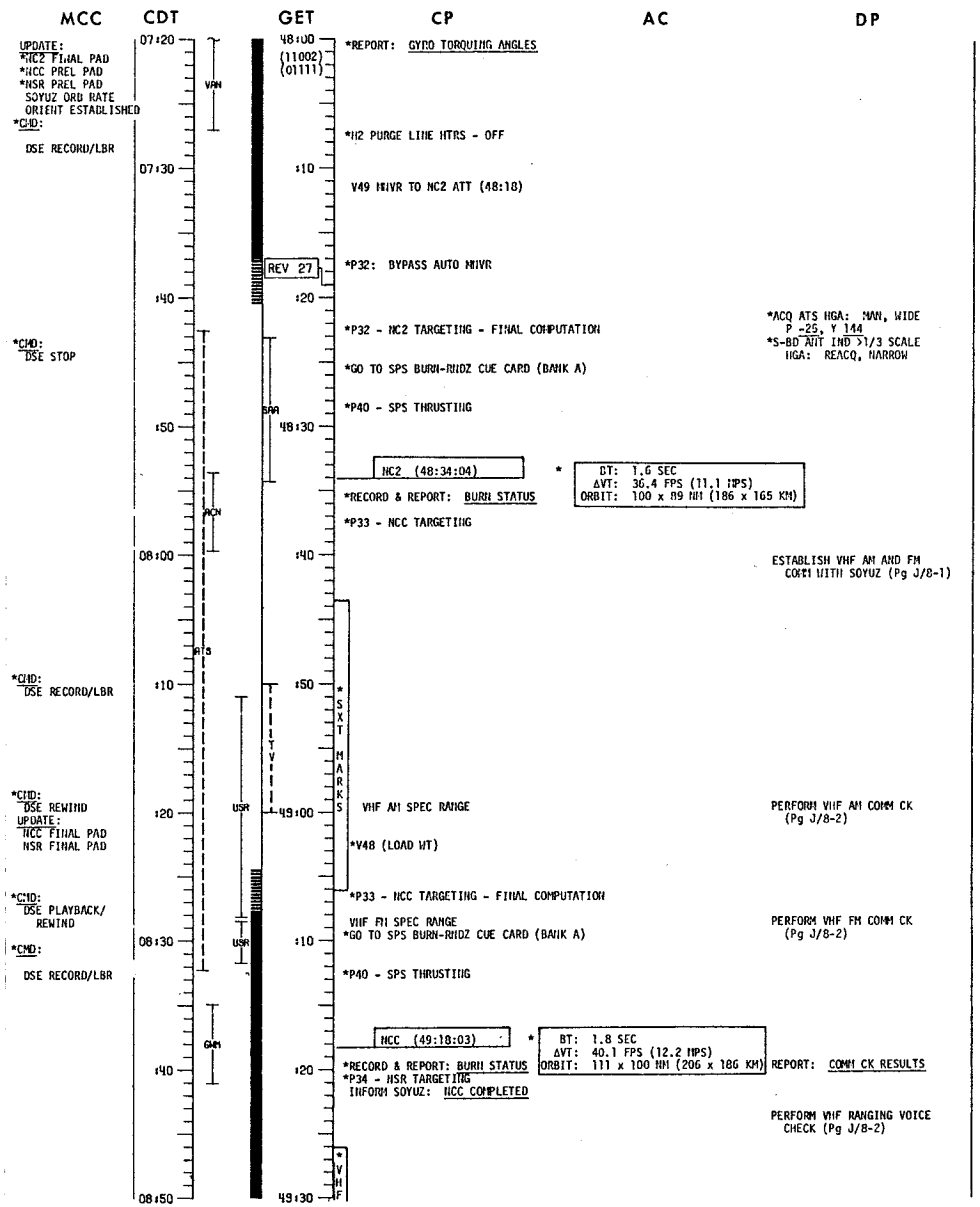
ASTP 40301

APOLLO DETAILED CREW ACTIVITIES PLAN

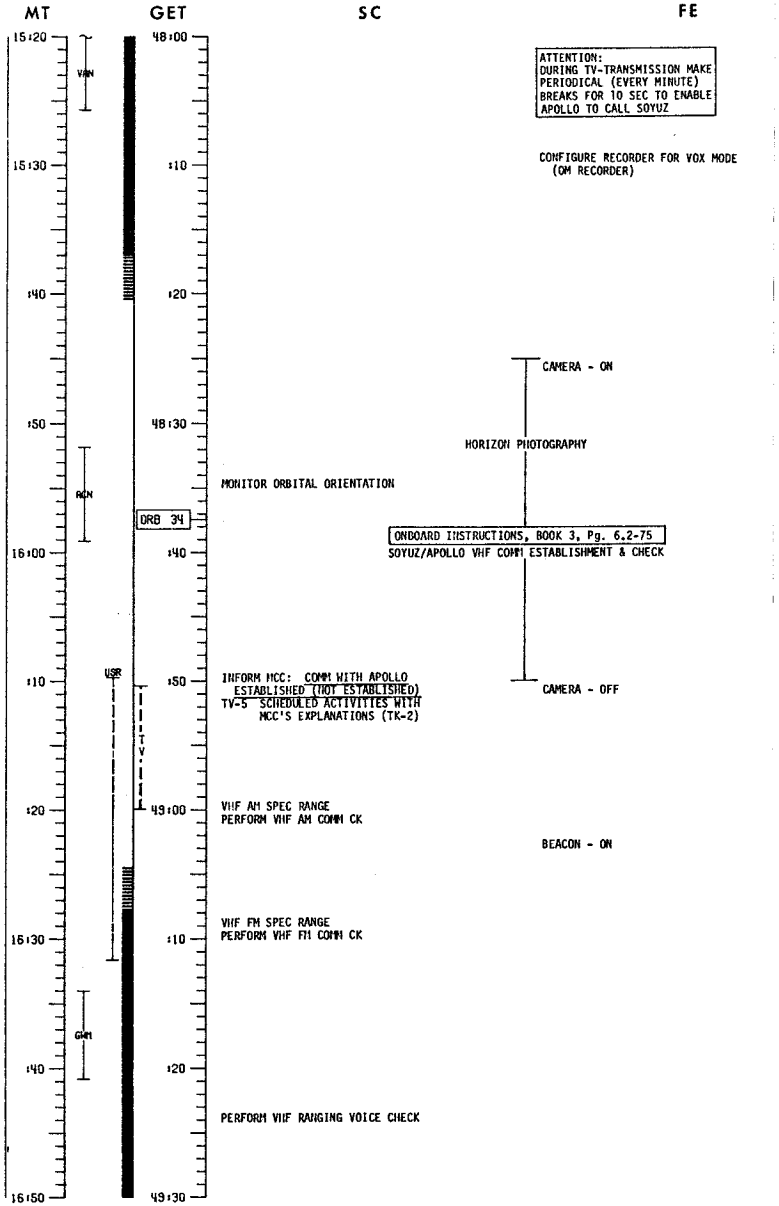
HOUSTON DATE	REV
JULY 17, 1975	26-27



MISSION	EDITION	PUBLICATION DATE	PAGE
ASTP	REVISION 6	APRIL 28, 1975	4.2-2

SOYUZ DETAILED CREW ACTIVITIES PLAN

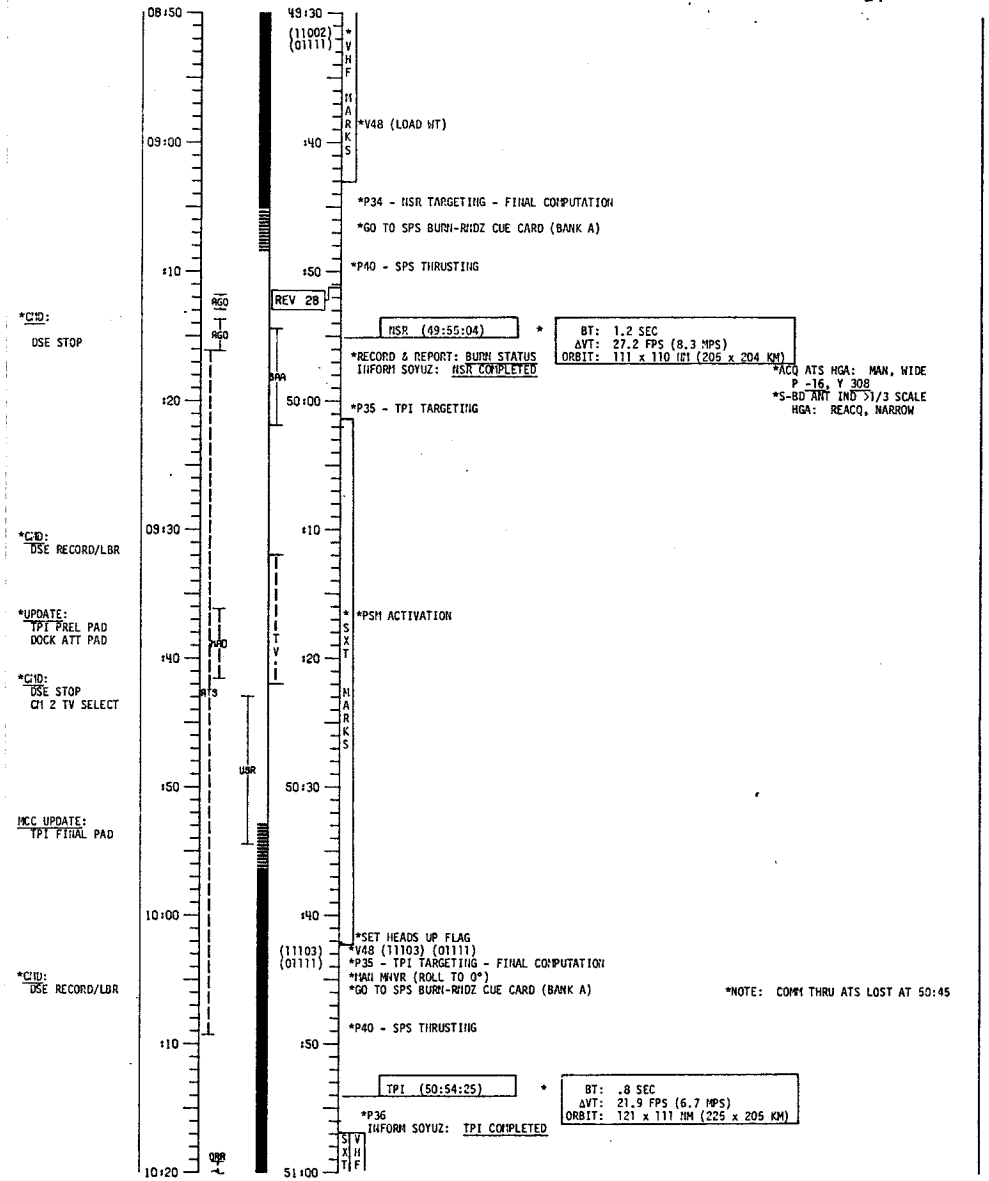
MOSCOW DATE	ORB
JULY 17, 1975	33-34



MISSION	EDITION	PUBLICATION DATE	PAGE
ASTP	REVISION 6	APRIL 28, 1975	4.2-3

APOLLO DETAILED CREW ACTIVITIES PLAN

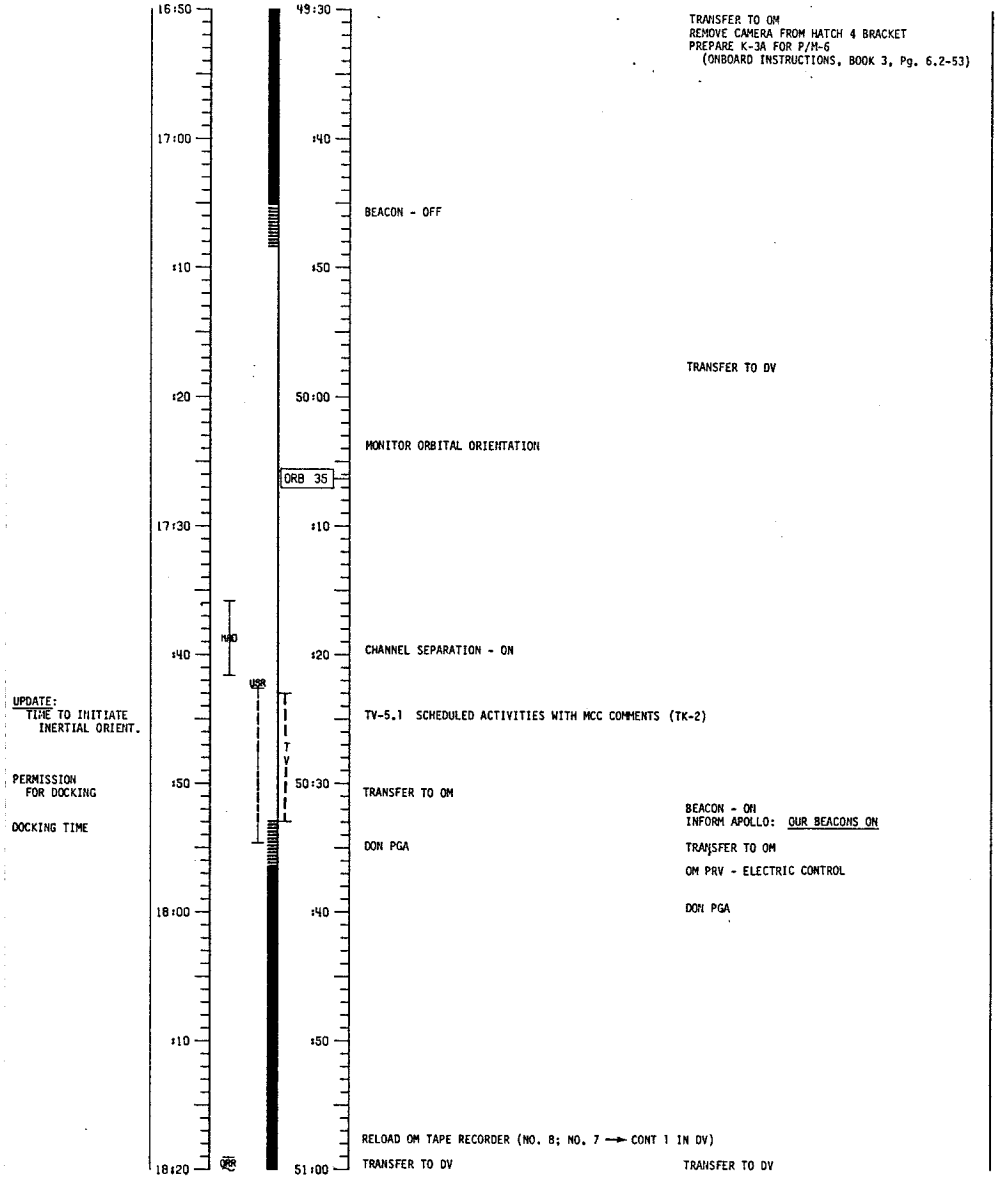
HOUSTON DATE	REV
JULY 17, 1975	27-28



MISSION	EDITION	PUBLICATION DATE	PAGE
ASTP	REVISION 6	APRIL 28, 1975	4.2-4

SOYUZ DETAILED CREW ACTIVITIES PLAN

MOSCOW DATE	ORB
JULY 17, 1975	34-35



MISSION	EDITION	PUBLICATION DATE	PAGE
ASTP	REVISION 6	APRIL 28, 1975	4.2-5

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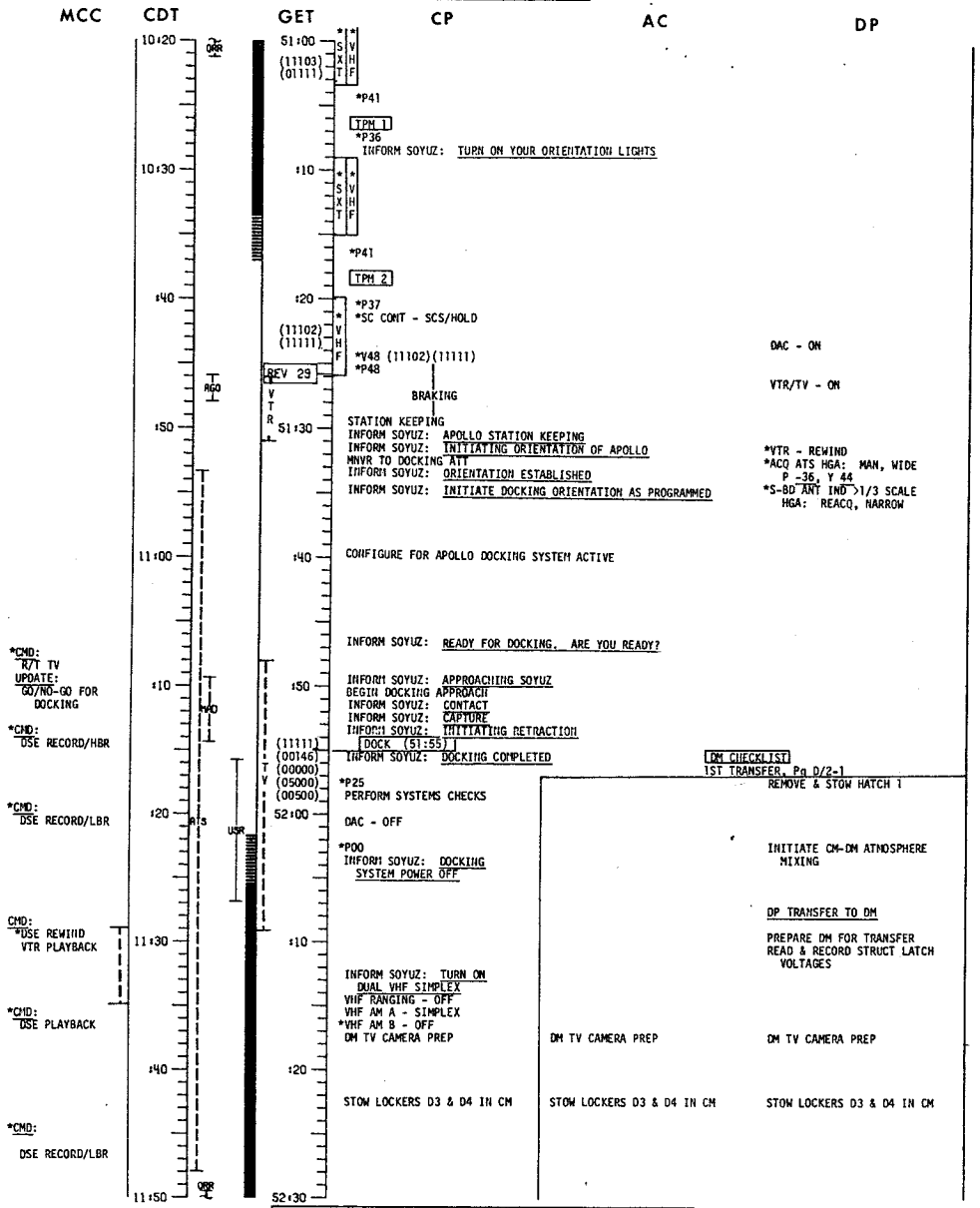
APOLLO DETAILED CREW ACTIVITIES PLAN

