STS-122 / 1E

FD 11 Execute Package

MSG	Page(s)	Title
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093	15 - 16	FD11 Mission Summary **(pdf)**
094	17	FD10 MMT Summary **(pdf)**
095	18-19	FD11 Transfer Message **(pdf)**
096	20	RNDZ Tools Checkout Updates **(pdf)**
097	21-36	Columbus Stereo Photography **(pdf)**

Approved by FAO: *Jennifer Clevenger*

Last Updated: Feb 17 2008 6:27AM GMT
JEDI *(**J**oint **E**xecute package **D**evelopment and **I**ntegration), v2.04.0003*

MSG INDEX

MSG NO.	TITLE
092	FD11 Flight Plan Revision
093	FD11 Mission Summary
094	FD10 MMT Summary
095	FD11 Transfer Message (16-1066)
096	RNDZ Tools Checkout Updates
097	Columbus Stereo Photography (16-1069)

1. O2 Transfer Termination Deltas
   Make the following addition to JOINT OPS: 3.116 HIGH PRESSURE TANK O2 TRANSFER, Step 3:

   After Step 3.2, perform the following action:

   ML86B:C cb MNC EXT ARLK HTR LN ZN 1,2 (two) – op

2. Mylar Sleeve Location for Airlock Fan Deact
   For step 9 of JOINT OPS 2.108 SHUTTLE AIRLOCK/TUNNEL FAN DEACTIVATION (BYPASS DUCT INSTALLED), the mylar sleeve for the Fwd Middeck diffuser is in a Ziploc Bag in the top drawer of the IFM locker (MF43G).

3. Rex/Peggy: We know Rex had intended on putting as many of the ISS EVA tools away as possible prior to undock, but was unable to finish this task yesterday (reference step 17 of MSG 088 (16-1057)). We have added the remaining ISS EVA Tool Stow activity to the Task List for Peggy so Rex can concentrate on getting the correct suits and tools over to Shuttle. Rex, please let MCC and Peggy know if you end up taking care of the ISS Tool Stow yourself.

4. There are no exercise constraints for FD11.

5. REPLACE PAGES 2-36, 2-38, 2-40, AND 3-114 THROUGH 3-123.

FD10
GMT 02/16/08 (047)

MET Day 009

		009/00	01	02	03	04	05	06	07	08	09	10	11	12
		20	21	22	23	02/17	01	02	03	04	05	06	07	

STS-122	CDR FRICK	PMC A/G	PRE SLEEP						SLEEP						POST SLEEP
STS-122	PLT POINDEXTER	PRE SLEEP							SLEEP						POST SLEEP
STS-122	MS1 MELVIN	PRE SLEEP							SLEEP					LOG	POST SLEEP
STS-122	MS2/EV1 WALHEIM	EXER CISE	PRE SLEEP						SLEEP					LOG	POST SLEEP
STS-122	MS3/EV2 SCHLEGEL	♣	EXERCISE	PRE SLEEP		DRY			SLEEP					LOG	POST SLEEP
STS-122	MS4/EV3 LOVE	⊕	PRE SLEEP			DRY			SLEEP					LOG	POST SLEEP
DN	FE-2 TANI	PREP WORK	DPC	PRE SLEEP	PFC	PRE SLEEP-ISS			SLEEP					SLVA	POST SLEEP
ISS	ISS CDR WHITSON	VEST DPRS	DPC	PRE SLEEP-ISS					SLEEP					SLVA	POST SLEEP
ISS	FE-1 MALENCHENKO	♦ DWNLD	DPC	PRE SLEEP-ISS					SLEEP						POST SLEEP
UP	FE-2 EXP16 EYHARTS	PW	DPC	PRE SLEEP-ISS					SLEEP					SLVA	POST SLEEP

DAY/NIGHT

ORBIT: 143 | 144 | 145 | 146 | 147 | 148 | 149 | 150 | 151

TDRS
- W -171.0
- E -46.0
- Z -275.0

ORB ATT: BIAS -XLV -ZVV

NOTES
- ♣PRE SLEEP
- ⊕EXERCISE
- ♦PREP WORK

02/17/08 00:19:06 **REPLANNED**

FD11
GMT 02/17/08 (048)
MET Day 009

08 09 10 11 12 13 14 15 16 17 18 19
12 13 14 15 16 17 18 19 20 21 22 23 010/00

STS-122	CDR FRICK	POST SLEEP; N2*; CWC12 INIT; EXERCISE; CWC TERM; CWC XFER; N2*; CWC13 INIT; MEAL; CWC TERM; CWC XFER; HOSE PURGE; IMU; BSTR FAN*; TERM; O2 XFER T/D; FARE WELL; H/O; NOM H2O CNFG; PCS*; H/O; ICNT*; PRE SLEEP; PMC A/G
	PLT POINDEXTER	POST SLEEP; MCIU#; EXERCISE; POST EVA RCNFG/XFER; MEAL; RNDZ TOOLS C/O; PTVO4 SETUP; PTVO5 DEACT; FARE WELL; FES^; MO69M; PRE SLEEP#
	MS1 MELVIN	POST SLEEP; XFR UPDAT; XFER OPS; EXERCISE; RMS*; MEAL; RNDZ TOOLS C/O; BLOOD SETUP; BLOOD COLL OP; BLOOD COLL OP; XFER TAG; BRIEF; FARE WELL; P/TV03 UNDOCK SETUP; PRE SLEEP
	MS2/EV1 WALHEIM	POST SLEEP; EXERCISE; POST EVA RCNFG/XFER; MEAL; FARE WELL; SETUP C/L CAMR; PRE SLEEP
	MS3/EV2 SCHLEGEL	POST SLEEP; EDR%; FIBER; EUPU; BLB LAPTP S/U; BGB SI INSTL; BGB CI INSTL; VERIF; DEACT; MEAL; COL 3D PHOTO; LAPTP; STOW; EXERCISE; FARE WELL; HATCH CLOSE; HATCH LEAK CHECK; MUS; PRE SLEEP
	MS4/EV3 LOVE	POST SLEEP; XFER OPS; EXERCISE; COND T/D; RMS*; MEAL; XFER OPS; XFER TAG; FARE WELL; HATCH CLOSE; HATCH LEAK CHECK; PRE SLEEP
DN	FE-2 TANI	POST SLEEP; PREP WORK; DPC; HRF1-SSPCM-CHG/OUT; MTX-T; MTX-I; MIDDAY-MEAL; DCB FAM; DCB PACK; DCB XFER; EXERCISE CEVIS; FARE WELL; EXERCISE; PRE SLEEP
ISS	ISS CDR WHITSON	POST SLEEP; LK CK TERM; DPC; INGRS; SMPL ADTER INST PURG; DEGAS S/U; DEGAS MON; COL ITCS VLV; COL SAMPL ADPT RMV; DEGAS T/D; KBAR; EVA TOOL STOW; EXERCISE TVIS; MIDDAY-MEAL; DCB FAM; DCB PACK; EXERCISE RED; BLOOD COLL SUBJ; TERM; O2 XFER T/D; FARE WELL; HATCH CLOSE; PS28 T/S PT2; DPC; ♣; PREP WORK; PRE SLEEP ISS
	FE-1 MALENCHENKO	POST SLEEP; PREP WORK; DPC; ИП-1 MNT; ПФП ВБ-3 C/O; VELO + RED; EXERCISE TVIS; PFC; ПИЛЛЕ D/L; ⊕; MIDDAY-MEAL; ♦; 28P СИ XFER; СОЖ MNT; FARE WELL; CB-B2-MNT; DPC; DWNLD; PREP WORK; PRE SLEEP ISS
UP	FE-2 EXP16 EYHARTS	POST SLEEP; PREP WORK; DPC; FSL ODM S/U; FSL CEM UPPER S/U; MIDDAY-MEAL; FSL CEM LOWER S/U; PHOTO; COL 3D PHOTO; BLOOD COLL SUBJ; STOW; STOW*; FARE WELL; EXERCISE CEVIS; DPC; PREP WORK; PRE SLEEP ISS

DAY/NIGHT

ORBIT 151 152 153 154 155 156 157 158 159

TDRS W -171.0 E -46.0 Z -275.0

ORB ATT BIAS -XLV -ZVV

NOTES
*RPRS INIT
#FILTER CHECK
%LAPTOP-ACT
*RPRS TERM
⊕КУБЗ-КОПИР-INIT
♦КУБЗ-КОПИР-TERM
*MNVR-UNDOCK
*OFF *TERM *SLVA CLCT
♣HRF1-SSPCM-C/O
*ACT *RETURN
#√HUM Seps
^HTR ACT

GMT 02/17/08 (048) 20 21 22 23 02/18 01 02 03 04 05 06 07

MET Day 010 010/00 01 02 03 04 05 06 07 08 09 10 11 12

STS-122	CDR FRICK	PRE SLEEP	SLEEP			POST SLEEP		
	PLT POINDEXTER	PRE SLEEP#	SLEEP			POST SLEEP		
	MS1 MELVIN	PRE SLEEP	SLEEP	LOG		POST SLEEP		
	MS2/EV1 WALHEIM	PRE SLEEP	SLEEP	LOG		POST SLEEP		
	MS3/EV2 SCHLEGEL	PRE SLEEP	SLEEP	LOG		POST SLEEP		
	MS4/EV3 LOVE	PRE SLEEP	SLEEP	LOG		POST SLEEP		
DN	FE-2 TANI	PRE SLEEP	SLEEP			POST SLEEP		
ISS	ISS CDR WHITSON	PRE SLEEP ISS	SLEEP			POST SLEEP	DPC	PWRORPK
	FE-1 MALENCHENKO	PRE SLEEP ISS	SLEEP			POST SLEEP	DPC	PWRORPK
UP	FE-2 EXP16 EYHARTS	PRE SLEEP ISS	SLEEP			POST SLEEP	DPC	PWRORPK

