

APOLLO 15

CSM UPDATES

PART NO	S/N
SKB32100115 - 330	1001

7

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500	

DATE 3/29/71
7/15/71

P27 UPDATE

EARTH ORBIT
 BLOCK DATA

P37 BLOCK DATA

P30 MANEUVER

7

DATE 3/29/71

P30 MANEUVER

015

<u>VTO</u>	<u>SET STARS</u>	<u>SPS X SCS</u>	PURPOSE
R ALIGN <u>209</u>		+ NA	PROP/GUID
P ALIGN <u>009</u>		- 0 0 1 2 4	WT N47
Y ALIGN <u>349</u>		- 0 0 0 1 1	P TRIM N48
		+ 0 0 0 2 8	Y TRIM
		+ 0 0 0 4 0	HRS GETI
		+ 0 0 0 0 0	MIN N33
			SEC
	<u>SET</u>	<u>NA</u>	ΔV_X N81
	<u>ULLAGE</u>	"	ΔV_Y
	<u>SPS</u>	"	ΔV_Z
	<u>THUMBS</u>	X X X 0 6 1	R
	<u>P TRM</u>	X X X 0 1 8	P
	<u>P Y TRM</u>	X X X 0 2 0	Y
	<u>HC</u>	+ NA	H_A N44
	<u>P - 25</u>	"	H_P
	<u>Y 359</u>	+ NA	ΔVT
	<u>HORIZON/WINDOW</u>	X X X "	BT
		X " "	ΔVC
		X X X X 1 1	SXTS
		+ 2 1 6 1 0	SFT
		+ 1 8 6 0 0	TRN
		X X X NA	BSS
		X X "	SPA
		X X X "	SXP
	<u>OTHER</u>	0	LAT N61
		+	LONG
		+	RTGO EMS
			V10
			GET 0.05G

P27 UPDATE

EARTH ORBIT
BLOCK DATA

P37 BLOCK DATA

P30 MANEUVER

P30 MANEUVER

P30 MANEUVER

	P C + Z	PURPOSE
SET STARS	S P S G & N	PROP/GUID
R ALIGN	+ 6 6 3 1 3	WT N47
P ALIGN	+ 0 0 1 2 3	P TRIM N48
Y ALIGN	- 0 0 0 1 2	Y TRIM
ULLAGE	+ 0 0 0 8 0	HRS GETI
NONE	+ 0 0 0 2 9	MIN N33
	+ 0 1 3 4 7	SEC
	+ 3 1 8 9 4	ΔV_X N81
	- 2 4 3 7 0	ΔV_Y
	- 1 3 5 6 5	ΔV_Z
	X X X 1 7 5	R
	X X X 0 7 9	P
	X X X 3 3 2	Y
	+ H A	N44
	+ H P	
	+ ΔV_T	
	X X X BT	
	X ΔV_C	
HORIZON/WINDOW	X X X X	SXTS
	+ 0	SFT
	+ 0 0	TRN
	X X X	BSS
	X X SPA	
	X X X SXP	
OTHER	0 LAT N61	
BURN = GPS		LONG
DCKED	+ RTGO EMS	
	+ V10	
		GET 0.05G

DATE 3/29/71

P O Y 275

P30 MANEUVER

U-D		FLY - BY		PURPOSE
SET STARS		1		PROP/GUID
+ PTC Damping	R	+ 6 6 6 5 5		WT N47
A YD		+ 0 0 1 2 4		P TRIM N48
B + D SPIN UP	.375	- 0 0 0 1 1		Y TRIM
ALIGN 2 0 0 9		+ 0 0 0 7 3	HRS GETI	
P ALIGN 0 0 9		+ 0 0 0 3 0	MIN N33	
Y ALIGN 3 4 9		+ 0 5 6 8 0	SEC	
ULLAGE		+ 0 2 5 7 2	ΔV X	N81
NONE		+ 0 2 3 0 9	ΔV Y	
		- 0 3 1 4 9	ΔV Z	
		X X X 3 3 1	R	
		X X X 1 0 9	P	
		X X X 0 7 9	Y	
#1 SPS DOCKED		+ 1 1 1 1 1	H A	N44
#2 PREF REFS		+ 0 6 2 0 8	H P	
HORIZON/WINDOW		+ 0 0 2 0 8	ΔVT 04670	
Because of open		X X X 0 1 1	BT	
#3 LM wt		X 0 6 3 0	ΔVC	
33250		X X X X 0 2	SXTS	
36220		+ 1 4 8 5 0	SFT	
OTHER		+ 2 6 4 0 0	TRN	
		X X X 2 0 / A	BSS	
		X X	SPA	
		X X X	SXP	
		+ 0 1 3 3 2	LAT	N61
		- 1 7 4 0 4	LONG	
		+ 1 0 9 8 7	RTGO EMS	
		+ 3 6 1 7 0	V10	
		17 0:59:57	GET	0.05G

DATE 3/29/71

P24 LDMK TRACKIN

P37 BLOCK DATA

EARTH ORBIT
BLOCK DATA

P27 UPDATE

P30 MANEUVER

P30 MANEUVER

<i>V>0</i>	<i>MCC 8</i>	<i>PURPOSE</i>
SET STARS	<i>SPS 169N</i>	<i>PROP/GUID</i>
<i>R ALIGN</i> <u>209</u>	+ 6 6 5 3 1	WT N47
<i>P ALIGN</i> <u>009</u>	+ 0 0 1 2 3	P TRIM N48
<i>Y ALIGN</i> <u>349</u>	- 0 0 0 1 2	Y TRIM
<i>ULLAGE</i> <u>NONE</u>	+ 0 0 0 0 7 3	HRS GETI
	+ 0 0 0 3 1	MIN N33
	+ 0 1 4 0 2	SEC
	+ 0 0 0 1 9	ΔV_X N81
	- 0 0 0 3 6	ΔV_Y
	+ 0 0 0 3 5	ΔV_Z
<i>LM</i> <u>36256</u>	X X X 0 3 8	R
<i>SM</i> <u>0011101</u>	X X X 2 4 0	P
<i>NOMINAL</i>	X X X 3 3 1	Y
<i>SINGLE BANK B</i>	+ NA	H_A N44
<i>NGA P 21 Y 243</i>	NA	H_P
<i>HORIZON/WINDOW</i>	+ 0 0 0 5 4	ΔVT
	X X X 0 0 1	BT
	X 0 0 0 3 2	ΔVC
	X X X X 2 3	SXTS
	+ 1 0 6 1 0	SFT
	+ 1 7 6 0 0	TRN
	X X X NA	BSS
	X X	SPA
	X X X	SXP
<i>OTHER</i>	0	LAT N61
		LONG
	+	RTGO EMS
	+	V10
		GET 0.05G

DATE 3/29/71

P30 MANEUVER

DATE 3/29/71

<u>V70</u>	<u>LoI</u>	PURPOSE
SET STARS	<u>SPS 16YN</u>	PROP/GUID
R ALIGN <u>0 MARK</u>	+ 66 24 4	WT N47
P ALIGN <u>264</u>	+ 0 0 1 2 1	P TRIM N48
Y ALIGN <u>090</u>	- 0 0 0 1 2	Y TRIM
ULLAGE <u>None</u>	+ 0 0 0 7 8	HRS GETI
	+ 0 0 0 3 1	MIN N33
	+ 0 3 4 4 8	SEC
	- 2 8 7 4 5	ΔV_X N81
	- 0 7 6 6 4	ΔV_Y
	- 0 1 1 2 3	ΔV_Z
	X X X 0 -	R
	X X X 0 -	P
	X X X 0 -	Y
	+ 0 1 6 9 5	H A N44
	+ 0 0 5 8 3	H P
	+ 2 9 9 6 4	ΔV_T
HORIZON/WINDOW	X X X 6 4 0	BT
	X 2 9 9 0 2	ΔV_C
	X X X X 2 5	SXTS
	+ 2 6 7 1 0	SFT
	+ 2 2 8 0 0	TRN
	X X X NA	BSS
	X X	SPA
	X X X	SXP
OTHER	0	LAT N61
	+	LONG
	+	RTGO EMS
		V10
		GET 0.05G

P27 UPDATE

EARTH ORBIT
BLOCK DATA

P37 BLOCK DATA

P24 LDMK TRACKIN

P30 MANEUVER

P30 MANEUVER

SET STARS	TG 4	PURPOSE
R ALIGN	SPS 1 G>N	PROP/GUID
P ALIGN	+ 4 0 0 1 5	WT N47
Y ALIGN	+ 0 0 0 5 9	P TRIM N48
	+ 0 0 1 2 1	Y TRIM
ULLAGE	+ 0 0 0 8 7	HRS GETI
4 JET	+ 0 0 0 1 2	MIN N33
12 SEC	+ 0 4 0 0 6	SEC
	+ 3 1 2 1 1	ΔV_x N81
	- 2 0 7 4 0	ΔV_y
	- 0 6 4 3 0	ΔV_z
BURN underway	X X X 1 8 2	R
NOO DOI	X X X 0 5 7	P
L.S. Rofsmans	X X X 3 2 9	Y
HORIZON/WINDOW	+ NA	H_A N44 H_P
	+	ΔV_t
	X X X	BT
	X	ΔV_c
	X X X X	SXTS
	+ 0	SFT
	+ 0 0	TRN
	X X X	BSS
	X X	SPA
	X X X	SXP
OTHER	0	LAT N61 LONG
	+	RTGO EMS
	+	V10
		GET 0.05G

DATE 3/29/71

P30 MANEUVER

DATE 3/29/71

VTO		LOT		PURPOSE	
SET STARS		SPS YGYN		PROP/GUID	
R ALIGN	264	+ 66244		WT	N47
P ALIGN	090	+ 00121		P TRIM	N48
Y ALIGN	349	- 00012		Y TRIM	
ULLAGE	NO	+ 00078		HRS GETI	
		+ 00031		MIN N33	
		+ 04591		SEC	
		- 28975		ΔV_X	N81
		- 07764		ΔV_Y	
		- 00491		ΔV_Z	
		X X X 0		R	
		X X X 0		P	
		X X X 0		Y	
		+ 01696		H _A	N44
		+ 00584		H _P	
		+ 30000		ΔV_T	
		X X X 691		BT	
		X 29939		ΔV_C	
		X X X X 25		SXTS	
		+ 26710		SFT	
		+ 22800		TRN	
		X X X NA		BSS	
		X X		SPA	
		X X X		SXP	
		0		LAT	N61
				LONG	
		+		RTGO	EMS
		+		V10	
				GET	0.05G
36258					
SINGLES					
6+52					
L.O ON BANK					
A					
HORIZON/WINDOW					
OTHER					

P27 UPDATE

EARTH ORBIT
BLOCK DATA

P37 BLOCK DATA

P24 LDMK TRACKIN

P30 MANEUVER

P30 MANEUVER

SET STARS		PURPOSE
R ALIGN	+	WT N47
P ALIGN	0 0	P TRIM N48
Y ALIGN	0 0	Y TRIM
ULLAGE	+ 0 0	HRS GETI
	+ 0 0 0	MIN N33
	+ 0	SEC
		ΔV_X N81
		ΔV_Y
		ΔV_Z
HORIZON/WINDOW	X X X	R
	X X X	P
	X X X	Y
	+	H_A N44
		H_P
	+	ΔVT
	X X X	BT
	X	ΔVC
	X X X X	SXTS
	+	SFT
	+	TRN
OTHER	X X X	BSS
	X X	SPA
	X X X	SXP
	0	LAT N61
		LONG
	+	RTGO EMS
	+	V10
		GET 0.05G