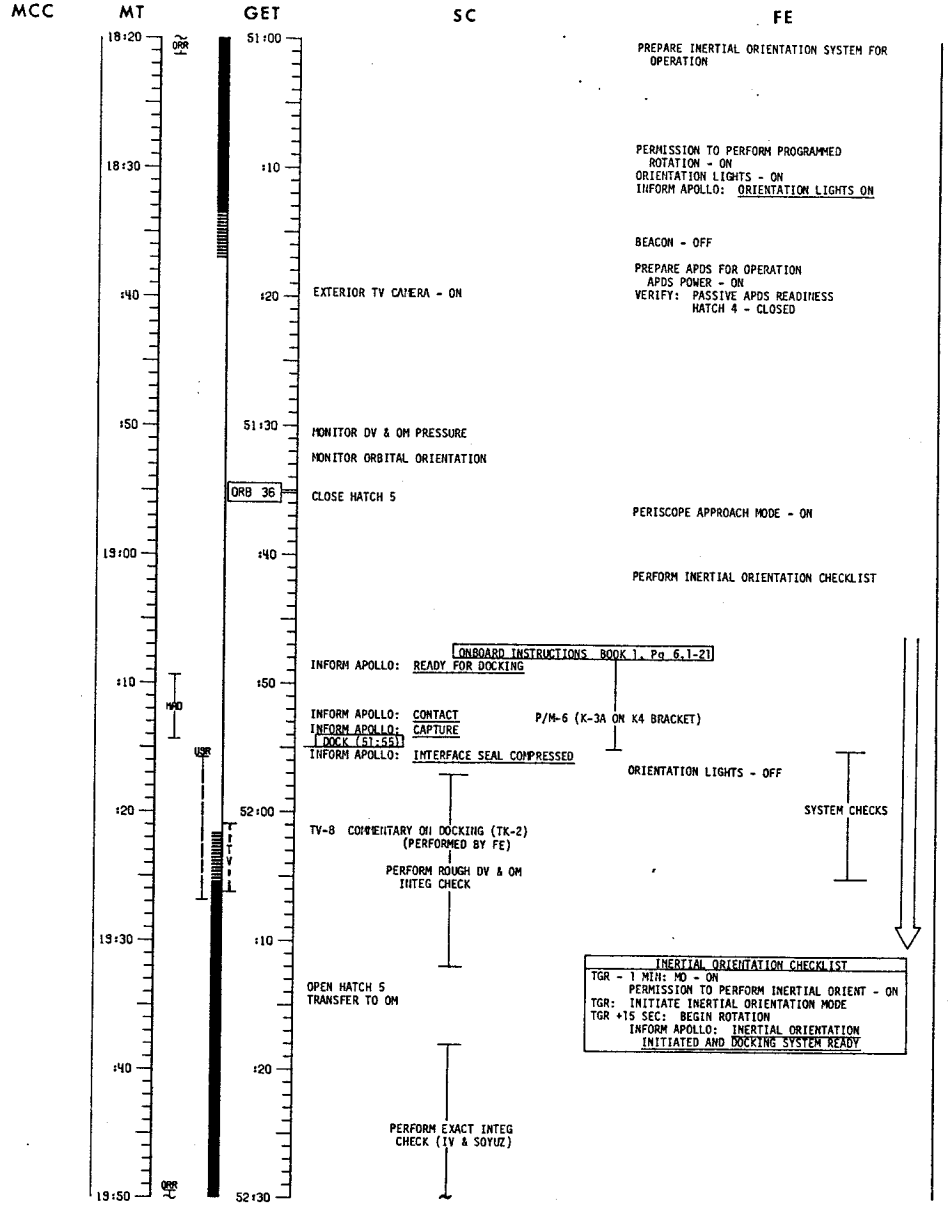
HOUSTON DATE	REV
JULY 17, 1975	28-29



MISSION	EDITION	PUBLICATION DATE	PAGE
ASTP	REVISION 6	APRIL 28, 1975	4.2-6

SOYUZ DETAILED CREW ACTIVITIES PLAN

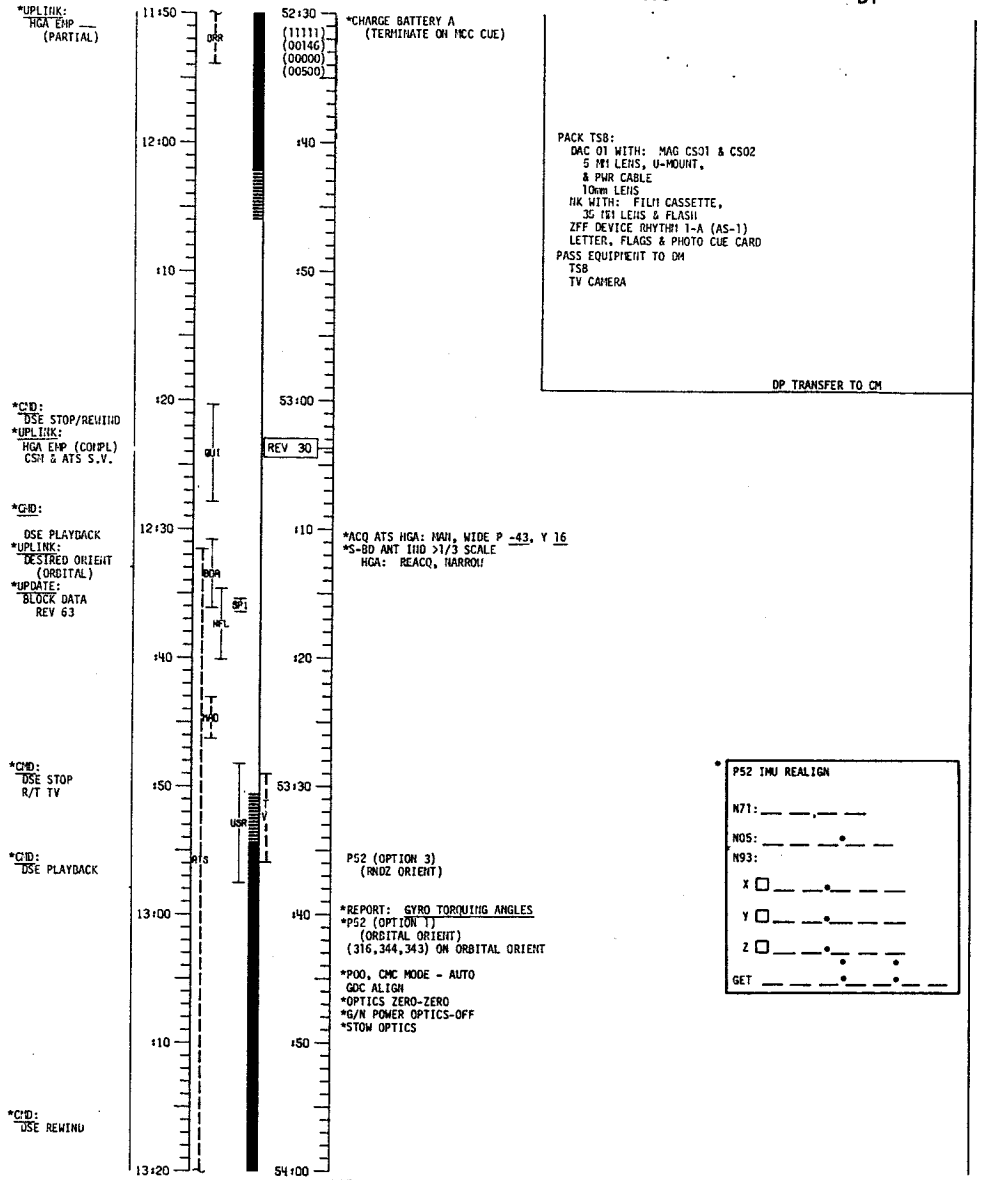
MOSCOW DATE	ORB
JULY 17, 1975	35-36



MISSION	EDITION	PUBLICATION DATE	PAGE
ASTP	REVISION 6	APRIL 28, 1975	4.2-7

APOLLO DETAILED CREW ACTIVITIES PLAN

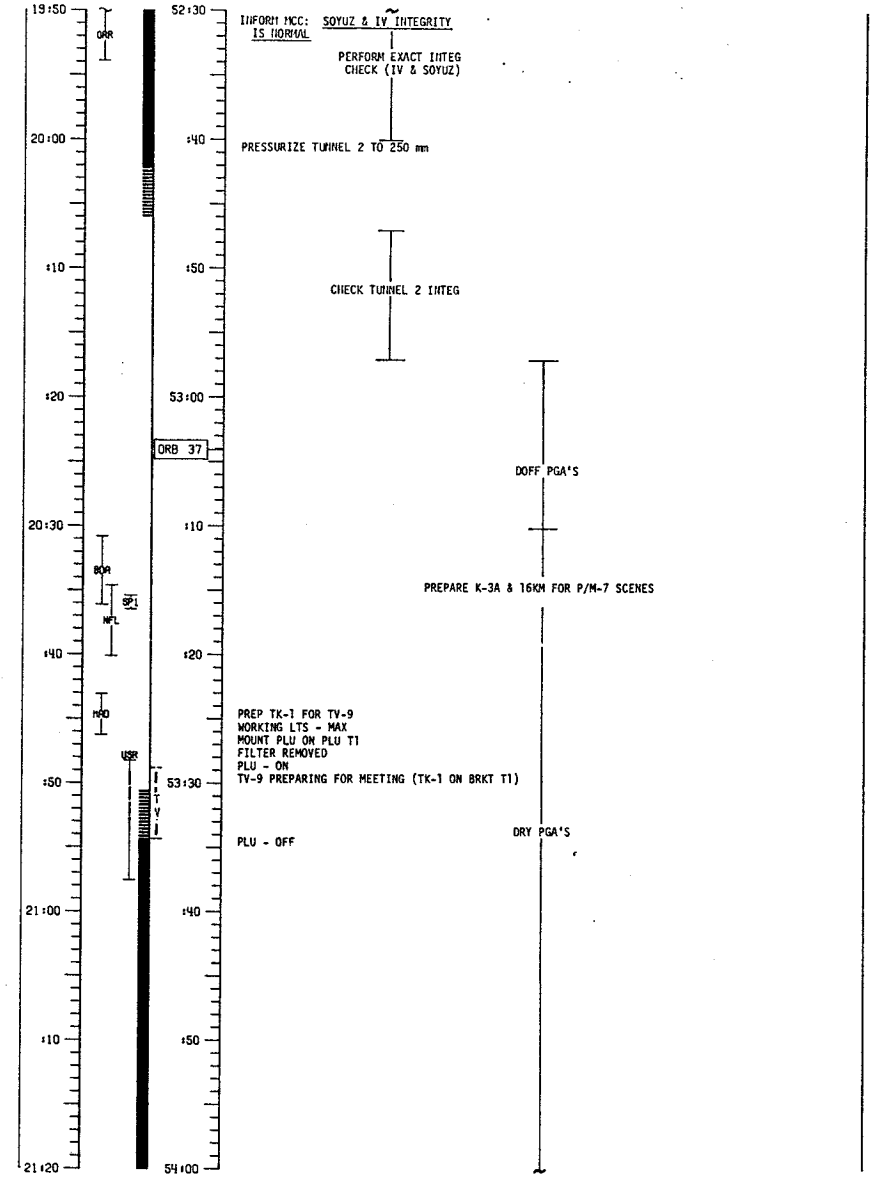
HOUSTON DATE	REV
JULY 17, 1975	29-30



MISSION	EDITION	PUBLICATION DATE	PAGE
ASTP	REVISION 6	APRIL 28, 1975	4.2-8

SOYUZ DETAILED CREW ACTIVITIES PLAN

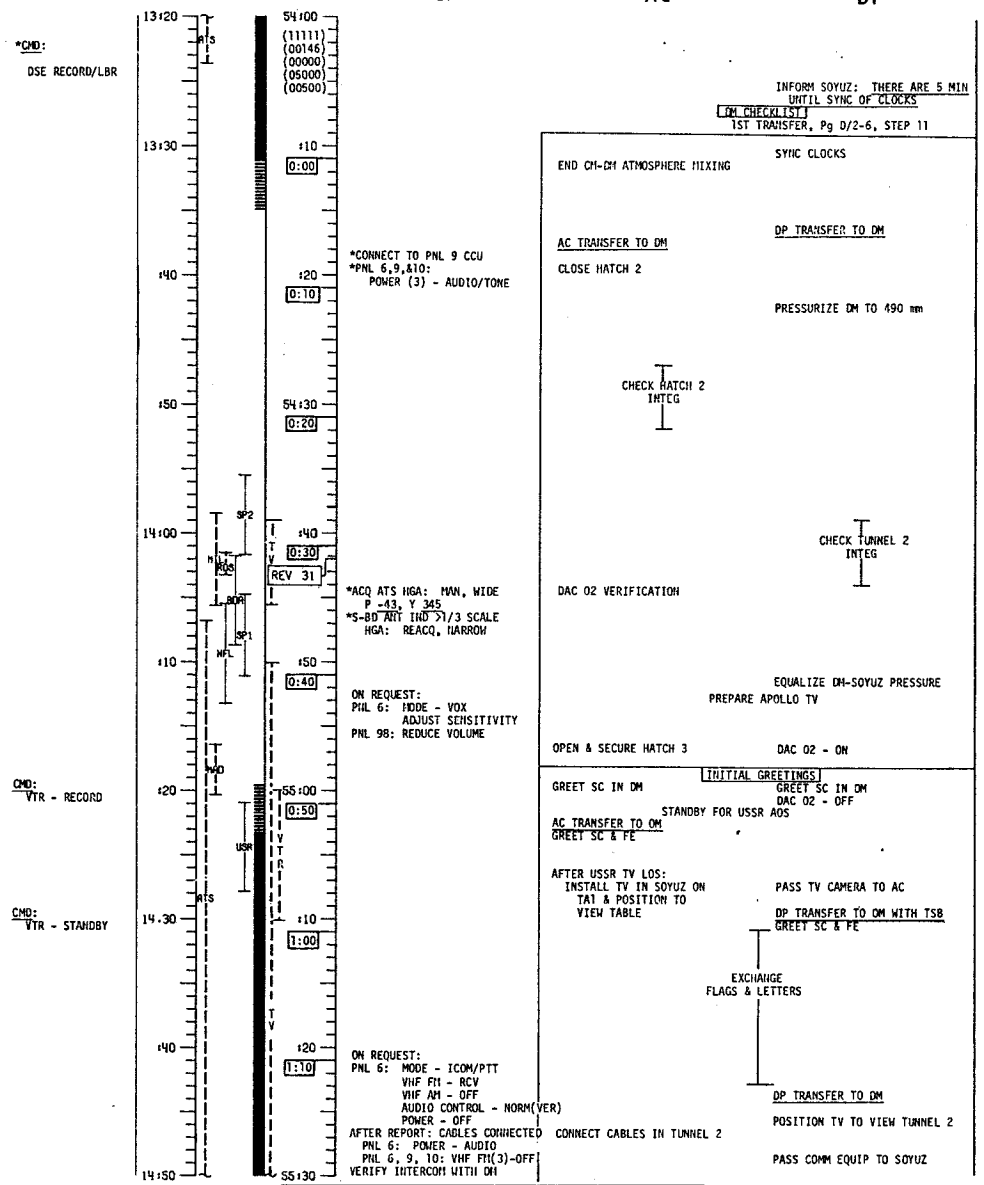
MOSCOW DATE	ORB
JULY 17, 1975	36-37



MISSION	EDITION	PUBLICATION DATE	PAGE
ASTP	REVISION 6	APRIL 28, 1975	4.2-9

APOLLO DETAILED CREW ACTIVITIES PLAN

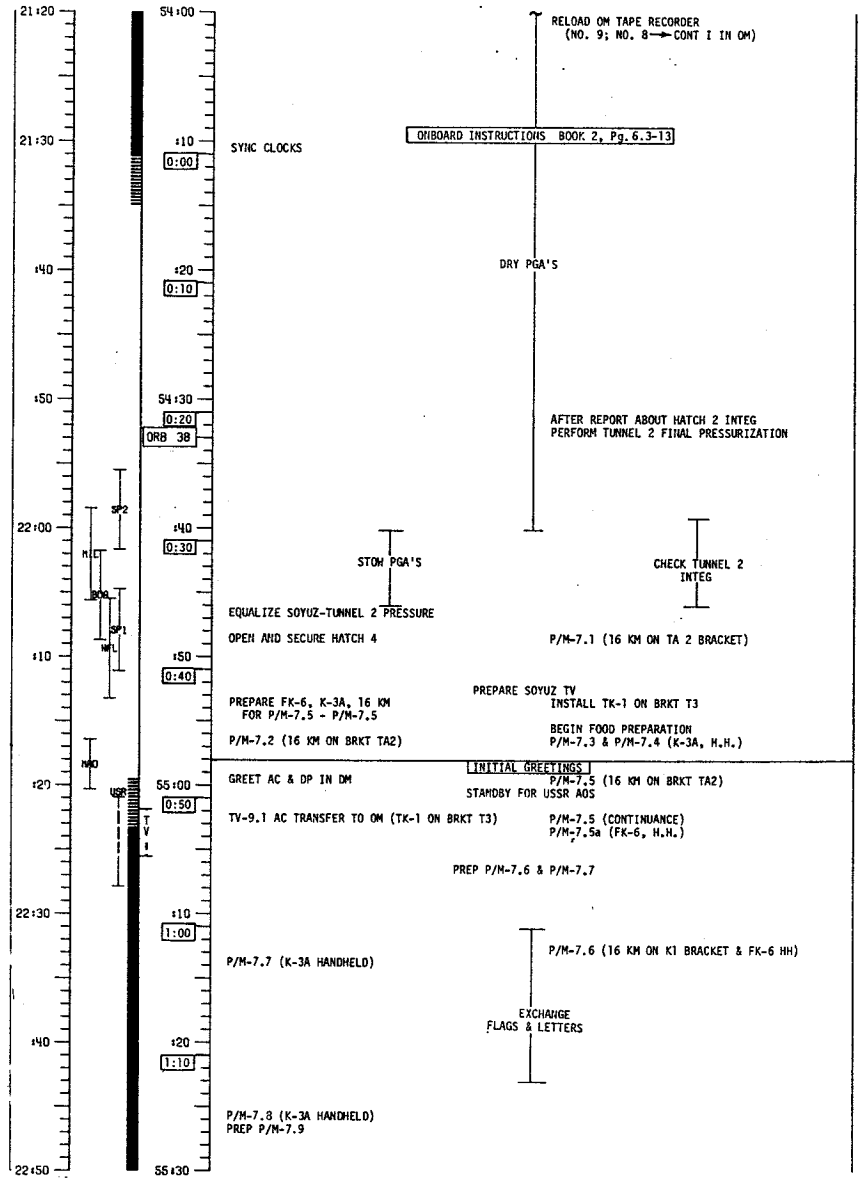
HOUSTON DATE	REV
JULY 17, 1975	30-31



MISSION	EDITION	PUBLICATION DATE	PAGE
ASTP	REVISION 6	APRIL 28, 1975	4.2-10

SOYUZ DETAILED CREW ACTIVITIES PLAN

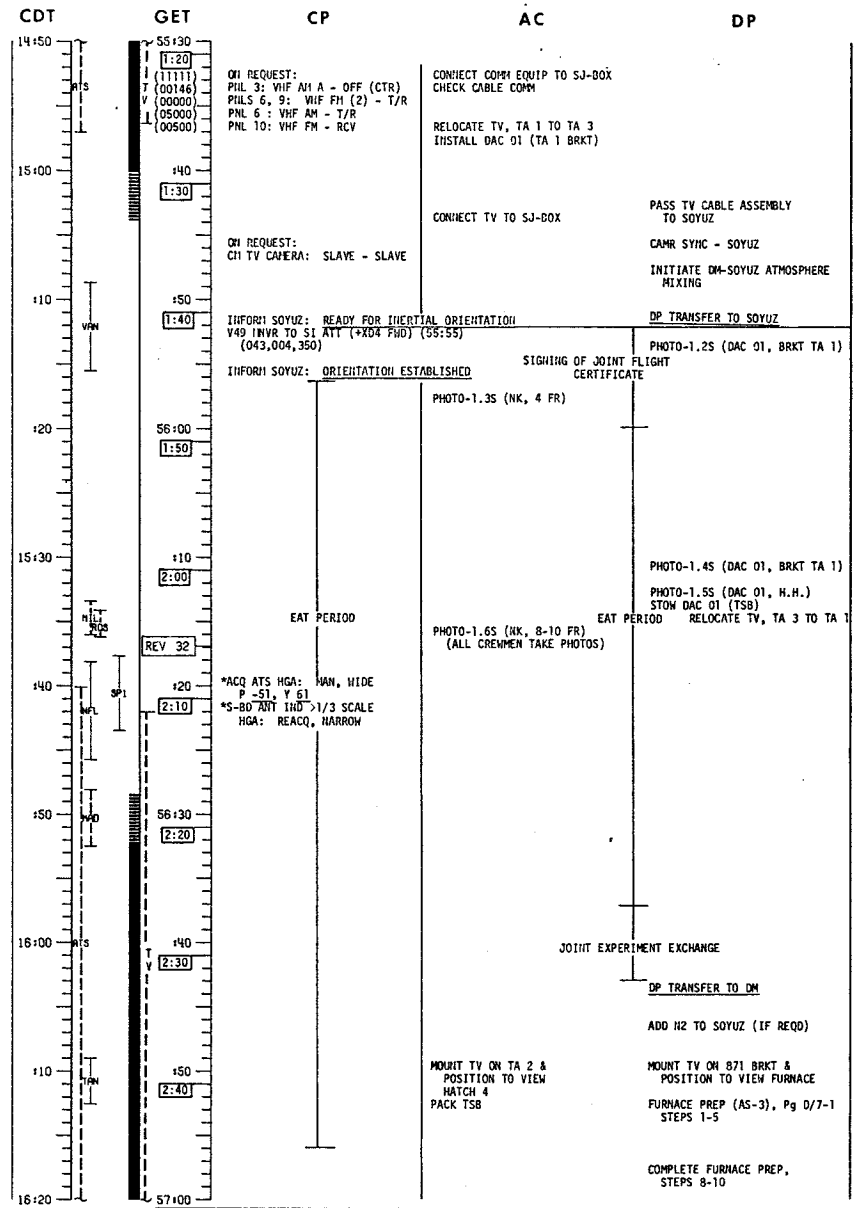
MOSCOW DATE	ORB
JULY 17, 1975	37-38



MISSION	EDITION	PUBLICATION DATE	PAGE
ASTP	REVISION 6	APRIL 28, 1975	4.2-11

APOLLO DETAILED CREW ACTIVITIES PLAN

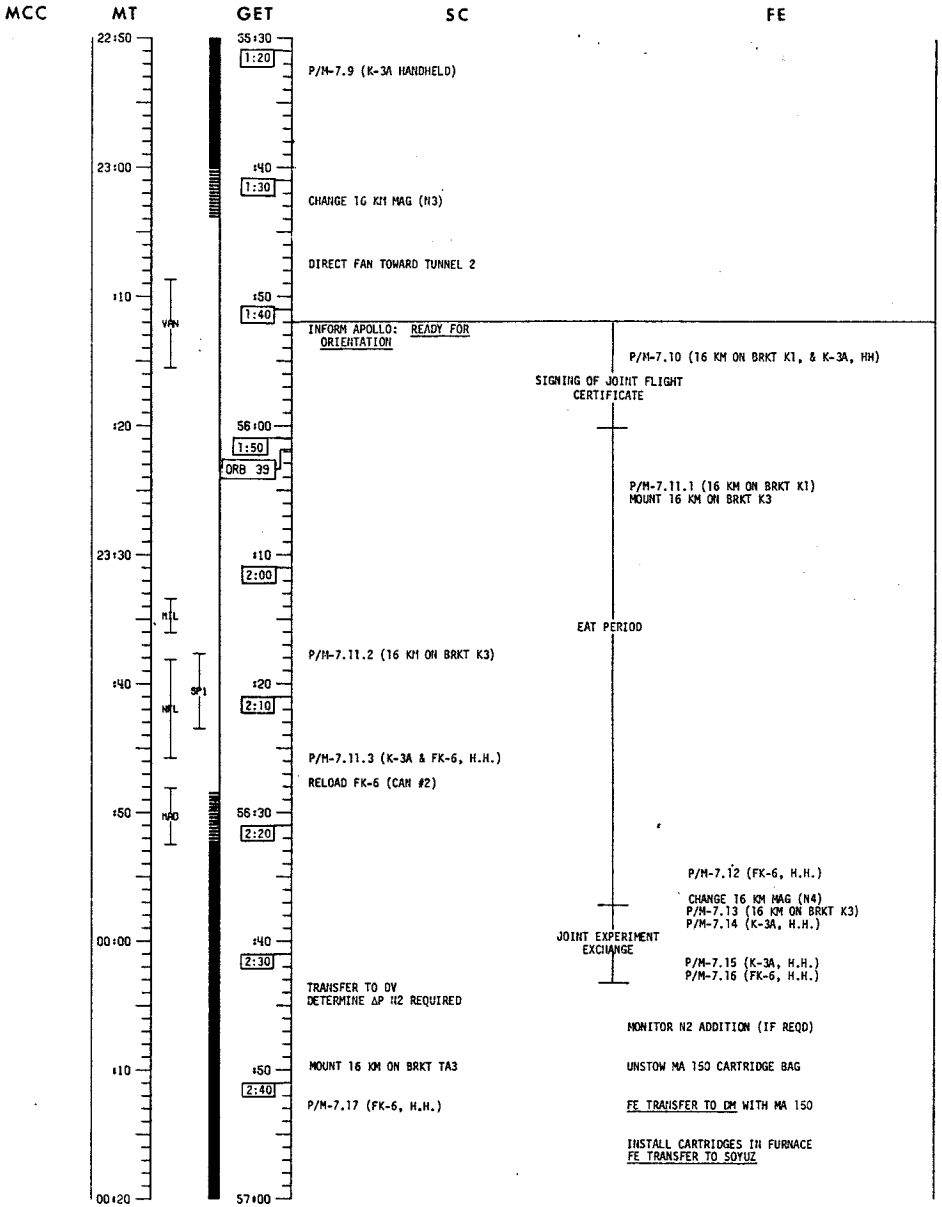
HOUSTON DATE	REV
JULY 17, 1975	31-32



MISSION	EDITION	PUBLICATION DATE	PAGE
ASTP	REVISION 6	APRIL 28, 1975	4.2-12

SOYUZ DETAILED CREW ACTIVITIES PLAN

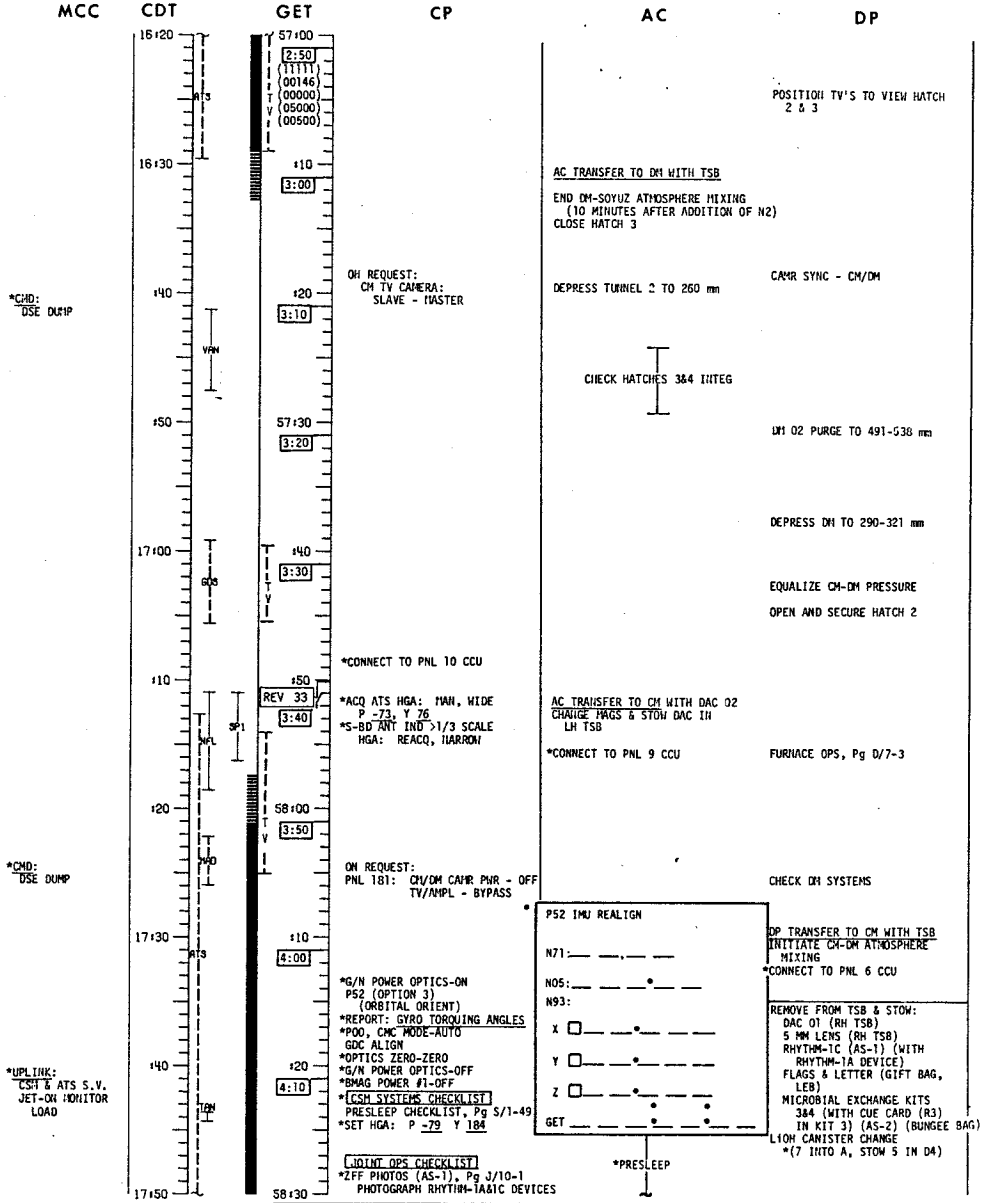
MOSCOW DATE	ORB
JULY 17, 1975	38-39



MISSION	EDITION	PUBLICATION DATE	PAGE
ASTP	REVISION 6	APRIL 28, 1975	4.2-13

APOLLO DETAILED CREW ACTIVITIES PLAN

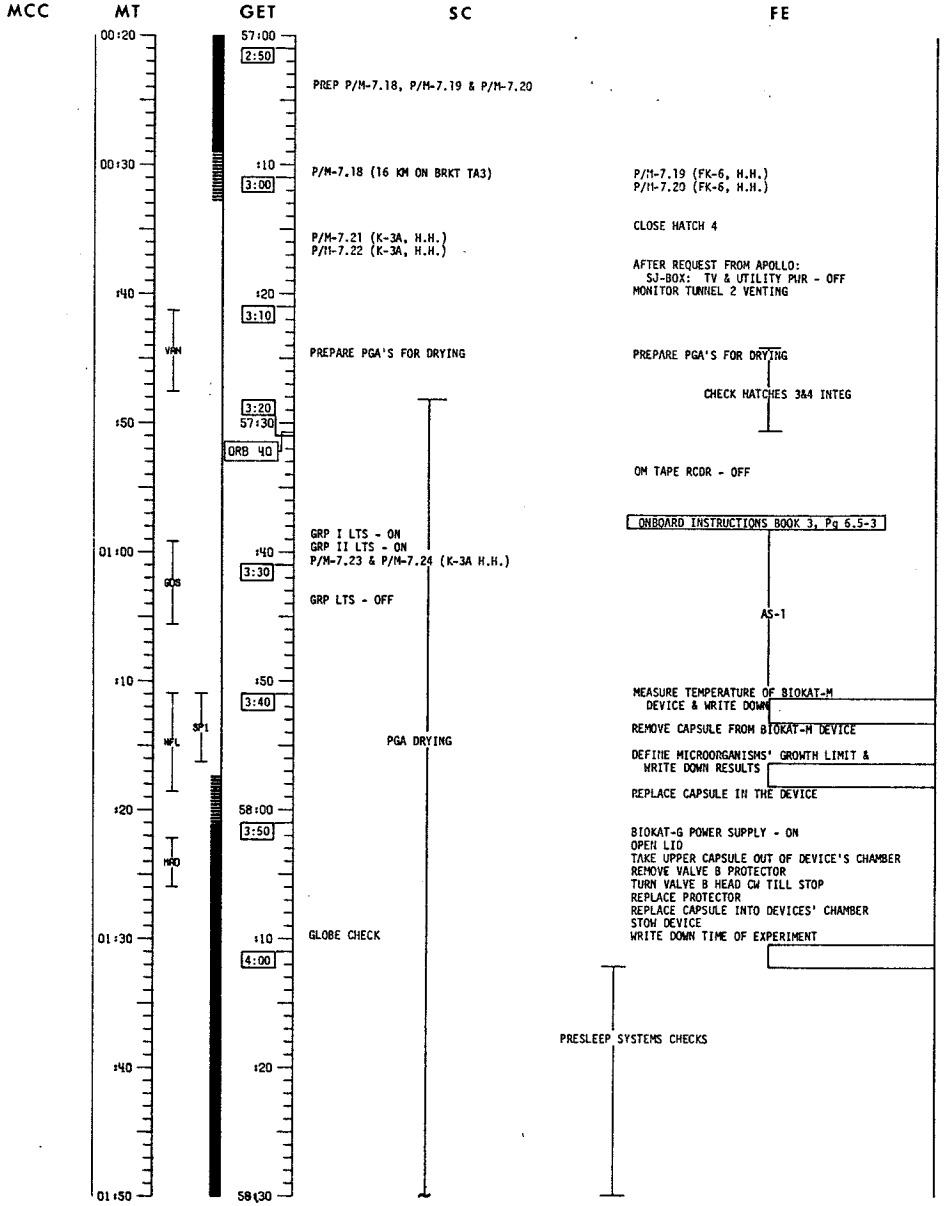
HOUSTON DATE	REV
JULY 17, 1975	32-33



MISSION	EDITION	PUBLICATION DATE	PAGE
ASTP	REVISION 6	APRIL 28, 1975	4.2-14

SOYUZ DETAILED CREW ACTIVITIES PLAN

MOSCOW DATE	ORB
JULY 18, 1975	39-40



MISSION	EDITION	PUBLICATION DATE	PAGE
ASTP	REVISION 6	APRIL 28, 1975	4.2-15

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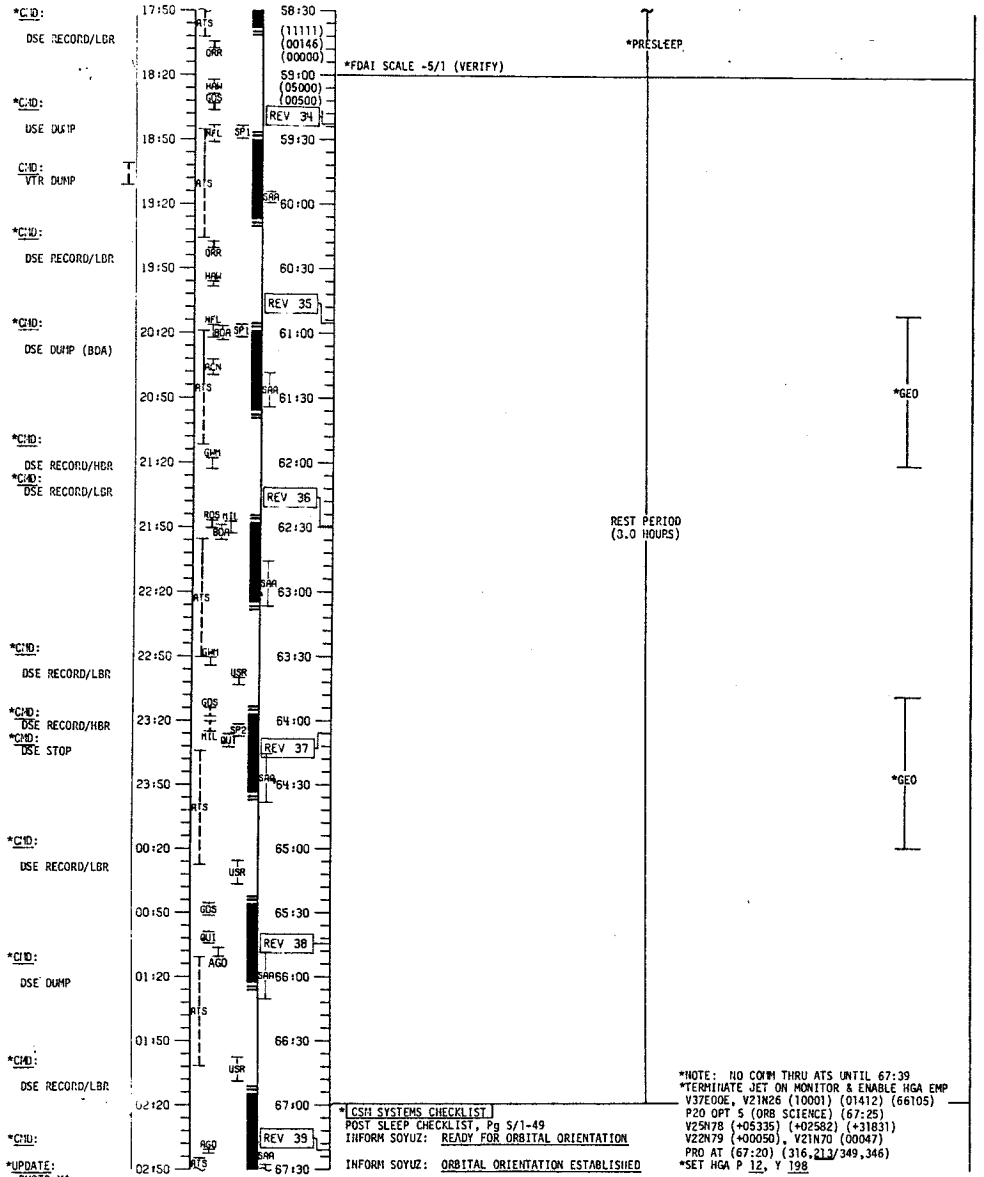
APOLLO DETAILED CREW ACTIVITIES PLAN