DAY/NIGHT

ORBIT 159 160 161 162 163 164 165 166 167

TDRS W -171.0 E -46.0 Z -275.0

ORB ATT BIAS -XLV -ZVV

NOTES #√HUM Seps

STS-122 FD (11)

REPLANNED

GMT Date 02/17 (048) | W | TDRSE | Z | DORB 13 | DORB 14 | DORB 15 | ORB 149 | ORB 150 | ORB 151 | MET Day 009 | STS ATI | CDR FRICK | PLT POINDEXTER | MS1 MELVIN | NOTES

04:00 05:00 06:00 07:00

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

BIAS-XLV-ZVV

SLEEP

SLEEP

SLEEP

POST-SLEEP ACTIVITY (ORB OPS, CREW SYS)

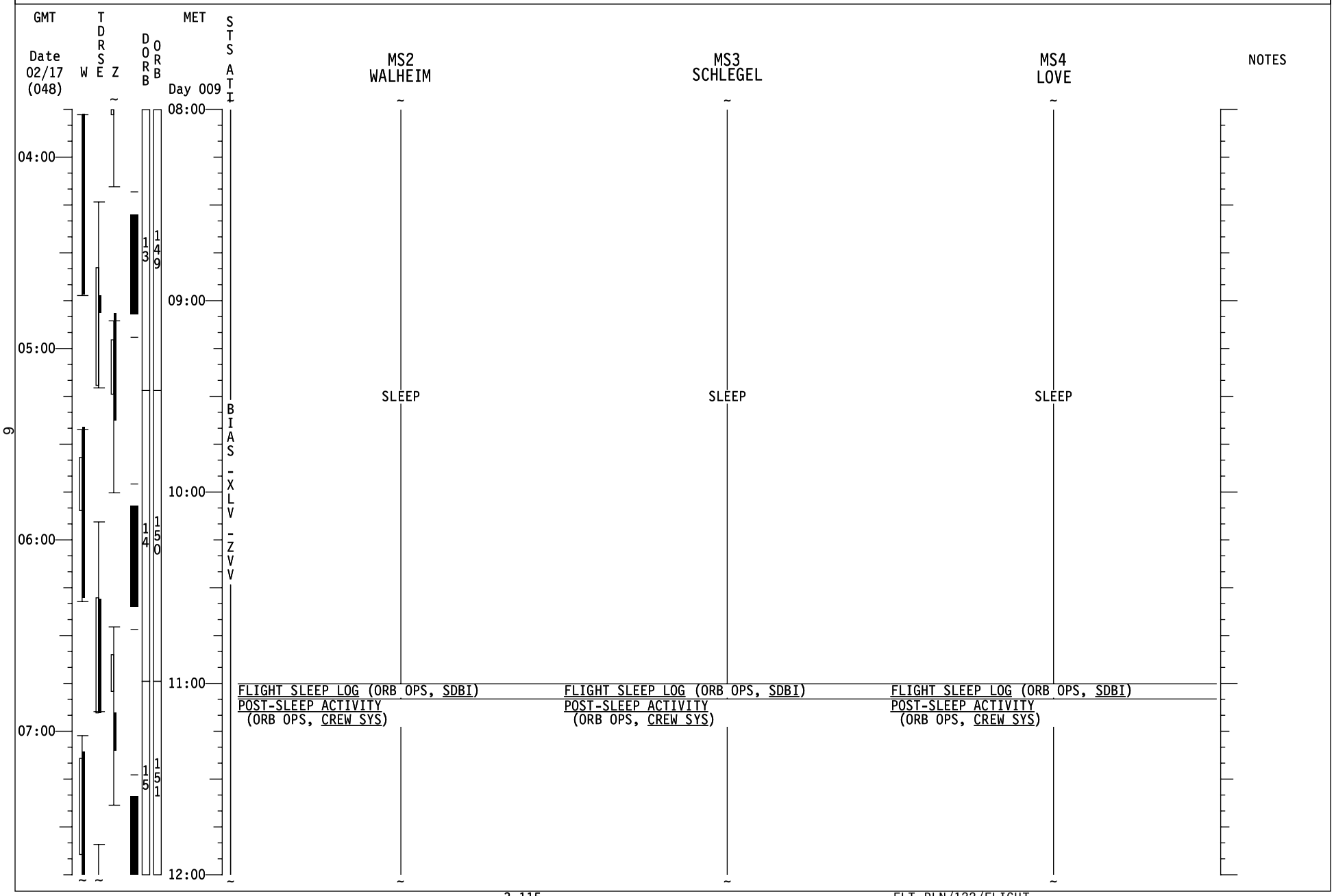
POST-SLEEP ACTIVITY (ORB OPS, CREW SYS)

FLIGHT SLEEP LOG (ORB OPS, SDBI)

POST-SLEEP ACTIVITY (ORB OPS, CREW SYS)

STS-122 FD (11)

REPLANNED



STS-122 FD (11)

REPLANNED

GMT Date 02/17 (048) | W | TDRSE | Z | DORB | ORB | MET Day 009 | STS ATT | CDR FRICK | PLT POINDEXTER | MS1 MELVIN | NOTES

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

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

BIAS - XLV - ZVV

FD11 EZ ACTIVITIES:
OCAC FILTER INSPECTION
HARD REBOOT ALL PGSCs

POST-SLEEP ACTIVITY (ORB OPS, CREW SYS)

POST-SLEEP ACTIVITY (ORB OPS, CREW SYS)

POST-SLEEP ACTIVITY (ORB OPS, CREW SYS)

L17 Check MCIU filter screen

DAILY TRANSFER LIST UPDATE
Ref. Transfer List & MSG 095

TRANSFER OPS
Ref. Transfer List, Items 36,45,407, 626,705-712,719,721,811, and Bag H (409,415,420,605)

EXERCISE

N2 REPRESS USING PAYLOAD N2 VLVS
(ORB OPS, ECLS)Steps 1-5
On MCC Go, Perform Step 6
MCC will TMBU all S/W limits

SHUTTLE/ISS H2O CNTR FILL
(ORB OPS, ECLS)INIT FILL #12
Ref. MSG 005, Fill Dur ~52 min

EXERCISE

STS-122 FD (11)

REPLANNED

GMT Date 02/17 (048) | W | TDRSE | Z | DORB | ORB | MET Day 009 | STS ATT | MS2 WALHEIM | MS3 SCHLEGEL | MS4 LOVE | NOTES

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

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

1 5 | 1 5 1 | 1 | 1 5 2 | 2 | 1 5 3 | 3 | 1 5 4

BIAS-XLV-ZVV

POST-SLEEP ACTIVITY (ORB OPS, CREW SYS)

POST-SLEEP ACTIVITY (ORB OPS, CREW SYS)

POST-SLEEP ACTIVITY (ORB OPS, CREW SYS)

1.122 EDR LAPTOP CONNECTION (ASSY PAYLOADS, EDR)Step 5

1.100 PCDF ELECTRONICS UNIT CONNECTIONS INSTALLATION (ASSY PAYLOADS, EDR) Steps 5

TRANSFER OPS
Ref. Transfer List, Items 36,45,407, 626,705-712,719,721,811, and Bag H (409,415,420,605)

1.120 PCDF ELECTRONICS UNIT ACTIVATION (ASSY PAYLOADS, EDR)Step 1

ESA PODF: BLB COMM: 1.701 BIOLAB LAPTOP STOWAGE ITEMS INSTALLATION
Perform step 3-end

EXERCISE

1.302 BIOLAB GLOVEBOX STOWAGE ITEMS INSTALLATION (ASSY PAYLOADS, BIOLAB) Steps 1-7, & 10

8

STS-122 FD (11)

REPLANNED

GMT Date 02/17 (048) | W | TDRSE | Z | DORB | ORB | MET Day 009 | STS ATT

CDR FRICK	PLT POINDEXTER	MS1 MELVIN	NOTES
EXERCISE	POST EVA EMU RECONFIGURATION AND TRANSFER Ref. MSG 090, Steps 27-46	TRANSFER OPS Ref. Transfer List, Items 36,45,407, 626,705-712,719,721,811, and Bag H (409,415,420,605)	
SHUTTLE/ISS H2O CNTR FILL (ORB OPS, ECLS) Perform FILL TERMINATION			
CWC TRANSFER Transfer 1 CWC to ISS			
N2 REPRESS USING PAYLOAD N2 VLVS (ORB OPS, ECLS) On MCC GO, perform Steps 7-12 MCC will TMBU all S/W limits		EXERCISE	
SHUTTLE/ISS H2O CNTR FILL (ORB OPS, ECLS)INIT FILL #13 Ref. MSG 005, Fill Dur ~52 min		OBSS MNVR TO UNDOCK POSITION (PDRS, OBSS NOMINAL) R12(VPU): VPU PWR - ON (LED ON)	
MEAL	MEAL	MEAL	TFL 192
SHUTTLE/ISS H2O CNTR FILL (ORB OPS, ECLS) Perform FILL TERMINATION	RNDZ TOOLS CHECKOUT(RNDZ, RNDZ TOOLS) Ref. MSG 096	RNDZ TOOLS CHECKOUT(RNDZ, RNDZ TOOLS) Ref. MSG 096	
CWC TRANSFER Transfer 1 CWC to ISS Transfer Item 720 (silver kit 1006) to ISS Ref. MSG 095			
SHUTTLE/ISS H2O CNTR FILL (ORB OPS, ECLS) Perform WATER TRANSFER HOSE PURGE Label purge bag with MET after purge complete			