DATE 3/29/71

P30 MANEUVER

DATE 3/29/71

<i>V & D</i>		001				PURPOSE	
SET STARS		SPS 16N				PROP/GUID	
R ALIGN	288	+	37800	0	0	WT	N47
P ALIGN	340	+	00168	0	0	P TRIM	N48
Y ALIGN	346	-	00055	0	0	Y TRIM	
ULLAGE		+	00082	0	0	HRS GETI	
4 QUAD		+	00039	0	0	MIN N33	
15 SEC		+	04829	0	0	SEC	
		-	02084	0	0	ΔV_X	N81
		-	00480	0	0	ΔV_Y	
		+	00020	0	0	ΔV_Z	
		X	X	X	0000	R	
		X	X	X	283	P	
		X	X	X	347	Y	
		+	00584	0	0	H_A	N44
		+	00092	0	0	H_P	
		+	02139	0	0	ΔVT	
		X	X	X	024.875	ΔVC	
		X	02084	0	0	SXTS	
		+	14420	0	0	SFT	
		+	35700	0	0	TRN	
		X	X	X	NA	BSS	
		X	X			SPA	
		X	X	X		SXP	
			0			LAT N61	
						LONG	
		+				RTGO EMS	
		+				V10	
						GET 0.05G	
HORIZON/WINDOW							
OTHER							

P27 UPDATE

EARTH ORBIT
BLOCK DATA

P37 BLOCK DATA

P24 LDMK TRACKIN
26082

P30 MANEUVER

P30 MANEUVER

V90	T815	PURPOSE
SET STARS	SPS 1 GYN	PROP/GUID
R ALIGN 288	+ 3 8 2 0 6	WT N47
P ALIGN 340	+ 0 0 0 5 8	P TRIM N48
Y ALIGN 346	+ 0 0 1 0 1	Y TRIM
ULLAGE 4 Ver	+ 0 0 0 8 8	HRS GETI
12 SEC	+ 0 0 0 2 5	MIN N33
	+ 0 4 7 0 9	SEC
ULLAGE 4 Ver	+ 2 8 6 4 3	ΔV_x N81
12 SEC	- 1 2 2 7 7	ΔV_y
	- 0 3 1 7 0	ΔV_z
UNDOCKED	X X X 1 8 0	R
DOI	X X X 0 9 1	P
	X X X 3 3 8	Y
HORIZON/WINDOW	+ 1 9	H_A N44
		H_p
	+	ΔV_t
	X X X	BT
	X	ΔV_c
	X X X X	SXTS
	+ 0	SFT
	+ 0 0	TRN
	X X X	BSS
	X X	SPA
	X X X	SXP
OTHER	0	LAT N61
		LONG
	+	RTGO EMS
	+	V10
		GET 0.05G

DATE 3/29/71

P30 MANEUVER

DATE 3/29/71

SET STARS	TGT	12	PURPOSE
	SPS	1 GYN	PROP/GUID
R ALIGN	+ 3 8	1 1 0	WT N47
P ALIGN	+ 0 0	0 5 8	P TRIM N48
Y ALIGN	+ 0 0	1 0 0	Y TRIM
ULLAGE	+ 0 0	1 0 1	HRS GETI
	+ 0 0	0 3 6	MIN N33
	+ 0 0	8 3 8	SEC
	+ 2 8	4 5 0	ΔV_X N81
	- 0 3	8 0 2	ΔV_Y
	- 0 0	6 3 8	ΔV_Z
	X X X	1 8 0	R
	X X X	1 0 7	P
	X X X	3 5 4	Y
	+ N8		H _A N44
			H _P
	+		ΔV_T
HORIZON/WINDOW	X X X		BT
	X		ΔV_C
	X X X X		SXTS
	+	0	SFT
	+	0 0	TRN
	X X X		BSS
	X X		SPA
	X X X		SXP
OTHER	0		LAT N61
	+		LONG
	+		RTGO EMS
			V10
			GET 0.05G

P27 UPDATE

EARTH ORBIT
BLOCK DATA

P37 BLOCK DATA

P24 LDMK TRACKIN

P30 MANEUVER

P30 MANEUVER

V20	001 TRIM	PURPOSE
SET STARS	PCS / GPN	PROP/GUID
R ALIGN 288	+ 38 26 4	WT N47
P ALIGN 340	0 NA	P TRIM N48
Y ALIGN 346	0 0	Y TRIM
ULLAGE 4 ULR	+ 0 0 0 9 5	HRS GETI
RCS	+ 0 0 0 5 6	MIN N33
	+ 0 42 5 0	SEC
	+ 0 0 0 3 1	ΔV_x N81
	0 -	ΔV_y
	0 -	ΔV_z
NO TRIM	X X X 1 8 0	R
RETROGRADE	X X X 1 0 4	P
RESIDUAL	X X X 3 5 9	Y
	+ 0 0 5 9 4	H_A N44
	+ 0 0 0 9 6	H_P
	+ 0 0 0 3 1	ΔV_T
HORIZON/WINDOW	X X X 0 2 0	BT
	X 0 0 0 3 1	ΔV_C
	X X X X 3 0	SXTS
	+ 1 9 2 8 0	SFT
	+ 1 1 1 0 0	TRN
	X X X NA	BSS
	X X	SPA
	X X X	SXP
OTHER	0	LAT N61
		LONG
	+	RTGO EMS
	+	V10
		GET 0.05G

DATE 3/29/71

P30 MANEUVER

DATE 3/29/71

SET STARS	TE	19	PURPOSE
R ALIGN	SPS	1 CN	PROP/GUID
P ALIGN	+ 3 8 0 0 9		WT N47
Y ALIGN	+ 0 0 0 0 6 1		P TRIM N48
	+ 0 0 0 1 0 5		Y TRIM
ULLAGE	+ 0 0 0 1 1 5		HRS GETI
	+ 0 0 0 2 7		MIN N33
	+ 0 5 5 5 7		SEC
	+ 2 8 4 5 1		ΔV_X N81
12 SEC	- 0 8 3 1 7		ΔV_Y
	- 0 2 1 9 7		ΔV_Z
	X X X 1 8 0		R
	X X X 1 0 2		P
	X X X 3 4 6		Y
	+ H A		N44
	+ H P		
	+ ΔV_T		
HORIZON/WINDOW	X X X		BT
	X		ΔV_C
	X X X X		SXTS
	+ SFT		
	+ TRN		
	X X X		BSS
	X X		SPA
	X X X		SXP
OTHER	0		LAT N61
			LONG
	+ RTGO		EMS
	+ V10		
			GET 0.05G

P24 LDMK TRACKIN

P37 BLOCK DATA

EARTH ORBIT
BLOCK DATA

P27 UPDATE

P30 MANEUVER

P30 MANEUVER

SET STARS	T E 1 2 6	PURPOSE
	S P 5 1 6 1	PROP/GUID
R ALIGN	+ 3 7 3 5 4	WT N47
P ALIGN	+ 0 0 0 6 0	P TRIM N48
Y ALIGN	+ 0 0 0 8 7	Y TRIM
	+ 0 0 1 2 9	HRS GETI
	+ 0 0 0 2 2	MIN N33
	+ 0 2 5.5 4	SEC
ULLAGE	+ 3 0 3 1 2	ΔV_X N81
<u>45-12 sec</u>	- 1 3 2 7 1	ΔV_Y
	- 0 3 0 8.7	ΔV_Z
	X X X 1 8 0	R
	X X X 0 9 Z	P
	X X X 3 3 9	Y
	+ H A	N44
	+ H P	
	+ ΔV_T	
HORIZON/WINDOW	X X X BT	
	X ΔV_C	
	X X X X SXTS	
	+ 0 SFT	
	+ 0 0 TRN	
	X X X BSS	
	X X SPA	
	X X X SXP	
OTHER	0 LAT N61	
		LONG
	+ RTGO EMS	
	+ V10	
		GET 0.05G

$L_{TIA} = +172.93$

DATE 3/29/71

P30 MANEUVER **TEI-37**DATE 3/29/71

SET STARS	5	P	S	G	N	PURPOSE
R ALIGN	+	3	7	3	5	WT N47
P ALIGN	+	0	0	0	6	P TRIM N48
Y ALIGN	+	0	0	1	0	Y TRIM
ULLAGE	+	0	0	1	5	HRS GETI
<u>25-17 sec</u>	+	0	0	0	0	MIN N33
	+	0	1	7	4	SEC
	+	2	9	7	9	ΔV_X N81
	-	0	7	4	5	ΔV_Y
	-	0	2	4	3	ΔV_Z
HORIZON/WINDOW	X	X	X	1	8	0 R
	X	X	X	1	0	9 P
	X	X	X	3	4	9 Y
OTHER	+					H _A N44
						H _P
	+					ΔV_T
	X	X	X			BT
	X					ΔV_C
	X	X	X	X		SXTS
	+				0	SFT
	+				0	TRN
	X	X	X			BSS
	X	X				SPA
	X	X	X			SXP
			0			LAT N61
						LONG
	+					RTGO EMS
	+					V10
						GET 0.05G

$$L_{T16} = -179.52$$

P27 UPDATE

EARTH URBI BLOCK DATA

P37 BLOCK DATA

P24 LDMK TRACKIN

P30 MANEUVER

P30 MANEUVER

SET STARS		37	PURPOSE
R ALIGN	+ 3 7 3 5 0	WT	N47
P ALIGN	+ 0 0 0 6 0	P TRIM	N48
Y ALIGN	+ 0 0 1 0 1	Y TRIM	
ULLAGE	+ 0 0 1 5 0	HRS GETI	
25 - 17 Sec	+ 0 0 0 5 9	MIN N33	
	+ 0 3 0.0 8	SEC	
	+ 2 9 7 9.1	ΔV_x	N81
	- 0 7 4 8.6	ΔV_y	
	- 0 2 1 9.6	ΔV_z	
	X X X 1 8 0	R	
	X X X 1 0 9	P	
	X X X 3 4 9	Y	
	+ H _A		N44
	+ H _P		
	+ ΔV_T		
HORIZON/WINDOW	X X X	BT	
	X	ΔV_C	
	X X X X	SXTS	
	+ 0	SFT	
	+ 0 0	TRN	
	X X X	BSS	
	X X	SPA	
	X X X	SXP	
L _{T16} = -179.22	0	LAT	N61
OTHER		LONG	
	+ RTGO	EMS	
	+ V10		
		GET	0.05G

DATE 3/29/71

P30 MANEUVER

DATE 3/29/71

SET STARS	<u>T E 1 - 4 5</u>	PURPOSE
R ALIGN	<u>1</u>	PROP/GUID
P ALIGN	<u>+ 3 7 2 6 4</u>	WT N47
Y ALIGN	<u>+ 0 0 0 0 0</u>	P TRIM N48
ULLAGE	<u>+ 0 0 0 0 0</u>	Y TRIM
<u>2J - 17 Sec</u>	<u>+ 0 0 0 0 0</u>	HRS GETI
<u>B/D</u>	<u>+ 0 0 0 0 0</u>	MIN N33
<u>No P.C.</u>	<u>+ 0 0 0 0 0</u>	SEC
<u>$\Delta t = +163.63$</u>	<u>+ 0 0 0 0 0</u>	ΔV_x N81
HORIZON/WINDOW	<u>+ 0 0 0 0 0</u>	ΔV_y
	<u>+ 0 0 0 0 0</u>	ΔV_z
	X X X	R
	X X X	P
	X X X	Y
OTHER		H A N44
		H P
		ΔV_t
	X X X	BT
	X	ΔV_c
	X X X X	SXTS
	+ 0	SFT
	+ 0 0	TRN
	X X X	BSS
	X X	SPA
	X X X	SXP
	0	LAT N61
		LONG
		RTGO EMS
		V10
		GET 0.05G