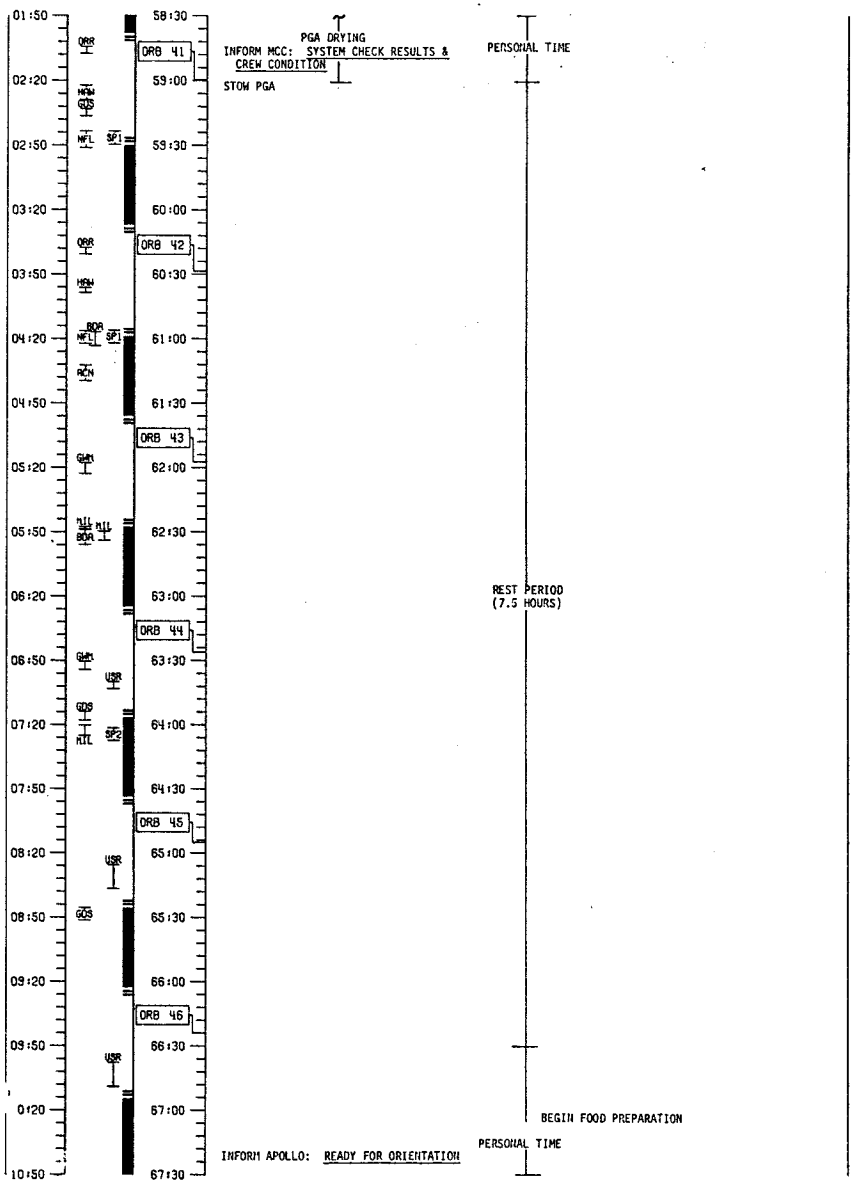
HOUSTON DATE	REV
JULY 17, 1975	33-39



MISSION	EDITION	PUBLICATION DATE	PAGE
ASTP	REVISION 6	APRIL 28, 1975	4.2-16

SOYUZ DETAILED CREW ACTIVITIES PLAN

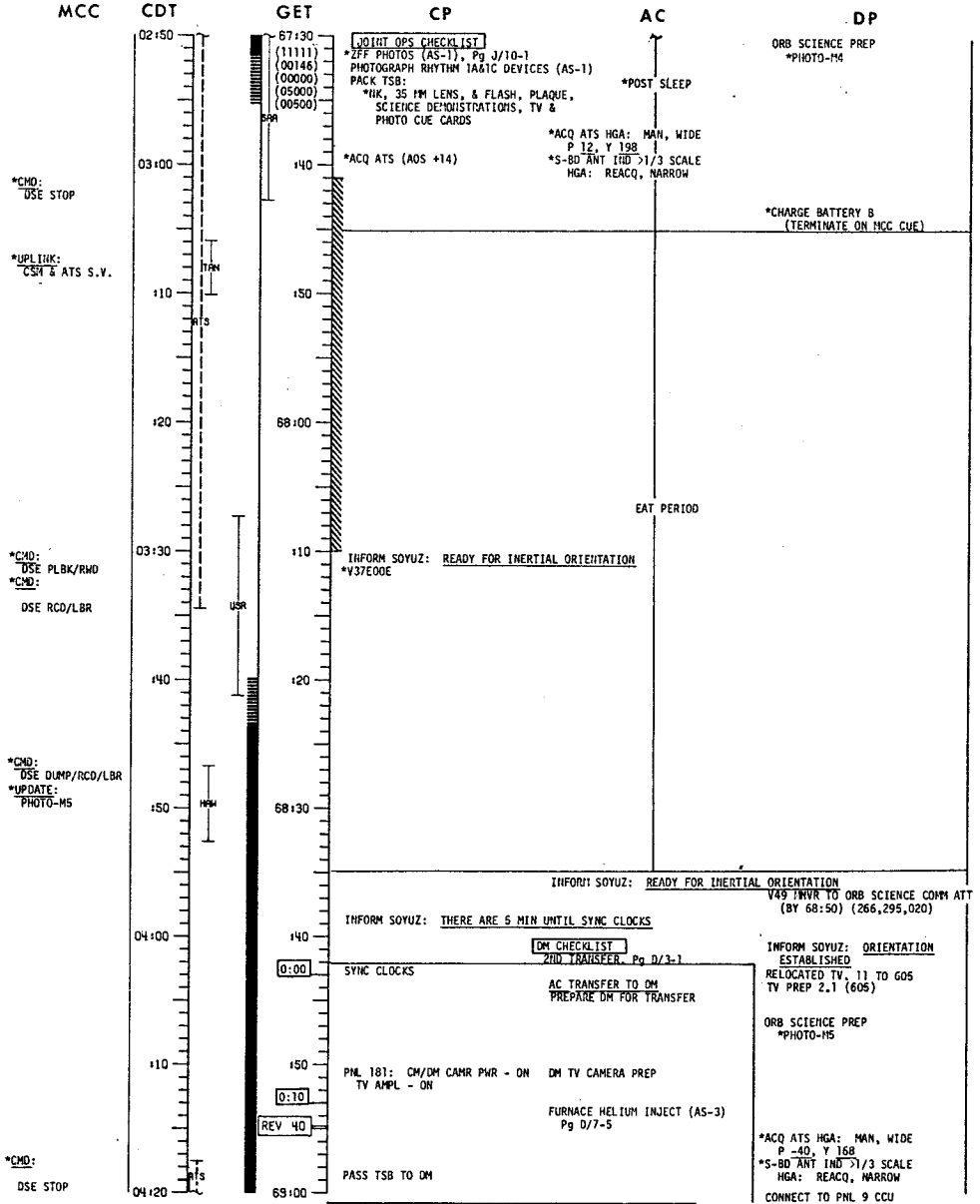
MOSCOW DATE	ORB
JULY 18, 1975	40-46



MISSION	EDITION	PUBLICATION DATE	PAGE
ASTP	REVISION 6	APRIL 28, 1975	4.2-17

APOLLO DETAILED CREW ACTIVITIES PLAN

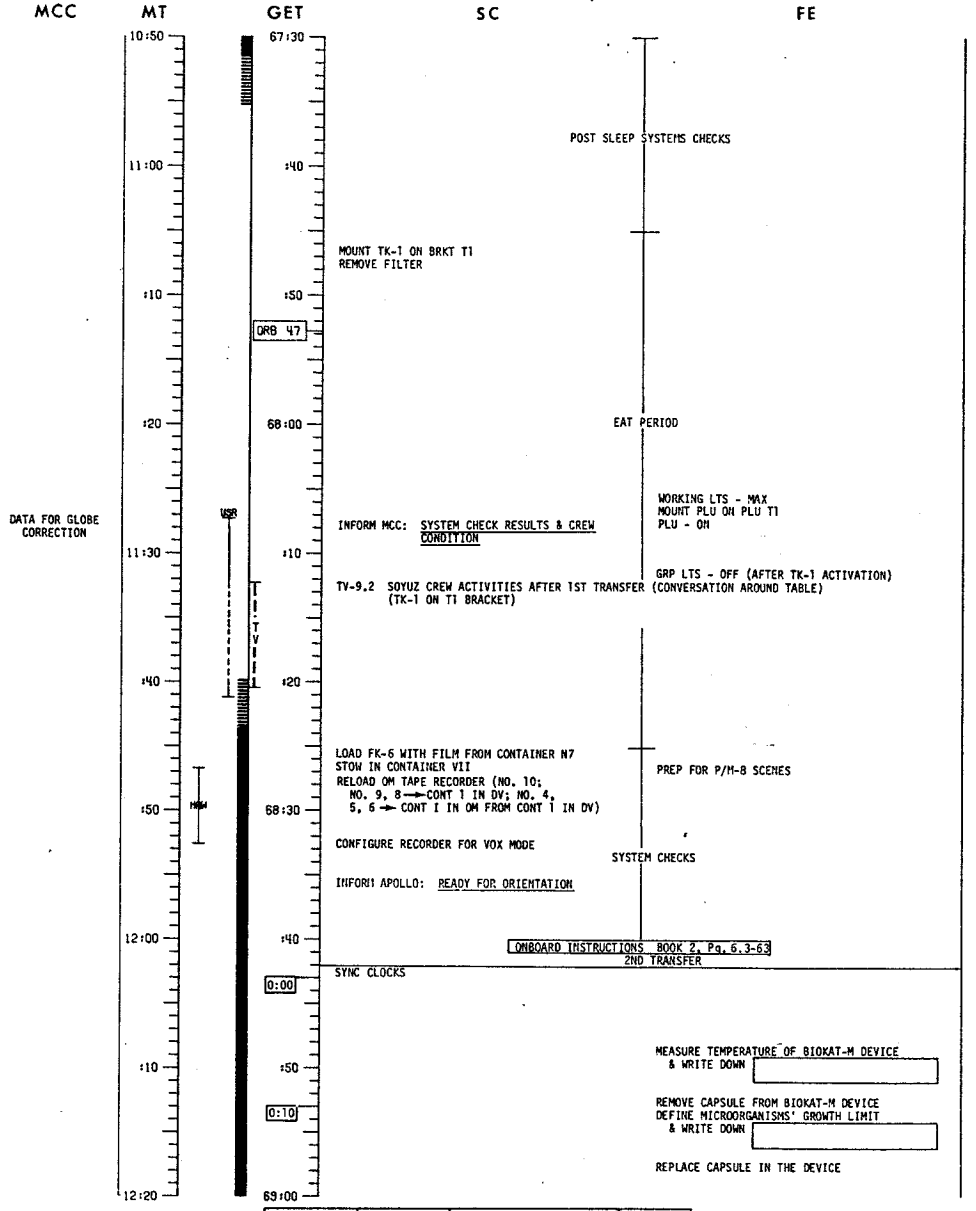
HOUSTON DATE	REV
JULY 18, 1975	39-40



MISSION	EDITION	PUBLICATION DATE	PAGE
ASTP	REVISION 6	APRIL 28, 1975	4.2-18

SOYUZ DETAILED CREW ACTIVITIES PLAN

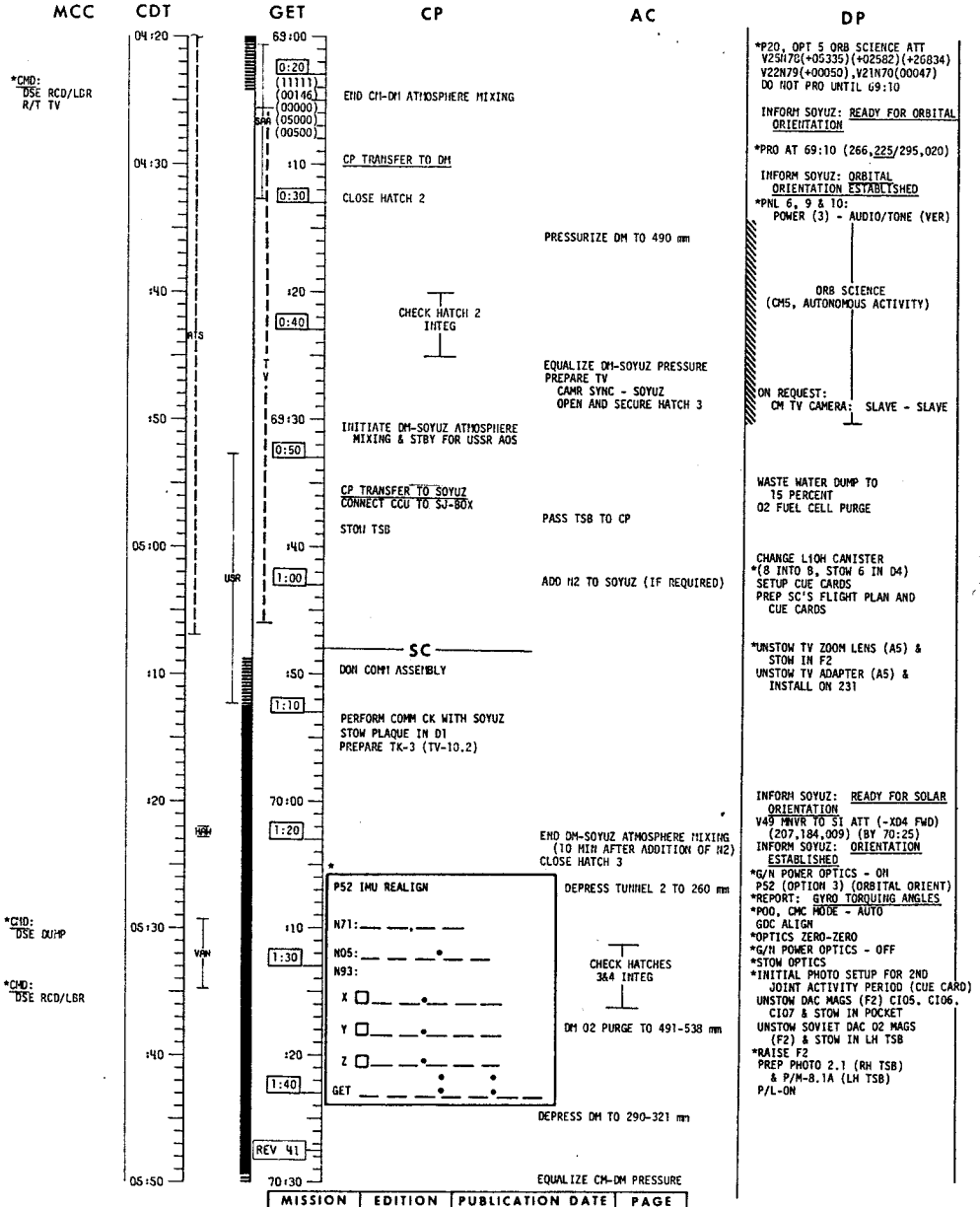
MOSCOW DATE	ORB
JULY 18, 1975	46-47



MISSION	EDITION	PUBLICATION DATE	PAGE
ASTP	REVISION 6	APRIL 28, 1975	4.2-19

APOLLO DETAILED CREW ACTIVITIES PLAN

HOUSTON DATE	REV
JULY 18, 1975	40-41

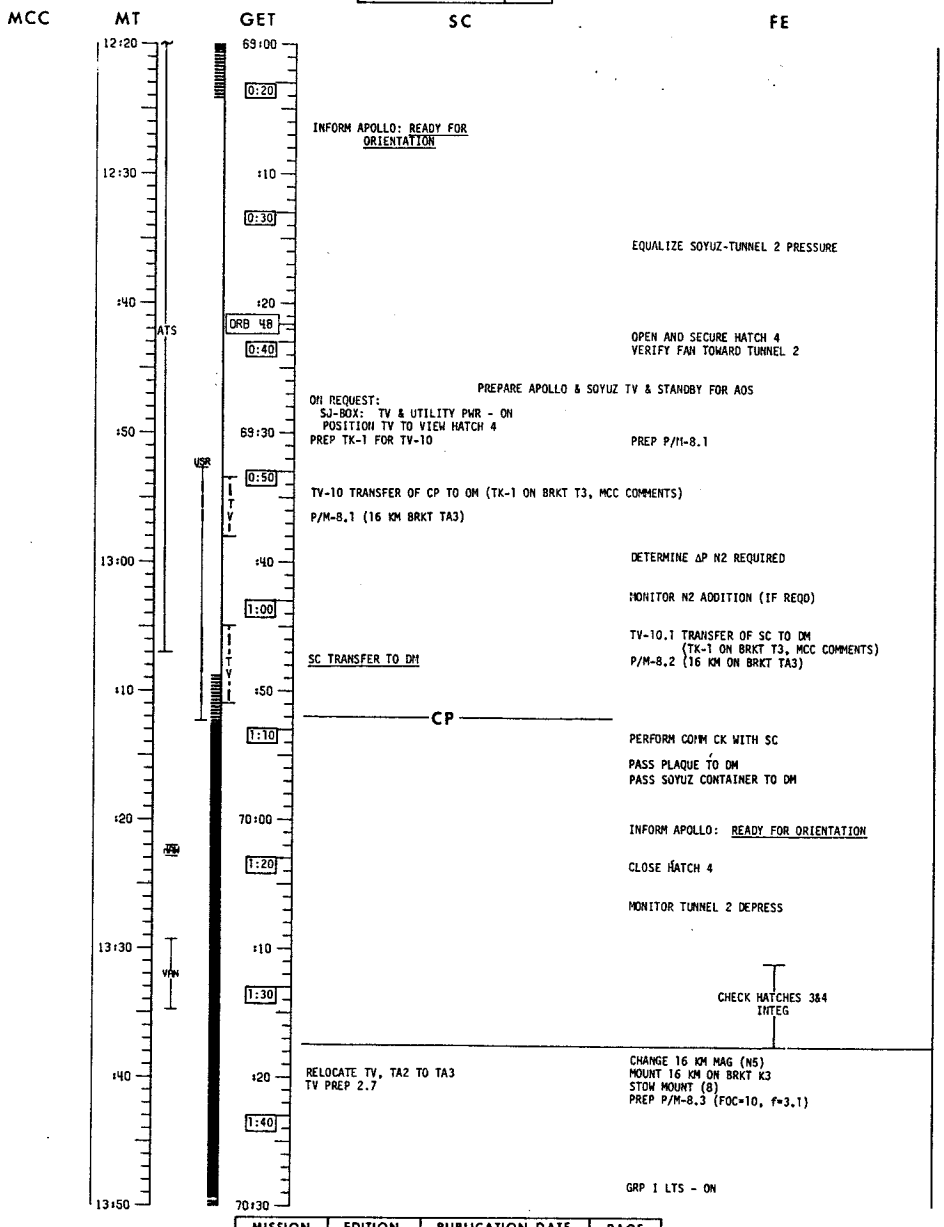


MISSION	EDITION	PUBLICATION DATE	PAGE
ASTP	REVISION 6	APRIL 28, 1975	4.2-20

SOYUZ DETAILED CREW ACTIVITIES PLAN

ASTP 40301

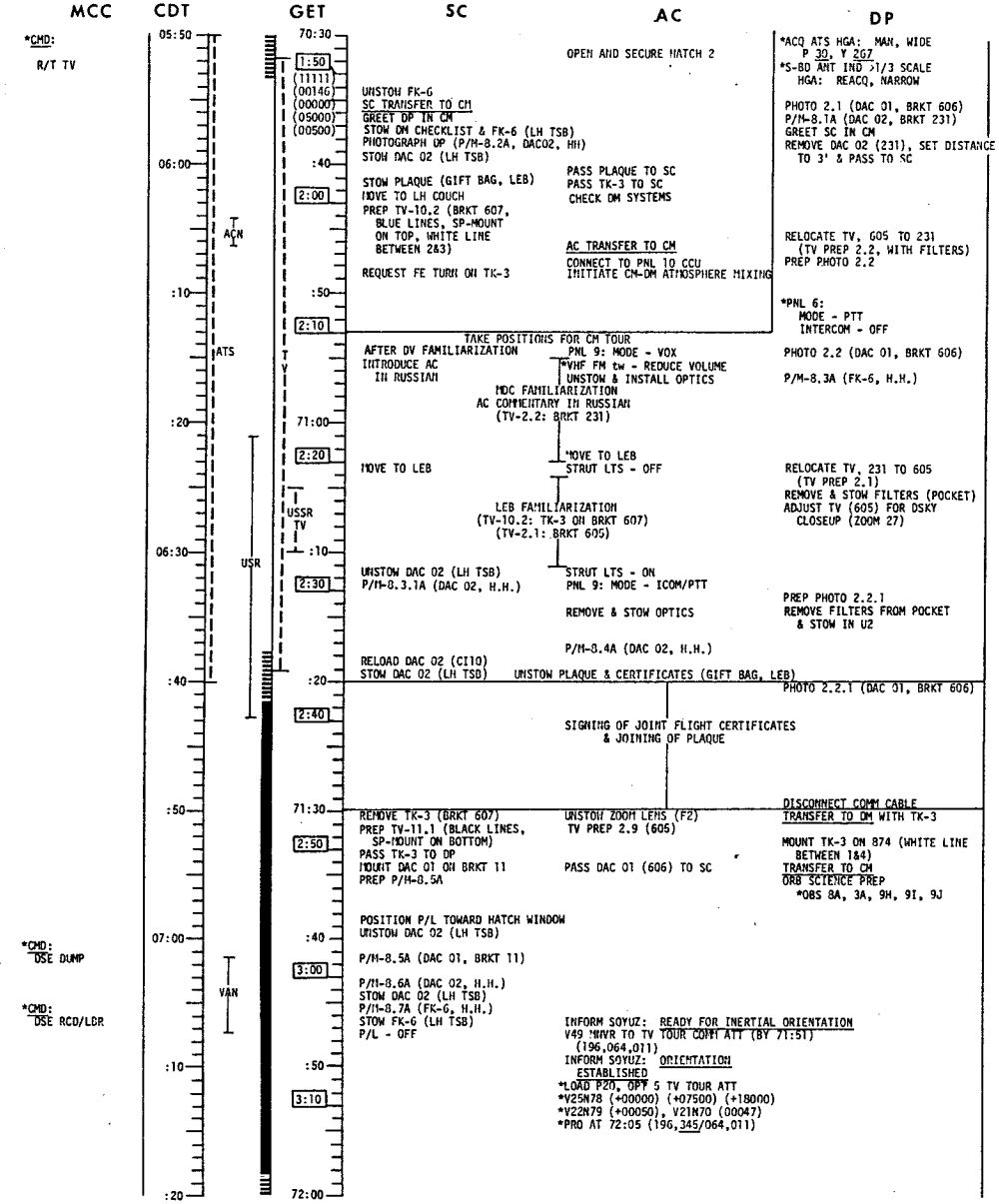
MOSCOW DATE	ORB
JULY 18, 1975	47-48



MISSION	EDITION	PUBLICATION DATE	PAGE
ASTP	REVISION 6	APRIL 28, 1975	4.2-21

APOLLO DETAILED CREW ACTIVITIES PLAN

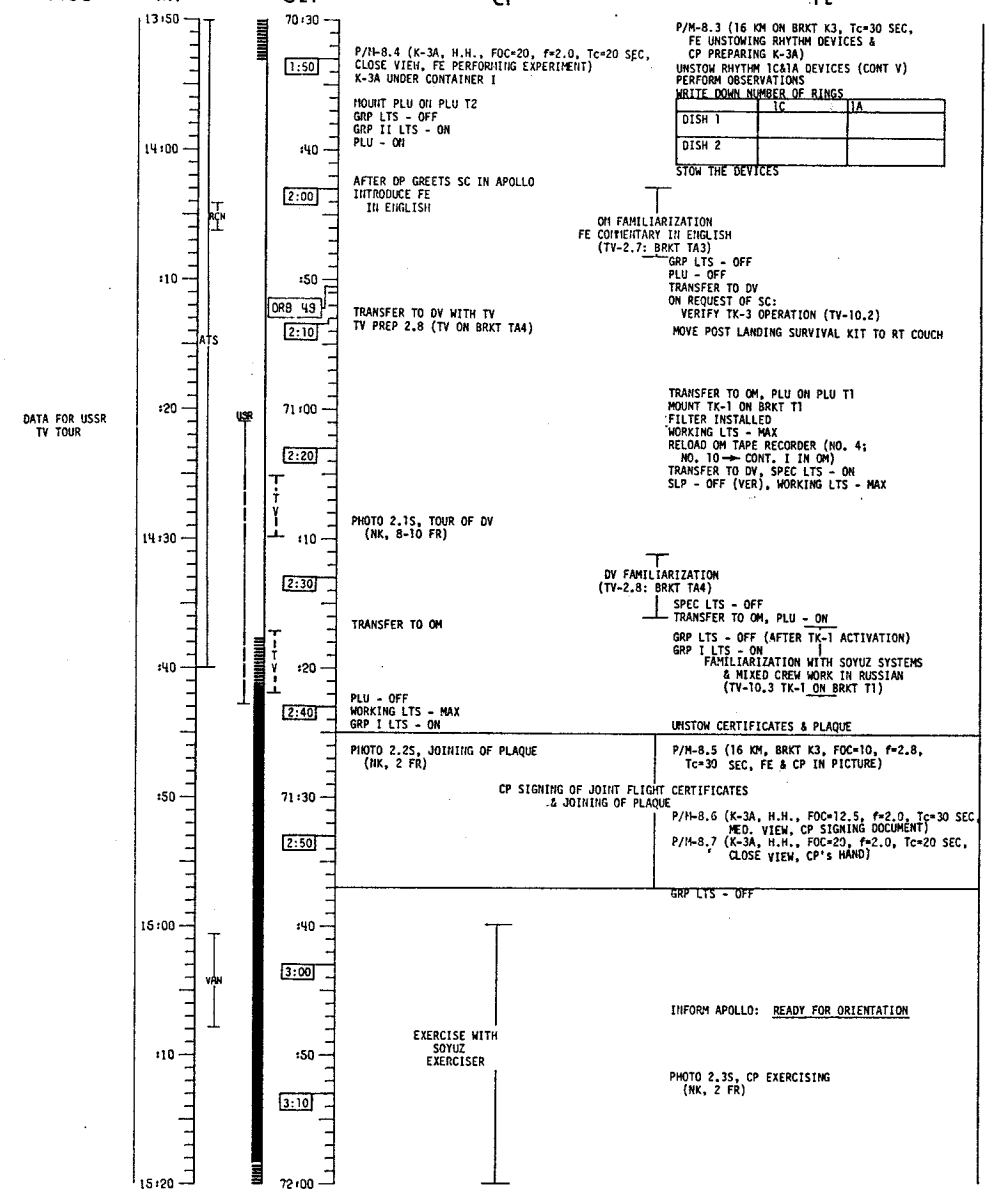
HOUSTON DATE	REV
JULY 18, 1975	41



MISSION	EDITION	PUBLICATION DATE	PAGE
ASTP	REVISION 6	APRIL 28, 1975	4.2-22

SOYUZ DETAILED CREW ACTIVITIES PLAN

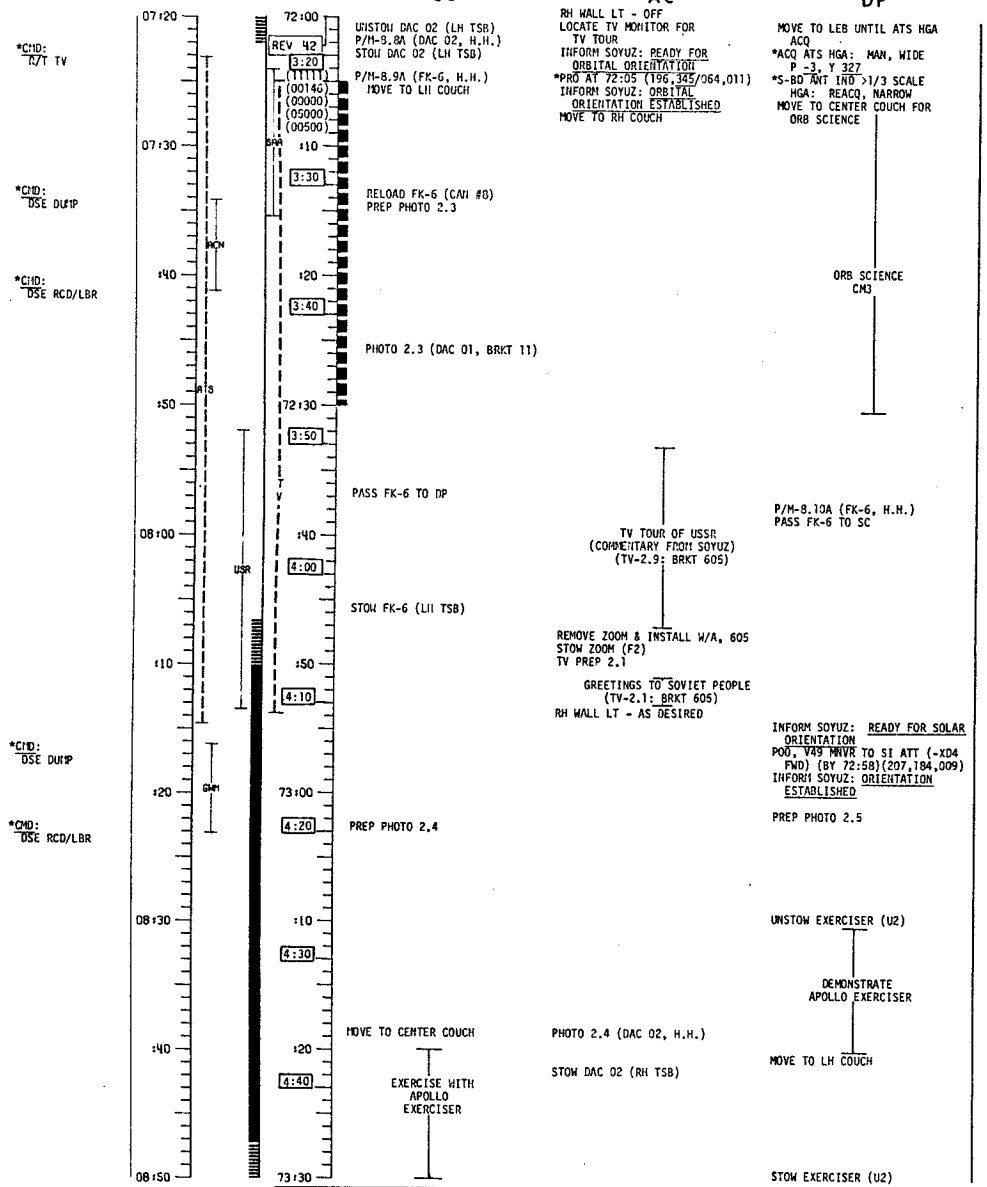
MOSCOW DATE	ORB
JULY 18, 1975	48-49



MISSION	EDITION	PUBLICATION DATE	PAGE
ASTP	REVISION 6	APRIL 28, 1975	4.2-23

APOLLO DETAILED CREW ACTIVITIES PLAN

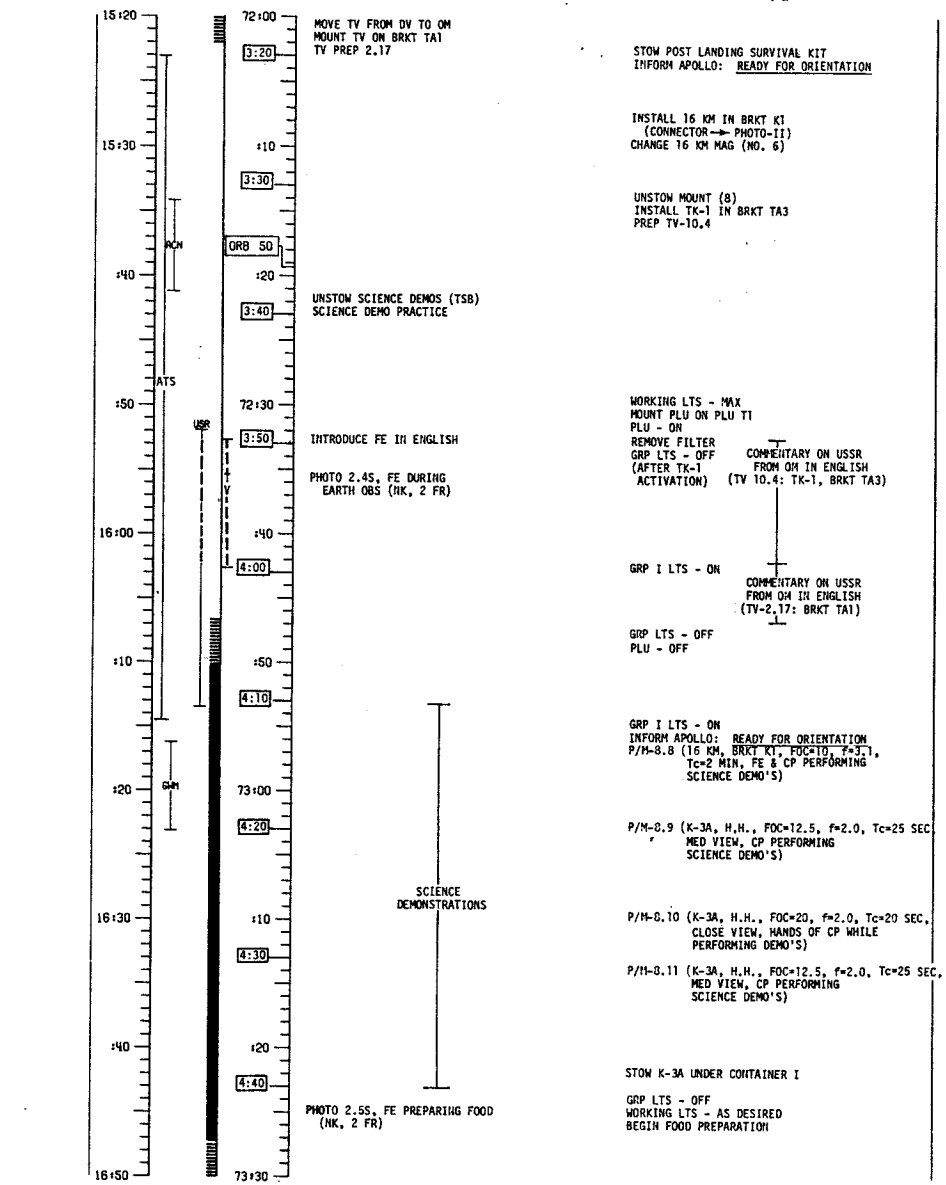
HOUSTON DATE	REV
JULY 18, 1975	42



MISSION	EDITION	PUBLICATION DATE	PAGE
ASTP	REVISION G	APRIL 28, 1975	4.2-24

SOYUZ DETAILED CREW ACTIVITIES PLAN

MOSCOW DATE	ORB
JULY 18, 1975	49-50



MISSION	EDITION	PUBLICATION DATE	PAGE
ASTP	REVISION 6	APRIL 28, 1975	4.2-25

APOLLO DETAILED CREW ACTIVITIES PLAN

HOUSTON DATE	REV
JULY 18, 1975	42-43

MCC | CDT | GET | SC | AC | DP

CDT 08:50 – 10:20; GET 73:30 – 75:00

MCC:
- *CMD: DSE STOP/RWD
- *CMD: R/T TV
- *CMD: DSE DUMP
- *CMD: DSE RCD/LBR
- *CMD: DM TV SEL

Station coverage: AGO, MAD, ATS, USR, ORR

GET markers: 4:50, REV 43, (11111), (00146), (00000), (05000), (00500), SAA, 5:00, 5:10, TV, 5:20, 5:30, 5:40, 5:50, 6:00, 6:10

SC:
- UNSTOW DAC 02 & U-MOUNT (RH TSB)
- PREP P/M-8.11A
- SC COMMENTARY ABOUT SPACE FOOD IN RUSSIAN (TV-2.1: BRKT 605)
- P/M-8.11A (DAC 02, BRKT 607)
- PASS FK-6 TO DP (LH TSB)
- P/M-8.15A (FK-6, H.H.)
- P/M-8.12A (DAC 02, H.H.)
- PASS DAC 02 TO DP
- STOW DAC 02 (LH TSB)
- RELOAD FK-6 (CAN #9)
- STOW FK-6 (LH TSB)
- PASS P/L TO AC
- UNSTOW DAC 02 (LH TSB)
- PREP FOR PHOTO 2.6
- P/M-8.16A (FK-6, H.H.)
- PASS FK-6 TO DP
- PHOTO 2.6 (DAC 02, BRKT 857)

AC:
- PHOTO 2.5 (DAC 01, BRKT 606)
- AC & DP DEMONSTRATE FOOD PREPARATION & TECHNIQUE OF EATING
- EAT PERIOD
- UNSTOW SEEDS & MEDALLION HALF (GIFT BAG, LEB) CARRY IN POCKET
- DM CHECKLIST
- 3RD TRANSFER, Pg D/4-1
- AC TRANSFER TO DM
- PREPARE DM FOR TRANSFER
- PREP P/M-8.17A
- MOUNT P/L AT PL7
- FURNACE SHUTDOWN, Pg D/7-6
- STOW MA 150 CARTRIDGES ON FURNACE (IN BAG)

DP:
- BEGIN FOOD PREPARATION
- *ACQ ATS HGA: MAN, WIDE P -10, Y 237
- *S-BD ANT IND >1/3 SCALE HGA: REACQ, NARROW
- P/M-8.14A (FK-6, H.H.)
- PASS FK-6 TO SC
- P/M-8.13A (DAC 02, H.H.)
- UNSTOW 5 MM LENS (LH TSB), INSTALL ON DAC 02 & STOW 10 MM LENS(LH TSB)
- PASS DAC 02 TO SC
- P/L - OFF
- REMOVE DAC 01 (606)
- UTILITY POWER - OFF (PNL 16)
- DISCONNECT DAC 01, INSTALL MAG CI1 (LH TSB) & PASS TO AC
- *PNL 6: MODE - ICOM/PTT INTERCOMM - T/R
- *PNL 9: VHF FM tw - INCR VOLUME (AS DESIRED)
- RELOCATE TV, 605 TO 11
- TV PREP 2.14
- FOR TV OF SC TRANSFER TO DM: VTR HD WHEEL DRIVE MOTOR - ON VTR TAPE MODE - RECORD

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SOYUZ DETAILED CREW ACTIVITIES PLAN

MOSCOW DATE	ORB
JULY 18, 1975	50-51

MCC | MT | GET | CP | FE

MT 16:50 – 18:20; GET 73:30 – 75:00

Station coverage: MAD, ATS, USR, TV, ORR

GET markers: 4:50, 5:00, ORB 51, 5:10, 5:20, 5:30, 5:40, 5:50, 6:00, 6:10

CP:
- TV PREP 2.12
- CP COMMENTARY ABOUT SPACE FOOD IN ENGLISH (TV-2.12: BRKT TA1)
- RELOCATE TV, TA1 TO TA2
- TV PREP 2.16

FE:
- CHANGE 16KM MAG (N7)
- MOUNT 16KM ON BRKT K2
- PREP P/M-9 (ONBOARD INSTRUCTIONS, BOOK 3, Pg. 6.2-67)
- MOUNT TK-1 ON BRKT T1
- INSTALL FILTER
- UNSTOW MOUNT (8)
- WORKING LTS - MAX
- MOUNT PLU ON PLU T1
- PLU - ON
- TV-10.5 SCHEDULED ACTIVITIES IN RUSSIAN (TK-1 ON BRKT T1)
- GRP LTS - OFF (AFTER TK-1 ACTIVATION)
- GRP I LTS - ON
- TV-10.5 (CONTINUANCE) COMMENTARY ABOUT SPACE FOOD IN RUSSIAN
- GRP I LTS - ON
- FE DEMONSTRATES FOOD PREPARATION & TECHNIQUES OF EATING
- EAT PERIOD
- GRP LTS - OFF
- PLU - OFF
- WORKING LTS - AS DESIRED
- RELOAD OM TAPE RECORDER (No. 5; No. 4 ⟶ CONT I IN OM)
- ONBOARD INSTRUCTIONS, BOOK 2, Pg. 6.3-81
- 3RD TRANSFER

