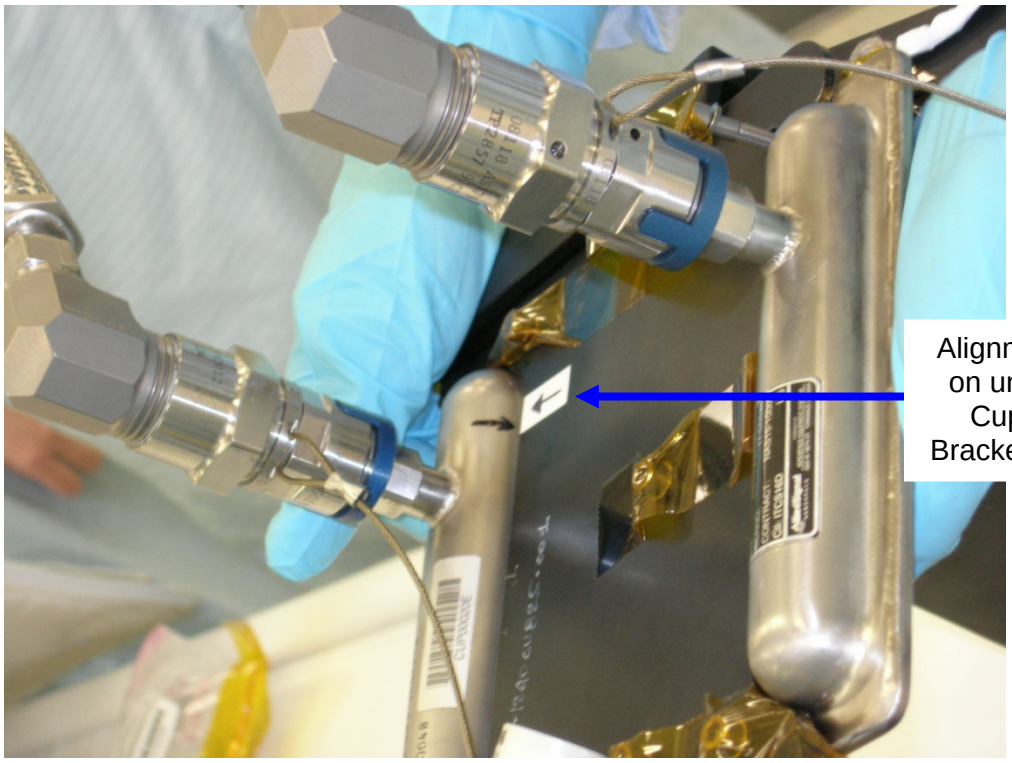


Figure 4. - Crew Preference Labeling to Assist with Orientation of Cupola ATU Coldplate.

NOTE

Coolant Water HTL Return Line label includes a crew preference label to remind crew that it is the line that needs to be fed through the Cupola ATU Bracket. There are also alignment arrows on the underside of the Cupola ATU Bracket and Coldplate to help make orientation easier. Refer to Figures 2 to 4.

1.1 Locate HTL line labeled “Coolant Water HTL Return From ATU” on Cupola ATU Coldplate.
Route through Cupola ATU Bracket according to Figure 2.
Carefully rotate Cupola ATU Coldplate as required to install Coldplate into Bracket using alignment arrows to assist with orientation.
Refer to Figures 1 to 4.