P27 UPDATE

EAKIH URKII
BLOCK DATA

P37 BLOCK DATA

P24 LDMK TRACKIN

P30 MANEUVER

P30 MANEUVER

SET STARS	1	E1	52	PURPOSE
	5	8	5	PROP/GUID
R ALIGN	+	3	6 0 0 3	WT N47
P ALIGN	+	0 0	0 6 0	P TRIM N48
Y ALIGN	+	0 0	1 0 7	Y TRIM
ULLAGE	+	0 0	1 8 0	HRS GETI
2J-17 Sec	+	0 0	0 3 1	MIN N33
B/D	+	0 5	1 8 8	SEC
L = +177.77 Assumes LOPC E Ascent	+	3 0 3 0 0	ΔV_x N81	
HORIZON WINDOW	-	0 8 9 3 9	ΔV_y	
Refined	-	0 2 3 1 0	ΔV_z	
	X	X	X 1 8 0	R
	X	X	X 0 8 8	P
	X	X	X 3 4 6	Y
	+		H _A	N44
			H _P	
	+		ΔV_t	
	X	X	X BT	
	X			ΔV_c
	X	X	X X TS	SXTS
	+		0	SFT
	+		0 0	TRN
	X	X	X BSS	
	X	X		SPA
	X	X	X SXP	
OTHER		0	LAT N61	
			LONG	
	+		RTGO EMS	
	+		V10	
			GET 0.05G	

DATE 3/29/71

P30 MANEUVER

DATE 3/29/71

SET STARS			PURPOSE
R ALIGN	TEI 58 505163N		PROP/GUID
P ALIGN	+ 36 36 3	WT N47	
Y ALIGN	+ 0 0 0 6 1	P TRIM N48	
	+ 0 0 0 9 3	Y TRIM	
ULLAGE	+ 0 0 1 9 2	HRS GETI	
4 JET	+ 0 0 0 1 3	MIN N33	
12 SEC	+ 0 3 3 3 0	SEC	
	+ 2 7 9 9 7	ΔV X N81	
	+ 0 6 0 9 5	ΔV Y	
	- 0 0 9 8 0	ΔV Z	
HORIZON/WINDOW	X X X 1 8 1	R	
	X X X 1 1 2	P	
	X X X 0 1 5	Y	
	+ NA	H _A N44	
		H _P	
	+	ΔVT	
	X X X	BT	
	X	ΔVC	
	X X X X	SXTS	
	+ 0	SFT	
	+ 0 0	TRN	
OTHER	X X X	BSS	
	X X	SPA	
	X X X	SXP	
	0	LAT N61	
		LONG	
	+	RTGO EMS	
	+	V10	
		GET 0.05G	

P27 UPDATE

LAKIH UKBLI
Block Data

P37 BLOCK DATA

P24 LDMK TRACKIN

P30 MANEUVER

P30 MANEUVER

SET STARS	TG	62	PURPOSE
R ALIGN	5.5	1 GYN	PROP/GUID
P ALIGN	+ 3 6 3	1 0	WT N47
Y ALIGN	+ 0 0 0	6 1	P TRIM N48
	+ 0 0 0	9 2	Y TRIM
ULLAGE	+ 0 0 2 0 0	0	HRS GETI
	+ 0 0 0 1 0	0	MIN N33
	+ 0 3 4 6 4	0	SEC
4 dtr	+ 2 9 2 8 4	0	ΔV_X N81
12 SEC	+ 0 1 9 0 3	0	ΔV_Y
	- 0 0 4 3 5	0	ΔV_Z
	X X X 1 8 0	0	R
	X X X 1 0 6	0	P
	X X X 0 0 6	0	Y
	+ NA	0	H_A N44
		0	H_P
	+	0	ΔV_T
HORIZON/WINDOW	X X X	0	BT
	X	0	ΔV_C
	X X X X	0	SXTS
	+	0	SFT
	+	0 0	TRN
	X X X	0	BSS
	X X	0	SPA
	X X X	0	SXP
OTHER	0	0	LAT N61
		0	LONG
	+	0	RTGO EMS
	+	0	V10
		0	GET 0.05G

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P30 MANEUVER

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SET STARS	T E 1	6 4	PURPOSE
R ALIGN	1		PROP/GUID
P ALIGN	+ 3 6 3 1 0		WT N47
Y ALIGN	+ 0 0 0 6 1	P	TRIM N48
	+ 0 0 0 9 2	Y	TRIM
ULLAGE	+ 0 0 2 0 4	HRS	GETI
	+ 0 0 0 0 8	MIN	N33
	+ 0 1 1 6 2	SEC	
	+ 3 0 1 1 0	ΔV_X	N81
	- 0 0 1 9 6	ΔV_Y	
	+ 0 0 4 8 8	ΔV_Z	
HORIZON/WINDOW	X X X 1 8 0	R	
	X X X 1 0 2	P	
	X X X 0 0 2	Y	
OTHER	+ H A		N44
	+ H P		
	+ ΔV_T		
	X X X BT		
	X ΔV_C		
	X X X X SXTS		
	+ 0 SFT		
	+ 0 0 TRN		
	X X X BSS		
	X X SPA		
	X X X SXP		
	0 LAT N61		
		LONG	
	+ RTGO EMS		
	+ V10		
		GET 0.05G	

P27 UPDATE

EARTH ORBIT
BLOCK DATA

P37 BLOCK DATA

P24 LDMK TRACKING

P30 MANEUVER

P30 MANEUVER

SET STARS	TET	PURPOSE
	SPS / GND	PROP/GUID
+ 36 29 5	WT	N47
+ 0 0 0 6 1	P	TRIM N48
+ 0 0 0 9 2	Y	TRIM
+ 0 0 2 1 3	HRS	GETI
+ 0 0 0 5 1	MIN	N33
+ 0 5 1 0 4	SEC	
+ 2 8 0 3 1	ΔV X	N81
- 0 4 6 5 4	ΔV Y	
- 0 0 9 9 6	ΔV Z	
X X X / 7 9	R	
X X X / 3 2	P	
X X X 3 5 3	Y	
+ NA	H _A	N44
	H _P	
+	ΔVT	
X X X	BT	
X	ΔVC	
X X X X	SXTS	
+ 0	SFT	
+ 0 0	TRN	
X X X	BSS	
X X	SPA	
X X X	SXP	
OTHER 0	LAT	N61
	LONG	
+	RTGO	EMS
+	V10	
	GET	0.05G

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P30 MANEUVER

DATE 3/29/71

SET STARS	76	71	PURPOSE
	SPS	X GRS	PROP/GUID
R ALIGN	+ 0 0 0 6 4	WA	WT N47
P ALIGN	+ 0 0 0 9 8		P TRIM N48
Y ALIGN	+ 0 0 2 1 7		Y TRIM
ULLAGE	+ 0 0 0 4 9		HRS GETI
	+ 0 1 8 0 4		MIN N33
	+ 2 8 3 8 6		SEC
	- 0 5 8 1 0		ΔV_X N81
	- 0 0 2 7 7		ΔV_Y
	X X X 1 7 8		ΔV_Z
	X X X 1 2 9		R
	X X X 3 5 1		P
HORIZON/WINDOW	+ NA		Y
	+ H _A		
	+ H _P		N44
	+ BT		
	+ SFT		ΔVT
	+ TRN		BT
	X X X		ΔVC
	X X X X		SXTS
	+ 0		SFT
	+ 0 0		TRN
	X X X		BSS
	X X		SPA
	X X X		SXP
OTHER	0		LAT N61
			LONG
	+ RTGO		RTGO EMS
	+ V10		V10
			GET 0.05G

P24 LDMK TRACKING

P37 BLOCK DATA

EARTH ORBIT
BLOCK DATA

P27 UPDATE

P30 MANEUVER

P30 MANEUVER

SET STARS	T81	T3	PURPOSE
	SAS	X Grn	PROP/GUID
R ALIGN	+ 3 6	1 8 8	WT N47
P ALIGN	+ 0 0	0 6 3	P TRIM N48
Y ALIGN	+ 0 0	0 9 8	Y TRIM
ULLAGE	+ 0 0	2 2 1	HRS GETI
	+ 0 0	0 4 7	MIN N33
	+ 0 4 2	8 1	SEC
4 JET	+ 2 8 8	3 3	ΔV_X N81
12 SEC	- 0 6 6	1 3	ΔV_Y
	- 0 1 9	5 5	ΔV_Z
	X X X	1 7 9	R
	X X X	1 2 8	P
	X X X	3 5 0	Y
PAO	+ NA		H_A N44
NO SHAPS			H_P
Lo. Raffman			
HORIZON/WINDOW	+ BT		ΔVT
	X		BT
	X X X X		ΔVC
	X X X X		SXTS
	+ 0		SFT
	+ 0 0		TRN
	X X X		BSS
	X X		SPA
	X X X		SXP
OTHER	0		LAT N61
			LONG
	+ RTGO		EMS
	+ V10		
			GET 0.05G

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P30 MANEUVER

<u>V&D</u>	TEI	174		PURPOSE
SET STARS	SPS	184N		PROP/GUID
R ALIGN	+ 3	5 8 5 2		WT N47
P ALIGN	+ 0	0 0 6 2		P TRIM N48
Y ALIGN	+ 0	0 0 9 6		Y TRIM
ULLAGE	+ 0	0 2 2 3		HRS GETI
	+ 0	0 0 4 8		MIN N33
	+ 0	4 3 6 3		SEC
	+ 2	9 4 5 0		ΔV X N81
	- 0	7 6 9 6		ΔV Y
	- 0	1 5 2 8		ΔV Z
	X	X X 0		R
	X	X X 0		P
	X	X X 0		Y
HORIZON/WINDOW	+ 0	0 2 2 3		H A N44
	+ 0	0 4 7 7		H P
	+ 3	0 2 2 2		ΔVT
	X	3 0 2 9 4		BT
	X	X X X 3 7		ΔVC
	X	X X X 3 7		SXTS
	+ 2	2 9 3 0		SFT
	+ 3	0 5 0 0		TRN
	X	X X X 1A		BSS
	X	X 1A		SPA
	X	X X 1A		SXP
OTHER	+ 0	2 6 1 2		LAT N61
	- 1	5 7 9 8		LONG
	+ 1	0 8 3 8		RTGO EMS
	+ 3	6 1 7 9		V10
	29	4 5 8 9 0		GET 0.05G