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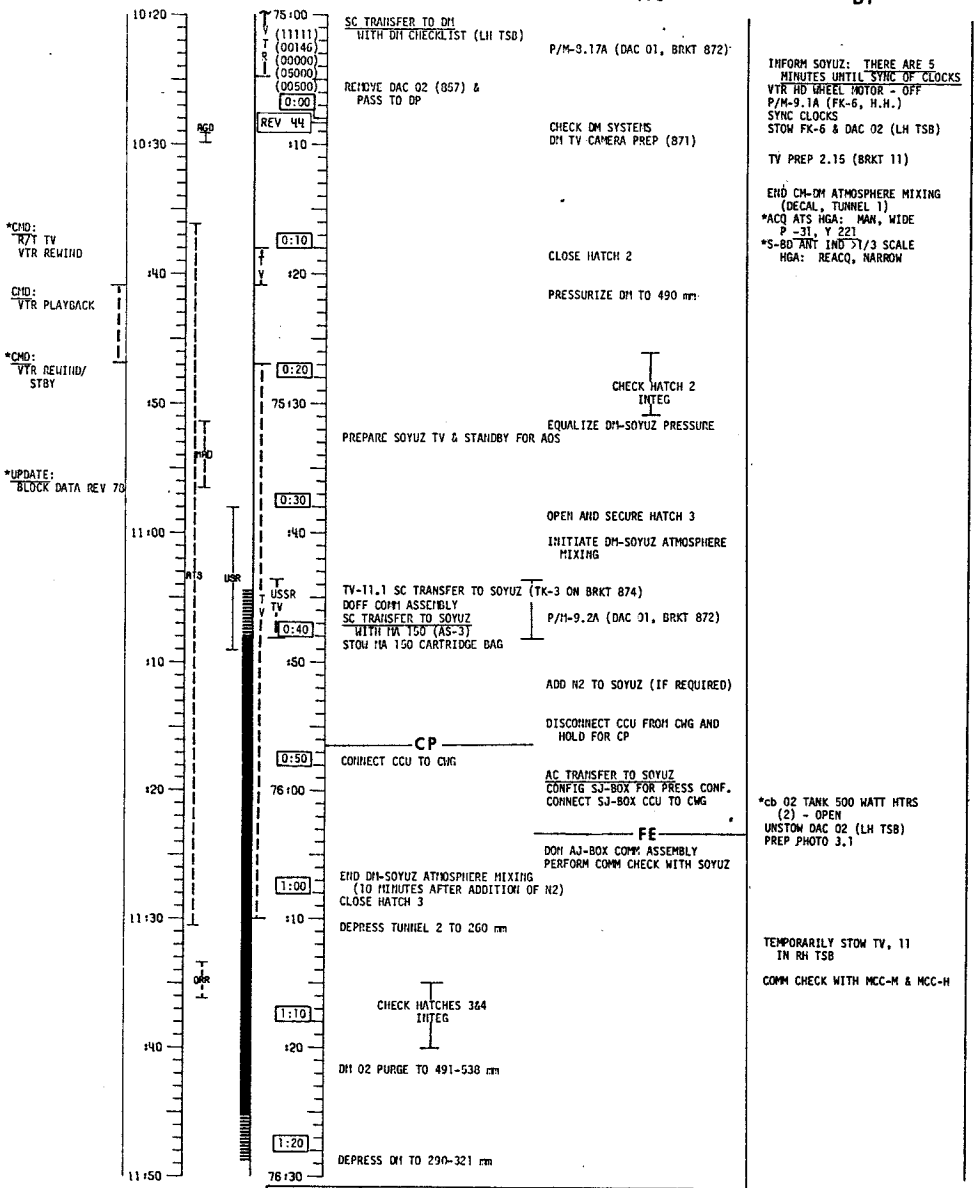
APOLLO DETAILED CREW ACTIVITIES PLAN

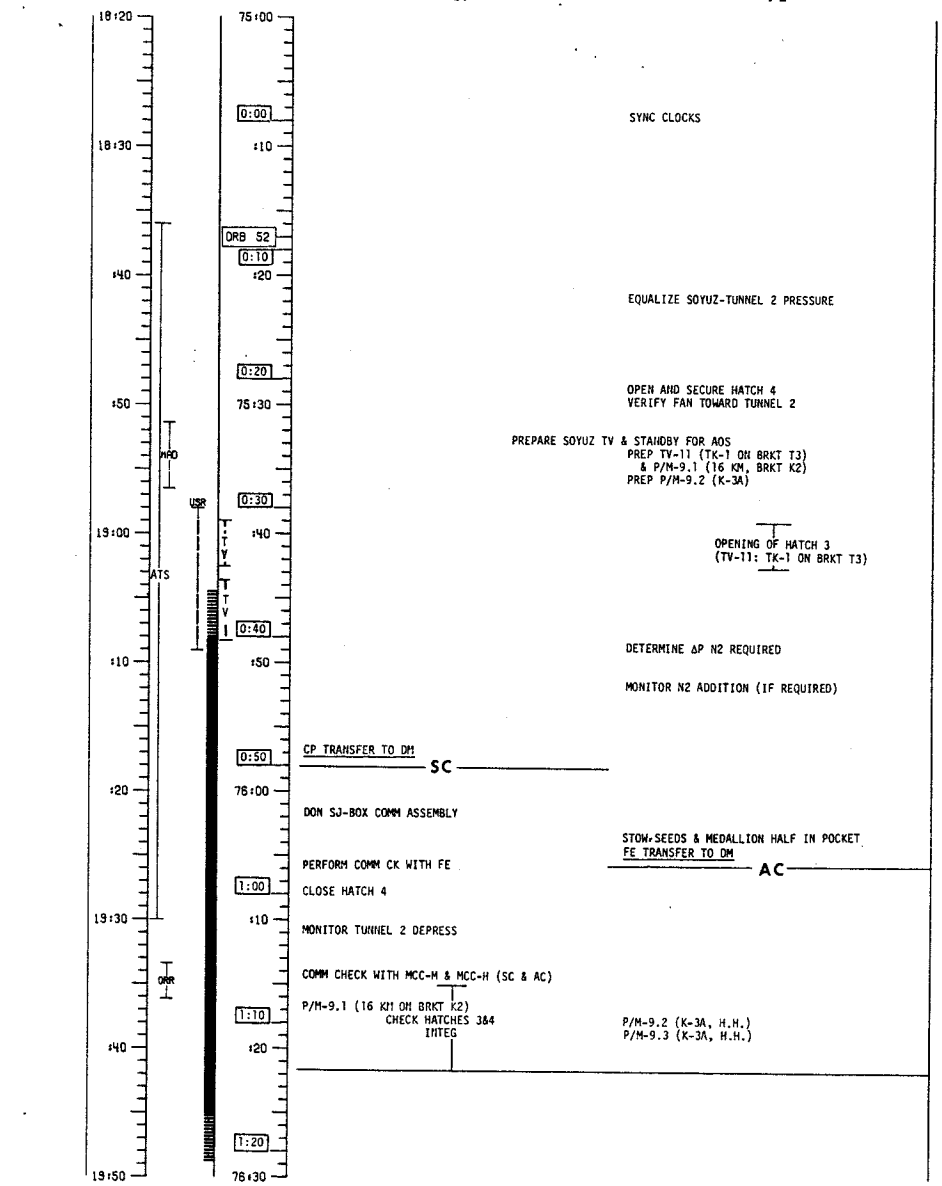
HOUSTON DATE	REV
JULY 18, 1975	43-44



MISSION	EDITION	PUBLICATION DATE	PAGE
ASTP	REVISION 6	APRIL 28, 1975	4.2-28

SOYUZ DETAILED CREW ACTIVITIES PLAN

MOSCOW DATE	ORB
JULY 18, 1975	51-52



MISSION	EDITION	PUBLICATION DATE	PAGE
ASTP	REVISION 6	APRIL 28, 1975	4.2-29

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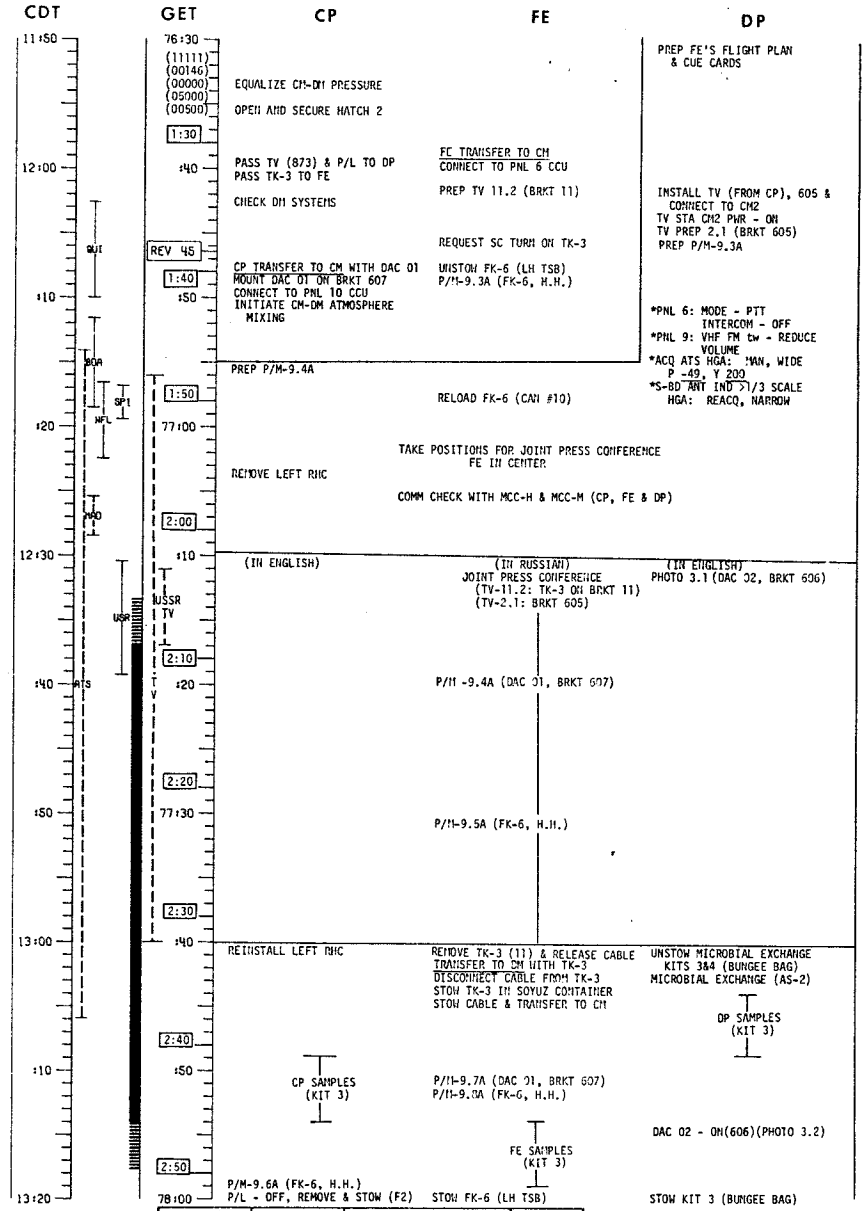
APOLLO DETAILED CREW ACTIVITIES PLAN

HOUSTON DATE	REV
JULY 18, 1975	44-45

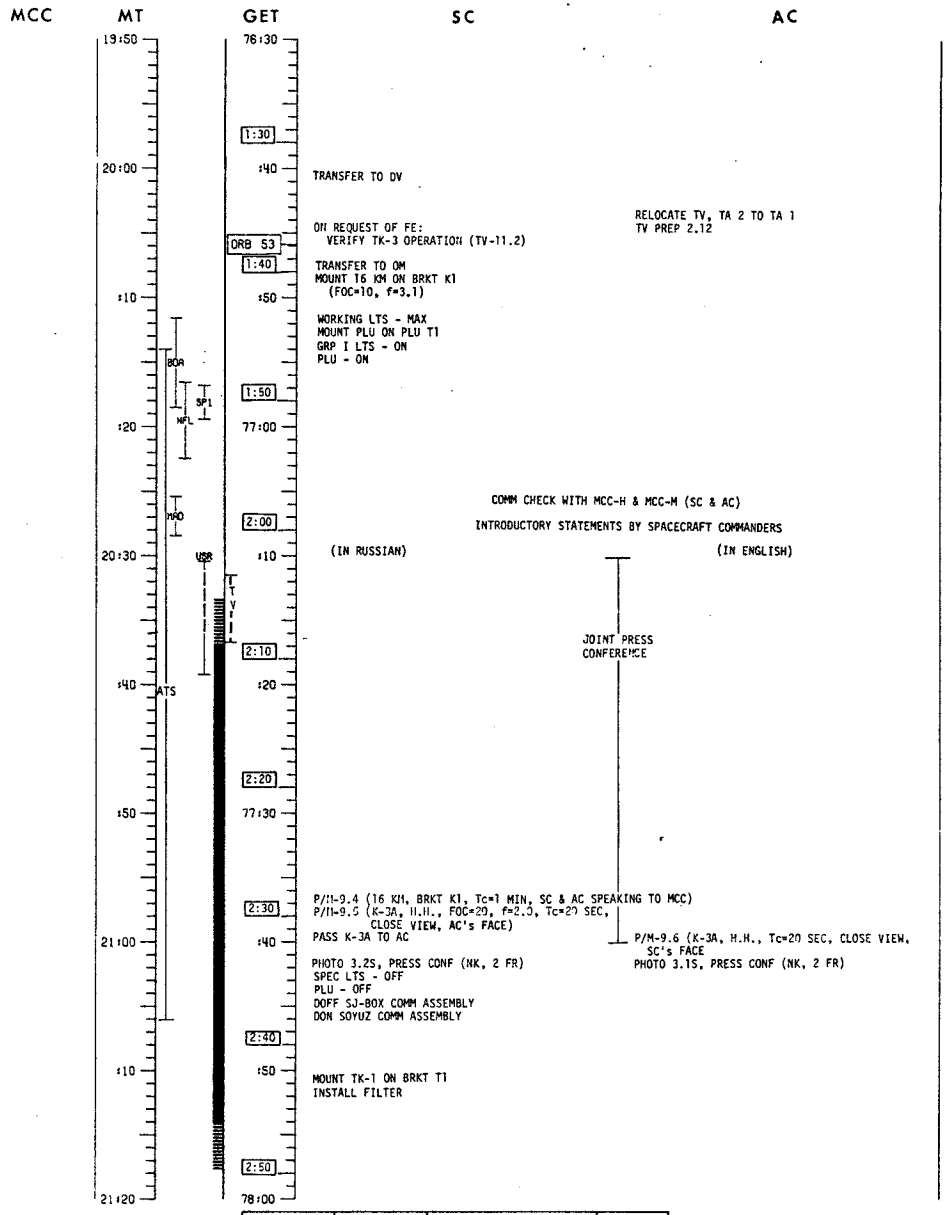


MISSION	EDITION	PUBLICATION DATE	PAGE
ASTP	REVISION 6	APRIL 28, 1975	4.2-30

ASTP 40301

SOYUZ DETAILED CREW ACTIVITIES PLAN

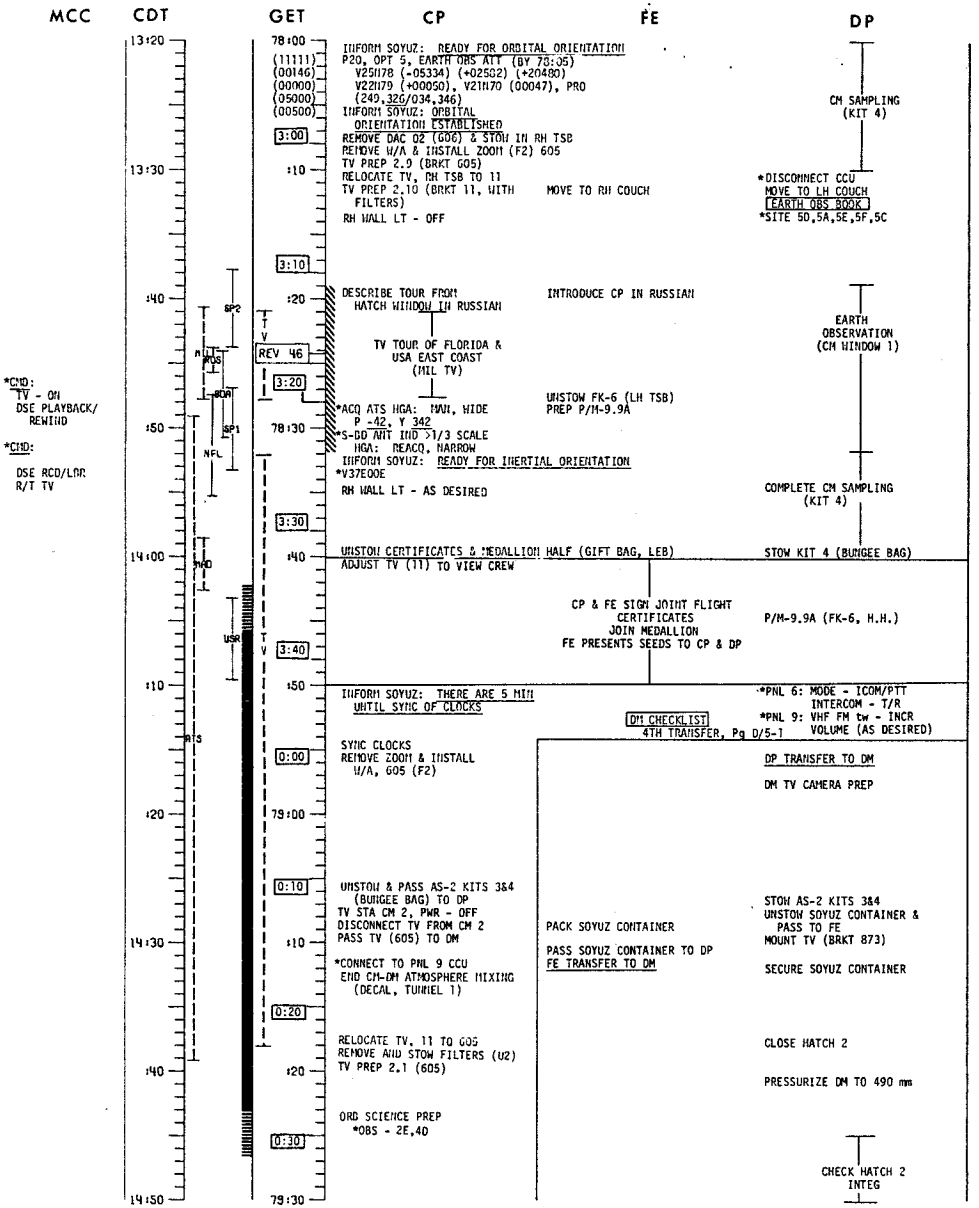
MOSCOW DATE	ORB
JULY 18, 1975	52-53



MISSION	EDITION	PUBLICATION DATE	PAGE
ASTP	REVISION 6	APRIL 28, 1975	4.2-31

APOLLO DETAILED CREW ACTIVITIES PLAN

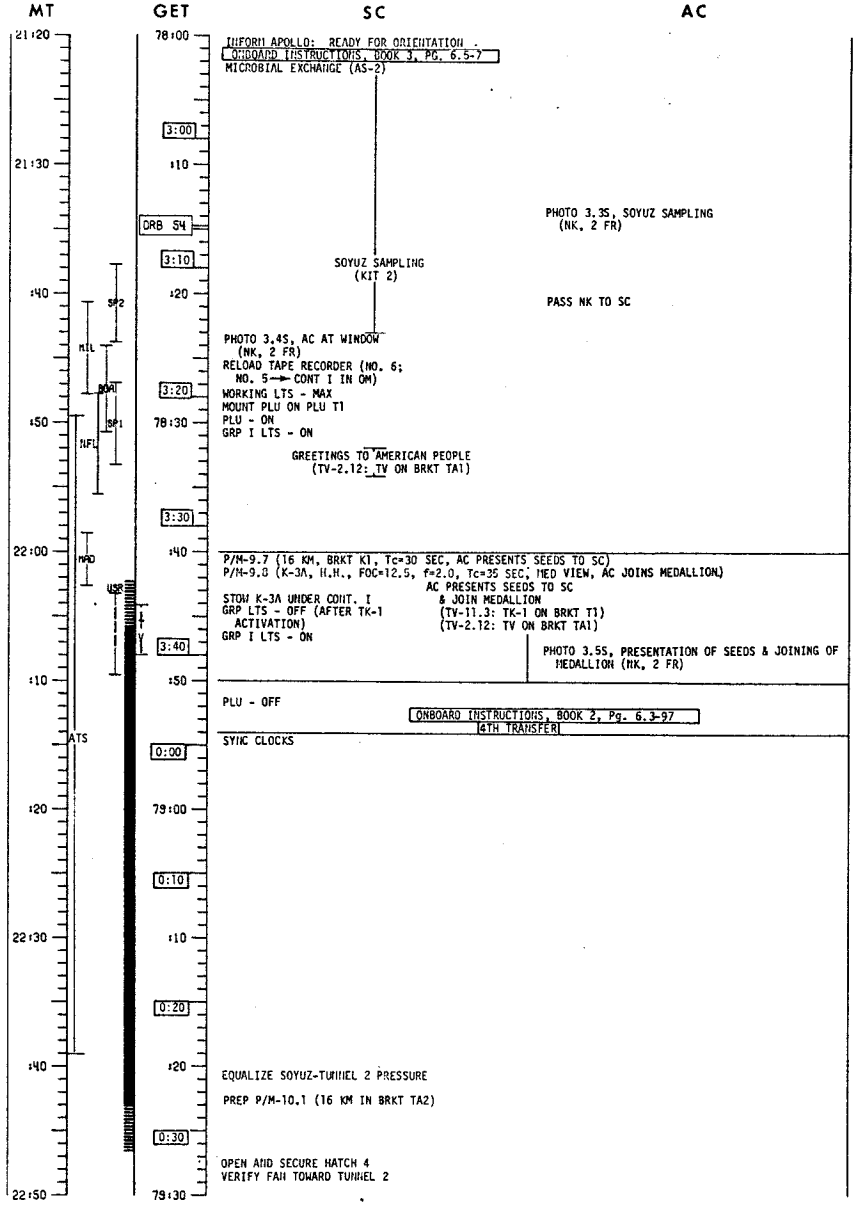
HOUSTON DATE	REV
JULY 18, 1975	45-46



MISSION	EDITION	PUBLICATION DATE	PAGE
ASTP	REVISION -	APRIL 28, 1975	4.2-32

SOYUZ DETAILED CREW ACTIVITIES PLAN

MOSCOW DATE	ORB
JULY 18, 1975	53-54



MISSION	EDITION	PUBLICATION DATE	PAGE
ASTP	REVISION 6	APRIL 28, 1975	4.2-33

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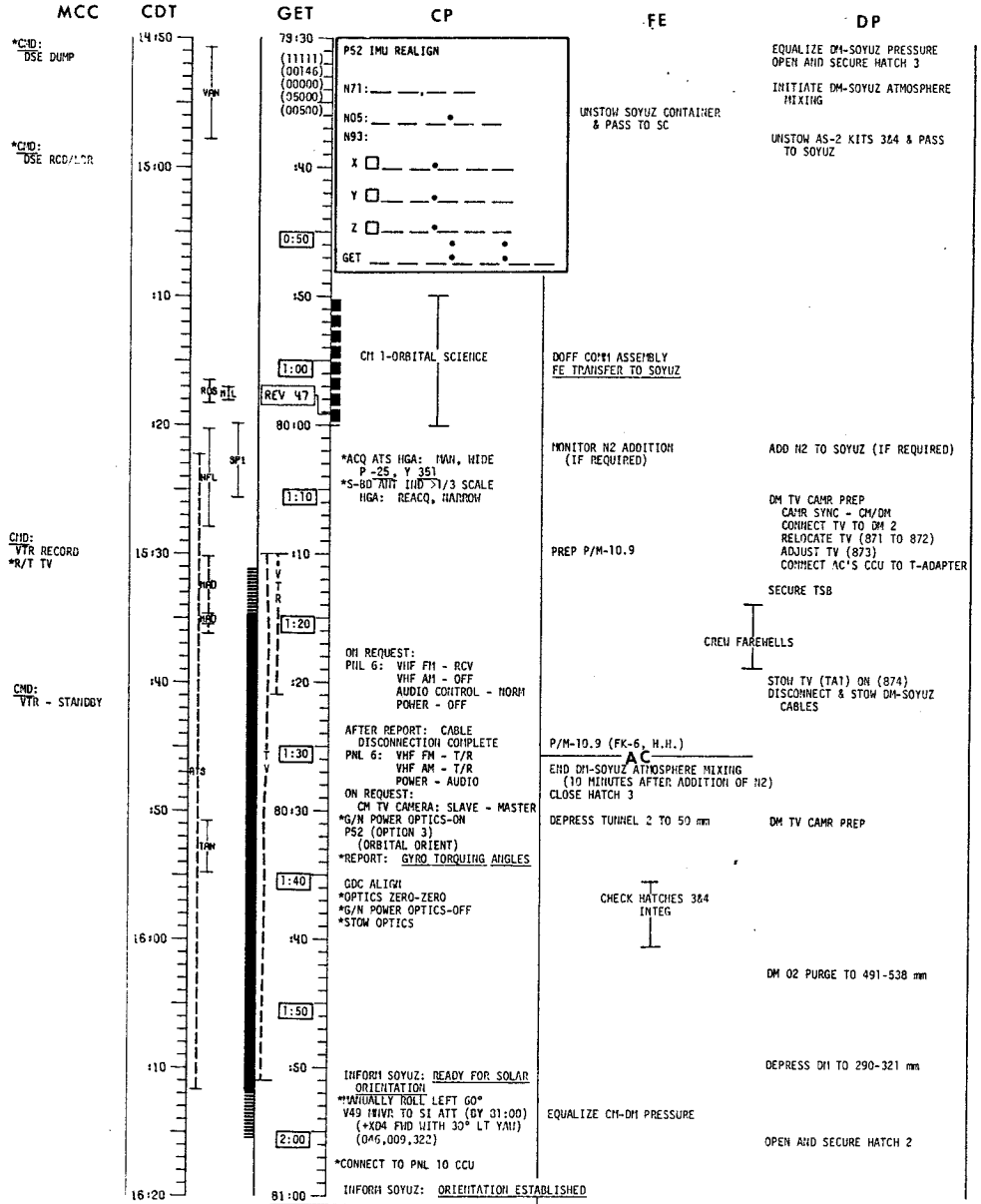
APOLLO DETAILED CREW ACTIVITIES PLAN