Non-Captive fasteners (six), installed for launch

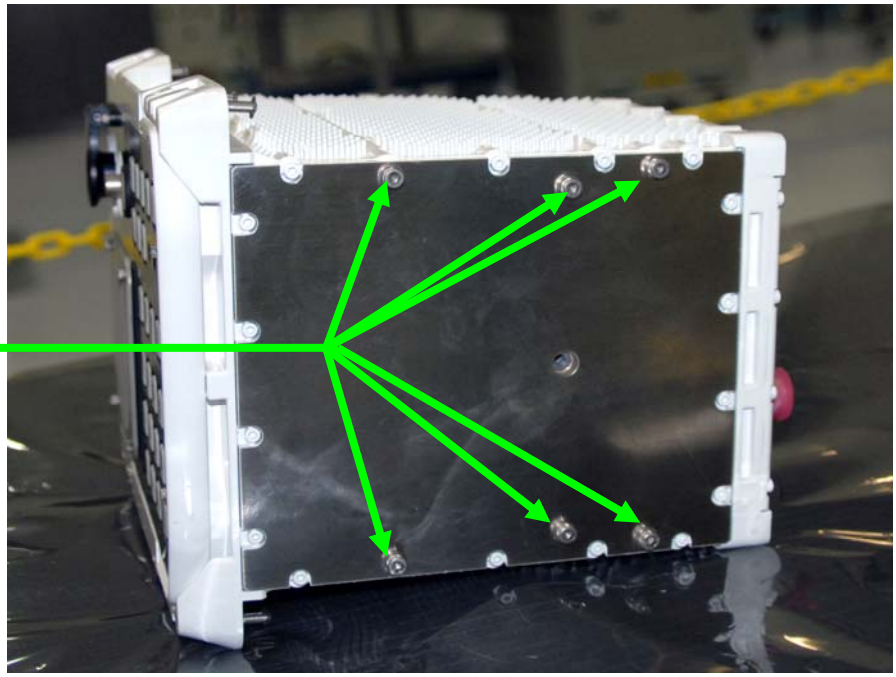


Figure 5. - Bottom View of ATU with Six Launch Fasteners Installed.

Figure 6. - ATU Outer Flange Fasteners.

1.2 Remove non-captive fasteners, washers (six each) from baseplate of ATU (Ratchet, 1/4” Drive; 5/32” Hex Head, 1/4” Drive).
Stow in Ziplock Bag. Label Ziplock Bag “Cupola ATU Launch Fasteners.”
Temporarily stow ziplock bag.
Refer to Figure 5.

1.3 Slide ATU into Cupola ATU Bracket.
Refer to Figure 1.

1.4 Remove Kapton Tape from Cupola ATU Bracket Fasteners.
Check alignment of Cupola ATU Bracket fasteners (seven) by hand threading each one individually to ensure there is no binding or misalignment of threads.
Refer to Figures 1 and 2.

1.5 Snug ATU outer flange fasteners (eight) (Ratchet, 1/4” Drive; 5/32” Hex Head. 1/4” Drive).
Refer to Figure 6.

1.6 Tighten, torque Cupola ATU Bracket Fasteners (seven) to 61 in-lbs [Ratchet, 1/4" Drive; 5/32" Hex Head, 1/4" Drive; (40-200) in-lbs Trq Wrench, 1/4" Drive].
Refer to Figure 2.

1.7 Tighten, torque outer flange fasteners (eight) to 52 in-lbs [Ratchet, 1/4" Drive; 5/32" Hex Head, 1/4" Drive; (40-200) in-lbs Trq Wrench, 1/4" Drive].