Time scale: 12:00, 13:00, 14:00, 15:00; MET: 16:00, 17:00, 18:00, 19:00, 20:00

DORB: 3, 4, 5; ORB: 154, 155, 156

BIAS-XLV-ZVV

6

STS-122 FD (11)

REPLANNED

GMT Date 02/17 (048) | W | TDRS E | Z | DORB 3 4 5 | ORB 154 155 156 | MET Day 009 | STS ATT

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

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

BIAS -XLV -ZVV

MS2 WALHEIM

POST EVA EMU RECONFIGURATION AND TRANSFER
Ref. MSG 090, Steps 27-46

MEAL

MS3 SCHLEGEL

1.302 BIOLAB GLOVEBOX STOWAGE ITEMS INSTALLATION (ASSY PAYLOADS, BIOLAB) Steps 1-7, & 10

1.303 BIOLAB GLOVEBOX COMMISSIONING ITEMS INSTALLATION
(ASSY PAYLOADS, BIOLAB)
Steps 2-8

1.107 BIOLAB ISPR RACK ACTIVATION
(ASSY PAYLOADS, BIOLAB)Step 1 only

ESA SODF: EDR-PCDF: 1.125 PCDF ELECTRONICS UNIT DEACTIVATION Steps 1,2

MEAL

COLUMBUS STEREO PHOTOGRAPHY
Ref. MSG 097
Assist Leo as necessary

MS4 LOVE

TRANSFER OPS (see page 3-117)

EXERCISE

SHUTTLE CONDENSATE COLLECTION
(ORB OPS, ECLS) Perform TEARDOWN
Temp stow S/N 5101 for dumping on FD13

OBSS MNVR TO UNDOCK POSITION(PDRS,OBSS NOM)
R12(VPU): VPU PWR - ON (LED ON)

MEAL

TRANSFER OPS
Ref. Transfer List, Items 36,45,407, 626,705-712,719,721,811, and Bag H (409,415,420,605)

NOTES

10

STS-122 FD (11)

REPLANNED

GMT Date 02/17 (048) | W | TDRSE | Z | DORB | ORB | MET Day 009 | STS ATT

16:00 | 17:00 | 18:00 | 19:00

5 | 6 | 7 | 8 | 157 | 158 | 159

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

BIAS-XLV-ZVV

CDR FRICK

IMU ALIGN - S TRK (ORB OPS, GNC)

JOINT OPS: 2.108 SHUTTLE AIRLOCK/TUNNEL FAN DEACTIVATION (BYPASS DUCT INSTALLED)
Verify with MCC-H step 2 complete before working steps 3-9, Inform MCC when complete
Ref. MSG 092, Item 2

JOINT OPS: 3.116 HIGH PRESSURE TANK O2 TRANSFER
Perform TERMINATING O2 TRANSFER, Step 3
Ref. MSG 092, Item 1

JOINT OPS: 3.118 OXYGEN TRANSFER TEARDOWN
Steps 1-6

FAREWELL

JOINT OPS: 3.110 HANDOVER ATTITUDE CONTROL CMG TA to ORBITER

A PCS ACTIVATION
MO10W 14.7 CAB REG INLET SYS 1 VLV - OP
Avoid WCS use during high N2 flow
Expect possible "S66 CAB N2(O2) FLO 1" msgs

NOMINAL H2O CONFIG
(ORB OPS, ECLS)
FES not req'd

PCS ACTIVATION A

JOINT OPS: 3.111 HANDOVER ATTITUDE CONTROL ORBITER to CMGTA

I'CNCT RETURN (OPS 2,3) (OPCL,RCS)

PRE-SLEEP ACTIVITY
(ORB OPS, CREW SYS)

PRIVATE MEDICAL CONFERENCE
Perform via A/G2

PLT POINDEXTER

RNDZ TOOLS CHECKOUT(RNDZ, RNDZ TOOLS)
Ref. MSG 096

P/TV04 INGRESS/EGRESS
(PHOTO/TV, SCENES)
Setup

P/TV05 ISS INTERNAL OPS
(PHOTO/TV, SCENES)
Perform DEACTIVATION,Step 2

FAREWELL

FES HEATER ACTIVATION
L1 TOP EVAP HTR DUCT sel - A
NOZ L,R - A AUTO
MO69M LEH O2 8 vlv - OP

PRE-SLEEP ACTIVITY
(ORB OPS, CREW SYS)
√HUM SEPS for H2O Accumulation

MS1 MELVIN

RNDZ TOOLS CHECKOUT(RNDZ, RNDZ TOOLS)
Ref. MSG 096

US PODF: HRF INT IMM: 2.001 INTEGRATED IMMUNE BLOOD COLLECTION Step 1, BLOOD SETUP
Use Integrated IMMN Blood Coll Kit S/N 1001

US PODF: HRF IMMN: 2.001 INTEGRATED IMMN BLOOD CLCT
Step 2, BLOOD DRAW

US PODF: HRF IMMN: 2.001 INTEGRATED IMMN BLOOD CLCT
Step 2, BLOOD DRAW

TRANSFER TAGUP
Coordinate with xfer counterpart

TRANSFER BRIEF
Call down status to MCC

FAREWELL

P/TV03 UNDOCK
(PHOTO/TV, SCENES)
Setup

PRE-SLEEP ACTIVITY
(ORB OPS, CREW SYS)

NOTES

TFL 184

STS-122 FD (11)

REPLANNED

GMT Date 02/17 (048) | W | TDRSE | Z | DORB | ORB | MET Day 009 | STS ATT | MS2 WALHEIM | MS3 SCHLEGEL | MS4 LOVE | NOTES

16:00 | 17:00 | 18:00 | 19:00

5 | 6 | 7 | 8

157 | 158 | 159

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

BIAS-XLV-ZVV

MS2 WALHEIM

FAREWELL

C/L CAMR INSTALL
(PHOTO/TV, C/L CAMR)
Perform step 1 only

PRE-SLEEP ACTIVITY
(ORB OPS, CREW SYS)

MS3 SCHLEGEL

1.123 EDR LAPTOP DISCONNECTION
(ASSY PAYLOADS, EDR)Steps 1-2
1.123 EDR LAPTOP DISCONNECTION
(ASSY PAYLOADS, EDR)Steps 3-4

EXERCISE

FAREWELL

JOINT OPS: 4.103 DUCT REMOVAL & HATCH CLOSE (BYPASS CONFIG)
Ref. Transfer List, Item 45

JOINT OPS: 4.104 ODS VEST/PMA DPRS & HATCH LEAK CHECK

LBP-MUSCLE QSTION(ASSY PL, QSTION)
PRE-SLEEP ACTIVITY
(ORB OPS, CREW SYS)

MS4 LOVE

TRANSFER OPS
Ref. Transfer List, Items 36,45,407, 626,705-712,719,721,811, and Bag H (409,415,420,605)

TRANSFER TAGUP
Coordinate with xfer counterpart

FAREWELL

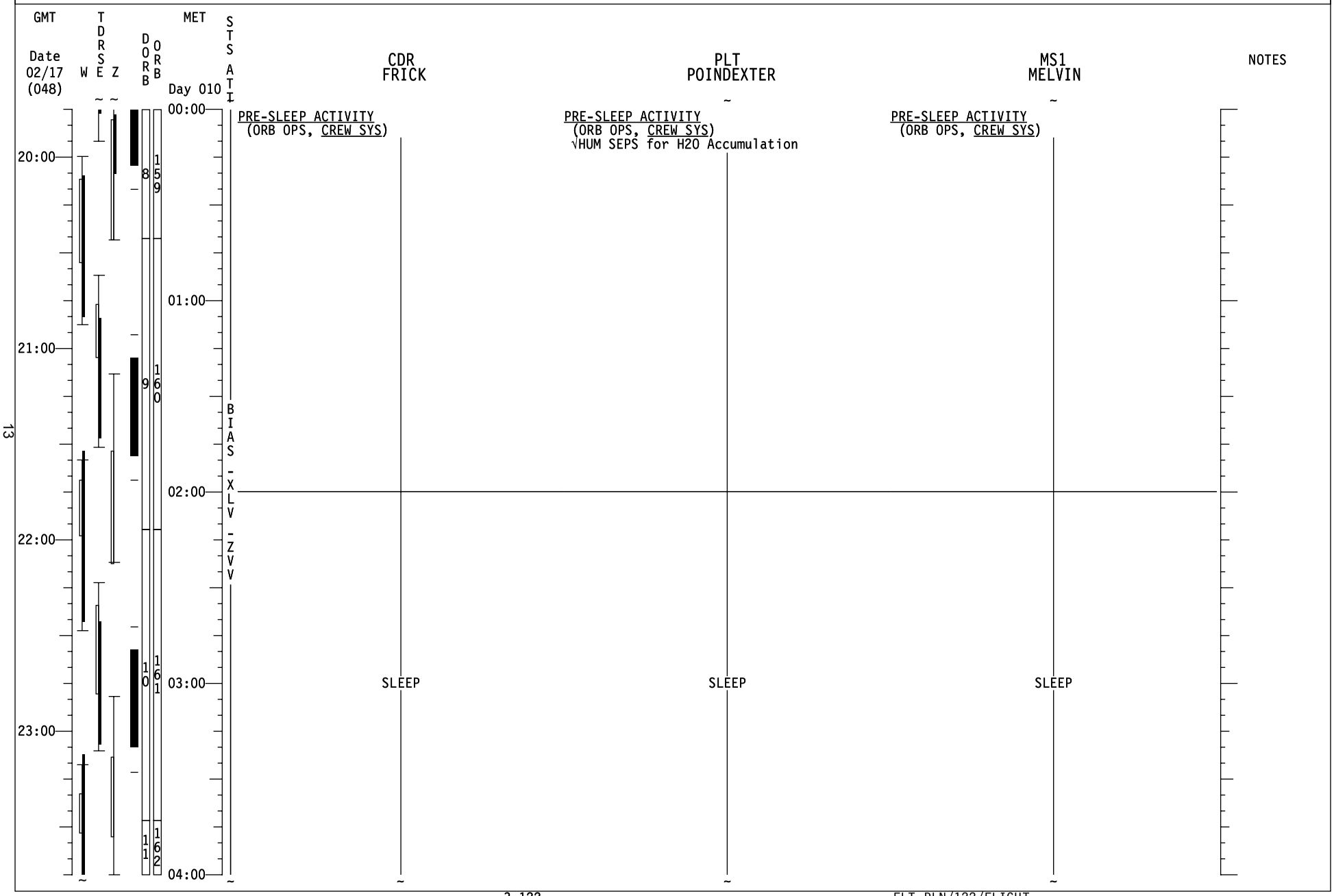
JOINT OPS: 4.103 DUCT REMOVAL & HATCH CLOSE (BYPASS CONFIG)
Ref. Transfer List, Item 45