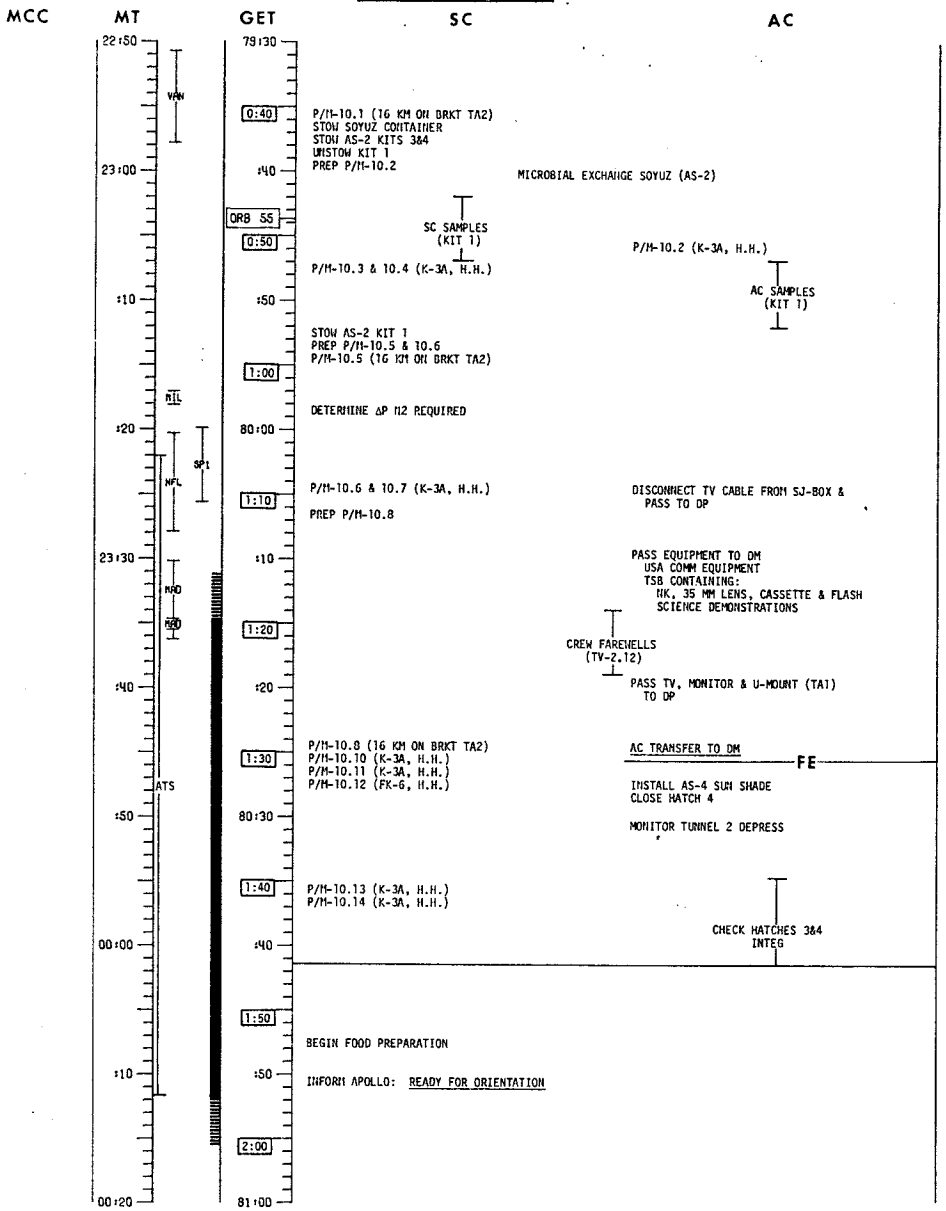
HOUSTON DATE	REV
JULY 18, 1975	46-47



MISSION	EDITION	PUBLICATION DATE	PAGE
ASTP	REVISION G	APRIL 28, 1975	4.2-34

SOYUZ DETAILED CREW ACTIVITIES PLAN

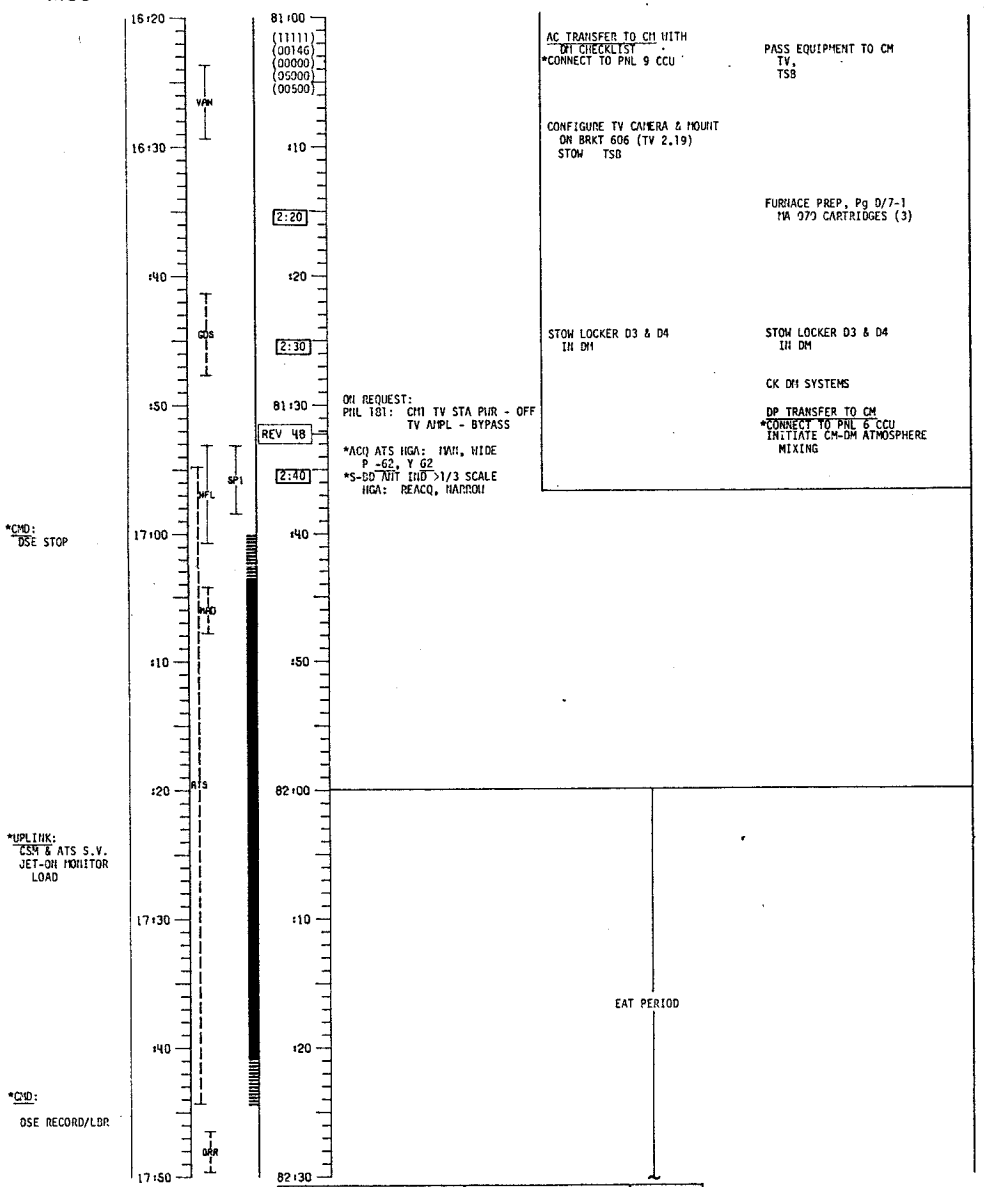
MOSCOW DATE	ORB
JULY 18, 1975	54-55



MISSION	EDITION	PUBLICATION DATE	PAGE
ASTP	REVISION G	APRIL 28, 1975	4.2-35

APOLLO DETAILED CREW ACTIVITIES PLAN

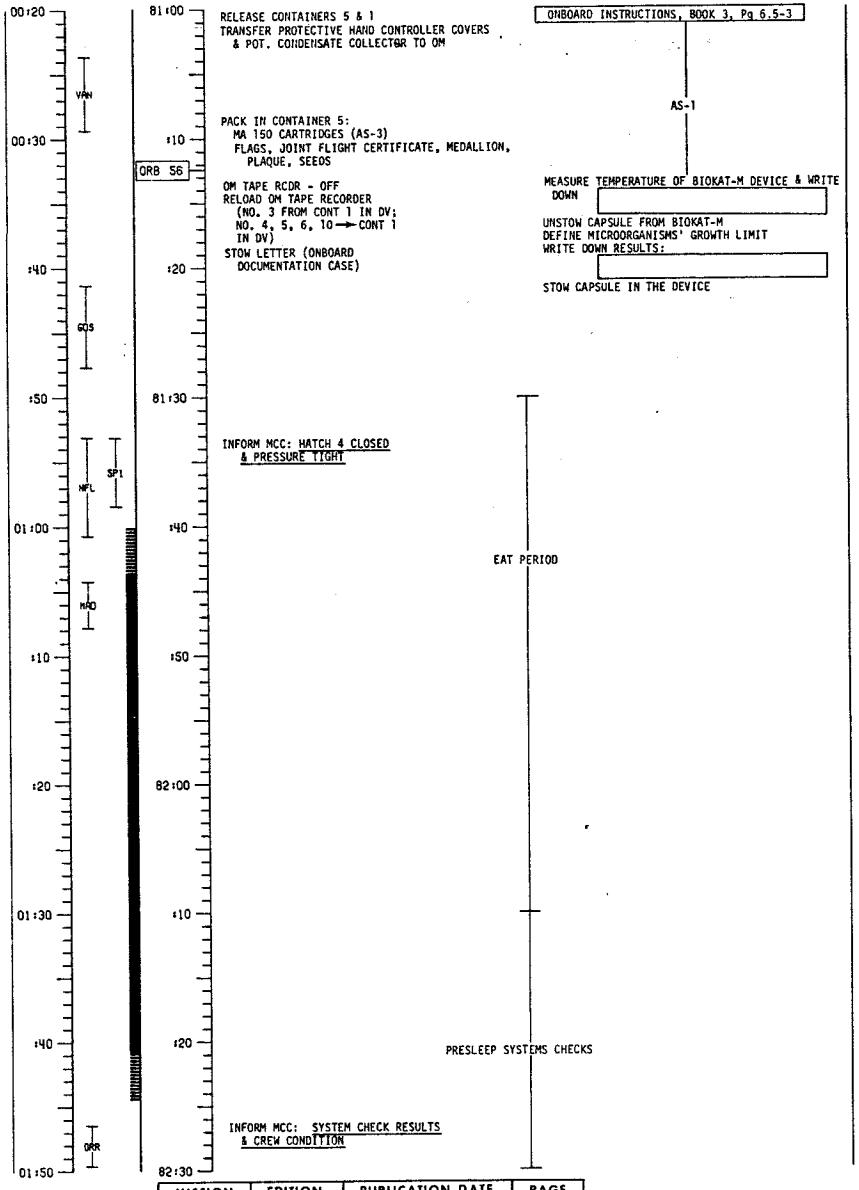
HOUSTON DATE	REV
JULY 18, 1975	47-48



MISSION	EDITION	PUBLICATION DATE	PAGE
ASTP	REVISION 6	APRIL 28, 1975	4.2-36

SOYUZ DETAILED CREW ACTIVITIES PLAN

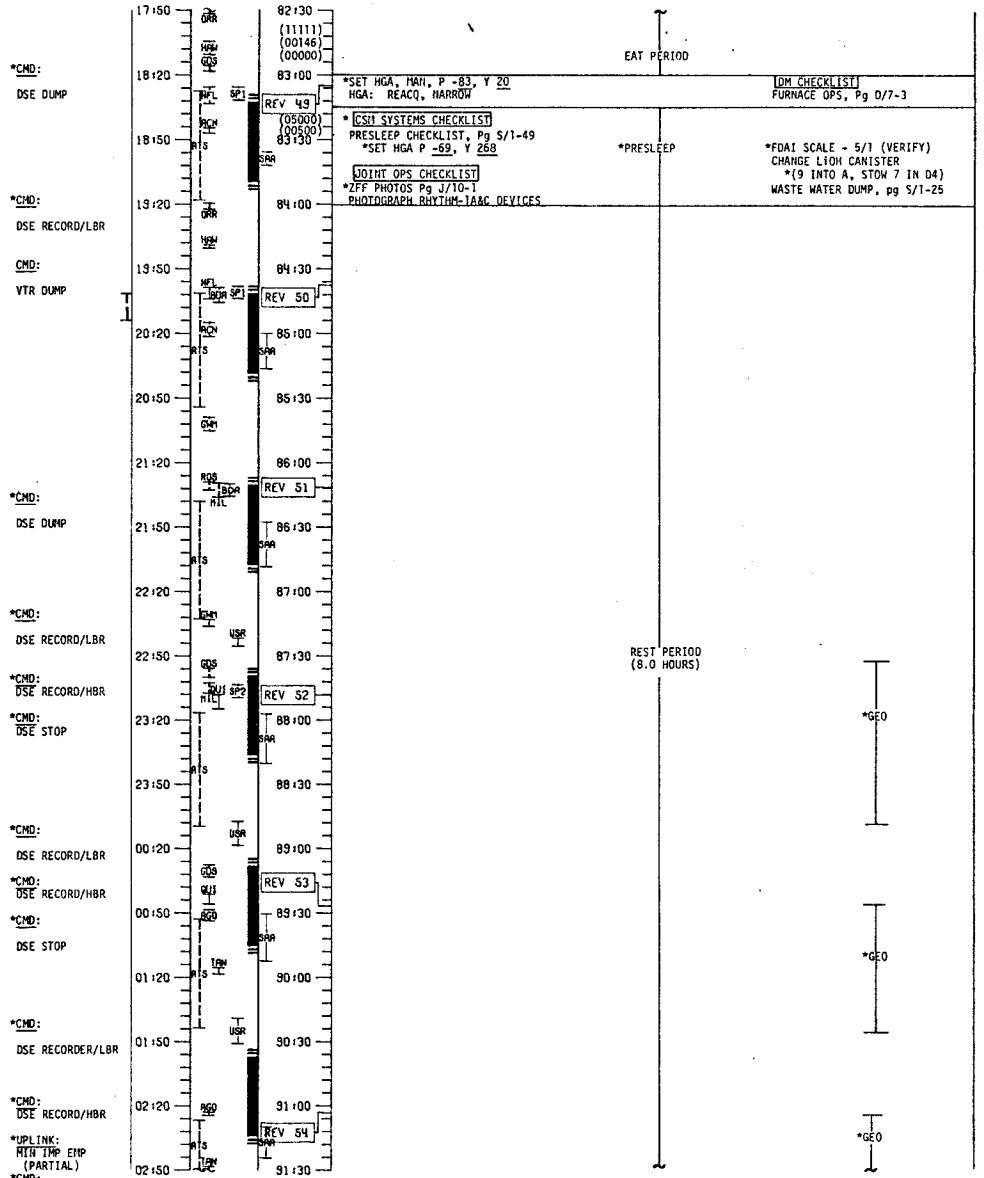
MOSCOW DATE	ORB
JULY 19, 1975	55-56



MISSION	EDITION	PUBLICATION DATE	PAGE
ASTP	REVISION 6	APRIL 28, 1975	4.2-37

APOLLO DETAILED CREW ACTIVITIES PLAN

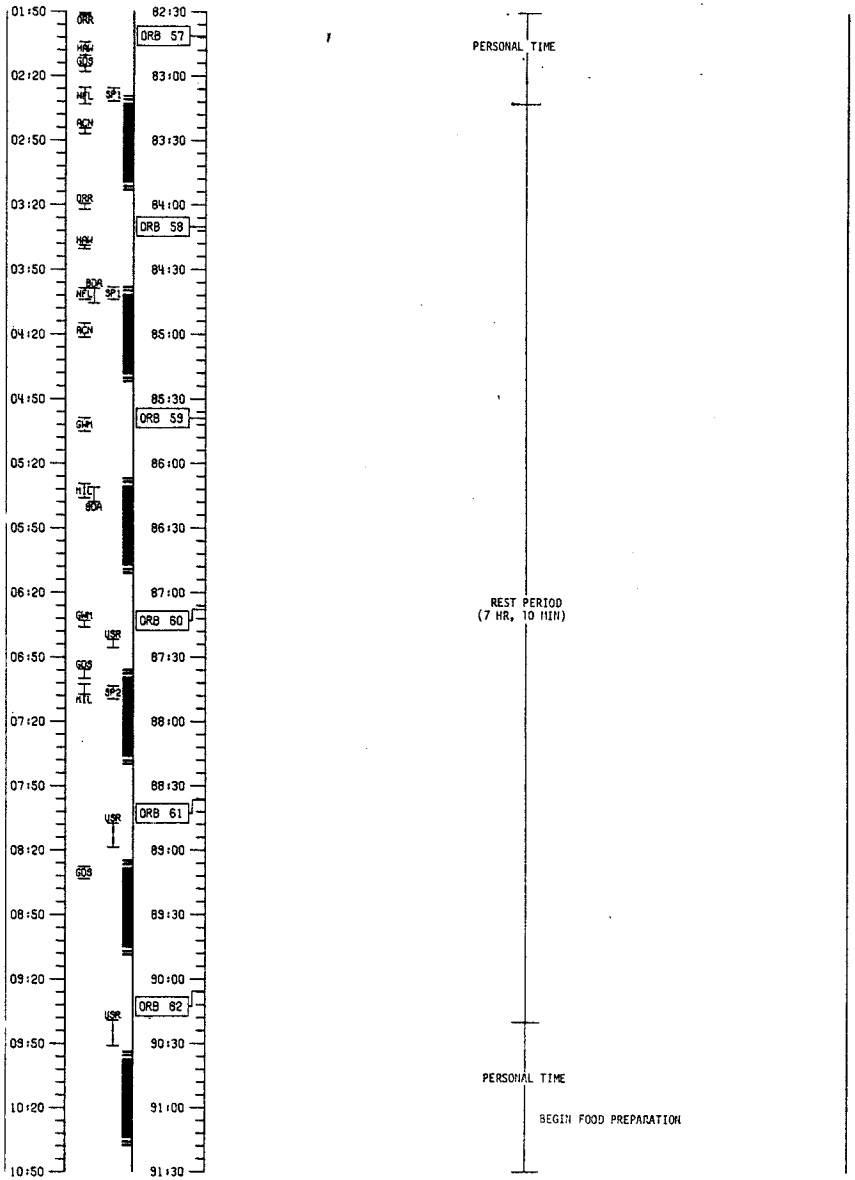
HOUSTON DATE	REV
JULY 18, 1975	48-54



MISSION	EDITION	PUBLICATION DATE	PAGE
ASTP	REVISION 6	APRIL 28, 1975	4.2-38

SOYUZ DETAILED CREW ACTIVITIES PLAN

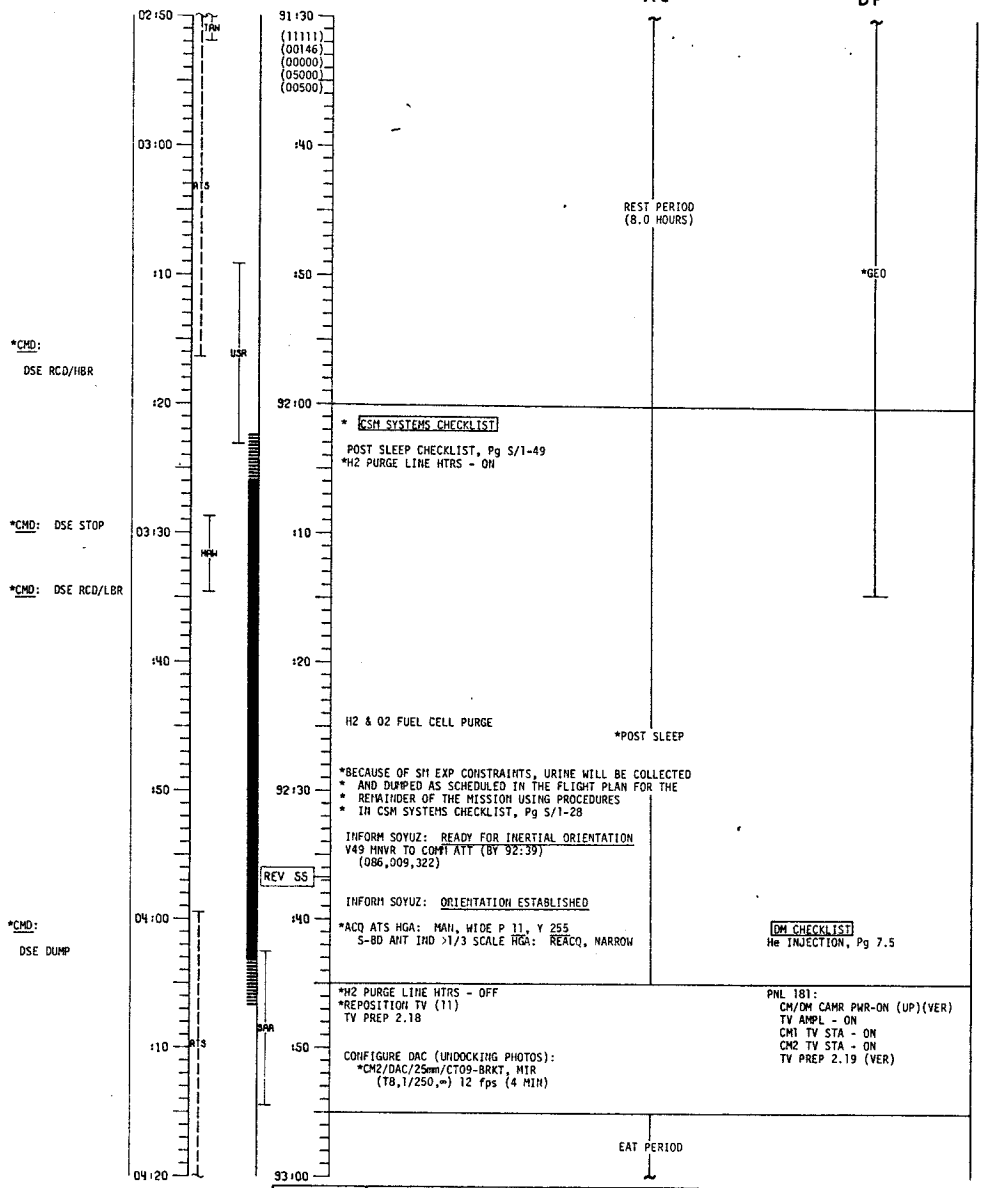
MOSCOW DATE	ORB
JULY 19, 1975	56-62



MISSION	EDITION	PUBLICATION DATE	PAGE
ASTP	REVISION 6	APRIL 28, 1975	4.2-39

APOLLO DETAILED CREW ACTIVITIES PLAN

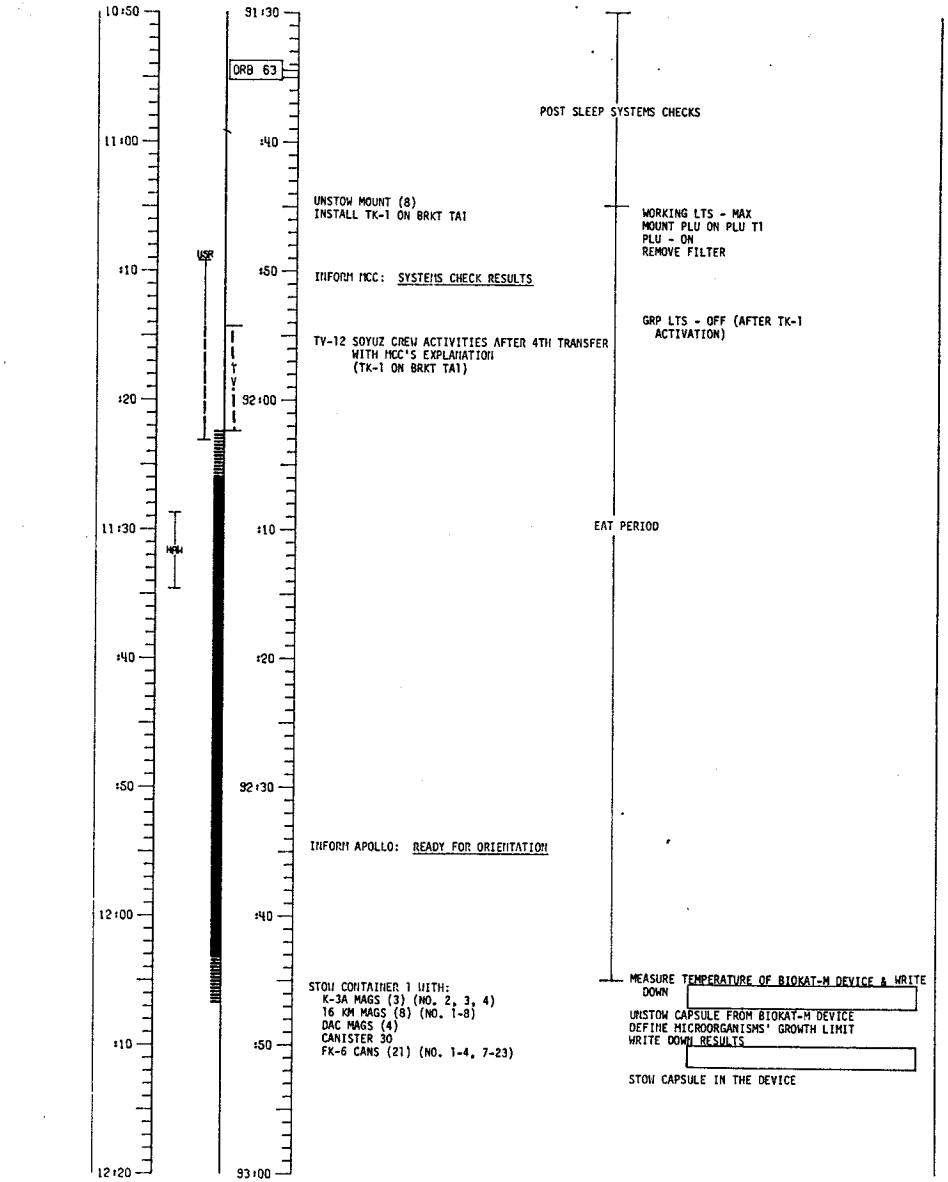
HOUSTON DATE	REV
JULY 19, 1975	54-55



MISSION	EDITION	PUBLICATION DATE	PAGE
ASTP	REVISION G	APRIL 28, 1975	4.2-40

SOYUZ DETAILED CREW ACTIVITIES PLAN

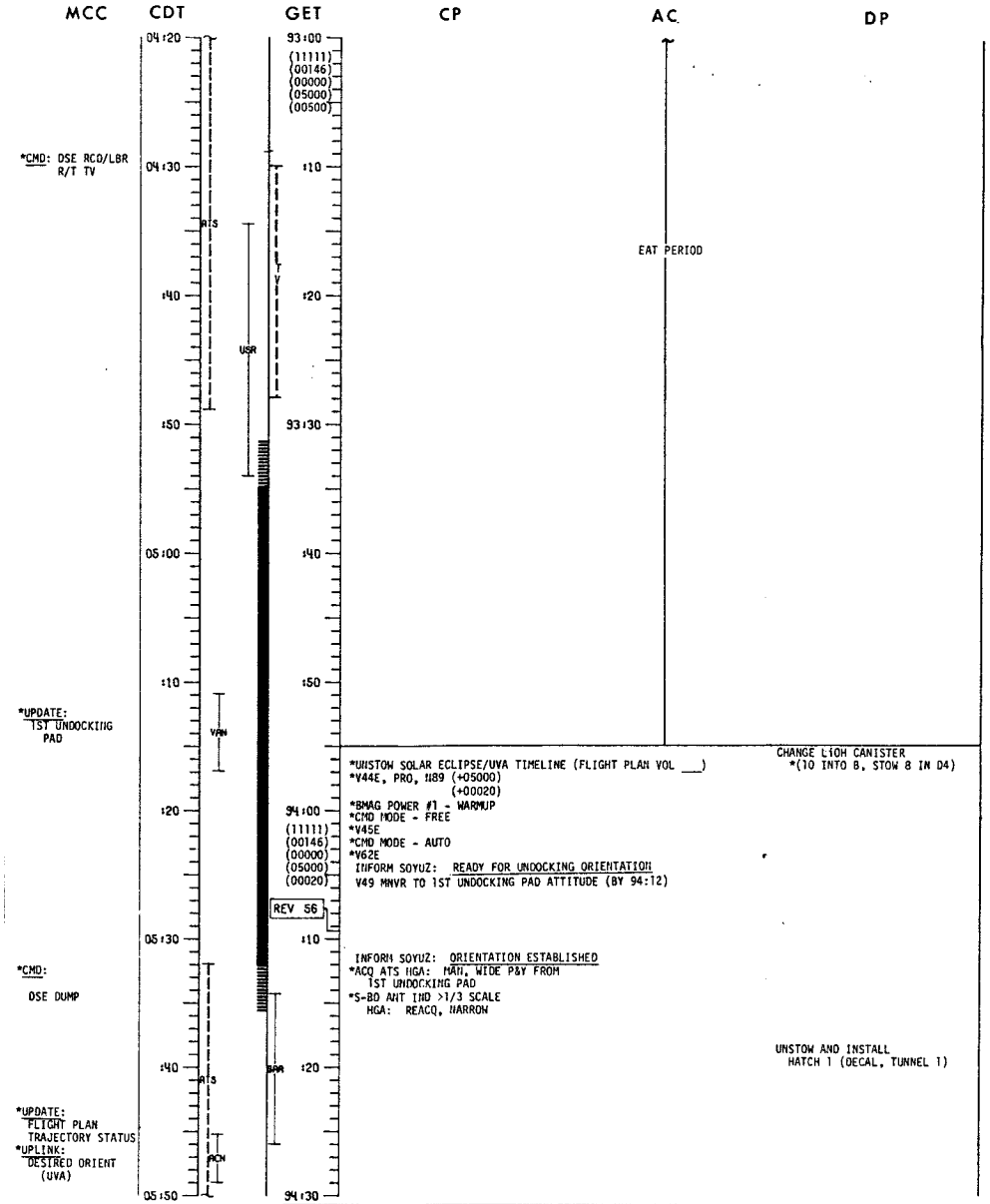
MOSCOW DATE	ORB
JULY 19, 1975	62-63



MISSION	EDITION	PUBLICATION DATE	PAGE
ASTP	REVISION G	APRIL 28, 1975	4.2-41

APOLLO DETAILED CREW ACTIVITIES PLAN

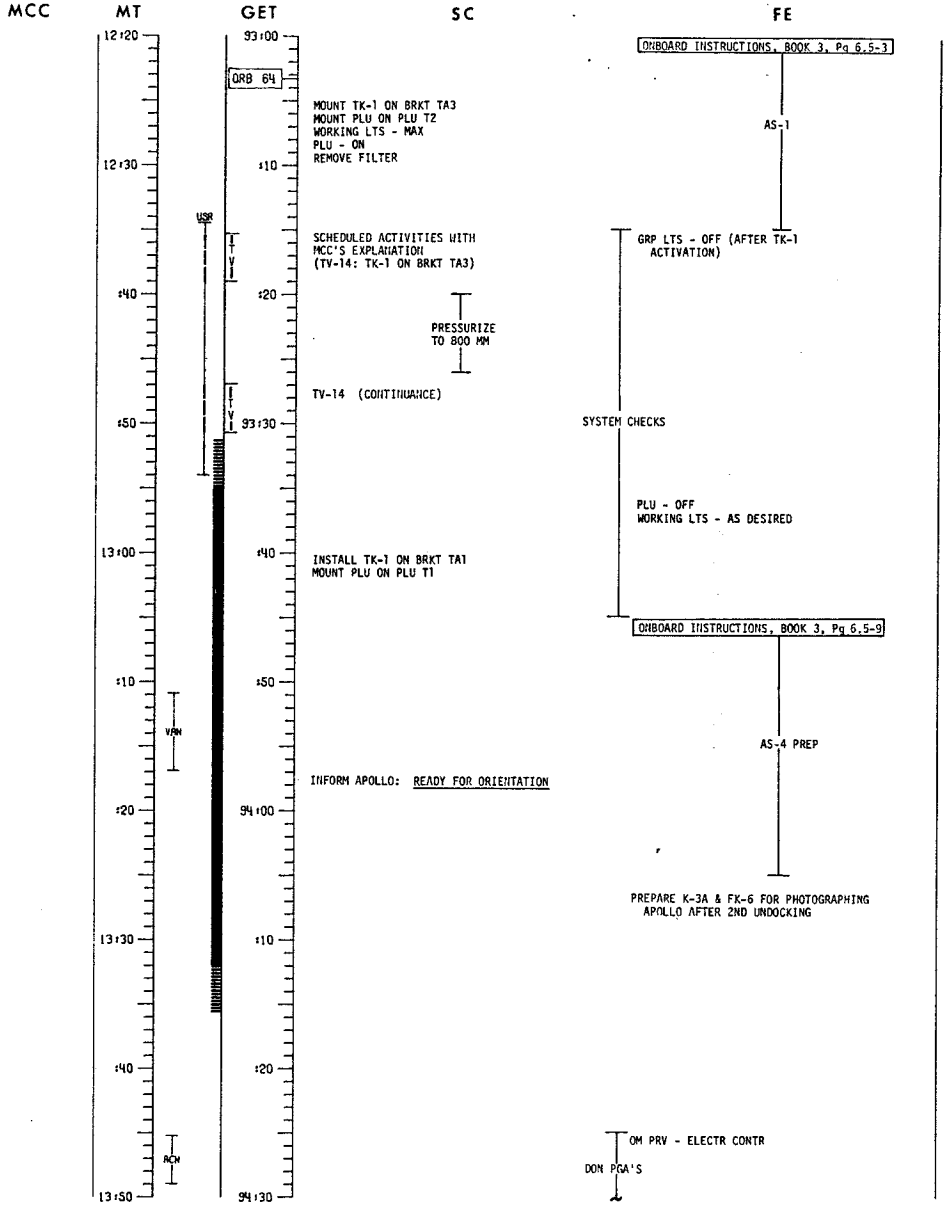
HOUSTON DATE	REV
JULY 19, 1975	55-56



MISSION	EDITION	PUBLICATION DATE	PAGE
ASTP	REVISION 6	APRIL 28, 1975	4.2-42

SOYUZ DETAILED CREW ACTIVITIES PLAN

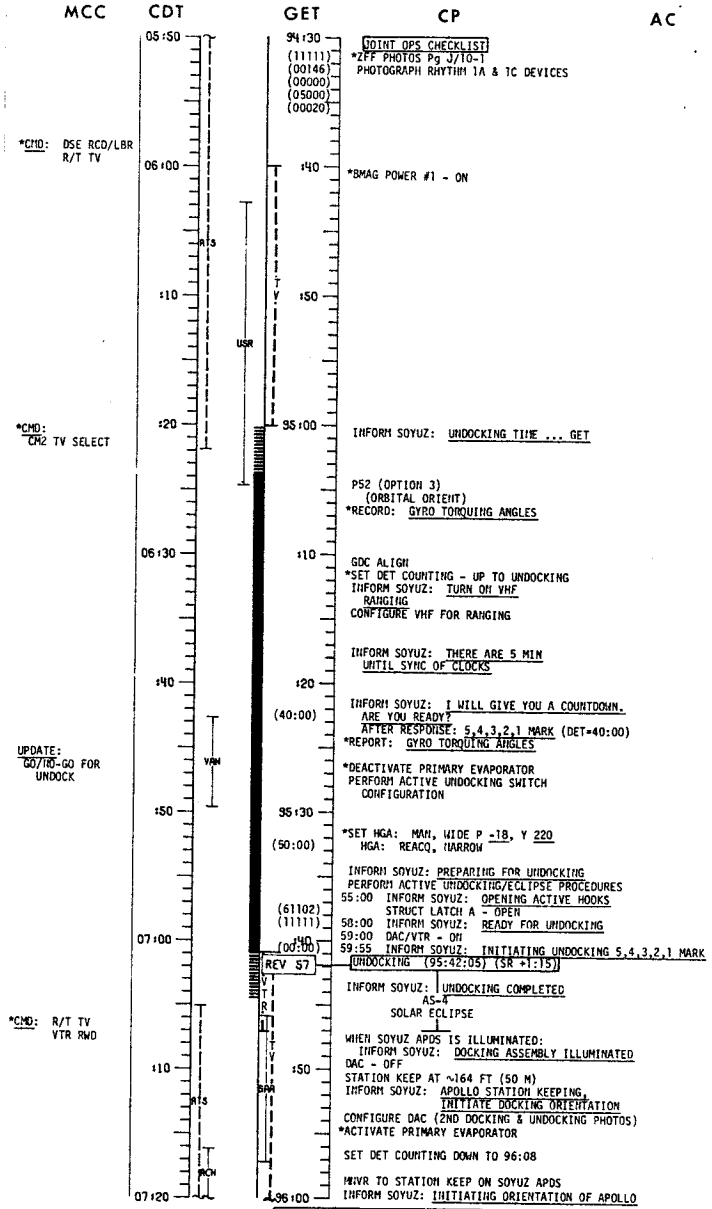
MOSCOW DATE	ORB
JULY 19, 1975	63-64



MISSION	EDITION	PUBLICATION DATE	PAGE
ASTP	REVISION 6	APRIL 28, 1975	4.2-43

APOLLO DETAILED CREW ACTIVITIES PLAN

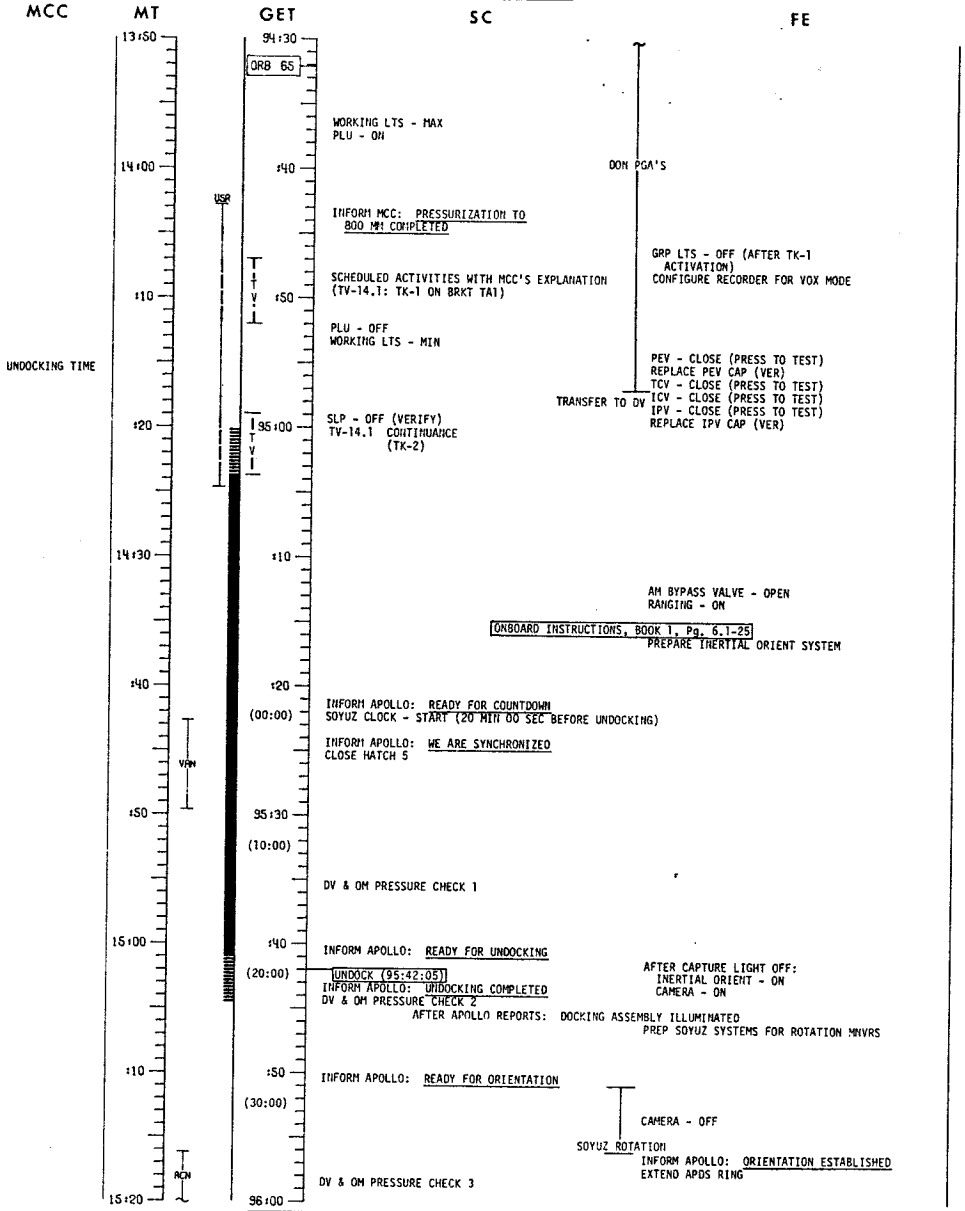
HOUSTON DATE	REV
JULY 19, 1975	56-57



MISSION	EDITION	PUBLICATION DATE	PAGE
ASTP	REVISION 6	APRIL 28, 1975	4.2-44

SOYUZ DETAILED CREW ACTIVITIES PLAN

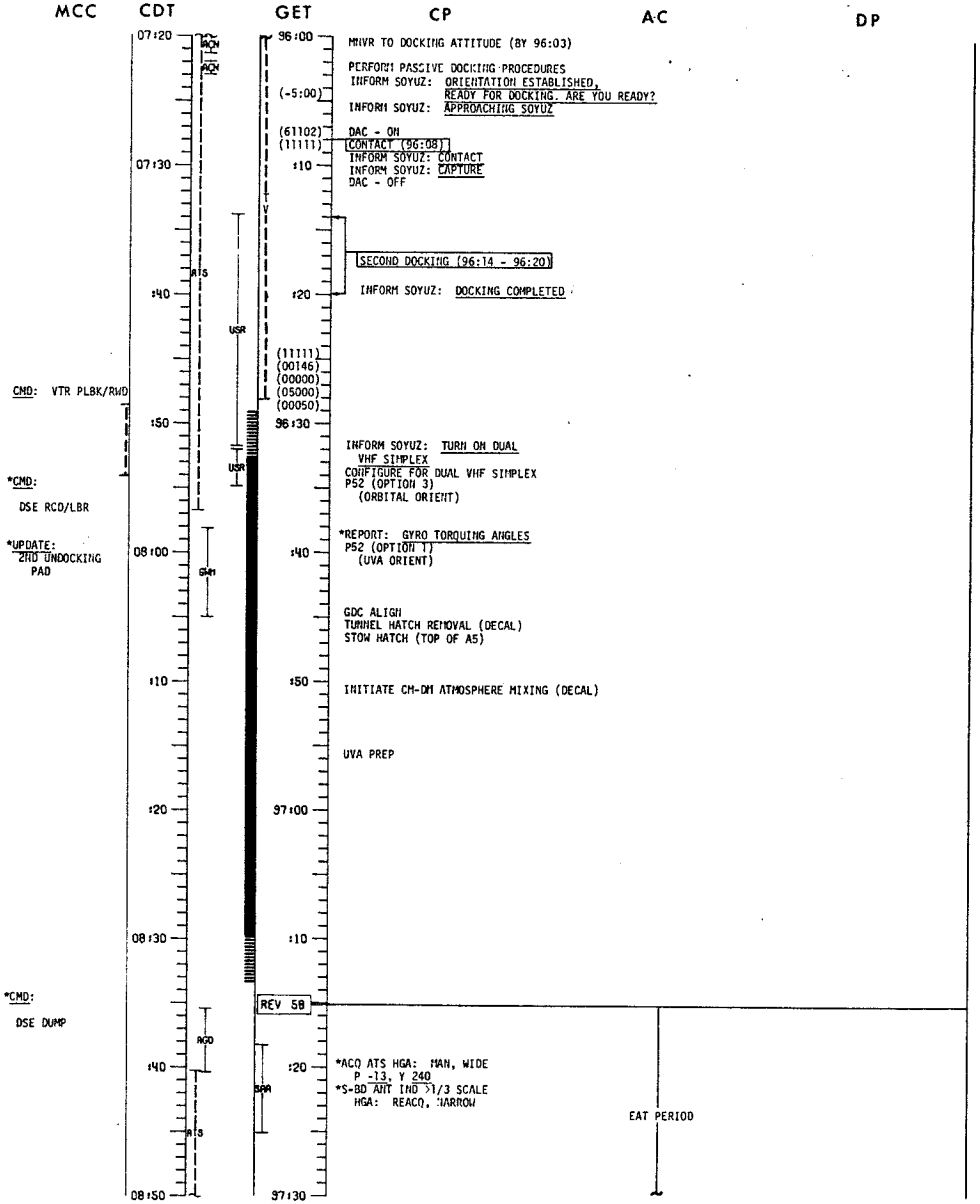
MOSCOW DATE	ORB
JULY 19, 1975	64-65



MISSION	EDITION	PUBLICATION DATE	PAGE
ASTP	REVISION 6	APRIL 28, 1975	4.2-45

APOLLO DETAILED CREW ACTIVITIES PLAN

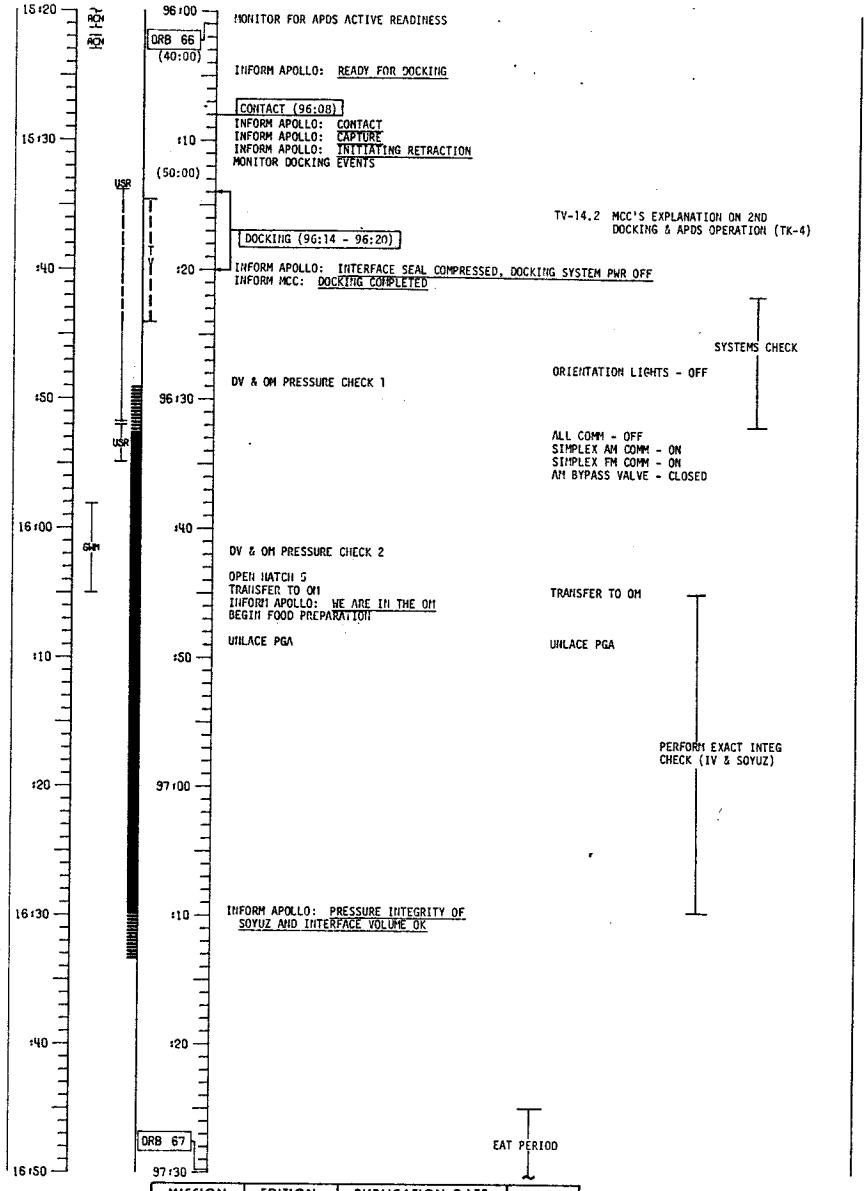
HOUSTON DATE	REV
JULY 19, 1975	57-58



MISSION	EDITION	PUBLICATION DATE	PAGE
ASTP	REVISION 6	APRIL 28, 1975	4.2-46

SOYUZ DETAILED CREW ACTIVITIES PLAN

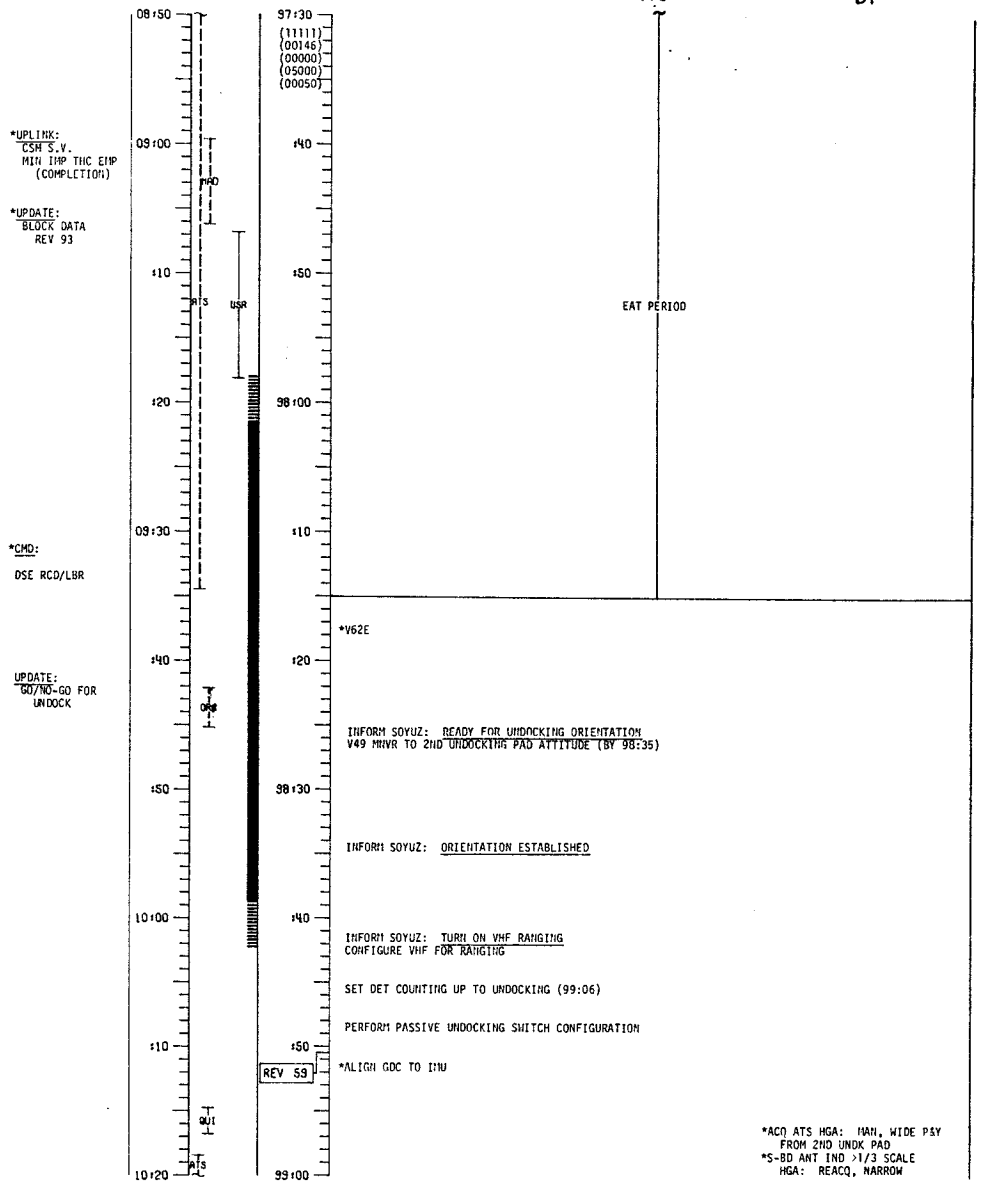
MOSCOW DATE	ORB
JULY 19, 1975	65-67



MISSION	EDITION	PUBLICATION DATE	PAGE
ASTP	REVISION 6	APRIL 28, 1975	4.2-47

APOLLO DETAILED CREW ACTIVITIES PLAN

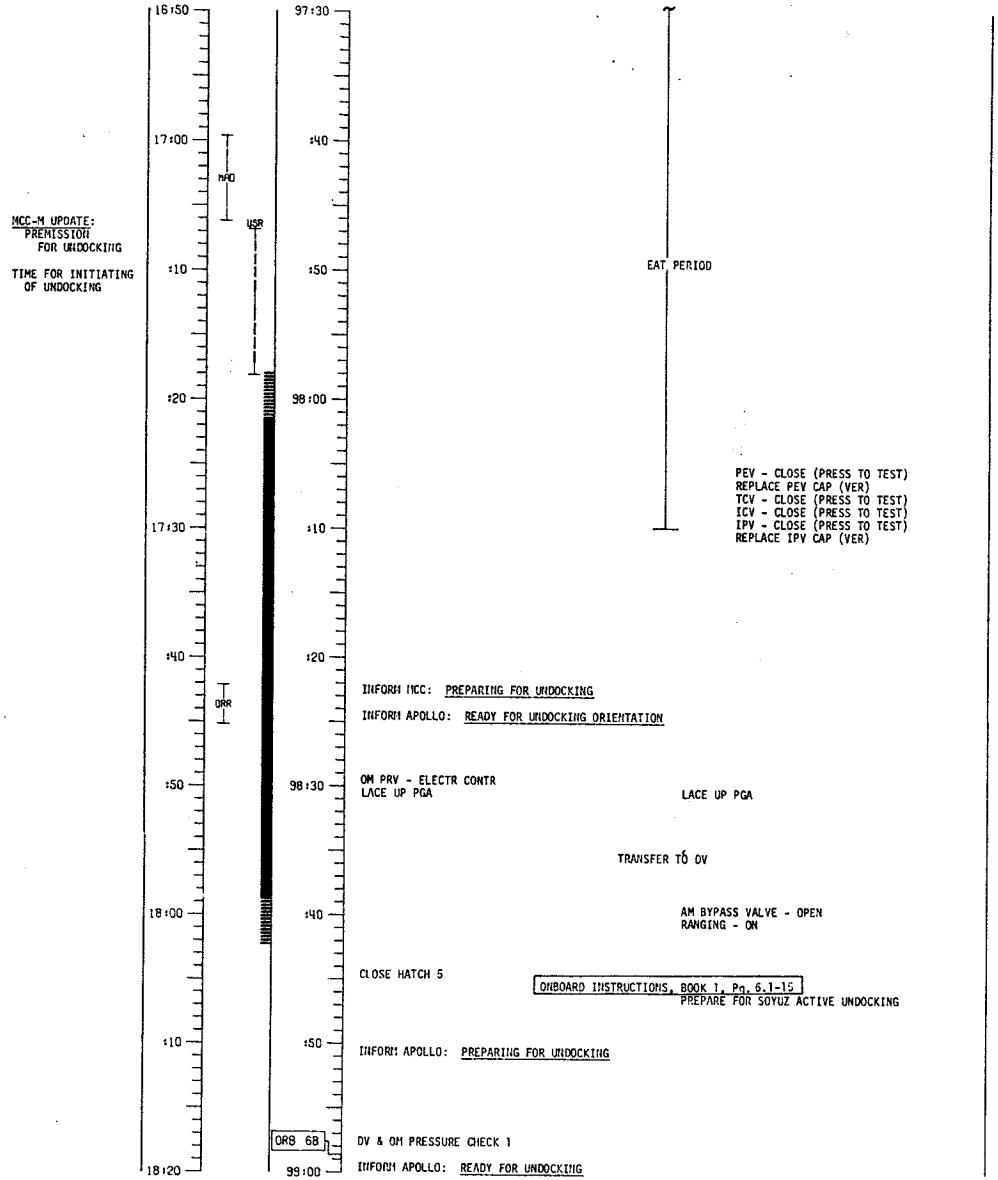
HOUSTON DATE	REV
JULY 19, 1975	58-59



MISSION	EDITION	PUBLICATION DATE	PAGE
ASTP	REVISION 6	APRIL 28, 1975	4.2-48

SOYUZ DETAILED CREW ACTIVITIES PLAN

MOSCOW DATE	ORB
JULY 19, 1975	67-68



MISSION	EDITION	PUBLICATION DATE	PAGE
ASTP	REVISION 6	APRIL 28, 1975	4.2-49

APOLLO DETAILED CREW ACTIVITIES PLAN

HOUSTON DATE	REV
JULY 19, 1975	60

MCC | CDT | GET | CP | AC | DP

*CMD: R/T TV

*CMD: DSE DUMP/ REWIND

*NOTE: ATS LOS MAY OCCUR AT 99:25 AND WILL BE AVAILABLE AGAIN AT ~99:31

*CMD: DSE RCD/HBR

*CMD: DSE DUMP

10:20 | 10:30 | 10:40 | 10:50 | 11:00 | 11:10 | 11:20 | 11:30 | 11:40 | 11:50

99:00 (00000) (00000) (00000) (05000) (00050) | 99:10 | 99:20 | 99:30 | 99:40 | 99:50 | 100:00 | 100:10 | 100:20 | 100:30

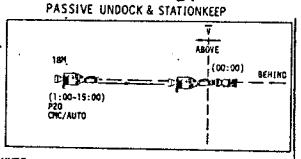
MAD | ATS | USR | DAR | GDI

REV 60

PERFORM PASSIVE UNDOCKING CHECKLIST
INFORM SOYUZ: READY FOR UNDOCKING
DAC - ON
UNDOCKING BEGINS (99:03)

SECOND UNDOCKING (99:06-99:08)
INFORM SOYUZ: UNDOCKING COMPLETED
DAC - OFF

PASSIVE UNDOCK & STATIONKEEP



04:00 INFORM SOYUZ: OPEN REFLECTOR COVERS AS PROGRAMMED
*GDC ALIGN
SET DET COUNTING UP TO 99:21:00
*DEACTIVATE PRIMARY EVAPORATOR

STATION KEEPING (18 M)

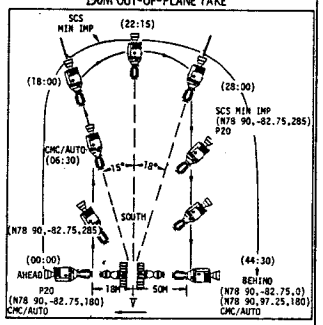
00:00 APOLLO MNVRS TO RIGHT OF SOYUZ (OUT-OF-PLANE)
INFORM SOYUZ: TURN ON BEACONS & ORIENTATION LIGHTS
EXT LTS RUN/EVA - RUN/EVA, EXT LTS RNDZ - RNDZ
AFTER SOYUZ REPORTS OPENING RETROREFLECTOR COVERS:
OBSERVE OPENING OF SIDE COVER (WITH BINOCULARS)

*IF ATS LOCK LOST:
SET HGA: MAN, WIDE P 26, Y 214
HGA: REACQ, NARROW
FOR ACQ AT ~99:31

18:00 INITIATE SOYUZ FLY-BY AT 150 M
INFORM SOYUZ: TURN OFF BEACONS & ORIENTATION LIGHTS
EXT LTS RNDZ - OFF

UVA DATA TAKE
(150 M SIDE REFLECTOR)

150M OUT-OF-PLANE TAKE



28:00 STOP SOYUZ FLY-BY AND BEGIN TRANSFER TO ORBITAL PLANE
INFORM SOYUZ: DATA TAKE COMPLETED, TURN ON BEACONS & ORIENTATION LIGHTS
EXT LTS RNDZ - RNDZ

IF REQUIRED:
INFORM SOYUZ: READY TO TURN ON SPOTLIGHT
WAIT FOR RESPONSE
EXT LTS RNDZ - SPOT

*ACTIVATE PRIMARY EVAPORATOR

44:30 INITIATE STATION KEEPING AT 164 FT (50 M) BEHIND SOYUZ

INFORM SOYUZ: TURN OFF BEACONS & ORIENTATION LIGHTS AND TURN ON DUAL VHF SIMPLEX
EXT LTS RNDZ - OFF
CONFIGURE FOR DUAL VHF SIMPLEX
ROLL TO HEADS DWN ATTITUDE
SET DET COUNTING UP TO 100:50:00

CONFIGURE DAC (SOYUZ PHOTOS)

MISSION	EDITION	PUBLICATION DATE	PAGE
ASTP	REVISION 6	APRIL 28, 1975	4.2-50

SOYUZ DETAILED CREW ACTIVITIES PLAN

MOSCOW DATE	ORB
JULY 19, 1975	69-70

MCC | MT | GET | SC | FE

18:20 | 18:30 | 18:40 | 18:50 | 19:00 | 19:10 | 19:20 | 19:30 | 19:40 | 19:50