P27 UPDATE

EARTH ORBIT
BLOCK DATA

P37 BLOCK DATA

P24 LDMK TRACKING

P30 MANEUVER

P30 MANEUVER

<i>V9D</i>		<i>SAT</i>	<i>PURPOSE</i>
	<u>SET STARS</u>	<i>SAT</i>	<u>PROP/GUID</u>
<u>R ALIGN</u>	<u>102</u>	+ 3 6 1 7 1	WT N47
<u>P ALIGN</u>	<u>178</u>	+ 0 0 0 6 3	P TRIM N48
<u>Y ALIGN</u>	<u>028</u>	+ 0 0 0 9 8	Y TRIM
<u>ULLAGE</u>	<u>40ft</u>	+ 0 0 2 2 1	HRS GETI
	<u>12 SEC</u>	+ 0 0 0 2 0	MIN N33
		+ 0 4 7 2 3	SEC
		+ 0 0 1 7 0	ΔV_X N81
		- 0	ΔV_Y
		- 0 0 6 4 2	ΔV_Z
		X X X 3 5 5	R
		X X X 1 9 8	P
		X X X 0 1 0	Y
	<u>SAT SAT L.</u>	+ 0 0 7 6 1	H A N44
	<u>6ft 222</u>	+ 0 0 5 4 3	H P
	<u>+39+27</u>	+ 0 0 6 6 4	ΔV_T
	<u>R 266</u>	X X X 0 0 3	BT
	<u>P 141</u>	X 0 0 5 4 8	ΔV_C
	<u>Y 038</u>	X X X X 1 3	SXTS
	<u>HORIZON/WINDOW</u>	+ 1 6 4 3 0	SFT
		+ 1 2 6 0 0	TRN
	<u>HGA P-70</u>	X X X 0 0 1	BSS
	<u>Y+113</u>	X X 0 0 9 1	SPA
	<u>FOR SHAPE</u>	X X X < 4 6	SXP
	<u>OTHER</u>	0 N9	LAT N61
			LONG
		+	RTGO EMS
		+	V10
			GET 0.05G

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P30 MANEUVER

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<u>V20</u> SET STARS	<u>TE1 74</u>	PURPOSE
R ALIGN <u>102</u>	<u>SPS 165N</u>	PROP/GUID
P ALIGN <u>178</u>	+ <u>35 7 6 8</u>	WT N47
Y ALIGN <u>028</u>	+ <u>0 0 0 57</u>	P TRIM N48
ULLAGE <u>4065</u>	+ <u>0 0 0 88</u>	Y TRIM
12 SEC	+ <u>0 0 22 3</u>	HRS GETI
	+ <u>0 0 0 48</u>	MIN N33
	+ <u>0 45 05</u>	SEC
	+ <u>29 45 2</u>	ΔV_X N81
	- <u>0 76 13</u>	ΔV_Y
	- <u>0 17 14</u>	ΔV_Z
HORIZON/WINDOW	X X X 0	R
	X X X 0	P
	X X X 0	Y
	+ <u>N9</u>	H_A N44
	+ <u>0 0 22 1</u>	H_P
	+ <u>30 46 8</u>	ΔV_T
	X X X 2 2 1	BT
	X <u>30 28 5</u>	ΔV_C
	X X X X 3 7	SXTS
	+ <u>22 43 0</u>	SFT
	+ <u>30 50 0</u>	TRN
	X X X 0 5 3	BSS
	X X 0 1 0 3	SPA
	X X X R 3 1	SXP
OTHER	+ <u>0 26 11</u>	LAT N61
	- <u>15 79 7</u>	LONG
	+ <u>10 84 1</u>	RTGO EMS
	+ <u>36 17 9</u>	V10
	29 45 83 4	GET 0.05G

P27 UPDATE

EARTH ORBIT
BLOCK DATA

F P37 BLOCK DATA

P24 LDMK TRACKING

P30 MANEUVER

P30 MANEUVER

	727	75		PURPOSE
SET STARS	8P3 X GRW			PROP/GUID
R ALIGN	+ 3 5 7 6 8		WT N47	
P ALIGN	+ 0 0 0 5 7		P TRIM N48	
Y ALIGN	+ 0 0 0 8 8		Y TRIM	
ULLAGE	+ 0 0 2 2 5		HRS GETI	
	+ 0 0 0 4 8		MIN N33	
	+ 0 4 9 0 8		SEC	
4 JET	+ 2 9 8 1 4		ΔV_X N81	
12 SEC	- 0 8 0 7 2		ΔV_Y	
	- 0 1 4 5 1		ΔV_Z	
	X X X 0 0 0		R	
	X X X 0 0 2		P	
	X X X 0 0 1		Y	
	+ NA		H_A N44	
			H_P	
	+		ΔVT	
	X X X		BT	
	X		ΔVC	
HORIZON/WINDOW	X X X X		SXTS	
	+ 0		SFT	
	+ 0 0		TRN	
	X X X		BSS	
	X X		SPA	
	X X X		SXP	
OTHER	0		LAT N61	
			LONG	
	+		RTGO EMS	
	+		V10	
			GET 0.05G	

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P30 MANEUVER

DATE 3/29/71

V8D	MCC 7	PURPOSE
SET STARS	RCS X GRV	PROP/GUID
R ALIGN	+ 2 6 3 6 3	WT N47
P ALIGN	0 0 2 9 1	P TRIM N48
Y ALIGN	0 0 0 5 6	Y TRIM
ULLAGE	+ 0 4 7 9 0	HRS GETI
+ X	- 0 0 0 5 6	MIN N33
QMS B&D	- 0 - - -	SEC
	+ 0 0 0 0 2	ΔV_x N81
	X X X 1 8 0	ΔV_y
	X X X 3 1 1	ΔV_z
	X X X 0 0 0	R
	+ NA	P
	+ 0 0 2 2 3	Y
	+ 0 0 0 5 6	H _A N44
	X X X 0 2 4	H _P
	X 0 0 0 5 6	ΔV_T
HORIZON/WINDOW	X X X X 3 1	BT
	+ 3 4 7 9 0	ΔV_C
	+ 3 5 3 0 0	SXTS
	X X X NA	SFT
	X X	TRN
	X X X	BSS
OTHER	0	SPA
		SXP
		LAT N61
		LONG
		RTGO EMS
		V10
		GET 0.05G

P27 UPDATE

EARTH ORBIT
BLOCK DATA

P37 BLOCK DATA

P24 LDMK TRACKING

P30 MANEUVER

P30 MANEUVER

SET STARS		PURPOSE
R ALIGN	X	PROP/GUID
P ALIGN	WT N47	WT N47
Y ALIGN	P TRIM N48	Y TRIM
ULLAGE	+ 0 0 HRS GETI	HRS GETI
	+ 0 0 0 MIN N33	MIN N33
	+ 0 SEC	SEC
		ΔV_X N81
		ΔV_Y
		ΔV_Z
	X X X R	R
	X X X P	P
	X X X Y	Y
HORIZON/WINDOW	+ H _A N44	H _A N44
	+ H _P	H _P
		ΔV_T
	X X X BT	BT
	X ΔV_C	ΔV_C
	X X X X SXTS	SXTS
	+ 0 SFT	SFT
	+ 0 0 TRN	TRN
	X X X BSS	BSS
	X X SPA	SPA
OTHER	X X X SXP	SXP
	0 LAT N61	LAT N61
		LONG
	+ RTGO EMS	RTGO EMS
	+ V10	V10
		GET 0.05G

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P30 MANEUVER

DATE 3/29/71

SET STARS				PURPOSE
R ALIGN		+		PROP/GUID
P ALIGN		0 0		WT N47
Y ALIGN		0 0		P TRIM N48
		+ 0 0		Y TRIM
		+ 0 0 0		HRS GETI
		+ 0		MIN N33
				SEC
ULLAGE				ΔV_X N81
				ΔV_Y
				ΔV_Z
		X X X		R
		X X X		P
		X X X		Y
		+		H _A
				H _P N44
		+		ΔV_T
HORIZON/WINDOW		X X X		BT
		X		ΔV_C
		X X X X		SXTS
		+	0	SFT
		+	0 0	TRN
		X X X		BSS
		X X		SPA
		X X X		SXP
OTHER		0		LAT N61
				LONG
		+		RTGO EMS
		+		V10
				GET 0.05G

P27 UPDATE

EARTH ORBIT
BLOCK DATA

P37 BLOCK DATA

P24 LDMK TRACKING

P30 MANEUVER

P30 MANEUVER

SET STARS				PURPOSE
R ALIGN	—	+	X	PROP/GUID
P ALIGN	—	0 0	•	WT N47
Y ALIGN	—	0 0	•	P TRIM N48
		+ 0 0		Y TRIM
		+ 0 0 0		HRS GETI
		+ 0	•	MIN N33
			•	SEC
ULLAGE	—		•	ΔV_X N81
	—		•	ΔV_Y
	—		•	ΔV_Z
		X X X		R
		X X X		P
		X X X		Y
		+ H A		N44
		+ H P		
		+ ΔV_T		
HORIZON/WINDOW	—	X X X	•	BT
	—	X	•	ΔV_C
	—	X X X X		SXTS
	—	+ 0		SFT
	—	+ 0 0		TRN
		X X X		BSS
		X X		SPA
		X X X		SXP
OTHER	—	0	•	LAT N61
	—		•	LONG
	—	+ RTGO		EMS
	—	+ V10		
				GET 0.05G

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P30 MANEUVER

DATE 3/29/71

SET STARS				PURPOSE	
		PROP/GUID			
R ALIGN	—	0	0	WT	N47
P ALIGN	—	0	0	P TRIM	N48
Y ALIGN	—	+ 0	0	Y TRIM	
		+ 0 0	0	HRS	GETI
		+ 0 0 0		MIN	N33
		+ 0		SEC	
ULLAGE	—			ΔV_X	N81
	—			ΔV_Y	
	—			ΔV_Z	
	—	X X X		R	
	—	X X X		P	
	—	X X X		Y	
	—	+ 0		H_A	N44
	—			H_P	
	—	+ 0		ΔVT	
	—	X X X		BT	
	—	X X X		ΔVC	
	—	X X X X		SXTS	
	—	+ 0 0 0	0	SFT	
	—	+ 0 0 0	0 0	TRN	
	—	X X X		BSS	
	—	X X		SPA	
	—	X X X		SXP	
OTHER	—	0		LAT	N61
	—			LONG	
	—	+ 0		RTGO	EMS
	—	+ 0		V10	
	—			GET	0.05G

P27 UPDATE

EARTH ORBIT
BLOCK DATA

P37 BLOCK DATA

P24 LDMK TRACKING

P30 MANEUVER

P30 MANEUVER

SET STARS				PURPOSE
R ALIGN	—	0	0	WT N47
P ALIGN	—	0	0	P TRIM N48
Y ALIGN	—	+	0	Y TRIM
		0	0	HRS GETI
		0	0	MIN N33
		0	0	SEC
ULLAGE	—			ΔV_X N81
	—			ΔV_Y
	—			ΔV_Z
	—	X	X	R
	—	X	X	P
	—	X	X	Y
	—	+	0	H_A N44
	—			H_P
	—	+	0	ΔV_T
HORIZON/WINDOW	—	X	X	BT
	—	X		ΔV_C
	—	X	X	SXTS
	—	+	0	SFT
	—	+	0	TRN
	—	X	X	BSS
	—	X	X	SPA
	—	X	X	SXP
OTHER	—	0	0	LAT N61
	—			LONG
	—	+	0	RTGO EMS
	—	+	0	V10
	—			GET 0.05G

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P30 MANEUVER

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SET STARS				PURPOSE
R ALIGN		+	X	PROP/GUID
P ALIGN		0 0		WT N47
Y ALIGN		0 0	•	P TRIM N48
		+ 0 0		Y TRIM
ULLAGE		+ 0 0 0		HRS GETI
		+ 0		MIN N33
			•	SEC
			•	ΔV_X N81
			•	ΔV_Y
			•	ΔV_Z
		X X X		R
		X X X		P
		X X X		Y
		+		H_A N44
		+		H_P
			•	ΔVT
HORIZON/WINDOW			•	BT
		X X X		ΔVC
		X		SXTS
		X X X X		SFT
		+	0	TRN
		+	0 0	
		X X X		BSS
		X X		SPA
		X X X		SXP
OTHER		0		LAT N61
			•	LONG
		+		RTGO EMS
		+		V10
			•	GET 0.05G
			•	
			•	