2. INSTALLING ATU BRACKET ON HANDRAIL

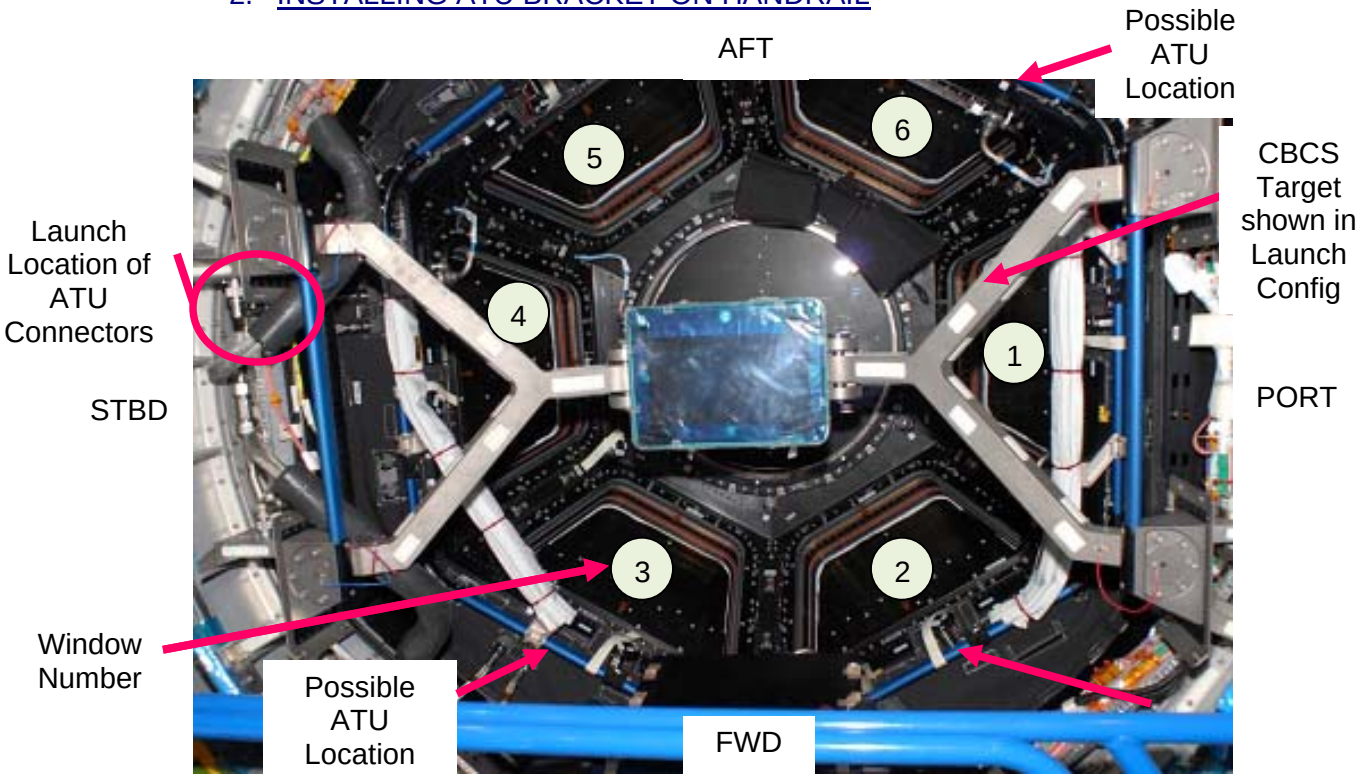


Figure 7. - ATU Installation Locations (Two).

NOTE
The Cupola ATU can be installed in front of Window 3 or in front of Window 6. The installation location will depend on the installation location of the Robotic Workstation. When the RWS is installed in front of Windows 2&3 or Window 4, the ATU must be installed in front of Window 6. When the RWS is installed in front of Windows 5&6 or Window 1, the ATU must be installed in front of Window 3.

2.1 √**MCC-H** to verify RPCM N32A2B_C2 RPC 14 is open, close command inhibited and either DDCU N32A or DDCU N32B converter is off.