99:00 | 99:10 | 99:20 | 99:30 | 99:40 | 99:50 | 100:00 | 100:10 | 100:20 | 100:30

MAD | USR | DAR

ORB 69

INFORM APOLLO: INITIATING UNDOCKING
UNDOCKING BEGINS (99:03)

MONITOR UNDOCKING EVENTS

UNDOCK (99:06-99:08)
INFORM APOLLO: UNDOCKING COMPLETED
INFORM APOLLO: READY FOR ORIENTATION
INITIATE ORBITAL ORIENTATION COURSE 0 ⟶ 180°
INFORM APOLLO: ORBITAL ORIENTATION ESTABLISHED

PREPARE SYSTEMS FOR AUTO ORBITAL ORIENTATION (0 ⟶ 180°)
ORBITAL RATE ORIENT - ON
PERISCOPE APPROACH MODE - ON

MONITOR APOLLO MANEUVER ON CED, THRU PERISCOPE & RT HD DV WINDOW

TV-15 EXPLANATION OF 2ND UNDOCKING RESULTS (TK-2)

DV & OM PRESSURE CHECK 2
PCU - ON
OPEN HATCH 5 & TRANSFER TO OM
INFORM APOLLO: OPENING REFLECTOR COVERS
RELEASE REFLECTOR COVERS
INFORM APOLLO: REFLECTOR COVERS OPEN

ON REQUEST:
BEACONS - ON
ORIENTATION LIGHTS - ON
INFORM APOLLO: ORIENTATION LIGHTS & BEACONS ON
PRESSURE INTEGRITY CHECK - ON

DOFF PGA
OM PRV - CLOSE

EXTERNAL TV CAMR - OFF

BEGIN PGA DRYING

ON REQUEST:
BEACONS - OFF
ORIENTATION LIGHTS - OFF

TRANSFER TO DV

TRANSFER TO OM
DOFF PGA
BEGIN PGA DRYING

AFTER APOLLO REPORTS DATA COMPLETED:
BEACONS - ON
ORIENTATION LIGHTS - ON
MD - ON

YAW SPACECRAFT TO TRACK APOLLO (IN RH DV WINDOW)

ON REQUEST:
INFORM APOLLO: YOU MAY TURN ON SPOTLIGHT

EXTERNAL TV CAMR - ON

DRY PGA'S

ON REQUEST:
ALL COMM - OFF
SIMPLEX AM COMM - ON
SIMPLEX FM COMM - ON
AM BYPASS VALVE - CLOSED
BEACONS - OFF
ORIENTATION LIGHTS - OFF
INFORM APOLLO: ORIENTATION LIGHTS & BEACONS OFF
PREPARE SYSTEMS FOR AUTO ORBITAL ORIENTATION (180 ⟶ 0°)
ORBITAL RATE ORIENT - ON

PERISCOPE ORIENT MODE - ON

YAW SPACECRAFT TO COURSE 180 ⟶ 0°

INFORM APOLLO: ORBITAL ORIENTATION ESTABLISHED

PERISCOPE APPROACH MODE - ON

PREPARE K-3A & FK-6 FOR P/M-12

TRANSFER TO DV WITH K-3A & FK-6

MISSION	EDITION	PUBLICATION DATE	PAGE
ASTP	REVISION 6	APRIL 28, 1975	4.2-51

WSN SPACEFLIGHT HISTORY SPECIAL REPORT * PAGE TWENTY-FIVE

APOLLO DETAILED CREW ACTIVITIES PLAN

HOUSTON DATE	REV
JULY 19, 1975	60-61

MCC | CDT | GET | CP | AC | DP

*CMD: DSE STOP

*CMD: DSE PLBK/ REWIND

*CMD: DSE RCD/LBR R/T TV

*CMD: R/T PCM

*CMD: DSE STOP

*CMD: DSE RCD/LBR

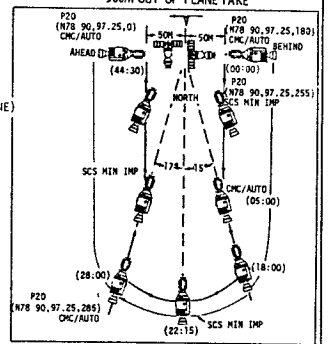
11:50 | 12:00 | 12:30 | 13:00 | 13:20

100:30 | 101:00 | 101:30 | 102:00

(00000) (00000) (00000) (05000) (00050)

*ACQ ATS HGA: MAN, WIDE P 10, Y 316
*S-BD ANT IND >1/3 SCALE HGA: REACQ, NARROW

500M OUT-OF-PLANE TAKE



*DEACTIVATE PRIMARY EVAPORATOR

00:00 APOLLO MNVR TO RIGHT OF SOYUZ (OUT-OF-PLANE)

EXT LTS RNDZ - RNDZ
INFORM SOYUZ: BEACON - ON

INFORM SOYUZ: TURN ON VHF RANGING
CONFIGURE FOR VHF RANGING

INFORM SOYUZ: RANGING LOCKUP ESTABLISHED

18:00 INITIATE SOYUZ FLY-BY AT 500 M
INFORM SOYUZ: TURN OFF BEACONS & ORIENTATION LIGHTS
EXT LTS RNDZ - OFF

UVA DATA TAKE
(500 M SIDE REFLECTOR)

28:00 STOP SOYUZ FLY-BY AND BEGIN TRANSFER TO ORBITAL PLANE
INFORM SOYUZ: DATA TAKE COMPLETED, TURN ON BEACONS & ORIENTATION LIGHTS
EXT LTS RNDZ - RNDZ

IF REQUIRED:
INFORM SOYUZ: READY TO TURN ON SPOTLIGHT
WAIT FOR RESPONSE
EXT LTS RNDZ - SPOT
*ACTIVATE PRIMARY EVAPORATOR

~44:30 INITIATE STATION KEEPING AT 164 FT (50 M) IN FRONT OF SOYUZ
INFORM SOYUZ: TURN OFF BEACONS & ORIENTATION LIGHTS, TURN ON DUAL VHF SIMPLEX
EXT LTS RNDZ - OFF
CONFIGURE FOR DUAL VHF SIMPLEX
DAC - ON (8 MIN)

SOYUZ PHOTOS

SET DET COUNTING UP TO 102:16:00

MISSION	EDITION	PUBLICATION DATE	PAGE
ASTP	REVISION 6	APRIL 28, 1975	4.2-52

SOYUZ DETAILED CREW ACTIVITIES PLAN

MOSCOW DATE	ORB
JULY 19, 1975	70-71

MCC | MT | GET | SC | FE

19:50 | 20:00 | 20:30 | 21:00 | 21:20

100:30 | 101:00 | 101:30 | 102:00

ORB 70

TV-18 REPORT ON PROGRAM ACCOMPLISHING (TK-2)

YAW SPACECRAFT TO TRACK APOLLO (IN RH DV WINDOW)

ON REQUEST:
INFORM APOLLO: YOU MAY TURN ON SPOTLIGHT

MAINTAIN ORIENTATION TO POINT DV RT HD WINDOW TOWARD APOLLO (YAW, ROLL & PITCH IF REQUIRED)

BEACONS - ON
ORIENTATION LIGHTS - ON
INFORM APOLLO: ORIENTATION LIGHTS & BEACONS ON
EXTERNAL TV CAMERA - OFF

AM BYPASS VALVE - OPEN
VHF AM HEADSET MICR - OFF
RANGING - ON
AFTER APOLLO REPORTS RANGING LOCKUP ESTABLISHED
VHF AM HEADSET MICR - ON

ON REQUEST:
BEACONS - OFF
ORIENTATION LIGHTS - OFF

DRY PGA'S

AFTER APOLLO REPORTS DATA TAKE COMPLETED:
BEACONS - ON
ORIENTATION LIGHTS - ON
MO - ON

ON REQUEST:
ALL COMM - OFF
SIMPLEX AM COMM - ON
SIMPLEX FM COMM - ON
AM BYPASS VALVE - CLOSED
BEACONS - OFF
ORIENTATION LIGHTS - OFF
INFORM APOLLO: ORIENTATION LIGHTS & BEACONS OFF
ORBITAL ORIENTATION MODE - OFF
MO - ON

PREPARE TO PHOTOGRAPH APOLLO

MISSION	EDITION	PUBLICATION DATE	PAGE
ASTP	REVISION 6	APRIL 28, 1975	4.2-53

APOLLO DETAILED CREW ACTIVITIES PLAN

HOUSTON DATE	REV
JULY 19, 1975	61-62

MCC | CDT | GET | CP | AC | DP

*CMD: DSE DUMP

*CMD: DSE RCD/LBR R/T TV

*CMD: R/T PCM

*CMD: DSE RCD/HBR
*NOTE: NO COMM THRU ATS FROM 102:49 TO 102:56

13:20 | 13:30 | 14:00 | 14:30 | 14:50

102:00 (00000) (00000) (00000) (05000) (00050) REV 61

52:00 TRANSLATE DWN FOR SOYUZ PHOTOS
INFORM SOYUZ: INITIATING PITCH ROTATION
PITCH UP 2°/SEC FOR 360°

INFORM SOYUZ: PITCH ROTATION COMPLETED

00:00 APOLLO SEP (102:16)

*DEACTIVATE PRIMARY EVAPORATOR

INFORM SOYUZ: TURN ON VHF RANGING
CONFIGURE FOR VHF RANGING
INFORM SOYUZ: RANGING LOCKUP ESTABLISHED

21:00 START DATA TAKE
INFORM SOYUZ: BEACONS & ORIENTATION LIGHTS OFF

UVA DATA TAKE
(1000 M TOP REFLECTOR)