P27 UPDATE

EARTH ORBIT
BLOCK DATA

P37 BLOCK DATA

P24 LDMK TRACKIN

P30 MANEUVER

P30 MANEUVER

SET STARS						PURPOSE
		X				PROP/GUID
R ALIGN	—	+	0	0	WT	N47
P ALIGN	—	0	0	•	P TRIM	N48
Y ALIGN	—	+	0	0	Y TRIM	
		+	0	0	HRS GETI	
		+	0	0	MIN N33	
		+	0	•	SEC	
ULLAGE	—			•	ΔV_X	N81
	—			•	ΔV_Y	
	—			•	ΔV_Z	
	—	X	X	X	R	
	—	X	X	X	P	
	—	X	X	X	Y	
	—	+		•	H_A	N44
	—			•	H_P	
	—	+		•	ΔVT	
	—	X	X	X	BT	
HORIZON/WINDOW	—	X		•	ΔVC	
	—	X	X	X	SXTS	
	—	+		•	SFT	
	—	+		0	TRN	
	—	X	X	X	BSS	
	—	X	X		SPA	
	—	X	X	X	SXP	
OTHER	—	0		•	LAT	N61
	—			•	LONG	
	—	+		•	RTGO EMS	
	—	+		•	V10	
	—			•	GET	0.05G

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P37 BLOCK DATA

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X	X	0 1 5 0 0	GETI	
X	X	4 9 2 6	ΔVT	
X	X	- 1 7 5	LONG	
		0 5 1 2 0	GET 400K	
		0 2 5 0 0	GETI	25 Hrs
X	X	4 6 2 1	ΔVT	
X	X	- 1 7 5	LONG	
		0 7 5 2 1	GET 400K	
		0 3 5 0 0	GETI	
X	X	6 8 2 1	ΔVT	
X	X	- 1 7 4	LONG	
		0 7 4 5 1	GET 400K	
		0 4 5 0 0	GETI	
X	X	5 6 0 5	ΔVT	
X	X	- 1 7 5	LONG	
		0 9 9 0 6	GET 400K	
		0 6 0 0 0	GETI	
X	X	5 4 4 8	ΔVT	
X	X	- 1 7 5	LONG	
		1 2 3 0 6	GET 400K	
X	X	X	GETI	
X	X	X	ΔVT	
			LONG	
			GET 400K	
X	X	X	GETI	
X	X	X	ΔVT	
			LONG	
			GET 400K	

P27 UPDATE

EARTH ORBIT
BLOCK DATA

P37 BLOCK DATA

P24 LDMK TRACKIN

P30 MANEUVER

P37 BLOCK DATA

P37 BLOCK DATA

	GETI ΔVT LONG GET 400K

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P37 BLOCK DATA

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	GETI ΔVT LONG GET 400K

P27 UPDATE

EARTH ORBIT
BLOCK DATA

FLIGHT PLAN UPDATE

P24 LDMK TRACKIN

P30 MANEUVER

P37 BLOCK DATA

P37 BLOCK DATA

	GETI ΔVT LONG GET 400K

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P37 BLOCK DATA

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	GETI ΔVT LONG GET 400K

P27 UPDATE

EARTH ORBIT
BLOCK DATA

FLIGHT PLAN UPDATE

P24 LDMK TRACKIN

P37 BLOCK DATA

P30 MANEUVER

P37 BLOCK DATA

	GETI ΔVT LONG GET 400K

DATE 3/29/71

EARTH ORBIT BLOCK DATA

X X	+	X X	+	AREA
X X X	.	X X X	.	LAT
X X	.	X X	.	LONG
.	.	.	.	GETI
X X X	.	X X X	.	ΔV_C
X X	-	X X	-	AREA
X X X	.	X X X	.	LAT
X X	.	X X	.	LONG
.	.	.	.	GETI
X X X	.	X X X	.	ΔV_C
X X	-	X X	-	AREA
X X X	.	X X X	.	LAT
X X	.	X X	.	LONG
.	.	.	.	GETI
X X X	.	X X X	.	ΔV_C
X X	-	X X	-	AREA
X X X	.	X X X	.	LAT
X X	.	X X	.	LONG
.	.	.	.	GETI
X X X	.	X X X	.	ΔV_C
X X	-	X X	-	AREA
X X X	.	X X X	.	LAT
X X	.	X X	.	LONG
.	.	.	.	GETI
X X X	.	X X X	.	ΔV_C
X X	-	X X	-	AREA
X X X	.	X X X	.	LAT
X X	.	X X	.	LONG
.	.	.	.	GETI
X X X	.	X X X	.	ΔV_C

REMARKS:

DATE 3/29/71

P27 UPDATE

EARTH ORBIT
BLOCK DATA

FLIGHT PLAN UPDATE

P24 LDMK TRACKIN

EARTH ORBIT BLOCK DATA

P30 MANEUVR

P37 BLOCK DATA

EARTH ORBIT
BLOCK DATA

X X	—	X X	—	AREA
X X X		X X X		LAT
X X		X X		LONG
X X X		X X X		GETI ΔV_C
X X	—	X X	—	AREA
X X X		X X X		LAT
X X		X X		LONG
X X X		X X X		GETI ΔV_C
X X	—	X X	—	AREA
X X X		X X X		LAT
X X		X X		LONG
X X X		X X X		GETI ΔV_C
X X	—	X X	—	AREA
X X X		X X X		LAT
X X		X X		LONG
X X X		X X X		GETI ΔV_C
X X	—	X X	—	AREA
X X X		X X X		LAT
X X		X X		LONG
X X X		X X X		GETI ΔV_C
X X	—	X X	—	AREA
X X X		X X X		LAT
X X		X X		LONG
X X X		X X X		GETI ΔV_C

EARTH ORBIT BLOCK DATA

DATE 3/29/71

X X		+	X X		+	AREA
X X X		.	X X X		.	LAT
X X		.	X X		.	LONG
	GETI
X X X		.	X X X		.	ΔV_C
X X	-		X X	-		AREA
X X X		.	X X X		.	LAT
X X		.	X X		.	LONG
	GETI
X X X		.	X X X		.	ΔV_C
X X	-		X X	-		AREA
X X X		.	X X X		.	LAT
X X		.	X X		.	LONG
	GETI
X X X		.	X X X		.	ΔV_C
X X	-		X X	-		AREA
X X X		.	X X X		.	LAT
X X		.	X X		.	LONG
	GETI
X X X		.	X X X		.	ΔV_C
X X	-		X X	-		AREA
X X X		.	X X X		.	LAT
X X		.	X X		.	LONG
	GETI
X X X		.	X X X		.	ΔV_C
REMARKS:						

P27 UPDATE

PHOTO LOG

16MM DAC

FLIGHT PLAN UPDATE

P24 LDMK TRACKIN

EARTH ORBIT
BLOCK DATA

P37 BLOCK DATA

P30 MANEUVER

EARTH ORBIT BLOCK DATA

X X	+	X X	+	AREA
X X X		X X X		LAT
X X		X X		LONG
				GETI
X X X		X X X		ΔV_C
X X	-	X X	-	AREA
X X X		X X X		LAT
X X		X X		LONG
				GETI
X X X		X X X		ΔV_C
X X	-	X X	-	AREA
X X X		X X X		LAT
X X		X X		LONG
				GETI
X X X		X X X		ΔV_C
X X	-	X X	-	AREA
X X X		X X X		LAT
X X		X X		LONG
				GETI
X X X		X X X		ΔV_C
X X	-	X X	-	AREA
X X X		X X X		LAT
X X		X X		LONG
				GETI
X X X		X X X		ΔV_C
X X	-	X X	-	AREA
X X X		X X X		LAT
X X		X X		LONG
				GETI
X X X		X X X		ΔV_C

REMARKS:

DATE 3/29/71

EARTH ORBIT BLOCK DATA

DATE 3/29/71

X X		-	X X		-	AREA
X X X		.	X X X		.	LAT
X X		.	X X		.	LONG
	GETI
X X X		.	X X X		.	ΔV_C
X X	-		X X	-		AREA
X X X		.	X X X		.	LAT
X X		.	X X		.	LONG
	GETI
X X X		.	X X X		.	ΔV_C
X X	-		X X	-		AREA
X X X		.	X X X		.	LAT
X X		.	X X		.	LONG
	GETI
X X X		.	X X X		.	ΔV_C
X X	-		X X	-		AREA
X X X		.	X X X		.	LAT
X X		.	X X		.	LONG
	GETI
X X X		.	X X X		.	ΔV_C
X X	-		X X	-		AREA
X X X		.	X X X		.	LAT
X X		.	X X		.	LONG
	GETI
X X X		.	X X X		.	ΔV_C
REMARKS:						

P27 UPDATE

PHOTO LOG
16 MM DAC

FLIGHT PLAN UPDATE

P24 LDMK TRACKIN

EARTH ORBIT
BLOCK DATA

P37 BLOCK DATA

P30 MANEUVER

EARTH ORBIT BLOCK DATA

X X	+	X X	-	AREA
X X X		X X X		LAT
X X		X X		LONG
X X X		X X X		GETI
X X	-	X X	-	ΔV_C
X X X		X X X		AREA
X X		X X		LAT
X X X		X X X		LONG
X X		X X		GETI
X X X		X X X		ΔV_C
X X	-	X X	-	AREA
X X X		X X X		LAT
X X		X X		LONG
X X X		X X X		GETI
X X	-	X X	-	ΔV_C
X X X		X X X		AREA
X X		X X		LAT
X X X		X X X		LONG
X X		X X		GETI
X X X		X X X		ΔV_C
X X	-	X X	-	AREA
X X X		X X X		LAT
X X		X X		LONG
X X X		X X X		GETI
X X	-	X X	-	ΔV_C
X X X		X X X		AREA
X X		X X		LAT
X X X		X X X		LONG
X X		X X		GETI
X X X		X X X		ΔV_C

REMARKS:

DATE 3/29/71

EARTH ORBIT BLOCK DATA

DATE 3/29/71

X X	-	X X	-	AREA
X X X	.	X X X	.	LAT
X X	.	X X	.	LONG
.	.	.	.	GETI
X X X	.	X X X	.	ΔV_C
X X	-	X X	-	AREA
X X X	.	X X X	.	LAT
X X	.	X X	.	LONG
.	.	.	.	GETI
X X X	.	X X X	.	ΔV_C
X X	-	X X	-	AREA
X X X	.	X X X	.	LAT
X X	.	X X	.	LONG
.	.	.	.	GETI
X X X	.	X X X	.	ΔV_C
X X	-	X X	-	AREA
X X X	.	X X X	.	LAT
X X	.	X X	.	LONG
.	.	.	.	GETI
X X X	.	X X X	.	ΔV_C
X X	-	X X	-	AREA
X X X	.	X X X	.	LAT
X X	.	X X	.	LONG
.	.	.	.	GETI
X X X	.	X X X	.	ΔV_C
X X	-	X X	-	AREA
X X X	.	X X X	.	LAT
X X	.	X X	.	LONG
.	.	.	.	GETI
X X X	.	X X X	.	ΔV_C
REMARKS:				