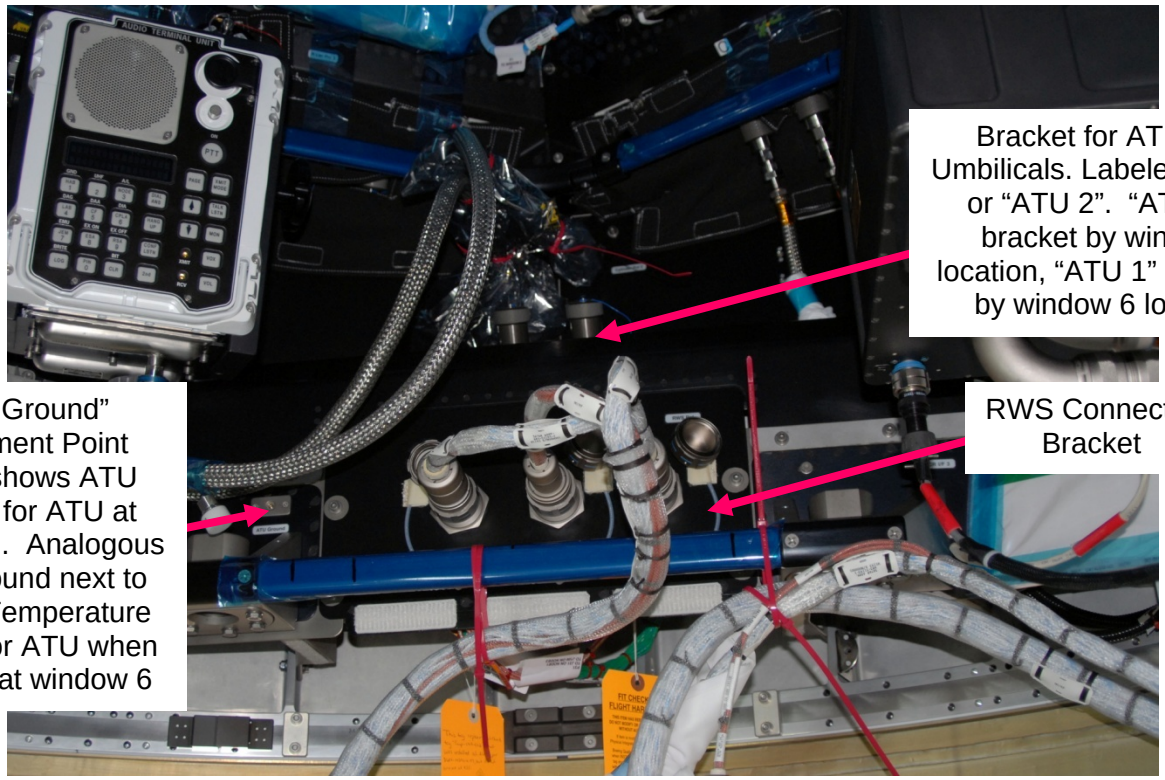


Figure 8. - Location of ATU Interfaces (ATU Shown Installed at Window 3 Location).

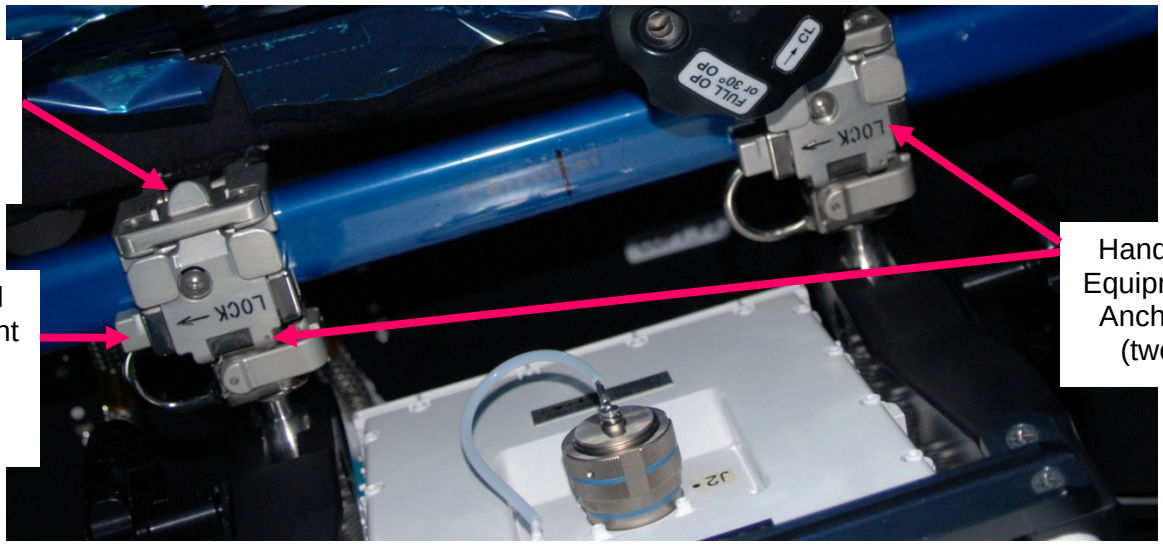


Figure 9. - ATU Installed on Handrail with Handrail Equipment Anchors in Locked Position.

NOTE

Handrail Equipment Anchors are opened by performing the following:
a. Pressing Locking Feature in opposite direction from LOCK arrow.
b. Pressing Tab to allow anchor to rotate open.
Refer to Figure 9.

2.2 Install Cupola ATU Bracket on Handrail in front of Window 6 using Handrail Equipment Anchors (two).
√Handrail Equipment Anchors (two) are in locked position
Refer to Figures 8 and 9.

3. CONNECTING ATU GROUND STRAP

NOTE

1. ATU Grounding Fastener is located at the loose end of a white wire extending from the right, lower rear corner of the Cupola ATU Bracket.

2. There are two ATU Ground attachment points (one for each ATU installation location). When the ATU is installed at Window 3, the ATU Ground attachment point next to the RWS Connector Bracket (CUP1F1) is used. When the ATU is installed at Window 6, the ATU Ground next to the Cupola Temperature Control (CUP1A1) is used. Refer to Figure 8.

3.1 Install ATU Grounding Fastener (one) into ATU Ground hole (Ratchet, 1/4” Drive; 5/32” Hex Head, 1/4” Drive).
Refer to Figure 8.

3.2 Torque ATU Grounding Fastener (one) to 50 in-lbs [5/32” Hex Head, 1/4” Drive; (40-200) in-lbs Trq Wrench, 1/4” Drive].