~30:00 INFORM SOYUZ: AS-5 COMPLETED
VHF RANGING - OFF
EXT LTS RUN/EVA - OFF
*V48 (61112) (01111), V46E

~33:00 V49 MNVR FOR UV IN-PLANE SCAN (BY 102:52)

~37:00 *V49 MNVR TO OUT-OF-PLANE DATA ATT (BY 102:56)

ATS LOS (61112) (01111)

ATS AOS

~41:00 *ACQ ATS HGA: MAN, WIDE P -30, Y 249
*S-BD ANT IND >1/3 SCALE, HGA: REACQ, NARROW

*PREP FOR URINE DUMP, Pg S/1-28

*ACTIVATE PRIMARY EVAPORATOR, Pg S/1-18

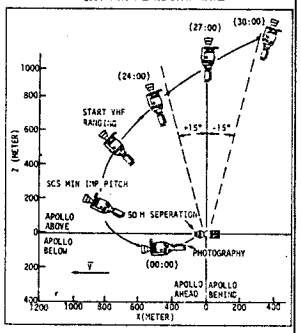
*BMAG POWER #1 - OFF

WASTE WATER DUMP, Pg S/1-25
*URINE DUMP, Pg S/1-28

102:00 | 102:30 | 103:00 | 103:30

*ACQ ATS HGA: MAN, WIDE
P -28, Y 144
*S-BD ANT IND >1/3 SCALE
HGA: REACQ, NARROW

1000M IN-PLANE DATA TAKE



MISSION	EDITION	PUBLICATION DATE	PAGE
ASTP	REVISION 6	APRIL 28, 1975	4.2-54

SOYUZ DETAILED CREW ACTIVITIES PLAN

MOSCOW DATE	ORB
JULY 19, 1975	71-72

MCC | MT | GET | SC | FE

21:20 | 21:30 | 22:00 | 22:30 | 22:50

102:00 | 102:30 | 103:00 | 103:30

ORB 71

INFORM APOLLO: READY TO PHOTOGRAPH APOLLO

P/M-12 PHOTOGRAPH APOLLO

PERISCOPE ORIENT MODE - ON
ESTABLISH ORBITAL ORIENTATION
(COURSE 90→270)
INFORM APOLLO: ORBITAL ORIENTATION ESTABLISHED
BEACONS - ON
ORIENTATION LIGHTS - ON
INFORM APOLLO: ORIENTATION LIGHTS & BEACONS ON

PREPARE SYSTEMS FOR AUTO ORBITAL ORIENTATION
ORBITAL RATE ORIENT - ON

DRY PGA'S

TV-18.1 REPORT ON PROGRAM ACCOMPLISHING (TK-2)
(FE PERFORMS)

TRANSFER TO OM WITH FK-6 & K-3A
MONITOR APOLLO SEPARATION

AM BYPASS VALVE - OPEN
VHF AM HEADSET MICR - OFF
RANGING - ON
AFTER APOLLO REPORTS RANGING
LOCKUP ESTABLISHED
VHF AM HEADSET MICR - ON
BEACONS - OFF
ORIENTATION LTS - OFF

OM TAPE RCDR - OFF
PREPARE FK-6 FOR EXPERIMENT
REMOVE KS-CAMERA FROM HATCH 4 & STOW (CONT VI)
PREPARE FK-6 FOR EXPERIMENT

AFTER APOLLO REPORTS AS-5 COMPLETED
ALL COMM - OFF
SIMPLEX FM COMM - ON
AM BYPASS VALVE - CLOSED
ORIENTATION MODE - OFF

OBSERVATION & PHOTOGRAPHING OF LIGHT EFFECTS (AUTONOMOUS DOCUMENTATION)

PREPARE FOR STAR IDENTIFICATION

MO - ON
ESTABLISH ORBITAL ORIENTATION
(COURSE 180→0)

PREPARE SYSTEMS FOR AUTO ORBITAL ORIENTATION
ORBITAL RATE ORIENT - ON

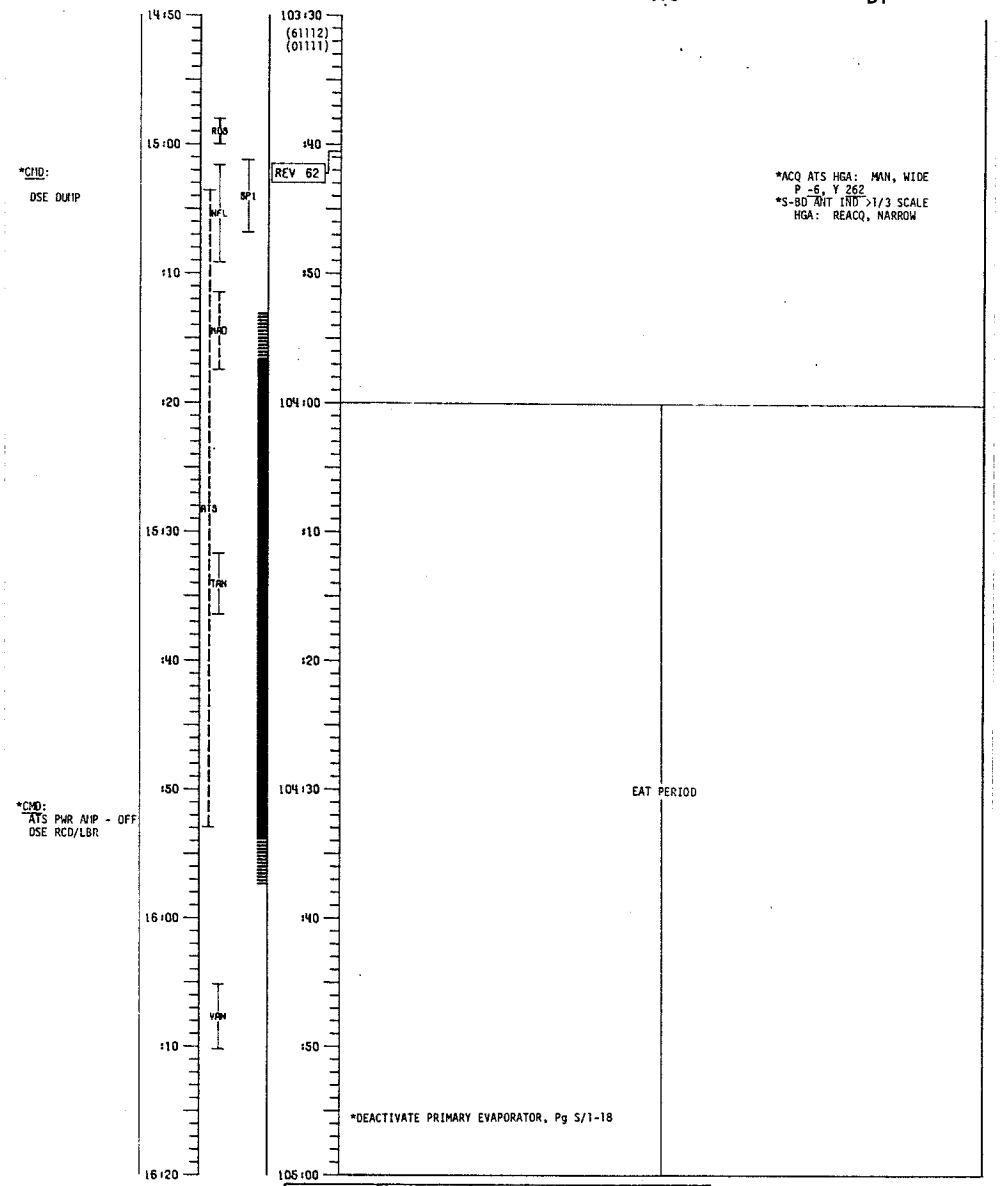
STAR IDENTIFICATION DURING DAYLIGHT PORTION OF ORBIT (AUTONOMOUS DOCUMENTATION)

MISSION	EDITION	PUBLICATION DATE	PAGE
ASTP	REVISION 6	APRIL 28, 1975	4.2-55

WSN SPACEFLIGHT HISTORY SPECIAL REPORT * PAGE TWENTY-SEVEN

APOLLO DETAILED CREW ACTIVITIES PLAN

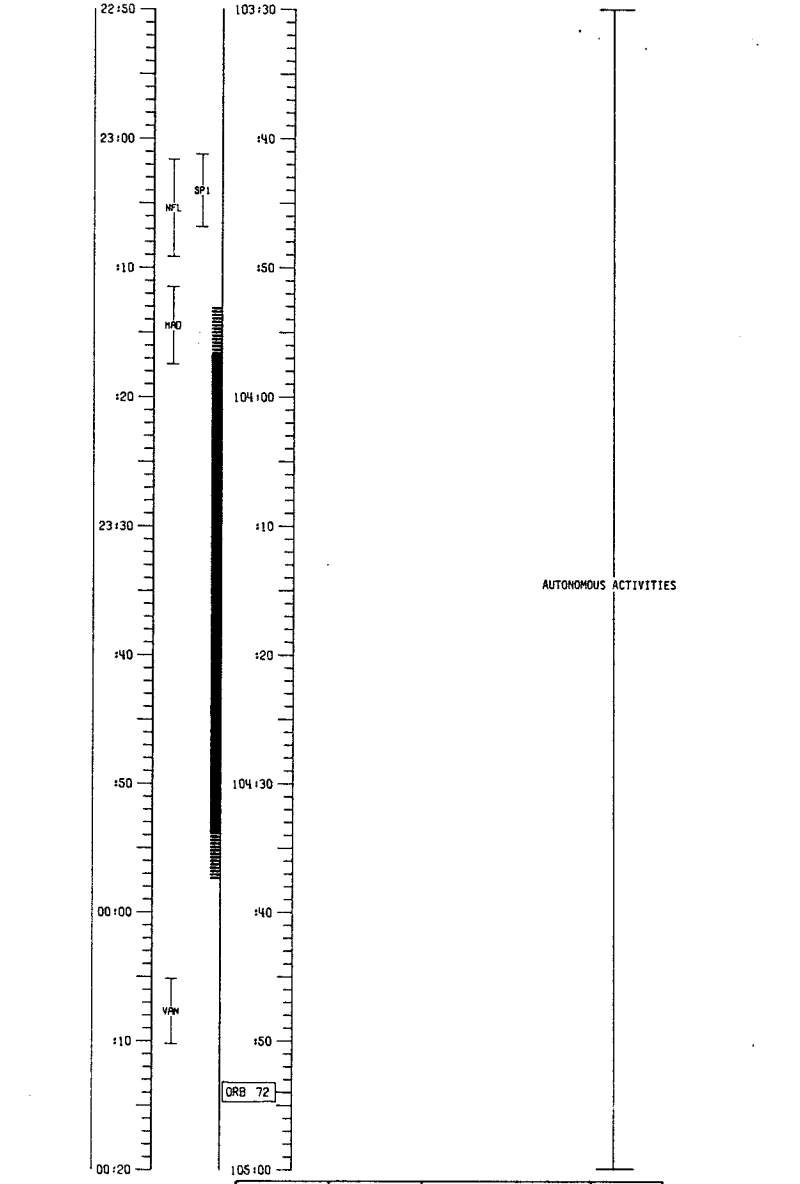
HOUSTON DATE	REV
JULY 19, 1975	61-62



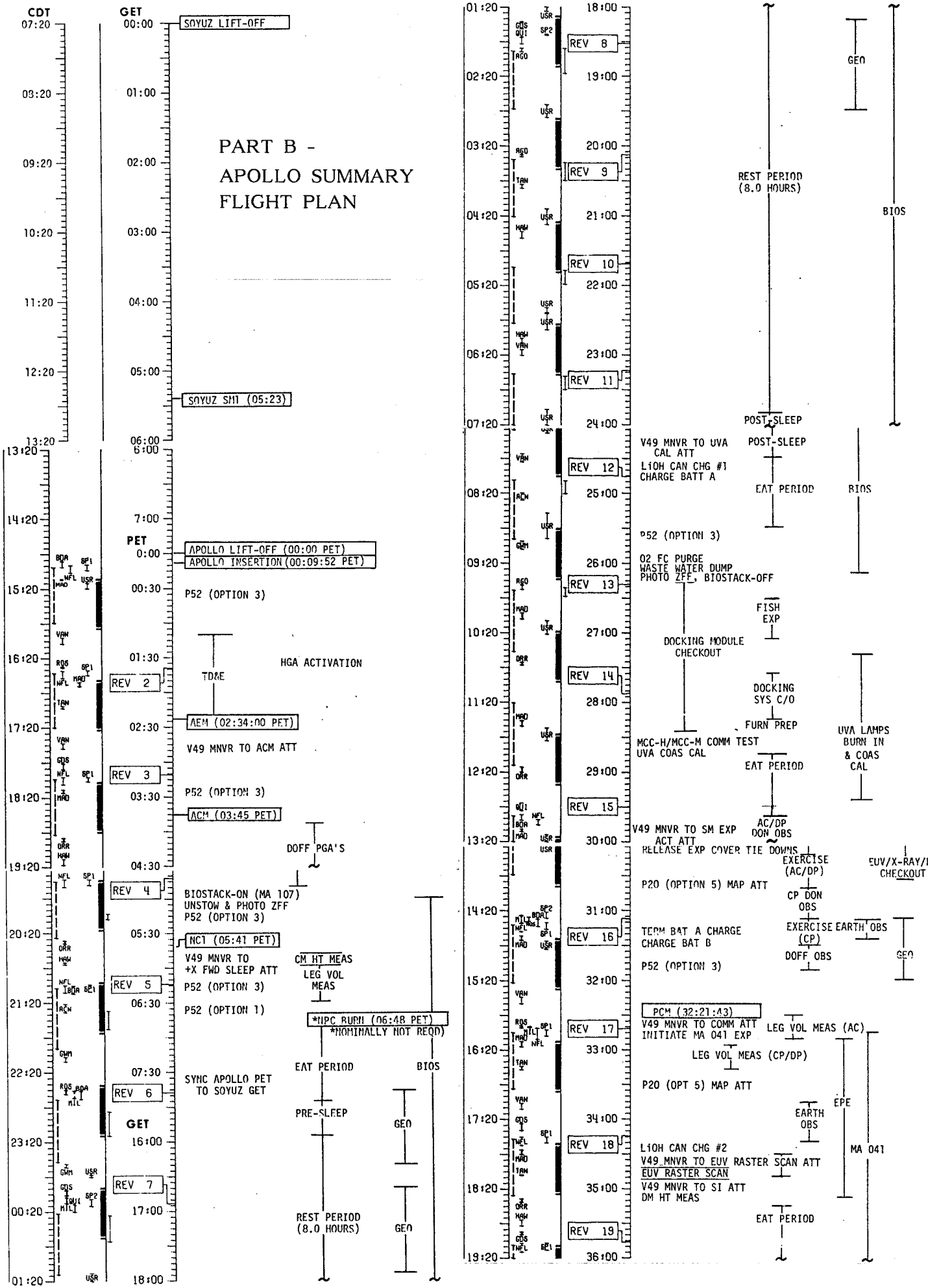
MISSION	EDITION	PUBLICATION DATE	PAGE
ASTP	REVISION 6	APRIL 28, 1975	4.2-56

SOYUZ DETAILED CREW ACTIVITIES PLAN

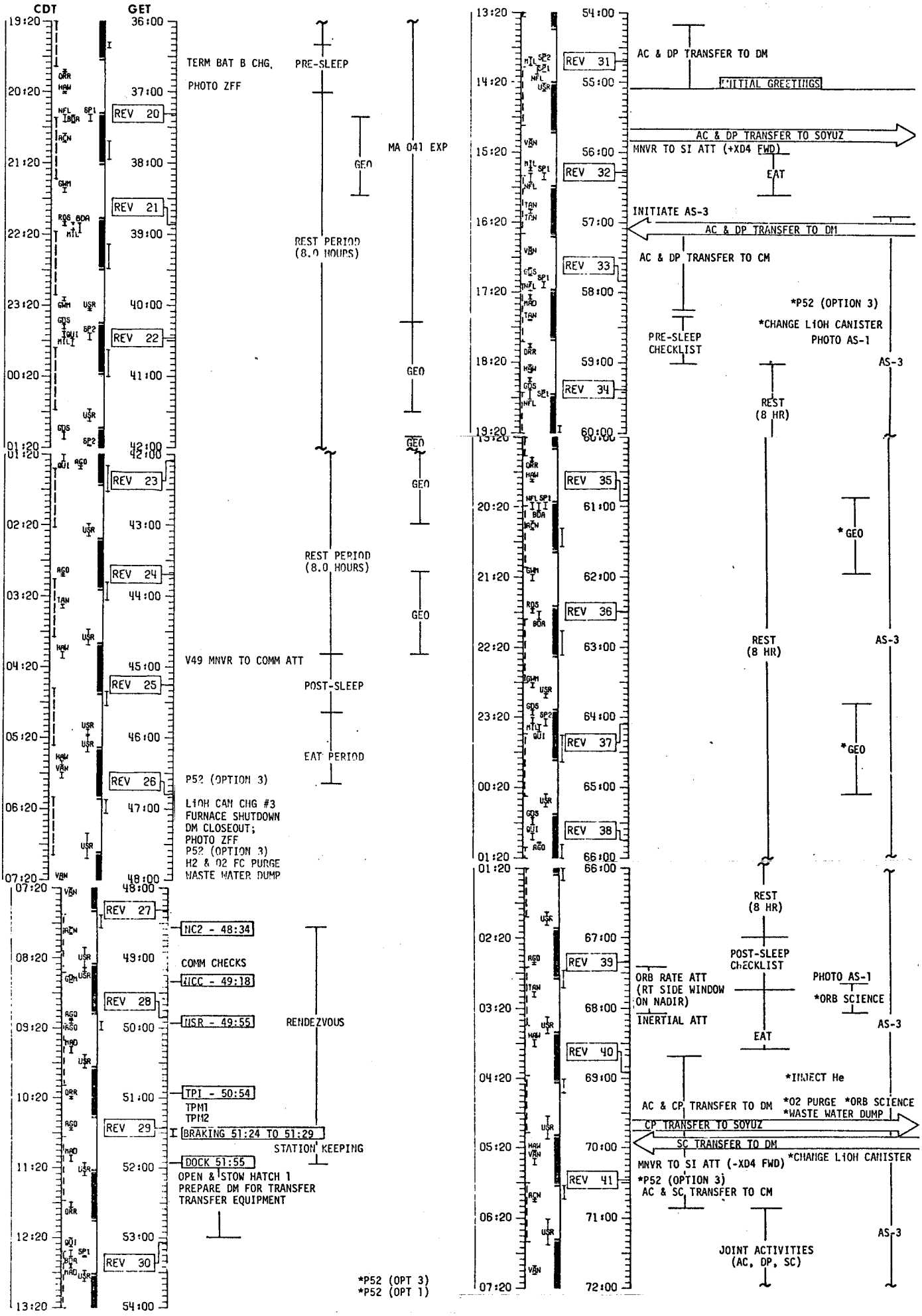
MOSCOW DATE	ORB
JULY 19, 1975	71-72

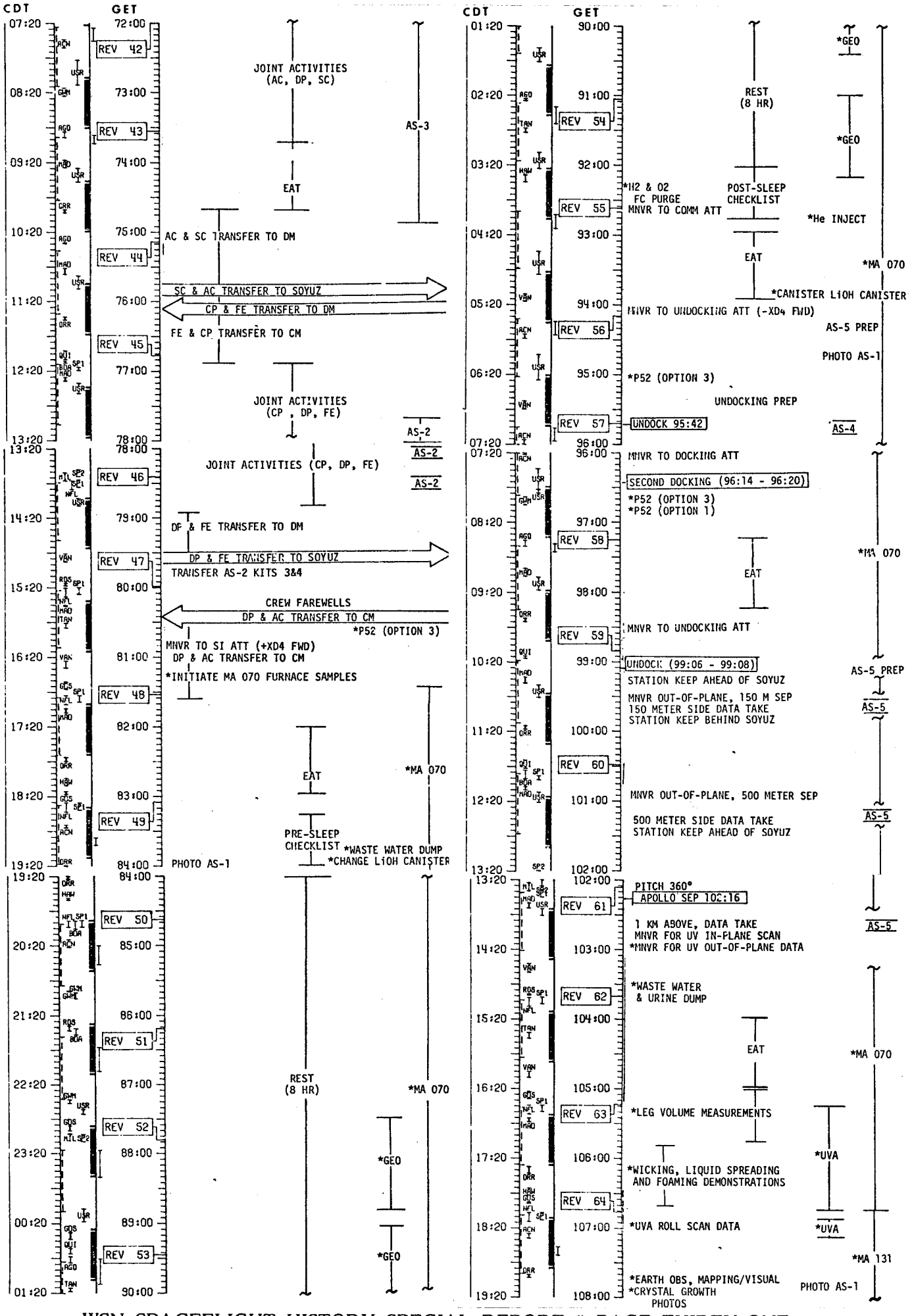


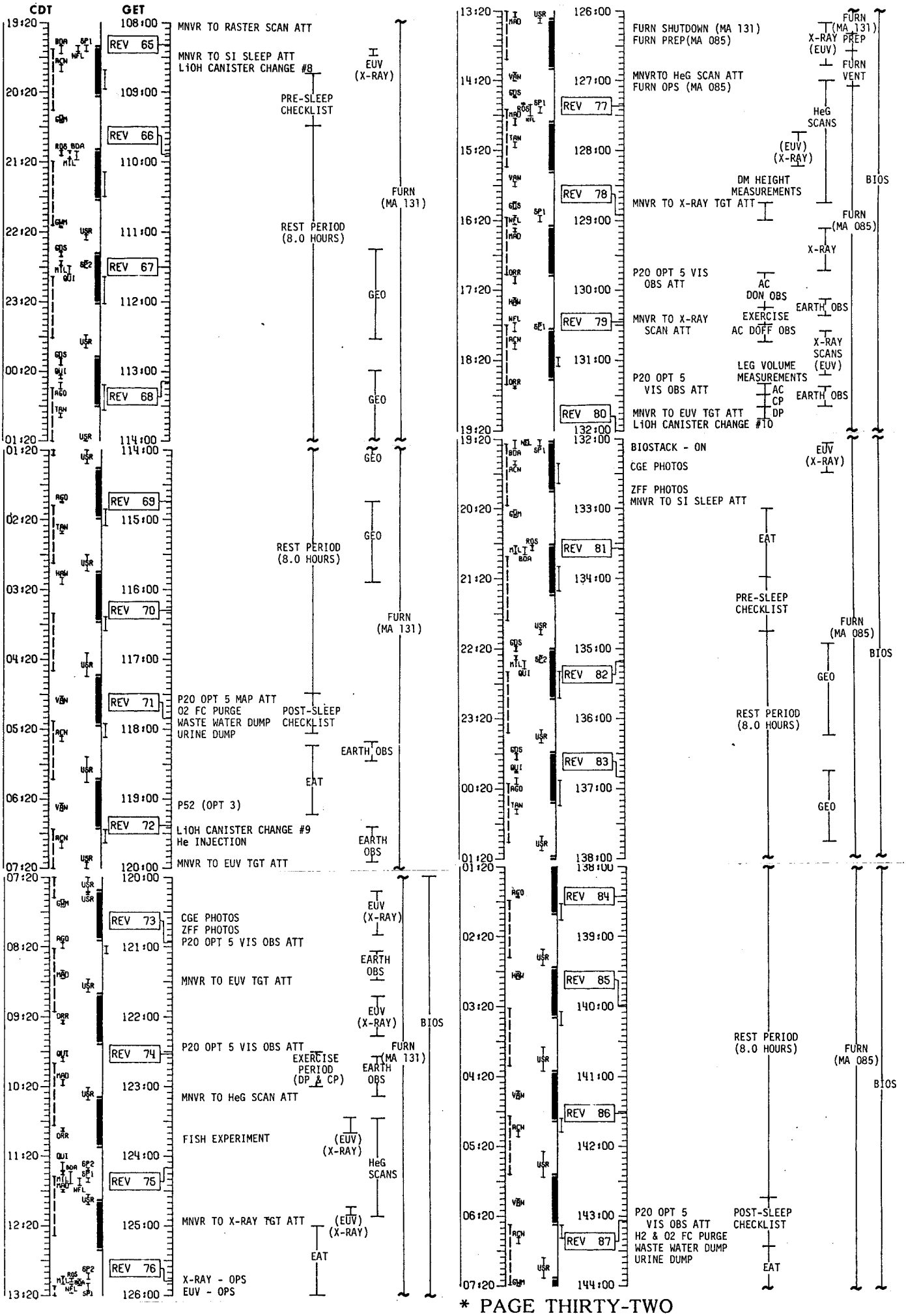
MISSION	EDITION	PUBLICATION DATE	PAGE
ASTP	REVISION 6	APRIL 28, 1975	4.2-57

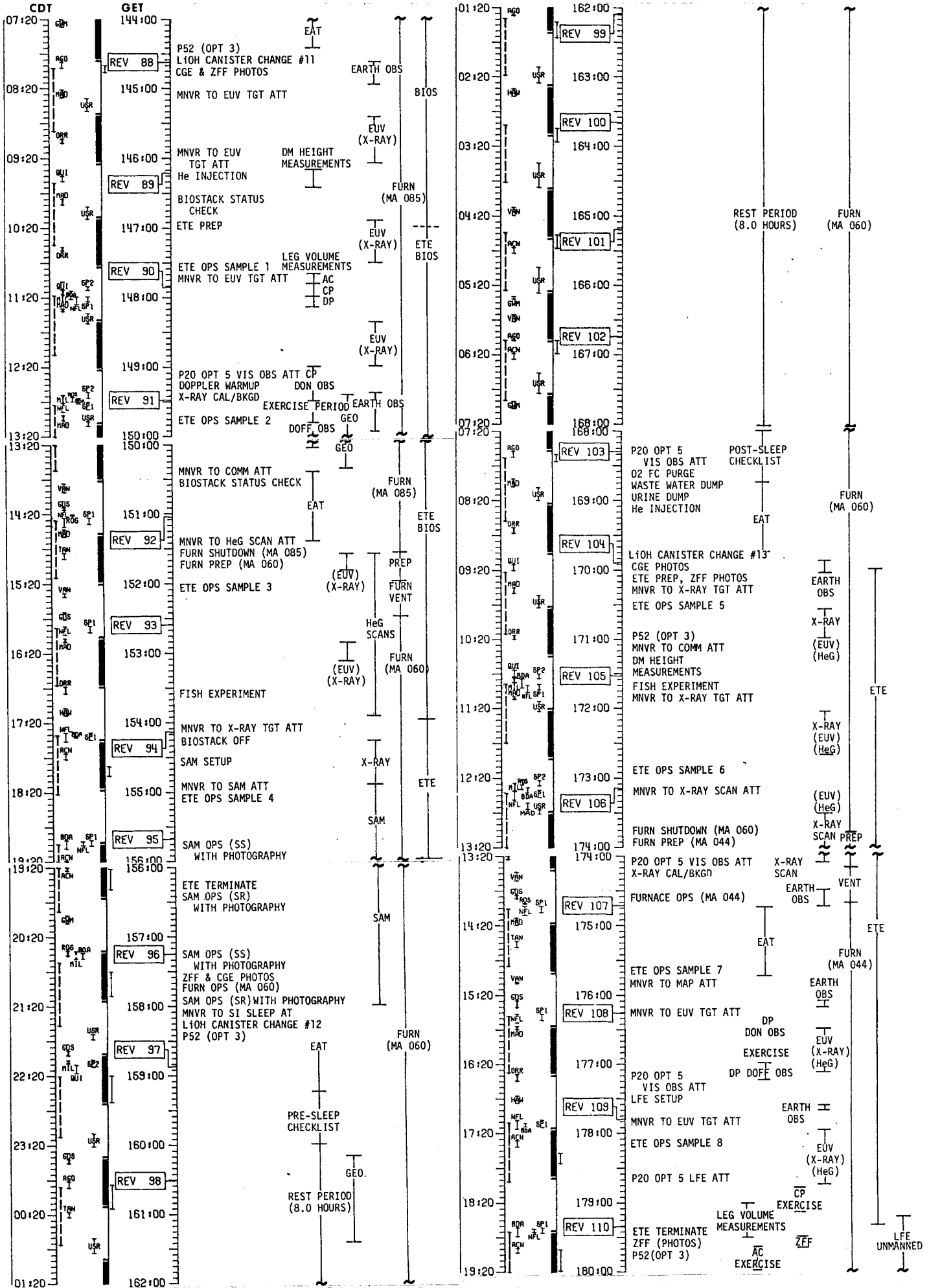


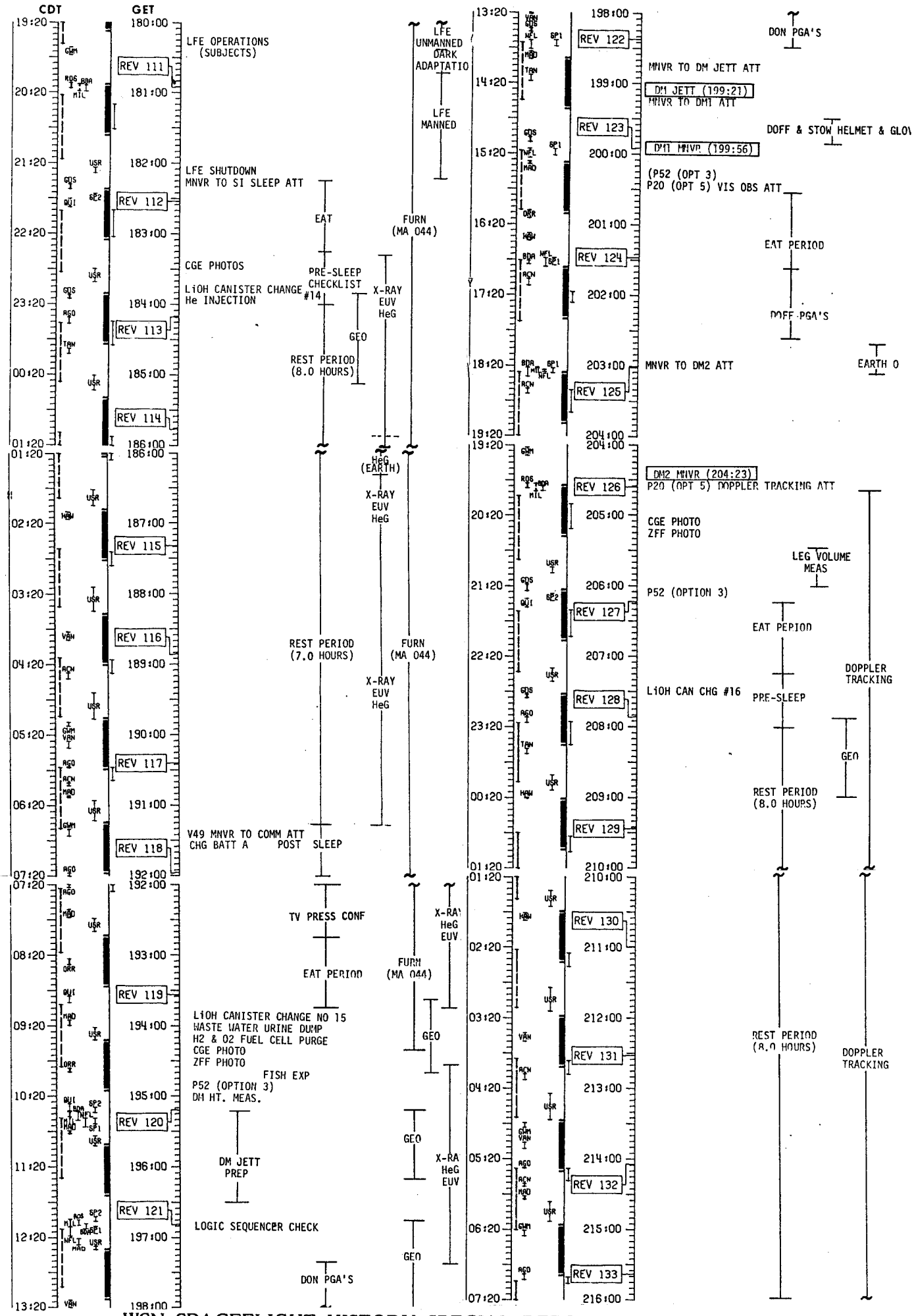
PART B - APOLLO SUMMARY FLIGHT PLAN


CDT
GET
TERM BAT B CHG,
PHOTO ZFF
PRE-SLEEP
GEO
MA 041 EXP
REST PERIOD
(8.0 HOURS)
GEO
GEO
GEO
REST PERIOD
(8.0 HOURS)
V49 MNVR TO COMM ATT
POST-SLEEP
EAT PERIOD
P52 (OPTION 3)
L1OH CAN CHG #3
FURNACE SHUTDOWN
DM CLOSEOUT;
PHOTO ZFF
P52 (OPTION 3)
H2 & 02 FC PURGE
WASTE WATER DUMP
NC2 - 48:34
COMM CHECKS
MCC - 49:18
MSR - 49:55
RENDEZVOUS
TPI - 50:54
TPM1
TPM2
BRAKING 51:24 TO 51:29
STATION KEEPING
DOCK 51:55
OPEN & STOW HATCH 1
PREPARE DM FOR TRANSFER
TRANSFER EQUIPMENT
*P52 (OPT 3)
*P52 (OPT 1)
AC & DP TRANSFER TO DM
INITIAL GREETINGS
AC & DP TRANSFER TO SOYUZ
MNVR TO SI ATT (+XD4 FWD)
EAT
INITIATE AS-3
AC & DP TRANSFER TO DM
AC & DP TRANSFER TO CM
PRE-SLEEP
CHECKLIST
*P52 (OPTION 3)
*CHANGE L1OH CANISTER
PHOTO AS-1
AS-3
REST
(8 HR)
*GEO
REST
(8 HR)
AS-3
*GEO
REST
(8 HR)
POST-SLEEP
CHECKLIST
ORB RATE ATT
(RT SIDE WINDOW
ON NADIR)
INERTIAL ATT
PHOTO AS-1
*ORB SCIENCE
AS-3
EAT
*INJECT He
AC & CP TRANSFER TO DM
*02 PURGE *ORB SCIENCE
*WASTE WATER DUMP
CP TRANSFER TO SOYUZ
SC TRANSFER TO DM
MNVR TO SI ATT (-XD4 FWD)
*CHANGE L1OH CANISTER
*P52 (OPTION 3)
AC & SC TRANSFER TO CM
JOINT ACTIVITIES
(AC, DP, SC)
AS-3