JOINT OPS: 4.104 ODS VEST/PMA DPRS & HATCH LEAK CHECK

PRE-SLEEP ACTIVITY
(ORB OPS, CREW SYS)

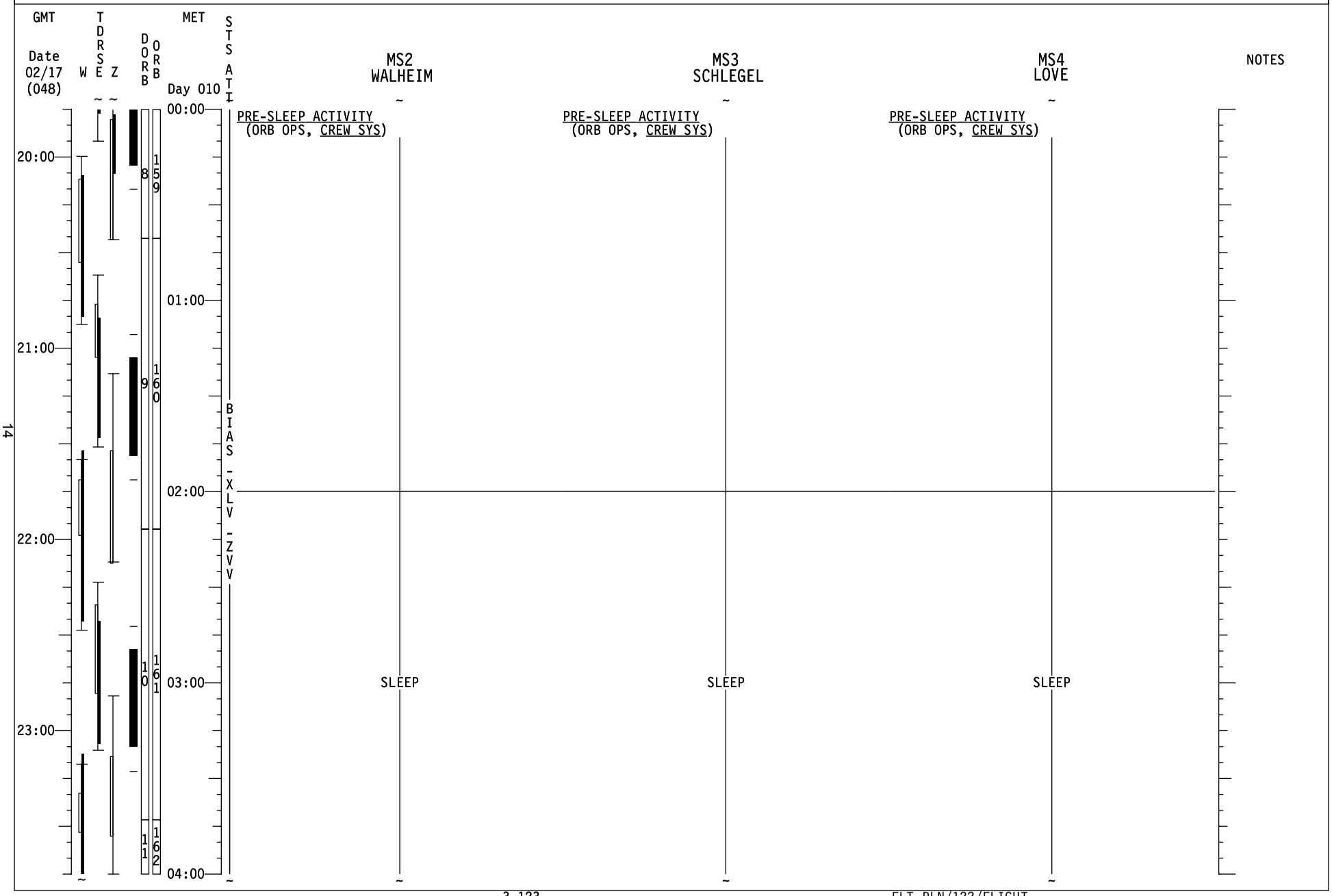
STS-122 FD (11)

REPLANNED



STS-122 FD (11)

REPLANNED



Good Morning Atlantis!!!!

Yesterday was yet another great day! Thank you for all your work!

Enjoy your last docked day!

Just a friendly reminder- be sure to call roll on both sides of the hatch before closing it!

YOUR CURRENT ORBIT IS: 188 X 177 NM

NOTAMS:

EDW – LAKEBED RUNWAYS RED.
NOR – LAKEBED RUNWAYS GREEN.
HAW – RWY 31 CLOSED; RWY 13 TODA 8,994'.
WAK – NOT USABLE.
IKF – NOT USABLE.
DIW – TACAN OTS.
LAJ – TACAN CH 45 OTS.
NGU – TACAN CHANNEL CHANGED TO CH 22.
BEN – POLITICALLY NOT RECOMMENDED/NOT SUPPORTED.
ZZA – FIRST 600M (~2,000') OF RWY 30L NOT AVAILABLE. 10,200' REMAINING.
PTN – THLD RWY 14 DISPLACED 2K', AVAILABLE RWY LENGTH 7,677'.
JDG – DIEGO GARCIA: CLOSED FRI 1800Z - MON 0100Z.
NKT – AERODROME CLOSED 15 FEB 2200Z TO 19 FEB 1200Z.

NEXT 2 PLS OPPORTUNITIES:

NOR35 ORB 157 – 9/20:57 (SCT100 SCT200 350/6P14)
EDW04 ORB 173 – 10/21:17 (SCT150 BKN200 060/5P9)

OMS TANK FAIL CAPABILITY:

L OMS FAIL: NO R OMS FAIL: NO

LEAKING OMS PRPLT BURN:

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

OMS QUANTITIES(%)

L OMS OX = 35.0 R OMS OX = 35.4
FU = 35.3 FU = 35.2

SUBTRACT ICNCT COUNTER FOR CURRENT OMS QUANTITIES

DELTA V AVAILABLE:

OMS	300 FPS
ARCS (TOTAL ABOVE QTY1)	52 FPS
TOTAL IN THE AFT	352 FPS
ARCS (TOTAL ABOVE QTY2)	85 FPS
FRCS (ABOVE QTY 1)	0 FPS
AFT QTY 1	66 %
AFT QTY 2	28 %

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

END OF PAGE 2 OF 2, MSG 093

MSG 094 - FD10 MMT SUMMARY

The MMT met to review mission progress, EVA status, and orbiter status. Due to your hard work, the mission is progressing extremely well. The first mated reboost in five years went really well and provided a total impulse of ~5.3 fps. A status of the previously mentioned minor orbiter anomalies was provided to the MMT. In addition, a post EVA 3 status was provided to the MMT. The ground teams are reviewing the pictures of the handrail to assess the affects the damaged site could have on EVA gloves.

END OF PAGE 1 OF 1, MSG 094

Good morning Leland & Stan,

You're just about done! It's been a pleasure watching you guys work. We look forward to your last transfer brief and verification that transfer is complete. The open items are listed below in the FD11 Choreography.

Because we are closing the hatch today, please call us if you run into any problems while transferring items throughout the day. There is very little time after the calldown to make any changes or provide any new information for you.

Silver Biocide Plan
To follow up with your request, here's the new Silver Biocide Plan:

- Item 36 (Silver Biocide Syringe Kit s/n 1003): This kit should return in MF28G as it's now empty (all contents were used during the mission).
- Item 720 (Silver Biocide Syringe Kit s/n 1006): Two syringes are needed from this kit for CWC fills today. After the syringes are removed, transfer this kit back to ISS and stow in M-02 Bag s/n 1026 at NOD2P2.

ITCS Sample (item 811)
We've added the return of 2 Columbus ITCS samples that will be taken by the ISS crew today.