P27 UPDATE

PHOTO LOG
16 MM DAC

FLIGHT PLAN UPDATE

P24 LDMK TRACKIN

EARTH ORBIT
BLOCK DATA

P37 BLOCK DATA

P30 MANEUVER

EARTH ORBIT BLOCK DATA

X X	-	X X	-	AREA
X X X		X X X		LAT
X X		X X		LONG
	•		•	GETI
X X X		X X X		ΔV_C
X X	-	X X	-	AREA
X X X X		X X X X		LAT
X X		X X		LONG
	•		•	GETI
X X X		X X X		ΔV_C
X X	-	X X	-	AREA
X X X X		X X X X		LAT
X X		X X		LONG
	•		•	GETI
X X X		X X X		ΔV_C
X X	-	X X	-	AREA
X X X X		X X X X		LAT
X X		X X		LONG
	•		•	GETI
X X X		X X X		ΔV_C
X X	-	X X	-	AREA
X X X X		X X X X		LAT
X X		X X		LONG
	•		•	GETI
X X X		X X X		ΔV_C

REMARKS:

DATE 3/29/71

EARTH ORBIT BLOCK DATA

DATE 3/29/71

X X	-	X X	-	AREA
X X X	.	X X X	.	LAT
X X	.	X X	.	LONG
.	.	.	.	GETI
X X X	.	X X X	.	ΔV_C
X X	-	X X	-	AREA
X X X	.	X X X	.	LAT
X X	.	X X	.	LONG
.	.	.	.	GETI
X X X	.	X X X	.	ΔV_C
X X	-	X X	-	AREA
X X X	.	X X X	.	LAT
X X	.	X X	.	LONG
.	.	.	.	GETI
X X X	.	X X X	.	ΔV_C
X X	-	X X	-	AREA
X X X	.	X X X	.	LAT
X X	.	X X	.	LONG
.	.	.	.	GETI
X X X	.	X X X	.	ΔV_C
X X	-	X X	-	AREA
X X X	.	X X X	.	LAT
X X	.	X X	.	LONG
.	.	.	.	GETI
X X X	.	X X X	.	ΔV_C
X X	-	X X	-	AREA
X X X	.	X X X	.	LAT
X X	.	X X	.	LONG
.	.	.	.	GETI
X X X	.	X X X	.	ΔV_C
REMARKS:				

P27 UPDATE

PHOTO LOG
16 MM DAC

FLIGHT PLAN UPDATE

P24 LDMK TRACKING

EARTH ORBIT
BLOCK DATA

P37 BLOCK DATA

P30 MANEUVER

EARTH ORBIT BLOCK DATA

X X	-	X X	-	AREA
X X X		X X X		LAT
X X		X X		LONG
	•	•	•	GETI
X X X		X X X		ΔV_C
X X	-	X X	-	AREA
X X X		X X X		LAT
X X		X X		LONG
	•	•	•	GETI
X X X		X X X		ΔV_C
X X	-	X X	-	AREA
X X X		X X X		LAT
X X		X X		LONG
	•	•	•	GETI
X X X		X X X		ΔV_C
X X	-	X X	-	AREA
X X X		X X X		LAT
X X		X X		LONG
	•	•	•	GETI
X X X		X X X		ΔV_C
X X	-	X X	-	AREA
X X X		X X X		LAT
X X		X X		LONG
	•	•	•	GETI
X X X		X X X		ΔV_C
X X	-	X X	-	AREA
X X X		X X X		LAT
X X		X X		LONG
	•	•	•	GETI
X X X		X X X		ΔV_C

REMARKS:

DATE 3/29/71

P27 UPDATE

DATE 3/29/71

PURP	V	7	1	V		V	
GET	11	45	:00	:	:	:	:
304 01	INDEX	2	1	INDEX		INDEX	
02	0	1	5	0	1		
03	0	0	0	0	1		
04	7	1	4	6	5		
05	4	1	4	3	7		
06	7	6	6	5	9		
07	4	5	4	2	5		
10	7	7	0	0	3		
11	5	2	5	5	3		
12	7	2	6	0	2		
13	5	4	0	0	7		
14	7	5	4	5	5		
15	5	5	2	1	7		
16	7	6	2	6	7		
17	5	5	3	2	4		
20	0	0	4	0	2		
21	0	5	5	6	0		
22							
23							
24							
N34	HRS	X	X	X		X	X
	MIN	X	X	X	X	X	X
NAV CHECK SEC		X	X			X	X
N43	LAT		0			0	
	LONG						
	ALT	+	0			+	0

P27 UPDATE

PHOTO LOG
16 MM DAC

FLIGHT PLAN UPDATE

P24 LDMK TRACKIN
35 MM N

P27 UPDATE

EARTH ORBIT
BLOCK DATA

P37 BLOCK DATA

P30 MANEUVER

P27 UPDATE

PURP	V	V	V
GET	:	:	:
304 01	INDEX	INDEX	INDEX
02			
03			
04			
05			
06			
07			
10			
11			
12			
13			
14			
15			
16			
17			
20			
21			
22			
23			
24			
N34 HRS	X X X		X X X
MIN	X X X X		X X X X
NAV CHECK SEC	X X		X X
N43 LAT	0	.	0
LONG		.	.
ALT	+ 0	.	+ 0

DATE 3/29/71

P27 UPDATE

DATE 3/29/71

PURP	V	V	V
GET	:	:	:
304 01	INDEX	INDEX	INDEX
02			
03			
04			
05			
06			
07			
10			
11			
12			
13			
14			
15			
16			
17			
20			
21			
22			
23			
24			
N34 HRS	X X X		X X X
MIN	X X X X		X X X X
NAV CHECK SEC	X X		X X
N43 LAT	0		0
LONG			
ALT	+ 0		+ 0

P24 LDMK TRACKING
35 MM N

FLIGHT PLAN UPDATE

PHOTO LOG
16 MM DACPHOTO LOG
70 MM E L

P27 UPDATE

EARTH ORBIT
BLOCK DATA

P37 BLOCK DATA

P30 MANEUVER

P27 UPDATE

PURP	V	V	V
GET	⋮ ⋮	⋮ ⋮	⋮ ⋮
304 01	INDEX	INDEX	INDEX
02			
03			
04			
05			
06			
07			
10			
11			
12			
13			
14			
15			
16			
17			
20			
21			
22			
23			
24			
N34	HRS	X X X	X X X
	MIN	X X X X	X X X X
NAV CHECK SEC		X X	X X
N43	LAT	0	0
	LONG		
ALT	+ 0		+ 0

DATE 3/29/71

P27 UPDATE

DATE 3/29/71

PURP	V	V	V
GET	⋮ ⋮	⋮ ⋮	⋮ ⋮
304 01	INDEX	INDEX	INDEX
02			
03			
04			
05			
06			
07			
10			
11			
12			
13			
14			
15			
16			
17			
20			
21			
22			
23			
24			
N34	HRS	X X X	X X X
	MIN	X X X X	X X X X
NAV CHECK SEC		X X	X X
N43	LAT	0	0
	LONG		
ALT	+ 0	+ 0	-

P24 LDMK TRACKIN
35 MM N

FLIGHT PLAN UPDATE

PHOTO LOG
16 MM DACPHOTO LOG
70 MM E

P27 UPDATE

EARTH ORBIT
BLOCK DATA

P37 BLOCK DATA

P30 MANEUVER

P27 UPDATE

PURP	V		V		V	
GET	:	:	:	:	:	:
304 01	INDEX		INDEX		INDEX	
02						
03						
04						
05						
06						
07						
10						
11						
12						
13						
14						
15						
16						
17						
20						
21						
22						
23						
24						
N34	HRS	X	X	X		X
	MIN	X	X	X	X	X
NAV CHECK	SEC	X	X		X	X
N43	LAT		0		0	
	LONG					
	ALT	+	0		+	0

DATE 3/29/71

P27 UPDATE

DATE 3/29/71

PURP	V	V	V
GET	:	:	:
304 01	INDEX	INDEX	INDEX
02			
03			
04			
05			
06			
07			
10			
11			
12			
13			
14			
15			
16			
17			
20			
21			
22			
23			
24			
N34 HRS	X X X		X X X
MIN	X X X X		X X X X
NAV CHECK SEC	X X		X X
N43 LAT	0		0
LONG			.
ALT	+ 0		+ 0

PHOTO LOG
70 MM E Z
16 MM DAC

FLIGHT PLAN UPDATE

P24 LDMK TRACKIN
35 MM N

P27 UPDATE

EARTH ORBIT
BLOCK DATA

P37 BLOCK DATA

P30 MANEUVER

P27 UPDATE

PURP	V	V	V
GET	:	:	:
304 01	INDEX	INDEX	INDEX
02			
03			
04			
05			
06			
07			
10			
11			
12			
13			
14			
15			
16			
17			
20			
21			
22			
23			
24			
N34 HRS	X X X		X X X
MIN	X X X X		X X X X
NAV CHECK SEC	X X		X X
N43 LAT	0		0
LONG			
ALT	+ 0		+ 0

DATE 3/29/71

P27 UPDATE

DATE 3/29/71

PURP	V	V	V
GET	:	:	:
304 01	INDEX	INDEX	INDEX
02			
03			
04			
05			
06			
07			
10			
11			
12			
13			
14			
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16			
17			
20			
21			
22			
23			
24			
N34	HRS	X X X	X X X
	MIN	X X X X	X X X X
NAV CHECK	SEC	X X	X X
N43	LAT	0	0
	LONG		
	ALT	+ 0	+ 0

PHOTO LOG
70 MM E2PHOTO LOG
16 MM DAC

FLIGHT PLAN UPDATE

P24 LDMK TRACKIN
35 MM NM

P27 UPDATE

EARTH ORBIT
BLOCK DATA

P37 BLOCK DATA

P30 MANEUVER

P27 UPDATE

PURP	V	V	V
GET	:	:	:
304 01	INDEX	INDEX	INDEX
02			
03			
04			
05			
06			
07			
10			
11			
12			
13			
14			
15			
16			
17			
20			
21			
22			
23			
24			
N34 HRS	X X X		X X X
MIN	X X X X		X X X X
NAV CHECK SEC	X X		X X
N43 LAT	0		0
LONG			
ALT	+ 0		+ 0

DATE 3/29/71

P27 UPDATE

DATE 3/29/71

PURP	V	V	V
GET	:	:	:
304 01	INDEX	INDEX	INDEX
02			
03			
04			
05			
06			
07			
10			
11			
12			
13			
14			
15			
16			
17			
20			
21			
22			
23			
24			
N34	HRS	X X X	X X X
	MIN	X X X X	X X X X
NAV CHECK SEC		X X	X X
N43	LAT	0	0
	LONG		
	ALT	+ 0	+ 0

P24 LDMK TRACKIN
35 MM N/C

FLIGHT PLAN UPDATE

PHOTO LOG
16 MM DACPHOTO LOG
70 MM E/L

P27 UPDATE

PURP	V		V		V	
GET	:	:	:	:	:	:
304	01	INDEX	INDEX	INDEX		
02						
03						
04						
05						
06						
07						
10						
11						
12						
13						
14						
15						
16						
17						
20						
21						
22						
23						
24						
N34	HRS	X	X	X	X	X
	MIN	X	X	X	X	X
NAV CHECK	SEC	X	X		X	X
N43	LAT		0			0
	LONG					
	ALT	+	0		+	0