4. MATING ATU TCS INTERFACES

4.1 Tethered Cap ←|→ MTL Sply on ATU 1 Bracket
Tethered Cap ←|→ MTL Rtn on ATU 1 Bracket
Refer to Figure 8.

4.2 Plug ←|→ COOLANT WATER MTL SUPPLY QD
Plug ←|→ COOLANT WATER MTL RETURN QD
Mate Plugs to Tethered Caps on MTL Sply and Rtn.

4.3 COOLANT WATER HTL SUPPLY →|← MTL Sply on ATU 1 Bracket
COOLANT WATER HTL RETURN →|← MTL Rtn on ATU 1 Bracket

5. CONFIGURING ATU POWER AND AUDIO LINES

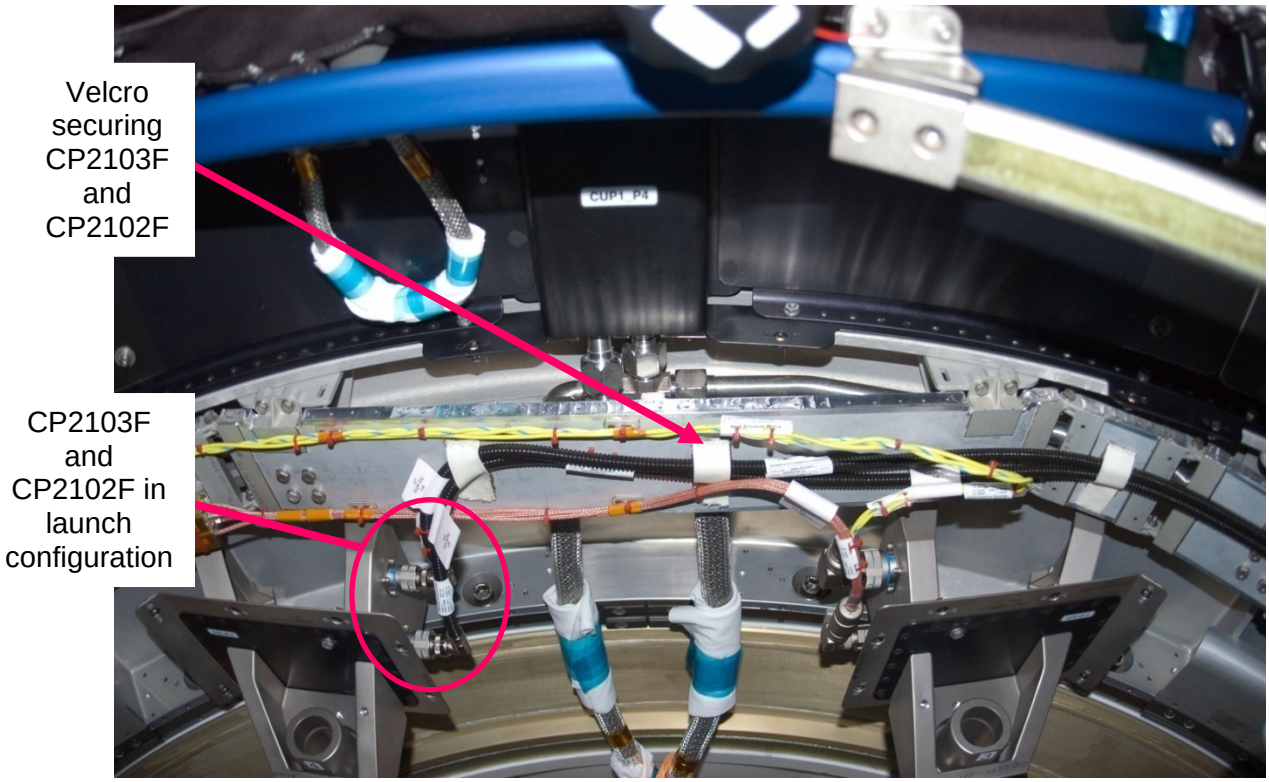


Figure 10. - ATU Power and Fiber Umbilicals in Launch Configuration (CUP1S1 - Vent Panel 3 Removed).