IELK Foam
The IELK foam is a flammability hazard and per STS/ISS Safety, it must be contained in a non-flammable bag (ie; Nomex). As a result, please disassemble the IELK foam and pack it in a jettison stowage bag(s) from MF28K. You may either return this in the Ext A/L (restrained to the handrails) or transfer it to ISS. This cannot return in the Middeck retention net due to weight restrictions.

Bag Swap
Just wanted to give you a heads-up that you'll need to swap Bags G and H during cabin stow. Rationale: Bag H is heavier and due to bag stack c.g. we want it closer to the pallet.

Items 809 and 810
If Peggy can spare this return, we'd like to swap items 809 and 810.

The Transfer List Excel file, FD11_TransferList_STS122.xls, is located on the KFX machine in **C:\OCA-up\transfer**.

For ISS, the Transfer List Excel file, FD11_TransferList_STS122.xls, is located in **K:\OCA-up\transfer**.

FD11 Choreography

- Complete remaining transfers
  - **Bag H:** Transfer from NOD2D2 to MD CEIL STBD 2
  - **Item 36:** Confirm Silver Biocide Syringe Kit [s/n 1003] is on STS for return
  - **Item 720:** Confirm Silver Biocide Syringe Kit [s/n 1006] is on ISS (not returning)
  - **Item 45:** IMV O-Ring Kit needed for hatch closure
  - **Items 407 and 407.1:** Relocate at least one (1) CPA to a MDDK food or clothing locker (to get Ext A/L Floor Bag within weight limits). **407.2** is optional.
  - **Item 626:** Confirm Bag A is packed per MSG 077A
  - **Item 705** (Leo) Transfer Blood Sample Sleeves (2) to STS
  - **Item 706** (Dan): Pack Double Cold bag and transfer to STS for return (verify MA16L is empty)
  - **Items 707 - 711:** Return EMUs and EVA mesh bags to STS
  - **Item 712** (Leo): Transfer Dan's Integrated Immune Saliva Collection Kit s/n 1002
  - **Items 719** (Leo): Transfer Saliva Return Pouches to STS
  - **Item 721** (Leland): Transfer Stability Kit to STS for return
  - **Item 809 and 810:** Swap items
  - **Item 811:** Transfer ITCS Fluid Samples taken by the ISS crew today

Please update the Transfer List as follows:

In **RESUPPLY** tab:
Replace pages Resupply- 10 and Resupply- 12

In **RETURN** tab:
Replace pages Return- 10 and Return- 11

Thanks again for all your great work. Call us with any questions.

- The Transfer Team

If the HHL connectivity problem experienced during the Rendezvous occurs during Tools Checkout, perform the RPOP NOT RECEIVING HHL DATA steps on page 7-5.

Based on a review of the RPOP data files downlinked after the rendezvous, it appears TCS data was not getting to the backup RPOP PGSC (RPOP2). Of course this capability is not required for undock and flyaround. However, if time is available, we would like you to test this connection.

Please perform the RNDZ TOOLS CHECKOUT procedures with the following clarifications or updates. Perform steps 2, 4, and 7 of RNDZ TOOLS CHECKOUT on both the prime (RPOP) and backup (RPOP2) PGSCs. Also, in step 1 of TCS ACTIVATION, open TCS CADS on both the RPOP and RPOP2 PGSCs.

If TCS CADS on the RPOP2 PGSC does not receive data (per step 2 of TCS ACTIVATION), perform TCS CADS NOT RECEIVING TCS DATA, steps 1-4 only, of the RNDZ TOOLS TROUBLESHOOTING procedure on page 7-5 of the Rendezvous Checklist.
In step 1, to verify a good connection, use the following path:
Start > Settings > Control Panel > Administrative Tools > Computer Management > Device Manager > Ports > Quatech PCMCIA Serial Ports (COM2 and/or COM4)
In step 2, the backup RPOP is on the RX leg

8. 3D PHOTOCAMERA

Required hardware:

"3D CAMERA POUCH": kit:

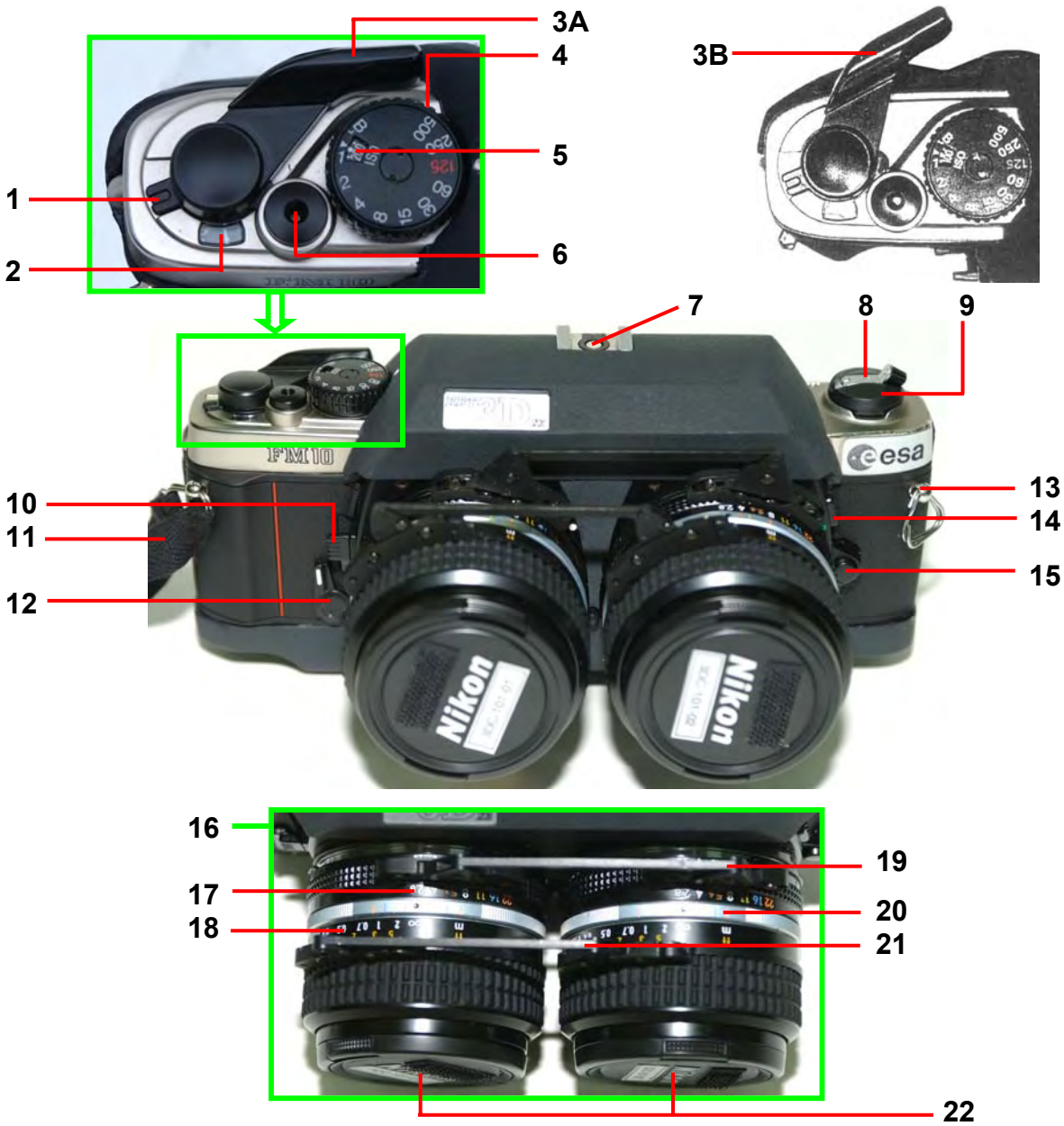
3D photocamera	one
Unremovable lens NIKKOR 2.8/24mm	two
Protective covers of the lenses	two
Battery LR 44	four
3DC-101-04 adapter for installation camera on bracket	one
Case for films of 3D camera "SSM-3DC-200"	
Film 35 mm	twenty

Speedlight Nikon SB-28DX (Nikon SB-28) from the structure of equipment of RS ISS

Equipment storage area: see IMS

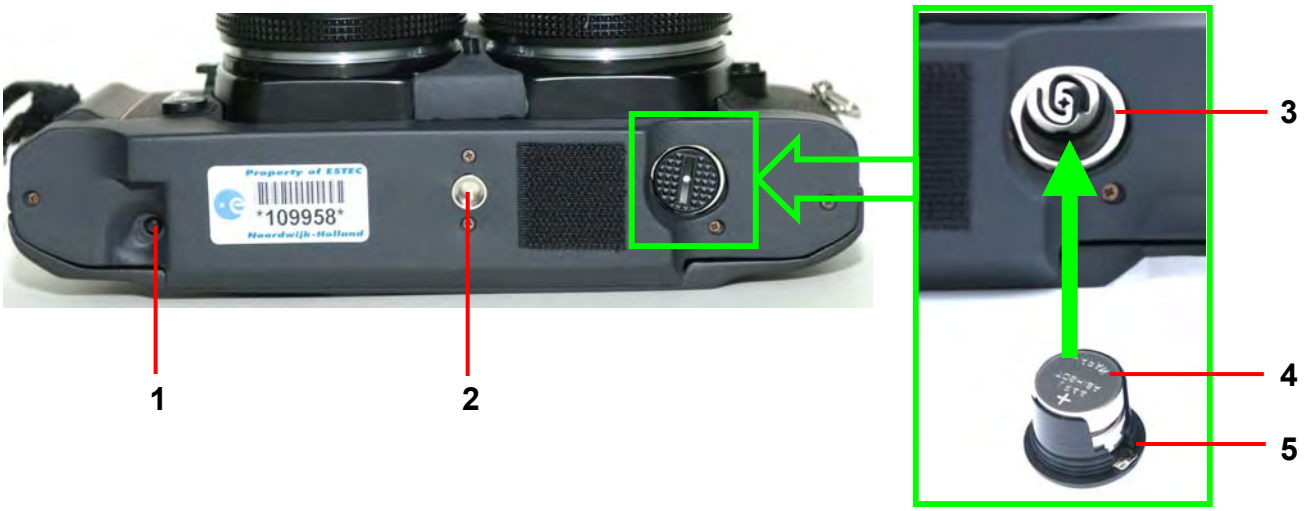
Returned hardware:

Case for films of 3D camera "SSM-3DC-200" with used films
Log sheets of photo events



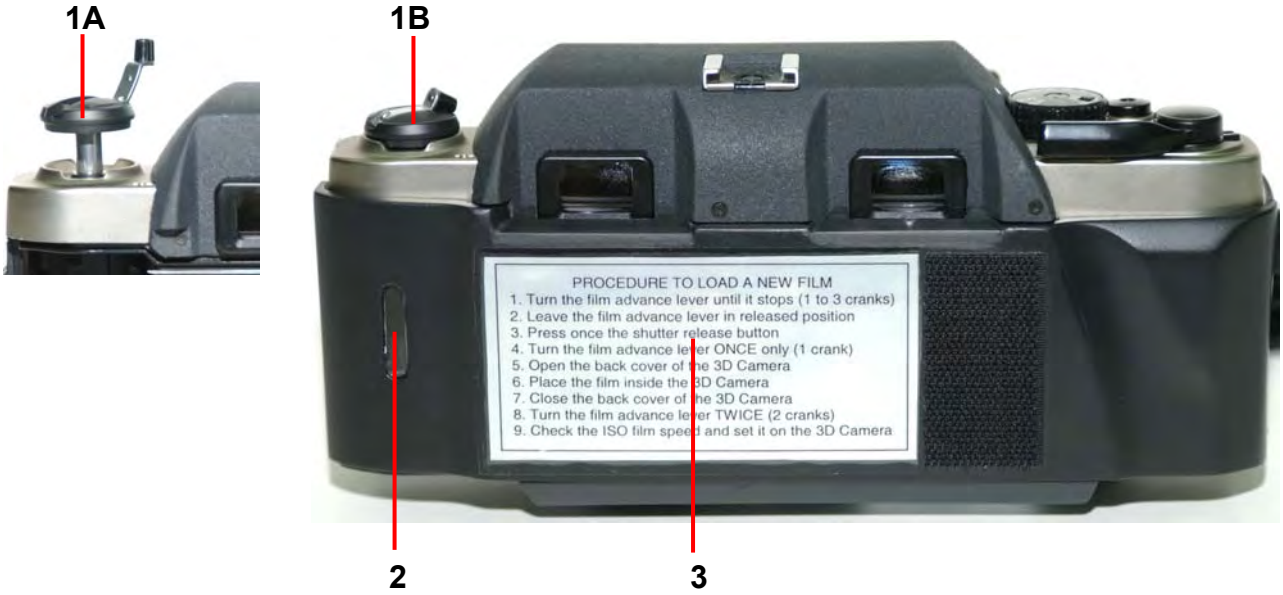
1	multiple exposure lever (not using)		12	self-timer lever
2	frame counter		13	eyelet for camera strap
3	3A	film advance lever (fixing position)	14	exposure measurement pb
	3B	film advance lever (work position)	15	lens fixing pb (not using)
4	shutter speed ISO / filmspeed set ring		16	unremovable lenses NIKKOR 2.8/24mm
5	filmspeed window		17	aperture range
6	shutter release pb		18	focusing scale white label – meters yellow label – feet
7	accessory shoe		19	rod, synchronizing apertures
8	foldable film rewind crank		20	depth-of-field preview scale
9	latch of the rear cover		21	rod, synchronizing of lenses focusing
10	depth-of-field preview lever		22	protective covers of the lenses
11	strap			

Figure 8.1 3D photocamera (The front view and from above)



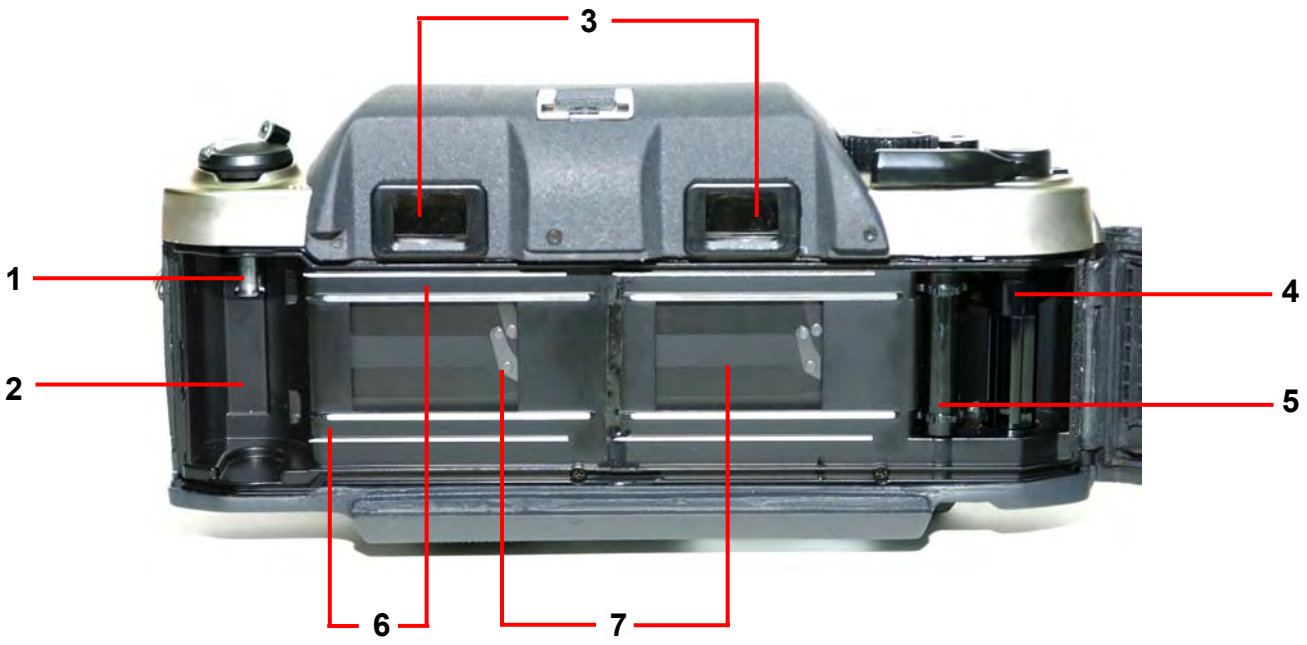
1	film rewind pb
2	tripod socket
3	battery compartment
4	batteries LR 44 (TWO)
5	cover of the battery chamber

Figure 8.2 3D photocamera (bottom view)



1	1A	latch of the rear cover in opened position with folded film rewind crank (the rear cover is unlocked)
	1B	latch of the rear cover in closed position (the rear cover is locked)
2	film cartridge confirmation window	
3	procedure to load a new film	

Figure 8.3 3D photocamera (the rear view with closed cover)



1	rewind fork
2	film cartridge compartment
3	viewfinders
4	film takeup spool
5	film sprocket
6	film guide rails
7	shutter curtains

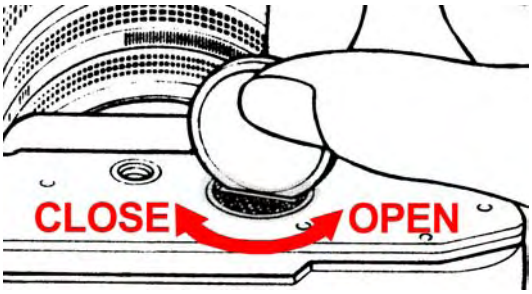
Figure 8.4 3D photocamera (the rear view with opened cover)

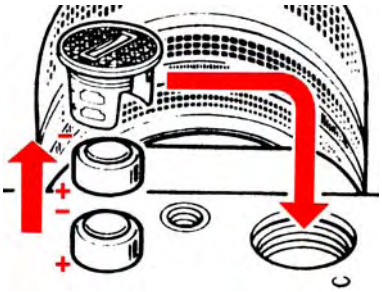
8.1. 3D CAMERA OPERATING

8.1.1. SETUP FOR OPERATION

1. Unstow:
   "3D CAMERA POUCH" kit
   case for films of 3D camera "SSM-3DC-200"
   speedlight Nikon SB-28DX (Nikon SB-28)
   (used for shootings of internal interior of station)
   Unstow 3D camera from "3D CAMERA POUCH" kit

2. BATTERY CHECKING
   ↓ exposure measurement pb (Figure 8.1 page 8-2 position 14)
   ◁ in viewfinder □ one of three LED: ● or + or –
   If LED not burning:
   CHANGE BATTERIES
   ↶ cover of the battery compartment
   Extract old batteries from the cover of the battery compartment
   Discard old batteries
   Unstow "SPARE BATTERIES" ziplock bag from socket of cover of the "3D CAMERA POUCH" kit
   Unstow new batteries LR 44 (TWO) from "SPARE BATTERIES" ziplock bag
   Place "SPARE BATTERIES" ziplock bag in socket of cover of the "3D CAMERA POUCH" kit
   Install new batteries in the cover of the battery compartment (+ outside)
   Install cover with batteries in battery compartment
   ↷ cover of the battery compartment