CDT
GET
REV 42
REV 43
REV 44
REV 45
REV 46
REV 47
REV 48
REV 49
REV 50
REV 51
REV 52
REV 53
REV 54
REV 55
REV 56
REV 57
REV 58
REV 59
REV 60
REV 61
REV 62
REV 63
REV 64
JOINT ACTIVITIES (AC, DP, SC)
EAT
AS-3
AC & SC TRANSFER TO DM
SC & AC TRANSFER TO SOYUZ
CP & FE TRANSFER TO DM
FE & CP TRANSFER TO CM
JOINT ACTIVITIES (CP , DP, FE)
AS-2
JOINT ACTIVITIES (CP, DP, FE)
AS-2
DP & FE TRANSFER TO DM
DP & FE TRANSFER TO SOYUZ
TRANSFER AS-2 KITS 3&4
CREW FAREWELLS
DP & AC TRANSFER TO CM
*P52 (OPTION 3)
MNVR TO SI ATT (+XD4 FWD)
DP & AC TRANSFER TO CM
*INITIATE MA 070 FURNACE SAMPLES
EAT
*MA 070
PRE-SLEEP CHECKLIST
*WASTE WATER DUMP
*CHANGE LiOH CANISTER
PHOTO AS-1
REST (8 HR)
*MA 070
*GEO
*GEO
REST (8 HR)
*H2 & O2 FC PURGE
MNVR TO COMM ATT
POST-SLEEP CHECKLIST
EAT
*CANISTER LiOH CANISTER
MNVR TO UNDOCKING ATT (-XD4 FWD)
*P52 (OPTION 3)
UNDOCKING PREP
UNDOCK 95:42
MNVR TO DOCKING ATT
SECOND DOCKING (96:14 - 96:20)
*P52 (OPTION 3)
*P52 (OPTION 1)
EAT
MNVR TO UNDOCKING ATT
UNDOCK (99:06 - 99:08)
STATION KEEP AHEAD OF SOYUZ
MNVR OUT-OF-PLANE, 150 M SEP
150 METER SIDE DATA TAKE
STATION KEEP BEHIND SOYUZ
MNVR OUT-OF-PLANE, 500 METER SEP
500 METER SIDE DATA TAKE
STATION KEEP AHEAD OF SOYUZ
PITCH 360°
APOLLO SEP 102:16
1 KM ABOVE, DATA TAKE
MNVR FOR UV IN-PLANE SCAN
*MNVR FOR UV OUT-OF-PLANE DATA
*WASTE WATER & URINE DUMP
EAT
*LEG VOLUME MEASUREMENTS
*WICKING, LIQUID SPREADING AND FOAMING DEMONSTRATIONS
*UVA ROLL SCAN DATA
*EARTH OBS, MAPPING/VISUAL
*CRYSTAL GROWTH PHOTOS
*He INJECT
*MA 070
AS-5 PREP
PHOTO AS-1
AS-4
AS-5 PREP
AS-5
AS-5
AS-5
*MA 070
*UVA
*UVA
*MA 131
PHOTO AS-1

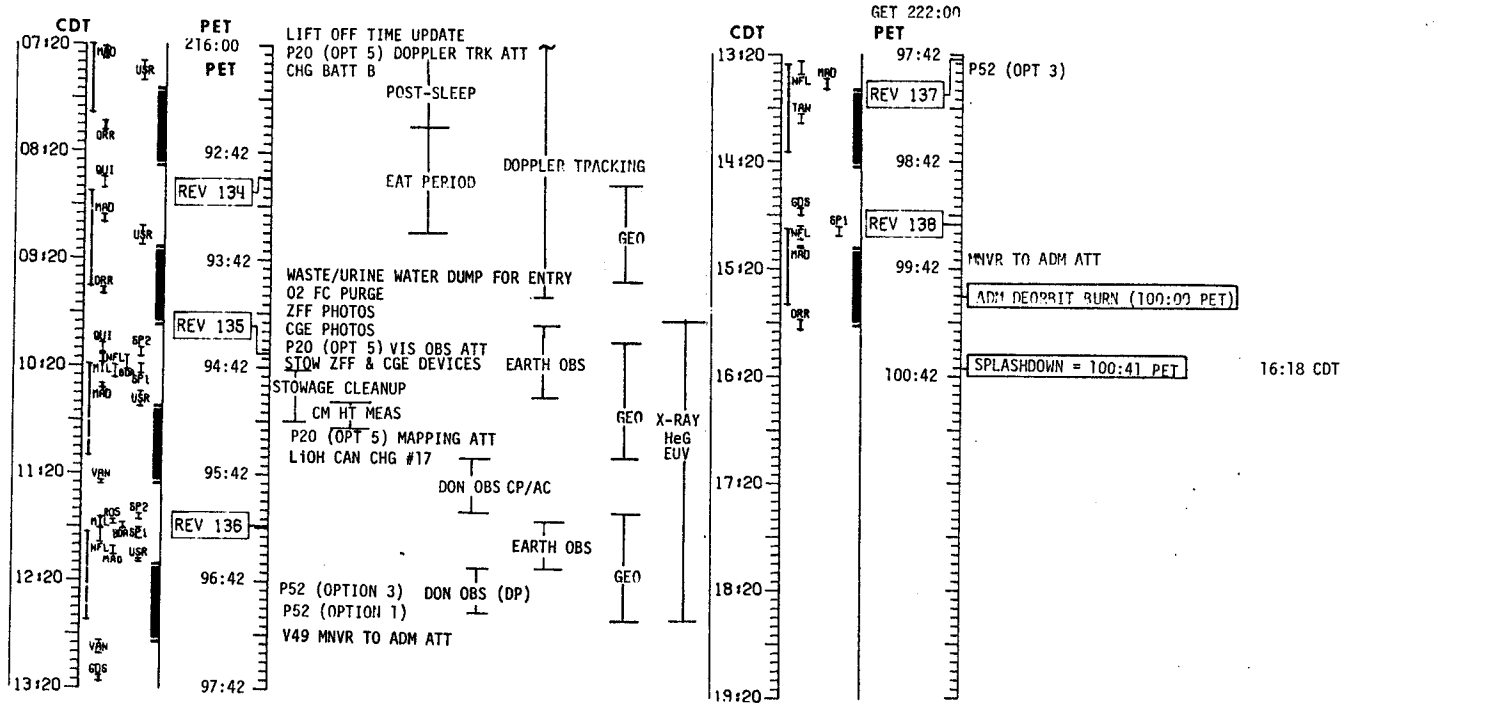

CDT
GET
MNVR TO RASTER SCAN ATT
REV 65
MNVR TO SI SLEEP ATT
LiOH CANISTER CHANGE #8
EUV (X-RAY)
PRE-SLEEP CHECKLIST
FURN (MA 131)
REST PERIOD (8.0 HOURS)
GEO
REV 66
REV 67
REV 68
REV 69
REV 70
REV 71
REV 72
REV 73
REV 74
REV 75
REV 76
P20 OPT 5 MAP ATT
O2 FC PURGE
WASTE WATER DUMP
URINE DUMP
POST-SLEEP CHECKLIST
EARTH OBS
EAT
P52 (OPT 3)
LiOH CANISTER CHANGE #9
He INJECTION
MNVR TO EUV TGT ATT
CGE PHOTOS
ZFF PHOTOS
P20 OPT 5 VIS OBS ATT
MNVR TO EUV TGT ATT
P20 OPT 5 VIS OBS ATT
EXERCISE PERIOD (DP & CP)
MNVR TO HeG SCAN ATT
FISH EXPERIMENT
(EUV) (X-RAY)
HeG SCANS
MNVR TO X-RAY TGT ATT
X-RAY - OPS
EUV - OPS
BIOS
REV 77
REV 78
REV 79
REV 80
REV 81
REV 82
REV 83
REV 84
REV 85
REV 86
REV 87
FURN SHUTDOWN (MA 131)
FURN PREP(MA 085)
MNVRTO HeG SCAN ATT
FURN OPS (MA 085)
FURN (MA 131)
X-RAY PREP (EUV)
FURN VENT
DM HEIGHT MEASUREMENTS
MNVR TO X-RAY TGT ATT
FURN (MA 085)
X-RAY
P20 OPT 5 VIS OBS ATT
AC DON OBS
EXERCISE
AC DOFF OBS
EARTH OBS
MNVR TO X-RAY SCAN ATT
X-RAY SCANS (EUV)
LEG VOLUME MEASUREMENTS
P20 OPT 5 VIS OBS ATT
AC
CP
DP
EARTH OBS
MNVR TO EUV TGT ATT
LiOH CANISTER CHANGE #10
BIOSTACK - ON
CGE PHOTOS
ZFF PHOTOS
MNVR TO SI SLEEP ATT
EUV (X-RAY)
EAT
PRE-SLEEP CHECKLIST
FURN (MA 085)
BIOS
GEO
REST PERIOD (8.0 HOURS)
P20 OPT 5 VIS OBS ATT
H2 & O2 FC PURGE
WASTE WATER DUMP
URINE DUMP
POST-SLEEP CHECKLIST
EAT


CDT
GET
REV 88
REV 89
REV 90
REV 91
REV 92
REV 93
REV 94
REV 95
REV 96
REV 97
REV 98
REV 99
REV 100
REV 101
REV 102
REV 103
REV 104
REV 105
REV 106
REV 107
REV 108
REV 109
REV 110
P52 (OPT 3)
LiOH CANISTER CHANGE #11
CGE & ZFF PHOTOS
MNVR TO EUV TGT ATT
MNVR TO EUV TGT ATT
He INJECTION
BIOSTACK STATUS CHECK
ETE PREP
ETE OPS SAMPLE 1
MNVR TO EUV TGT ATT
P20 OPT 5 VIS OBS ATT CP
DOPPLER WARMUP
X-RAY CAL/BKGD
ETE OPS SAMPLE 2
MNVR TO COMM ATT
BIOSTACK STATUS CHECK
MNVR TO HeG SCAN ATT
FURN SHUTDOWN (MA 085)
FURN PREP (MA 060)
ETE OPS SAMPLE 3
FISH EXPERIMENT
MNVR TO X-RAY TGT ATT
BIOSTACK OFF
SAM SETUP
MNVR TO SAM ATT
ETE OPS SAMPLE 4
SAM OPS (SS)
WITH PHOTOGRAPHY
ETE TERMINATE
SAM OPS (SR)
WITH PHOTOGRAPHY
SAM OPS (SS)
WITH PHOTOGRAPHY
ZFF & CGE PHOTOS
FURN OPS (MA 060)
SAM OPS (SR) WITH PHOTOGRAPHY
MNVR TO SI SLEEP AT
LiOH CANISTER CHANGE #12
P52 (OPT 3)
PRE-SLEEP CHECKLIST
REST PERIOD (8.0 HOURS)
GEO.
EAT
EARTH OBS
EUV (X-RAY)
DM HEIGHT MEASUREMENTS
FURN (MA 085)
ETE
BIOS
LEG VOLUME MEASUREMENTS
AC
CP
DP
DON OBS
EXERCISE PERIOD
DOFF OBS
GEO
PREP
FURN VENT
HeG SCANS
(EUV) (X-RAY)
FURN (MA 060)
X-RAY
SAM
REST PERIOD (8.0 HOURS)
FURN (MA 060)
P20 OPT 5 VIS OBS ATT
02 FC PURGE
WASTE WATER DUMP
URINE DUMP
He INJECTION
POST-SLEEP CHECKLIST
LiOH CANISTER CHANGE #13
CGE PHOTOS
ETE PREP, ZFF PHOTOS
MNVR TO X-RAY TGT ATT
ETE OPS SAMPLE 5
P52 (OPT 3)
MNVR TO COMM ATT
DM HEIGHT MEASUREMENTS
FISH EXPERIMENT
MNVR TO X-RAY TGT ATT
ETE OPS SAMPLE 6
MNVR TO X-RAY SCAN ATT
FURN SHUTDOWN (MA 060)
FURN PREP (MA 044)
P20 OPT 5 VIS OBS ATT
X-RAY CAL/BKGD
FURNACE OPS (MA 044)
ETE OPS SAMPLE 7
MNVR TO MAP ATT
MNVR TO EUV TGT ATT
P20 OPT 5 VIS OBS ATT
LFE SETUP
MNVR TO EUV TGT ATT
ETE OPS SAMPLE 8
P20 OPT 5 LFE ATT
ETE TERMINATE
ZFF (PHOTOS)
P52(OPT 3)
EARTH OBS
X-RAY (EUV) (HeG)
X-RAY SCAN
VENT
DP DON OBS
EXERCISE
DP DOFF OBS
CP EXERCISE
LEG VOLUME MEASUREMENTS
AC EXERCISE
ZFF
LFE UNMANNED


CDT
GET
LFE OPERATIONS (SUBJECTS)
REV 111
REV 112
REV 113
REV 114
REV 115
REV 116
REV 117
REV 118
REV 119
REV 120
REV 121
REV 122
REV 123
REV 124
REV 125
REV 126
REV 127
REV 128
REV 129
REV 130
REV 131
REV 132
REV 133
LFE SHUTDOWN
MNVR TO SI SLEEP ATT
CGE PHOTOS
LiOH CANISTER CHANGE #14
He INJECTION
EAT
PRE-SLEEP CHECKLIST
REST PERIOD (8.0 HOURS)
GEO
X-RAY EUV HeG
HeG (EARTH)
REST PERIOD (7.0 HOURS)
V49 MNVR TO COMM ATT
CHG BATT A
POST SLEEP
TV PRESS CONF
EAT PERIOD
LiOH CANISTER CHANGE NO 15
WASTE WATER URINE DUMP
H2 & 02 FUEL CELL PURGE
CGE PHOTO
ZFF PHOTO
FISH EXP
P52 (OPTION 3)
DM HT. MEAS.
DM JETT PREP
LOGIC SEQUENCER CHECK
DON PGA'S
LFE UNMANNED DARK ADAPTATIO
LFE MANNED
FURN (MA 044)
FURN (MA 044)
FURN (MA 044)
X-RAY EUV HeG
X-RAY EUV HeG
X-RAY EUV HeG
GEO
GEO
GEO
GEO
MNVR TO DM JETT ATT
DM JETT (199:21)
MNVR TO DM1 ATT
DM1 MNVR (199:56)
(P52 (OPT 3)
P20 (OPT 5) VIS OBS ATT
MNVR TO DM2 ATT
DM2 MNVR (204:23)
P20 (OPT 5) DOPPLER TRACKING ATT
CGE PHOTO
ZFF PHOTO
P52 (OPTION 3)
LiOH CAN CHG #16
PRE-SLEEP
REST PERIOD (8.0 HOURS)
DON PGA'S
DOFF & STOW HELMET & GLO
EAT PERIOD
DOFF PGA'S
EARTH O
LEG VOLUME MEAS
EAT PEPIOD
DOPPLER TRACKING
GEO
REST PERIOD (8.0 HOURS)
DOPPLER TRACKING

SUMMARY FLIGHT PLAN

DATE	REV
7/24/75	133-140



AC	alternating current or Apollo Commander
ACCEL	accelerometer
ACN	Ascension
ACT	activation
ACE	audio center equipment
ACM	Apollo circularization maneuver
ACQ	acquisition or acquire
ADAPT	adapter
ADM	Apollo deorbit maneuver
AEM	Apollo evasive maneuver
AGC	automatic gain control
AGO	Santiago, Chile (STDN)
AH	ampere hours
AJ-BOX	Apollo junction box
ALT	altitude
ALTM	altimeter
AM	amplitude modulation
AMP or amp	amperes
AMPL	amplifier
ANT	antenna
APDS	androgynous peripheral docking system
AOL	Atlantic Ocean line
AOS	acquisition of signal or acquisition of site
AS-X	Apollo-Soyuz joint experiment, 1 thru 5
ASCP	attitude set control panel
ASE	artificial solar eclipse (AS-4)
ASTP	Apollo Soyuz Test Project
ATS	applied technology satellite
ATT	attitude
AUX	auxiliary
AZ	azimuth
BAT or BATT	battery
BEF	blunt end forward
BD	band
BDA	Bermuda (STDN)
BIOMED	bio-medical data
BIOS	Biostack Experiment (MA 017)
BKWD	backward
BMAG	body mounted attitude gyro
BP	barber pole
BRKT	bracket
BT	burn time
BU	backup
C	centigrade
CAPCOM	capsule communicator
CAL	calibration
CAMR or CAM	camera
CAN	canister (Soyuz film)
CARR	carrier
CB or cb	circuit breaker
CC	cubic center
CCU	comm carrier umbilical
CCW	counter clockwise
CDT	Central Daylight Time
CDU	coupling data unit
CGE	Crystal Growth Experiment (MA 028)
CI	color interior film
CIRC	circulation
CK or ck	check
CKT	circuit
C/L	centerline or checklist
CM	command module or centimeters
CMC	command module computer
CMD	command
CNTL	control
CO2	carbon dioxide
C/O	check out
COAS	crew optical alignment sight
COMM	communications
COMM HEAD	communications head
CONFIG	configuration
COMP	compare or compensate
CONT	continue or contingency
CP	Command Module Pilot
CRYO	cryogenic
CSM	command and service modules
CST	central standard time
CTE	central timing equipment
CTR	center
C&WS	caution and warning system
CW	clockwise
CWG	constant wear garment
CX	color exterior film
DAC	data acquisition camera
DAP	digital auto pilot
DB	deadband
DC	direct current
DEG	degrees
DEPL	depletion
DEPRESS	depressurize, depressurization
DET	digital event timer
DIFF	difference
DIR	direct
DK	docked
DM	docking module (Apollo)
DM1	1st shaping maneuver for Doppler
DM2	2nd shaping maneuver for Doppler
DOPP	Doppler Tracking Experiment (MA 089)
DP	Docking Module Pilot
DSE	data storage equipment (CSM)
DSKY	display and keyboard
DUA	digital uplink assembly
DV	descent vehicle (Soyuz)
DWN	down
E	enter
EARTH OBS	Earth Observations & Photography (MA 136)
ECS	environmental control system
ED	explosive device
EDT	eastern daylight time
EFH	earth far horizon
EI	earth (atmosphere) interface and entry interface
EKG	electrocardiogram
ELECT	electrical
ELEV	elevation
EMER	emergency
EMP	erasable memory program
EMS	entry monitor system
ENG	engine
ENH	earth near horizon
ENT	entry
E.O.	earth orbit
EOM	end of mission
EPE	Electrophoresis, German Experiment (MA 014)
EPHEM	Ephemeris
EPS	electrical power subsystem
EQUIP	equipment
ERR	error
ETE	Electrophoresis Technology, USA Experiment (MA 011)
EUV	Extreme UV Telescope Experiment (MA 083)
EVA	extravehicular activity
EVAP	evaporator
EXP	experiment
EXT	external
EXTD	extend
F	farenheit, thrust (force)
f	f-stop
FAM	familiarize or familiarization
FC	fuel cell
FCS	fecal containment system
FDAI	flight director attitude indicator
FE	flight engineer or onboard engineer (Soyuz)
FK-6	Soyuz still camera
FLT	flight
FM	frequency modulated
FOV	field of view
FPS	feet per second
FR	frame(s)
FR/SEC	frames per second
FREQ	frequency
FT or ft	feet
FTO	functional test objective
FTP	full throttle position
FURN or AS-3	Multipurpose Electrical Furnace Experiment
FWD	forward
G	grams or gravity
GA	gimbal angle
GAL	galactic
G&C	guidance and control
GDC	gyro display coupler
GDS	Goldstone, California (STDN)
GEO	Geodynamics Experiment (MA 128)
GET	ground elapsed time
GETI	ground elapsed time of ignition
GLY	glycol
GMT	Greenwich mean time
G&N	guidance and navigation
GNCS	guidance, navigation and control system (CSM)
GRP	group
GWM	Guam
H2	hydrogen
HA	apogee altitude
HAW	Hawaii (STDN)
HBR	high bit rate (TLM)
HD	highly desirable or head (VTR)
HDC	Hasselblad data camera
HDS	heads
HeG	Helium Glow Experiment (MA 088)
HGA	high-gain antenna
HH	hand-held
HI	high (switch position)
HOR	horizon
H2O	water
HP	perigee altitude
HR(s)	hours(s)
HRC	Hasselblad reflex camera
HSB	helmet stowage bag
HTR	heater
I	current
ICDU	inertial coupling data unit
ID	identification
IED	interacting equipment document
ICG	inflight coverall garment
ICS	intercomm system
ICV	Interface control valve (Soyuz)
IGA	inner gimbal angle
IGN	ignition
IMP	impulse
IMU	inertial measurement unit
INCR	increase
IND	indicator

INIT	initialization
INT	interval
INTEG	integrity
IPV	Interface pressure valve (Soyuz)
IU	instrumentation unit
IV	interface volume
IVC	intervehicular communications
IVL	intervalometer
IVT	intravehicular transfer
iR	inclination of the ascending return
JETT	jettison
JSC	Lyndon B. Johnson Space Center
K-3A	camera (Soyuz)
KG	kilogram
KM	kilometer
KSC	John F. Kennedy Space Center
kwh	kilowatt hour
L	liter
LA	launch azimuth
LAT	latitude
LBR	low bit rate (TLM)
LB or lb	pound(s)
L/D	lift/drag
LDG	landing
LDMK	landmark
LEB	lower equipment bay
LFE	Light Flash Experiment (MA 106)
LH	left-hand
L/H	local horizontal
LiOH	lithium hydroxide
LLOS	landmark line of sight
L/O	lift-off
LONG	longitude
LOS	loss of signal or line of site
L/S or LS	landing site
LT	light
LTG	lighting
LUB	lubrication
LV	launch vehicle
L/V	local vertical
LVPD	launch vehicle pressure display
M	mandatory, meter or mass
MAD	Madrid, Spain (STDN)
MAG	magazine (camera)
MAN	manual
MAX	maximum
MAX Q	maximum dynamic pressure
MCC-H	Mission Control Center - Houston
MCC-M	Mission Control Center - Moscow
MDC	main display console
MEAS	measurement
MED	medical or medium
MET	mission event timer
MGA	middle gimbal angle
M/I	minimum impulse
MICR	microphone
MIN	minimum or minute(s)
MIR	mirror
MLA	Merrit Island, Florida, launch area
MM or mm	millimeter
MNA or MNB	main electrical bus A or B
MNVR	orientation maneuver
MO	manual orientation
MON	monitor
MONO	monaural
MPL	mid-Pacific line
MPS	main propulsion system or meters per second
M/R	mixture ratio (fuel to oxidizer)
MS	mass spectrometer
MSFC	George C. Marshall Space Flight Center
MT	Moscow time
MTN	motion
MTS	mountains
MTVC	manual thrust vector control
MULT	multiplier
N2	nitrogen
NAV	navigation
NC1	first phasing maneuver
NC2	second phasing maneuver
NCC	corrective combination maneuver
NEG	negative
NFL	Newfoundland, Canada (STDN)
NK	Nikon camera
NM	nautical miles
NPC	plane change maneuver
NO.	number
NOM	nominal
NSR	coelliptic maneuver
NXX	Noun XX
O2	oxygen
OBS	observation/OPS biomed system
ODB	Operational Data Book
O/F	oxidizer to fuel ratio
OGA	outer gimbal angle
OID	octal identifier
OM	orbital module (Soyuz)
OMNI	omnidirectional antenna
OPR	operate
OPT	option
ORB	orbital or orbit
ORDEAL	orbit rate display earth and lunar
ORIENT	orientation
ORR	Orroral, Australia (STDN)
OVBD	overboard
OVHD	overhead
P	pitch, program, or pressure
PAD	voice update
PART	particle
PC	plane change or chamber pressure
PCM	pulse code modulation or phase correction maneuver
PCU	pressure control unit (Soyuz)
PET	phased elpased time
PEV	pressure equalization valve
Pg	page
PGA	pressure garment assembly
PHOTO	photograph
PKG	package
P/L	portable light (Apollo)
PLU	portable light unit (Soyuz)
PM	phase modulated
P/M	photos & movies
POL	polarity or polarizing
PNL	panel
POS	positive
POT	potable
PRD	personal radiation dosimeter
PREF	preferred
PREL	preliminary
PREP	preparation
PRESS	pressure
PRIM	primary
PRO	proceed
PROP	proportional
PRN	pseudo random noise
PRPLNT	propellant
PRV	pressure relief valve
PSIA	pounds per square inch absolute
PSID	pounds per square inch differential
PSIG	pounds per square inch gage
PT	point
PTC	passive thermal control
PTT	push to talk
PU	propellant utilization
PUGS	propellant utilization gaging system
PWR	power
PXX	Program XX
PYRO	pyrotechnic
QTY	quantity
QUAD	quadrant
QUI	Quito, Ecuador (STDN)
R	roll or range
RAD	radiator, radial, or radiation
RCDR	recorder
RCS	reaction control system
RCVR	receiver
REACQ	reacquire
REFSMMAT	REFerence Stable Member MATrix
REG	regulator
REL	release
REQD	required
RETR	retract
REV	revolution
RH	right-hand
RHC	rotational hand controller
RMT	remote
RNDZ	rendezvous
RNG	range or ranging
ROS	Rosman, North Carolina (STDN)
RSI	roll stability indicator
RT	realtime
RTC	realtime command
RWD	rewind
RXX	Routine XX
SA	shaft angle
SAM	Stratospheric Aerosol Measurement Exp
SATT	satellite
S-BD	S-BAND
SC	spacecraft or Soyuz Commander
SCS	stabilization control system
SE	southeast
SEC	second or secondary
SECO	S-IVB engine cutoff
SECS	sequential events control system
SEF	sharp end forward
SEL	select
SEP	separate or separation
SEQ	sequence
SI	solar inertial
S-IVB	Saturn IVB (third stage)
SJ-BOX	Soyuz junction box
SLA	service module DM adapter
SLOS	star line-of-sight
SM	service module
SP1	USSR tracking ship (off Nova Scotia)
SP2	USSR tracking ship (off Honduras)
SI	solar inertial
SPEC	special
SPS	service propulsion system
SR	sunrise
SS	sunset or subsolar
STBY	standby
STDN	Spaceflight Tracking and Data Network
S.V.	state vector
SW	switch
SXT	sextant
SYS	system
T EPHEM	time of Ephemeris update
TA	trunnion angle
TAN	Tananarive, Madagascar (STDN)
TB	time base or talkback
TBD	to be determined
TBS	to be supplied
TC	time (camera setting)
TCA	time of closest approach
TCV	temperature control valve (Soyuz)
TD	touchdown
T&D	transposition and docking
TD&E	transposition and docking and DM ejection
TEMP	temperature or temporary
TERM	terminate
TGT	target
TGR	time of gyro release (Soyuz)
THC	translation hand controller
TIG	time of ignition
TK	tank
TK-X	television camera 1 thru 4 (Soyuz)
TLM or TM	telemetry
TPF	terminal phase final
TPI	terminal phase initiation
TPM	terminal phase midcourse
T/R	transmitter/receiver or transmit/receive
TRANS	translation
TRK	track or tracking
TRUN	trunnion
TV	television report (to control centers only)
TV-X	television in accordance with the Public Information Plan
TVC	thrust vector control or television camera
TWR	tower
UCTA	urine collection transfer assembly
UDL	up data link
ULL	ullage
UMB	umbilical
UNBAL	unbalance (meter)
UNDK	undock
USA, US	United States of America
USSR or USR	Union of Soviet Socialist Republics
UVA or AS-5	Ultraviolet Absorption Experiment (MA 059)
V	velocity or volt
VAN	USNS Vanguard
VER	verify
VGIMU	velocity to be gained as related to IMU orientation
VGX	velocity to be gained (X-body axis)
VGY	velocity to be gained (Y-body axis)
VGZ	velocity to be gained (Z-body axis)
VIS	visual
VR	resultant velocity
VTR	video tape recorder
VX	velocity along the X-axis
VY	velocity along the Y-axis
VZ	velocity along the Z-axis
VHF	very high frequency
VLV	valve
VOX	voice keying
VXX	Verb XX
W	watts
WRT	with respect to
WT	weight
XFER	transfer
XMIT	transmit or transmitter
XPNDER, XPNDR	transponder
X-RAY	X-Ray Observation Experiment (MA 048)
Y	yaw
ZFF or AS-1	Zone Forming Fungi Experiment (MA 147)
ΔAz	azimuth change (difference)
ΔH	altitude change (difference)
ΔP	pressure change (difference)
ΔR	position change (difference)
ΔV	velocity change (difference)
ΔVC	velocity change at engine cutoff
ΔVT	velocity change loaded pre-burn
#	numbers
θ	angle between the +X axis and a look angle vector with values from 0 to 180 deg
Ø	angle between the -Z axis and the projection of the look angle vector on the Y-Z plane with values from 0 to 360 deg
&	and (ampersand)
16KM	movie camera (Soyuz)