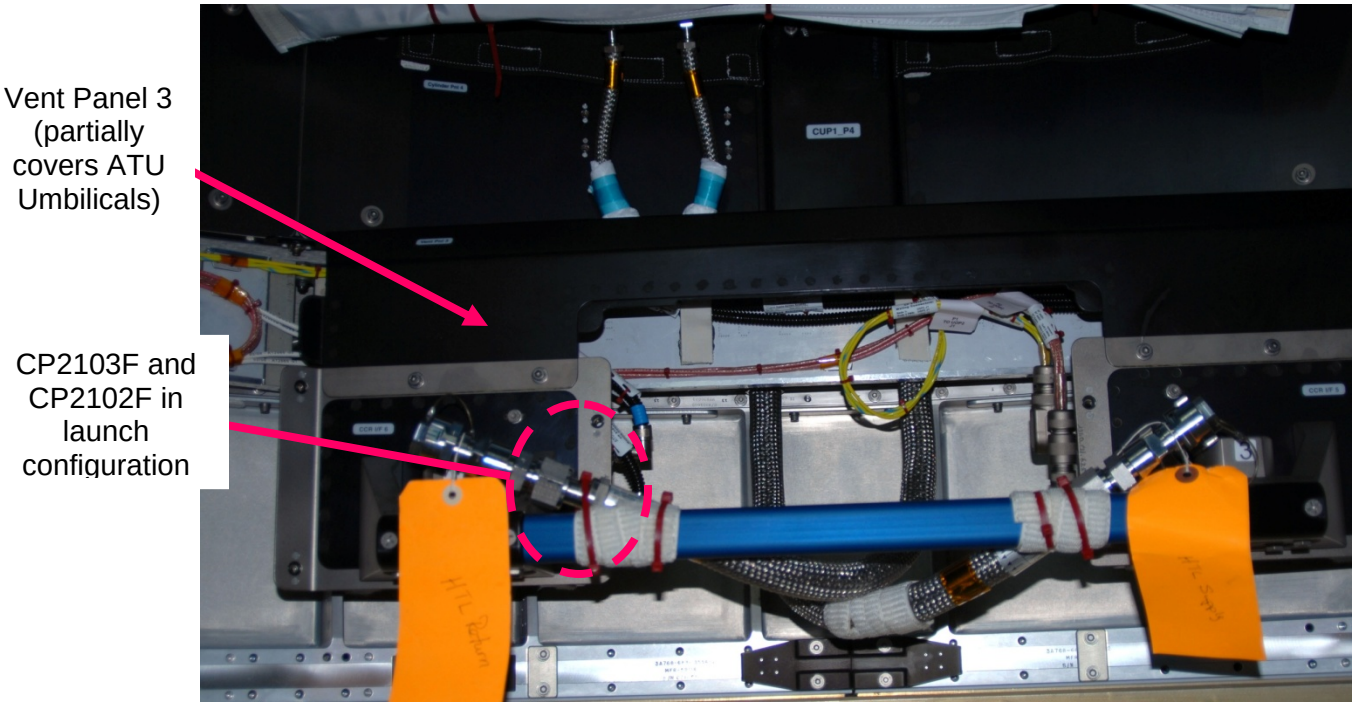


Figure 11.- Launch Config. of ATU Umbilicals With Vent Panel 3 Installed (CUP1S1).