   Repeat battery checking

3. FILM CHECKING
⊲ in window (Figure 8.3 page 8-3 position 2) the presence of cassette with film in the camera
If cassette with film is not installed in camera:

INSTALL CASSETTE WITH FILM IN CAMERA

3.1. Unstow cassette from "3D CAMERA POUCH" kit

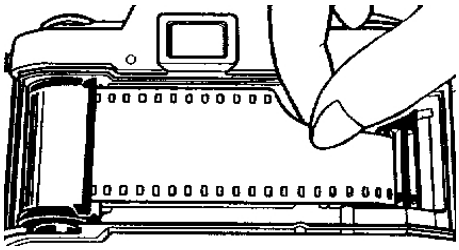
3.2. SET SHUTTER IN INITIAL STATE
↺ film advance lever (Figure 8.1 page 8-2 position 3A) 1 – 3 times to stop
Set film advance lever in the work position (Figure 8.1 page 8-2 position 3B)
↓ shutter release pb (Figure 8.1 page 8-2 position 6)
↺ **once** film advance lever (Figure 8.1 page 8-2 position 3A)

3.3. CASSETTE INSTALLATION IN THE CAMERA
Lift the latch of the rear cover of camera (Figure 8.3 page 8-3 position 1A)
Lift foldable film rewind crank
Open the rear cover of camera
Install cassette into the film cassette compartment (Figure 8.4 page 8-4 position 2)
↶ foldable film rewind crank and push down lightly the latch of the rear cover of camera to insert rewind fork (Figure 8.4 page 8-4 position 1) into the cassette grooves
Push down the latch of the rear cover of camera

CAUTION!

Do not touch by fingers the shutter curtains (Figure 8.4 page 8-4 position 7) and film pressure plates on the rear cover of the camera

3.4. FILM INSTALLATION IN THE CAMERA
Stretch a film on film guide rails
(Figure 8.4 page 8-4 position 6)
Insert the film leader into the grooves of the film takeup spool
(Figure 8.4 page 8-4 position 4)
√ toothing of the film sprocket
(Figure 8.4 page 8-4 position 5) is engage with the film perforation
Draw the film: ↷ foldable film rewind crank
Put down the foldable film rewind crank
Close the rear cover of camera
√ the rear cover of camera is locked



3.5. ↺ **twice** film advance lever (Figure 8.1 page 8-2 position 3A)
⊲ rotation of the latch of rear cover of camera (Figure 8.1 page 8-2 position 9)
⊲ symbol **S** in the frame counter (Figure 8.1 page 8-2 position 2)
Set film advance lever in the fixing position (Figure 8.1 page 8-2 position 3A)

If cassette with film is installed in camera
⊲ in the frame counter (Figure 8.1 page 8-2 position 2) the number of unused frames
If number of unused frames < **12**:
Continue shooting this film

If number of unused frames = **12** (film is finished):
Remove cassette with used film from the camera (see Sect. 8.1.5 step 5 page 8-13)
Install new cassette with film in the camera (see steps 3.1. – 3.5. page 8-6)

4. Attach a speedlight Nikon SB-28DX (or Nikon SB-28) to the camera
(speedlight is used for shootings of internal interior of station)

8.1.2. SET UP OPERATIONS BEFORE SHOOTING

1. FILMSPEED SETTING

NOTE

Filmspeed value is indicated on the film cassette.
◁ filmspeed value in the film cartridge confirmation window (Figure 8.3 page 8-3 position 2)

◁ filmspeed value in the filmspeed window (Figure 8.1 page 8-2 position 5)
Draw out and ↶ filmspeed set ring (Figure 8.1 page 8-2 position 4) to set required filmspeed value

2. EXPOSURE SETTING (TWO METHODS)
Remove protective covers of the camera lenses
Stow protective covers of lenses to “3D CAMERA POUCH” kit
Set exposure and aperture value according to the shooting conditions:

Shooting conditions	Exposure value	Aperture value
Shooting inside of station Use speedlight Nikon SB-28DX (Nikon SB-28)	1/60 (1/30)	8
Shooting of Earth	1/250 (1/125)	Aperture is adjusted by exposure meter of camera (see step 2.1 page. 8-8 METHOD 1)
Shooting of external elements of station on a background of the Earth and space	Exposure is adjusted by exposure meter of camera (see step 2.2 page. 8-8 METHOD 2)	8

2.1 METHOD 1: aperture adjustment

Set film advance lever in the work position
(Figure 8.1 page 8-2 position 3B)
↶ shutter speed dial (Figure 8.1 page 8-2 position 4) to mate required shutter speed value with a white label on the body of the camera
click (fixed shutter speed value)
Set film advance lever in the fixing position
(Figure 8.1 page 8-2 position 3A)
↓ exposure measurement pb (Figure 8.1 page 8-2 position 14)
◁ in the right viewfinder □ LED ●
If another LEDs are flashing – operate according to the scheme:

	state of the exposure				
	over exposure	slightly over exposure	correct exposure	slightly under exposure	under exposure
indication in the viewfinder	+	+ ●	●	● -	-
Operations on updating of exposure	↷ apertures of the lenses to increase aperture value		-	↶ apertures of the lenses to decrease aperture value	

2.2 METHOD 2: shutter speed adjustment

Set film advance lever in the work position
(Figure 8.1 page 8-2 position 3B)
↶ apertures of the lenses (synchronized by the rod, Figure 8.1 page 8-2 position 19) to mate required aperture value with a label on the depth-of-field preview scale (Figure 8.1 page 8-2 position 20)

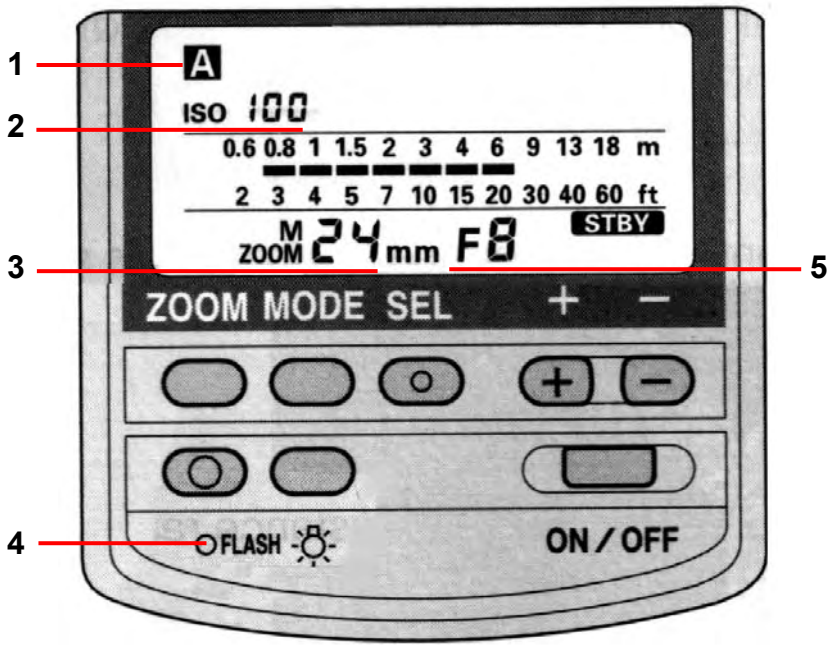
↓ exposure measurement pb (Figure 8.1 page 8-2 position 14)
◁ in the right viewfinder □ LED ●
If another LEDs are flashing – operate according to the scheme:

	state of the exposure				
	over exposure	slightly over exposure	correct exposure	slightly under exposure	under exposure
indication in the viewfinder	+	+ ●	●	● -	-
Operations on updating of exposure	↷ shutter speed dial (Figure 8.1 page 8-2 position 4) to decrease exposure		-	↶ shutter speed dial (Figure 8.1 page 8-2 position 4) to increase exposure	

click (fixed shutter speed value)
Set film advance lever in the fixing position (Figure 8.1 page 8-2 position 3A)

3. SETTINGS AT USE OF SPEEDLIGHTER NIKON SB-28DX (SB-28)
(speedlight is used for shootings of internal interior of station)

CAUTION!
It is impossible to use exposure measurement on a camera at shooting with speedlight. Set the shutter speed on camera at 1/60 or lower (1/30).