P27 UPDATE

EARTH ORBIT
BLOCK DATA

P37 BLOCK DATA

P30 MANEUVER

DATE 3/29/71

P27 UPDATE

DATE 3/29/71

PURP	V	V	V
GET	:	:	:
304 01	INDEX	INDEX	INDEX
02			
03			
04			
05			
06			
07			
10			
11			
12			
13			
14			
15			
16			
17			
20			
21			
22			
23			
24			
N34 HRS	X X X		X X X
MIN	X X X X		X X X X
NAV CHECK SEC	X X		X X
N43 LAT	0		0
LONG			
ALT	+ 0		+ 0

PHOTO LOG
16 MM DAC
70 MM E2

FLIGHT PLAN UPDATE

P24 LDMK TRACKIN
35 MM N/C

P27 UPDATE

EARTH ORBIT
BLOCK DATA

P37 BLOCK DATA

P30 MANEUVER

P27 UPDATE

PURP	V	V	V	
GET	• •	• •	• •	• •
304 01	INDEX	INDEX	INDEX	
02				
03				
04				
05				
06				
07				
10				
11				
12				
13				
14				
15				
16				
17				
20				
21				
22				
23				
24				
N34 HRS	X X X		X X X	
MIN	X X X X		X X X X	
NAV CHECK SEC	X X		X X	
N43 LAT	0	.	0	.
LONG		.		.
ALT	+	0	+	0

DATE 3/29/71

P27 UPDATE

DATE 3/29/71

PURP	V	V	V
GET	:	:	:
304 01	INDEX	INDEX	INDEX
02			
03			
04			
05			
06			
07			
10			
11			
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13			
14			
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16			
17			
20			
21			
22			
23			
24			
N34	HRS	X X X	X X X
	MIN	X X X X	X X X X
NAV CHECK SEC		X X	X X
N43	LAT	0	0
	LONG		
	ALT	+ 0	+ 0

PHOTO LOG
70 MM E/LPHOTO LOG
16 MM DAC

FLIGHT PLAN UPDATE

P24 LDMK TRACKIN
35 MM N/K

P27 UPDATE

P30 MANEUVER

P37 BLOCK DATA

EARTH ORBIT
BLOCK DATA

P27 UPDATE

PURP	V	V	V
GET	⋮ ⋮	⋮ ⋮	⋮ ⋮
304 01	INDEX	INDEX	INDEX
02			
03			
04			
05			
06			
07			
10			
11			
12			
13			
14			
15			
16			
17			
20			
21			
22			
23			
24			
N34 HRS	X X X		X X X
MIN	X X X X		X X X X
NAV CHECK SEC	X X		X X
N43 LAT	0	•	0
LONG		•	•
ALT	+ 0	•	+ 0

DATE 3/29/71

DATE 3/29/71

P27 UPDATE

PURP	V	V	V
GET	:	:	:
304 01	INDEX	INDEX	INDEX
02			
03			
04			
05			
06			
07			
10			
11			
12			
13			
14			
15			
16			
17			
20			
21			
22			
23			
24			
N34 HRS	X X X		X X X
MIN	X X X X		X X X X
NAV CHECK SEC	X X		X X
N43 LAT	0		0
LONG			
ALT	+ 0		+ 0

PHOTO LOG
70 MM E L
16 MM DAC

FLIGHT PLAN UPDATE

P24 LDMK TRACKIN
35 MM N K

P27 UPDATE

EARTH ORBIT
BLOCK DATA

P37 BLOCK DATA

P30 MANEUVER

P27 UPDATE

PURP	V	V	V
GET	:	:	:
304 01	INDEX	INDEX	INDEX
02			
03			
04			
05			
06			
07			
10			
11			
12			
13			
14			
15			
16			
17			
20			
21			
22			
23			
24			
N34 HRS	X X X		X X X
MIN	X X X X		X X X X
NAV CHECK SEC	X X		X X
N43 LAT	0		0
LONG			
ALT	+ 0		+ 0

DATE 3/29/71

P27 UPDATE

DATE 3/29/71

PURP	V	V	V
GET	:	:	:
304 01	INDEX	INDEX	INDEX
02			
03			
04			
05			
06			
07			
10			
11			
12			
13			
14			
15			
16			
17			
20			
21			
22			
23			
24			
N34 HRS	X X X		X X X
MIN	X X X X		X X X X
NAV CHECK SEC	X X		X X
N43 LAT	0		0
LONG			
ALT	+ 0		+ 0

P24 LDMK TRACKIN
35 MM NKC

FLIGHT PLAN UPDATE

PHOTO LOG
16 MM DACPHOTO LOG
70 MM E2

P27 UPDATE

PURP	V	V	V
GET	• •	• •	• •
304 01	INDEX	INDEX	INDEX
02			
03			
04			
05			
06			
07			
10			
11			
12			
13			
14			
15			
16			
17			
20			
21			
22			
23			
24			
N34 HRS	X X X		X X X
MIN	X X X X		X X X X
NAV CHECK SEC	X X		X X
N43 LAT	0		0
LONG			
ALT	+ 0		+ 0

P27 UPDATE

EARTH ORBIT
BLOCK DATA

P37 BLOCK DATA

P30 MANEUVER

DATE 3/29/71

P24 LANDMARK TRACKING

TGT:

()

T₁ _____ : : _____

T₂ _____ : : _____

TCA _____ : : _____

T₃ _____ : : _____

R _____ °P _____ °Y _____ ° (T2 ACQ)

N or S NM _____ / SA _____ TA _____ (T2 ACQ)

N89 LAT _____ • _____

LONG/2 _____ • _____

ALT _____ • _____

TGT:

()

T₁ _____ : : _____

T₂ _____ : : _____

TCA _____ : : _____

T₃ _____ : : _____

R _____ °P _____ °Y _____ ° (T2 ACQ)

N or S NM _____ / SA _____ TA _____ (T2 ACQ)

N89 LAT _____ • _____

LONG/2 _____ • _____

ALT _____ • _____

DATE 3/29/71

FLIGHT PLAN UPDATE

PHOTO LOG
16 MM DAC

PHOTO LOG
70 MM E2

P24 LDMK TRACKIN
35 MM N

P27 UPDATE

EARTH ORBIT
BLOCK DATA

P37 BLOCK DATA

P24 LANDMK TRACKING

TGT: ()

T₁ - - - - - • - - - - -

T₂ - - - - - • - - - - -

TCA - - - - - • - - - - -

T₃ - - - - - • - - - - -

R - - - - °P - - - - °Y - - - - ° (T2 ACQ)

N or S NM - - / SA - - TA - - (T2 ACQ)

N89 LAT - - - - - • - - - - -

LONG/2 - - - - - • - - - - -

ALT - - - - - • - - - - -

TGT: ()

T₁ - - - - - • - - - - -

T₂ - - - - - • - - - - -

TCA - - - - - • - - - - -

T₃ - - - - - • - - - - -

R - - - - °P - - - - °Y - - - - ° (T2 ACQ)

N or S NM - - / SA - - TA - - (T2 ACQ)

N89 LAT - - - - - • - - - - -

LONG/2 - - - - - • - - - - -

ALT - - - - - • - - - - -

DATE 3/29/71

P24 LANDMARK TRACKING

TGT: ()

T₁ _____ : _____ :

T₂ _____ : _____ :

TCA _____ : _____ :

T₃ _____ : _____ :

R _____ °P _____ °Y _____ ° (T2 ACQ)

N or S NM _____ / SA _____ TA _____ (T2 ACQ)

N89 LAT _____ • _____

LONG/2 _____ • _____

ALT _____ • _____

TGT: ()

T₁ _____ : _____ :

T₂ _____ : _____ :

TCA _____ : _____ :

T₃ _____ : _____ :

R _____ °P _____ °Y _____ ° (T2 ACQ)

N or S NM _____ / SA _____ TA _____ (T2 ACQ)

N89 LAT _____ • _____

LONG/2 _____ • _____

ALT _____ • _____

DATE 3/29/71

FLIGHT PLAN UPDATE

PHOTO LOG
16 MM DAC

PHOTO LOG
70 MM E2

PHOTU LUG
35 MM M

P24 LANDMARK TRACKING

TGT:

()

T₁ _____ : : _____T₂ _____ : : _____

TCA _____ : : _____

T₃ _____ : : _____

R _____ °P _____ °Y _____ °(T2 ACQ)

N or S NM _____ / SA _____ TA _____ (T2 ACQ)

N89 LAT _____ • _____

LONG/2 _____ • _____

ALT _____ • _____

TGT:

()

T₁ _____ : : _____T₂ _____ : : _____

TCA _____ : : _____

T₃ _____ : : _____

R _____ °P _____ °Y _____ °(T2 ACQ)

N or S NM _____ / SA _____ TA _____ (T2 ACQ)

N89 LAT _____ • _____

LONG/2 _____ • _____

ALT _____ • _____

DATE 3/29/71

P24 LANDMARK TRACKING

TGT: ()

T₁ _____ : _____ :

T₂ _____ : _____ :

TCA _____ : _____ :

T₃ _____ : _____ :

R _____ °P _____ °Y _____ ° (T2 ACQ)

N or S NM _____ / SA _____ TA _____ (T2 ACQ)

N89 LAT _____ • _____

LONG/2 _____ • _____

ALT _____ • _____

TGT: ()

T₁ _____ : _____ :

T₂ _____ : _____ :

TCA _____ : _____ :

T₃ _____ : _____ :

R _____ °P _____ °Y _____ ° (T2 ACQ)

N or S NM _____ / SA _____ TA _____ (T2 ACQ)

N89 LAT _____ • _____

LONG/2 _____ • _____

ALT _____ • _____

DATE 3/29/71

FLIGHT PLAN UPDATE

PHOTO LOG
16 MM DAC

PHOTO LOG
70MM EIZ

PHOTU LUG
35 MM N

P27 UPDATE

EARTH ORBIT
BLOCK DATA

P37 BLOCK DATA

P24 LANDMK TRACKING

TGT: ()

T₁ - - - - - : - - - - -

T₂ - - - - - : - - - - -

TCA - - - - - : - - - - -

T₃ - - - - - : - - - - -

R - - - - - °P - - - - - °Y - - - - - °(T2 ACQ)

N or S NM - - - / SA - - - TA - - - (T2 ACQ)

N89 LAT - - - - - • - - - - -

LONG/2 - - - - - • - - - - -

ALT - - - - - • - - - - -

TGT: ()

T₁ - - - - - : - - - - -

T₂ - - - - - : - - - - -

TCA - - - - - : - - - - -

T₃ - - - - - : - - - - -

R - - - - - °P - - - - - °Y - - - - - °(T2 ACQ)

N or S NM - - - / SA - - - TA - - - (T2 ACQ)

N89 LAT - - - - - • - - - - -

LONG/2 - - - - - • - - - - -

ALT - - - - - • - - - - -

DATE 3/29/71

P24 LANDMARK TRACKING

TGT: ()

T₁ _____ : _____ :

T₂ _____ : _____ :

TCA _____ : _____ :

T₃ _____ : _____ :

R _____ °P _____ °Y _____ ° (T2 ACQ)

N or S NM _____ / SA _____ TA _____ (T2 ACQ)

N89 LAT _____ • _____

LONG/2 _____ • _____

ALT _____ • _____

TGT: ()

T₁ _____ : _____ :

T₂ _____ : _____ :

TCA _____ : _____ :

T₃ _____ : _____ :

R _____ °P _____ °Y _____ ° (T2 ACQ)