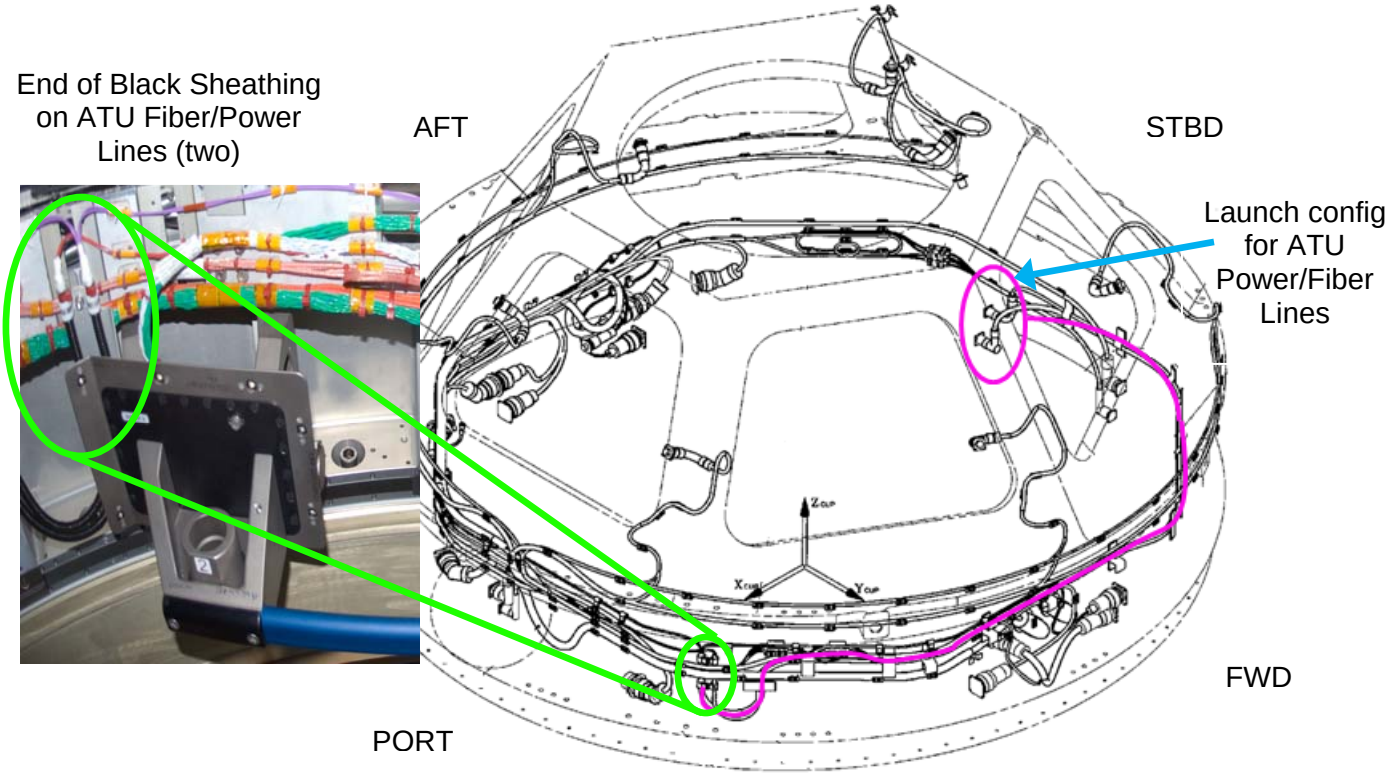


Figure 12.- ATU Wire Harness Routing - Launch Config.

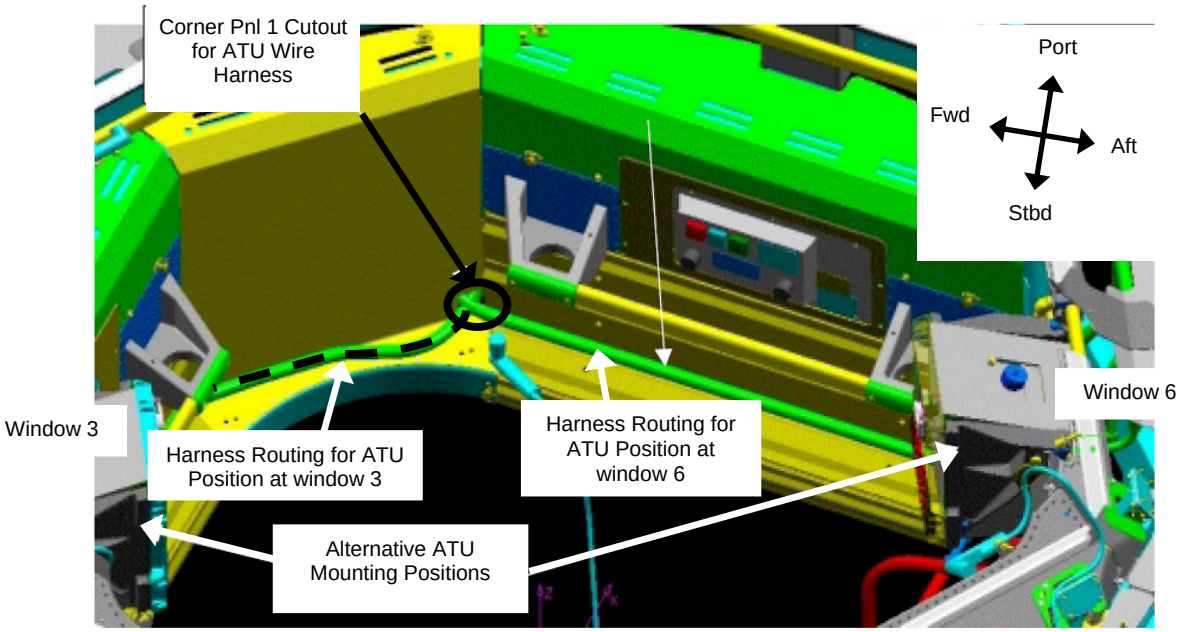


Figure 13.- ATU Wire Harness Routing.