1	indicator of aperture priority mode
2	indicator of filmspeed value
3	indicator of focus value
4	LED **FLASH**
5	indicator of aperture value

Рис. 8.5 LCD indication and speedlight NIKON SB-28DX (NIKON SB-28) controls

3.1. FILMSPEED SETTING

↓ pb **ON/OFF** ▯ LED **FLASH** *(speedlight is on)*

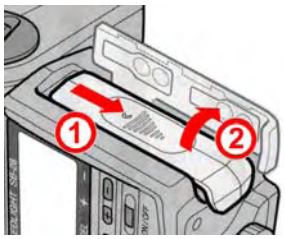
If LED **FLASH** not burning:

INSTALL NEW SPEEDLIGHT BATTERIES

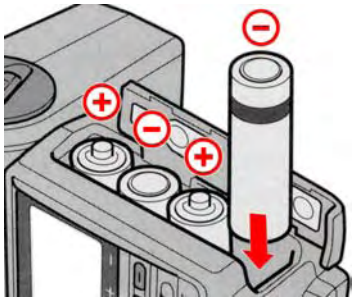
Open the cover of battery compartment of the speedlight

Extract old batteries

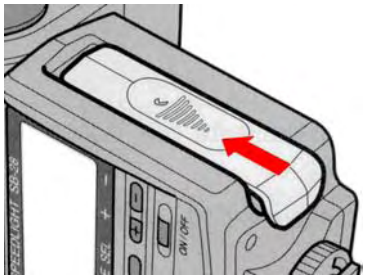
Discard old batteries



Install new batteries (A-A type, four) in battery compartment according to the label inside of battery compartment



Close the cover of battery compartment of the speedlight



▯ indicator of filmspeed value (for a five seconds)

↓ pb **+** and pb **–** to set filmspeed value = **100**
(operate it while indicator is flashing)

When indicator stops flashing – then the filmspeed value is set

If you late to set required filmspeed value:

↓ pb **ON / OFF** ■ LED **FLASH** *(speedlight is off)*

Repeat step 3.1. page 8-10

3.2. FOCUS VALUE SETTING

↓ pb **ZOOM** for several times

◁ on LCD focus value = **24**

3.3. APERTURE PRIORITY MODE SETTING

↓ pb **MODE** for several times ▯ indicator **A**

3.4. APERTURE VALUE SETTING

↓ and hold pb **SEL**

↓ pb **+** and pb **–** to set aperture value the same as on the camera
(recommended aperture value = **8**)

Set free pb **SEL**

↓ pb **SEL** once more (indicator stops flashing, aperture value is set)

8.1.3. PHOTOSHOOTING

NOTE

1. **For one session of shooting use the film cassette completely**
   За один сеанс съемки полностью израсходовать кассету с пленкой
   (twelve stereo-frames)
2. **The first image is mono-frame**

1. Frame the object
2. Focus the image: ↶ focusing rings of the lenses (synchronized by the rod Figure 8.1 page 8-2 position 21)
3. Set film advance lever in the work position (Figure 8.1 page 8-2 position 3B)

NOTE

The left shutter responses first (left viewfinder is dark)

CAUTION!

↓ shutter release pb gently. Very strong pressure on the shutter release pb might damage the camera.

4. ↓ shutter release pb (Figure 8.1 page 8-2 position 6)
   👂 click of shutter response
   If shutter release pb is not pressing:
   4.1. The film advance lever is in the fixing position (Figure 8.1 page 8-2 position 3A)
   You must set film advance lever in the work position (Figure 8.1 page 8-2 position 3B)
   4.2. Film is not advanced completely to the next frame
   You must ↶ film advance lever (1 – 3 times up to stop)
5. Advance film to the next frame: ↶ **three times** the film advance lever (Figure 8.1 page 8-2 position 3A)

NOTE

At correct rewind of a film to the next frame the film advance lever is standing to stop

If the film is not rewinding at twelve frame (film advance lever is not transferred after first or second reset):
Remove cassette with used film from the camera (see Sect. 8.1.5 step 5 page 8-13)
↶ film advance lever for several times up to stop
↓ shutter release pb (Figure 8.1 page 8-2 position 6)

6. For shooting of the next frame repeat steps 1 – 5 page 8-11

8.1.4. PHOTOSHOOTING IN SELF-TIMER MODE

1. Unstow a bracket from the storage location
   Unstow SSM-3DC-104 ziplock bag with 3DC-101-04 adapter from socket of cover of the "3D CAMERA POUCH" kit
   Unstow adapter 3DC-101-04 from SSM-3DC-104 ziplock bag
   Place SSM-3DC-104 ziplock bag in socket of cover of the "3D CAMERA POUCH" kit
   Fix a bracket in a place
   Set camera on the bracket with the help of adapter

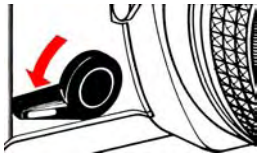
2. Frame the photograph

3. Focus the image: ↶ focusing rings of the lenses (synchronized by the rod Figure 8.1 page 8-2 position 21)

4. Set film advance lever in the work position (Figure 8.1 page 8-2 position 3B)

CAUTION!
1. If the self-timer lever is set in self-timer mode it is impossible to cancel it manually
2. shutter responded through ten seconds after pressing of the shutter release pb

5. ↶ self-timer lever (Figure 8.1 page 8-2 position 12)
   ↓ shutter release pb (Figure 8.1 page 8-2 position 6)
   👂 click of shutter response (after ten seconds)
   If shutter release pb is not pressing:



   5.1. The film advance lever is in the fixing position (Figure 8.1 page 8-2 position 3A)
   You must set film advance lever in the work position (Figure 8.1 page 8-2 position 3B)

   5.2. Film is not advanced completely to the next frame
   You must ↶ film advance lever (1 – 3 times up to stop)

6. Advance film to the next frame: ↶ **three times** the film advance lever (Figure 8.1 page 8-2 position 3A)

NOTE
At correct rewind of a film to the next frame the film advance lever is standing to stop

If the film is not rewinding at twelve frame (film advance lever is not transferred after first or second reset):
Remove cassette with used film from the camera (see Sect. 8.1.5 step 5 page 8-13)
↶ film advance lever for several times up to stop
↓ shutter release pb (Figure 8.1 page 8-2 position 6)

7. For shooting of the next frame repeat steps 2 – 6 page 8-12

8.1.5. CLOSEOUT OPERATIONS AFTER SESSION OF SHOOTING

1. Set film advance lever in the fixing position (Figure 8.1 page 8-2 position 3A)

2. Unstow protective covers of lenses from “3D CAMERA POUCH” kit
   Install protective covers to the lenses of camera

3. <u>BRACKET DISMANTLING (IF IT WAS USED)</u>
   Demount camera from bracket
   Unstow SSM-3DC-104 ziplock bag from socket of cover of the “3D CAMERA POUCH” kit
   Stow 3DC-101-04 adapter to SSM-3DC-104 ziplock bag
   Place SSM-3DC-104 ziplock bag with 3DC-101-04 adapter in socket of cover of the “3D CAMERA POUCH” kit
   Demount and stow bracket

4. <u>TURN OFF THE SPEEDLIGHT (IF IT WAS USED)</u>
   ↓ pb ON / OFF ■ LED FLASH *(speedlight is off)*
   Remove speedlight Nikon SB-28DX (Nikon SB-28) from camera
   Stow speedlight Nikon SB-28DX (Nikon SB-28) to the storage location

5. <u>REMOVE USED FILM FROM THE CAMERA</u>
   ↓ film rewind pb (Figure 8.2 page 8-3 position 1)
   Lift foldable film rewind crank
   ↷ foldable film rewind crank until pressure releases (the film is completely wound into the cassette)
   Lift the latch of the rear cover of camera (Figure 8.3 page 8-3 position 1A)
   Open the rear cover of camera
   Remove cassette with film from the camera
   Close the rear cover of camera
   Push down the latch of the rear cover of camera
   Put down the foldable film rewind crank
   Label used cassette (at crew discretion)
   Stow used cassette to the case for films of 3D camera ”SSM-3DC-200”

6. Stow camera to the “3D CAMERA POUCH” kit
   Stow “3D CAMERA POUCH” kit to the storage location and secure by velcro
   Stow the case for films of 3D camera ”SSM-3DC-200” to the storage location

7. Fill Log Sheets of photo events

8.2. CLOSEOUT OPERATIONS

1. Unstow from the storage location:
   "3D CAMERA POUCH" kit
   Case for films of 3D camera "SSM-3DC-200"

2. Unstow 3D camera from "3D CAMERA POUCH" kit

3. ⊲ in window (Figure 8.3 page 8-3 position 2) the presence of cassette with film in the camera
   If cassette with film is installed in camera:
   REMOVE USED FILM FROM THE CAMERA
   ↓ film rewind pb (Figure 8.2 page 8-3 position 1)
   Lift foldable film rewind crank
   ↷ foldable film rewind crank until pressure releases (the film is completely wound into the cassette)
   Lift the latch of the rear cover of camera (Figure 8.3 page 8-3 position 1A)
   Open the rear cover of camera
   Remove cassette with film from the camera
   Close the rear cover of camera
   Push down the latch of the rear cover of camera
   Put down the foldable film rewind crank
   Label used cassette (at crew discretion)
   Stow used cassette to the case for films of 3D camera "SSM-3DC-200"

4. REMOVE BATTERIES FROM CAMERA
   ↶ cover of the battery compartment
   Extract batteries from the cover of the battery compartment
   Unstow "SPARE BATTERIES" ziplock bag from socket of cover of the "3D CAMERA POUCH" kit
   Stow batteries to "SPARE BATTERIES" ziplock bag
   Place "SPARE BATTERIES" ziplock bag with batteries in socket of cover of the "3D CAMERA POUCH" kit
   Install cover in battery compartment
   ↷ cover of the battery compartment

5. Stow camera to the "3D CAMERA POUCH" kit
   Stow "3D CAMERA POUCH" kit to the storage location and secure by velcro

6. Stow Log Sheets of photo events to the case for films of 3D camera "SSM-3DC-200"
   Transfer and locate the case for films of 3D camera "SSM-3DC-200" in Souyz

MAIN SUBJECTS OF SHOOTING

1. Outside views of the ISS and the Earth through a well-located illuminator with daylight. (For better 3D effect, it is preferred that the pictures taken include both parts of the ISS and Earth view in the background)

2. RS and Russian facilities of the ISS

3. American segment and facilities of the ISS

4. European experiments

5. Astronauts at work

Label of cassette with film _____

frame number	date	time	subject of shooting	note (operator)

Label of cassette with film _____

frame number	date	time	subject of shooting	note (operator)