CAUTION
CP1203F data umbilical contains Fiber Optic lines. Do not expose this umbilical to tension or tight bend radius (less than 2 inches).

NOTE

1. ATU power and data umbilicals are mated to dummy connectors on a bracket for launch. The bracket is located near Window 4 (CUP1S1). The umbilicals are secured to Cupola structure by Velcro from the bracket location half way around the Cupola circumference to the Window 2 area. In the Window 2 area, the black sheathing on the umbilicals will end where the umbilicals are secured with a P-Clamp.

2. The portion of the umbilicals with the black sheathing is available for in-cabin routing to the ATU installation location. Corner Panel 1, which will be installed later in the Window 2 area, has a cutout for the ATU umbilicals.
   Refer to Figures 7 and 10 to 13.

3. Vent Panels 1 and 3 have eight captive fasteners. Vent Panels 2 and 4 have nine captive fasteners. It may be necessary to remove Vent Panels to deroute ATU umbilicals from their launch position.

5.1 CP2103F ←|→ J3 on launch bracket (fiber)
Kapton Tape over CP2103F fiber connection to protect it during cable routing.
CP2102F ←|→ J1 on launch bracket (power)
Refer to Figures 7 and 10 to 12.

5.2 As required to relocate ATU Umbilicals, remove Vent Panels, fasteners (eight or nine) (Ratchet, 1/4” Drive; 5/32” Hex Head, 1/4” Drive).
Refer to Figure 12.

5.3 Remove CP2103F and CP2102F from Velcro Restraints until black tubing ends and P-Clamp is reached near ISS Port/Fwd quadrant.
Refer to Figure 12.

5.4 Route CP2103F and CP2102F to ATU at Window 6 according to Figure 13 (Corner Panel 1 will not be present at this time).

5.5 If removed, replace Vent Panels, fasteners (eight or nine) (Ratchet, 1/4” Drive; 5/32” Hex Head, 1/4” Drive).

5.6 Cupola ATU Cnctr →|← J4 on ATU (Address Connector)
CP2103F →|← J3 on ATU (fiber)
CP2102F →|← J1 on ATU (power)

5.7 Temporarily restrain ATU Umbilicals away from translation path in Cupola (Velcro Straps).

6. POST-MAINTENANCE

6.1 ISS ⇓ **MCC-H** “Cupola ATU installed”

6.2 Photo-document final configuration of Cupla ATU and final umbilical routing (Digital Camera).

6.3 Stow tools, materials, Ziplock Bag labeled “Cupola ATU Launch Fasteners.”

MSG 130 - FD10 CREW CHOICE DOWNLINK

TDRS	AOS	LOS	Delta (min)	Notes
W-171	9/00:58	9/01:30	32	
E-275	9/02:25	9/02:34	9	Analog only
E-TDS	9/03:30	9/03:44	14	

Note: Please notify MCC-H 10 minutes prior to the event to allow for ground network configuration.

END OF PAGE 1 OF 1, MSG 130

TONOPEN

CALIBRATION PROCEDURE IN MICROGRAVITY

NOTE

This procedure is only needed in the event that the tonopen has been inadvertently placed in the calibration mode

1. Unstow:

Med Locker (MF57E)	Nitrile Gloves (blue, **non-latex**)	(MAK)
MF57G	Tonopen	(Tonopen Kit)

2. Inflate nitrile glove like a balloon by blowing into the glove and tying off the wrist opening

3. Place tip cover on tip of Tonopen

4. Power ON Tonopen by depressing Tonopen actuating button (black button) for 3 seconds and release. ‘CAL’ will appear on display for one second, then single dashed line (- - - -) appears.

5. While holding inflated glove in one hand and Tonopen (with tip cover in place) in the other, depress Tonopen actuating button twice in rapid succession

6. When ‘CAL’ appears on the display, hold the Tonopen steady until the display reads ‘-UP-’

7. Quickly push in and hold the top of the Tonopen (with tip cover in place) approximately 1 inch into the inflated glove until a faint “beep” is heard

    a. If the display reads ‘Good’, Tonopen is ready for use

    b. If the display reads ‘bAd’, then repeat steps 5-7