N or S NM _____ / SA _____ TA _____ (T2 ACQ)

N89 LAT _____ • _____

LONG/2 _____ • _____

ALT _____ • _____

DATE 3/29/71

FLIGHT PLAN UPDATE

PHOTO LOG
16 MM DAC

PHOTO LOG
70 MM E2

PHOTO LUG
35 MM NEX

P27 UPDATE

EARTH ORBIT
BLOCK DATA

P37 BLOCK DATA

P24 LANDMK TRACKING

TGT:

()

T₁ _____ : _____ :

T₂ _____ : _____ :

TCA _____ : _____ :

T₃ _____ : _____ :

R _____ °P _____ °Y _____ ° (T2 ACQ)

N or S NM _____ / SA _____ TA _____ (T2 ACQ)

N89 LAT _____ • _____

LONG/2 _____ • _____

ALT _____ • _____

TGT:

()

T₁ _____ : _____ :

T₂ _____ : _____ :

TCA _____ : _____ :

T₃ _____ : _____ :

R _____ °P _____ °Y _____ ° (T2 ACQ)

N or S NM _____ / SA _____ TA _____ (T2 ACQ)

N89 LAT _____ • _____

LONG/2 _____ • _____

ALT _____ • _____

DATE 3/29/71

P24 LANDMARK TRACKING

TGT: ()

T₁ _____ : : _____

T₂ _____ : : _____

TCA _____ : : _____

T₃ _____ : : _____

R _____ °P _____ °Y _____ ° (T2 ACQ)

N or S NM _____ / SA _____ TA _____ (T2 ACQ)

N89 LAT _____ • _____

LONG/2 _____ • _____

ALT _____ • _____

TGT: ()

T₁ _____ : : _____

T₂ _____ : : _____

TCA _____ : : _____

T₃ _____ : : _____

R _____ °P _____ °Y _____ ° (T2 ACQ)

N or S NM _____ / SA _____ TA _____ (T2 ACQ)

N89 LAT _____ • _____

LONG/2 _____ • _____

ALT _____ • _____

DATE 3/29/71

FLIGHT PLAN UPDATE

PHOTO LOG
16 MM DAC

PHOTO LOG
70 MM E.Z

PHOTOLUG
35 MM NK

P27 UPDATE

EARTH ORBIT
BLOCK DATA

P37 BLOCK DATA

P24 LANDMK TRACKING

TGT:

()

T₁ _____ : _____ :

T₂ _____ : _____ :

TCA _____ : _____ :

T₃ _____ : _____ :

R _____ °P _____ °Y _____ °(T2 ACQ)

N or S NM _____ / SA _____ TA _____ (T2 ACQ)

N89 LAT _____ : _____ • _____

LONG/2 _____ : _____ • _____

ALT _____ : _____ • _____

TGT:

()

T₁ _____ : _____ :

T₂ _____ : _____ :

TCA _____ : _____ :

T₃ _____ : _____ :

R _____ °P _____ °Y _____ °(T2 ACQ)

N or S NM _____ / SA _____ TA _____ (T2 ACQ)

N89 LAT _____ : _____ • _____

LONG/2 _____ : _____ • _____

ALT _____ : _____ • _____

DATE 3/29/71

DATE 3/29/71

TIME	ITEM
	OV - 0001 2 frames to site & 1 HR 25sec
3-38	over 17
3- 57	" 16
0 3-167	" 123 - 49 123 - 56
3- 352	" 16
3- 378	" 16
3- 402	still UV over 16

PHOTO LOG
70 MM E L

PHOTO LOG
12 MM DAC

FLIGHT PLAN UPDATE

PHOTO LOG
35 MM N F

P27 UPDATE

EARTH ORBIT
BLOCK DATA

FLIGHT PLAN UPDATE

<4 LDMK TRACKING

TIME	ITEM	IN	CERT.
	P 1-1	AIR	MAX FOR
		POS	NO.
	END 200 2	CG (16)	SAC. ASA close
P 1-7	AS Animations		
	Bonne	ASA	AS Mrs Bonne Bonne
	Star 1	VACU	
		FOR	10 min.
P 2-5	CG Cont.	ASA	Close
P 2-13	NOG Act	-	Bonee, V. ASA for 10 min

DATE 3/29/71

NASA MSC

DATE 3/29/71

TIME	ITEM	PHOTO LOG	- LENS	SERIAL#
TIME	MAG	FRAMES		
	P	BW	105	V 0
	Q	BW	0 ✓	N 130
	R	BW	5 ✓	W 170
	U	BW	0 ✓	
T	CER			1286
S	BW		177	
	N	CER	166	
O	BW	50		
K	CER	166		
L	BW	180		

PHOTO LOG
70 MM EIZPHOTO LOG
16 MM DACPHOTO LOG
35 MM NK

P27 UPDATE

EARTH ORBIT
BLOCK DATA

FLIGHT PLAN UPDATE

LDMK TRACKING

TIME	ITEM	Lunar Surface Photos Taken
16 min	MAC	Frame
	G	0
	H	0
	A	75% descent
	J	0
	B	100%
	E	100%
	C	0
	D	0

DATE 3/29/71

NAS — MSC

DATE 3/29/71

PHOTO LOG
70MM E.

PHOTO LOG
16 MM DAC

PHUIU LUG
35 MM MK

P27 UPDATE

EARTH ORBIT
BLOCK DATA

FLIGHT PLAN UPDATE

• 24 LDMK TRACKING

DATE 3/29/71

DATE 3/29/71

**PHOTO LOG
70MM E.L.
16 MM DAC**

PHUIU LUU
35 MM NR

P27 UPDATE

EARTH ORBIT
BLOCK DATA

FLIGHT PLAN UPDATE

LDMK TRACKS

DATE 3/29/71

NAS — MSC

DATE 3/29/71

PHOTO LOG
16 MM DAC

PHOTO LOG
35 MM NIKON

P27 UPDATE

EARTH ORBIT
BLOCK DATA

FLIGHT PLAN UPDATE

-4 LDMK TRACKS

DATE 3/29/71

NAS — MSC

DATE 3/29/71

PHOTO LOG
70MM E.L.

PHOTO LOG
M M DAC

PHOTO LOG
35 MM NIKON

P27 UPDATE

EARTH ORBIT
BLOCK DATA

FLIGHT PLAN UPDATE

-4 LDMK TRACKS

DATE 3/29/71

NASA - MSC

DATE 3/29/71

PHOTO LOG
TO MM E

PHOTO LOG

PHOTO LOG
35 MM N

P27 UPDATE

EARTH ORBIT
BLOCK DATA

FLIGHT PLAN UPDATE

LDMK TRACKING

DATE 3/29/71

NAS.—MSC

DATE 3/29/71

PHOTO LOG
ZOOM E

PHOTO LOG
16 MARCH DAC

PHOTO LOG

P27 UPDATE

EARTH ORBIT
BLOCK DATA

FLIGHT PLAN UPDATE

LDMK TRACKS

DATE 3/29/71

NAS — MSC

DATE 3/29/71

PHOTO LOG
70MM E.L.

PHOTO LOG
16 MM DAC

PHOTO LOG
35 MM M

P27 UPDATE

EARTH ORBIT
BLOCK DATA

FLIGHT PLAN UPDATE

• 24 LDMK TRACKS

DATE 3/29/71

NASA — MSC

DATE 3/29/71

PHOTO LOG
70MM E

PHOTO LOG

PHOTO LOG

P27 UPDATE

EARTH ORBIT
BLOCK DATA

FLIGHT PLAN UPDATE

LDMK TRACKING

TIME	ITEM							
	<i>Bor Rony</i>							

029

DATE 3/29/71

NASA — MSC

16 mm
CAM TYPE

PHOTO LOG

A
MAG ID

GET	MAG	NO.	REMARKS (f, t, LENS, FILTER)
3:15	A	1/2	T+D f8 250 12-6-12 fps
74	A	50-25	SIM 200 200' f8-100'

500

QQ	197	1-45	SERENITY + HADLEY
QQ	198	46-51	DAVES - PLINIES
QQ	200:30 201:30	51-123	INTERESTING TOTS. f8/125 → f11/250

213pp	145	123	REV 69
214	PP	134 155	REV 70

DATE _____

PHOTO LOG
16 MM DACPHOTO LOG
70 MM ELPHOTO LOG
35 MM N

• <4 LDMK TRACKING

FLIGHT PLAN UPDATE

PHOTO LOG

P27 UPDATE

16 mm
CAM TYPE

PHOTO LOG

B
MAG ID

DATE _____

PHOTO LOG
70MM E.Z.

PHOTO LOG

35 MM NK

• <4 LDMK TRACKING

FLIGHT PLAN UPDATE

PHOTO LOG

P27 UPDATE

16 mm
CAM TYPE

PHOTO LOG

B

MAG ID

DATE _____

16 mm
CAM TYPE

PHOTO LOG

C
MAG ID

DATE _____

PHOTO LOG
20 MM E

PHOTO LOG
35 MM M

P27 UPDATE

PHOTO LOG

FLIGHT PLAN UPDATE

• <4 LDMK TRACKING

16 mm
CAM TYPE

PHOTO LOG

C
MAG ID

DATE _____

~~16 mm~~
CAM TYPE

PHOTO LOG

~~D~~
~~MAG ID~~

Film Unused

DATE

PHOTO LOG
70MM E7

PHOTO LOG
35 MM / 2

P27 UPDATE

PHOTO LOG

FLIGHT PLAN UPDATE

• <4 LDMK TRACKING

CAM TYPE

PHOTO LOG

D
MAG ID

DATE

16mm
CAM TYPE

PHOTO LOG

E
MAG ID

DATE _____

PHOTO LOG
70MM E7

PHOTO LOG

LDMK TRACKING

FLIGHT PLAN UPDATE

PHOTO LOG

P27 UPDATE

16 mm
CAM TYPE

PHOTO LOG

E

MAG ID

DATE _____

16mm
CAM TYPE

PHOTO LOG

F
MAG ID

DATE _____

PHOTO LOG
70MM E.Z.

PHOTO LOG

-24 LDMK TRACKING

FLIGHT PLAN UPDATE

PHOTO LOG

P27 UPDATE

16mm
CAM TYPE

PHOTO LOG

F
MAG ID

DATE _____

16mm
CAM TYPE

PHOTO LOG

G
MAG ID

DATE _____

**PHOTO LOG
70MM E/L**

PHOTO LOG
35 MM N.Y.

P27 UPDATE

PHOTO LOG

FLIGHT PLAN UPDATE

LDMK TRACKING

16 mm
CAM TYPE

PHOTO LOG

G
MAG ID

DATE

16 mm
CAM TYPE

PHOTO LOG

H
MAG ID

DATE _____

PHOTO LOG
70MM E.L.

LDMK TRACKING

FLIGHT PLAN UPDATE

PHOTO LOG

P27 UPDATE

16 mm
CAM TYPE

PHOTO LOG

UHBW

H
MAG ID

DATE

16 mm
CAM TYPE

PHOTO LOG

I
MAG ID

DATE _____

PHOTO LOG
70 MM E 7

PHOTO LOG

• 24 LDMK TRACKING

FLIGHT PLAN UPDATE

PHOTO LOG

P27 UPDATE

16mm
CAM TYPE

PHOTO LOG

I
MAG ID

DATE _____

16 mm
CAM TYPE

PHOTO LOG

J
MAG ID

DATE _____

PHOTO LOG
70MM E7

PHOTO LOG

124 LDMK TRACKING

FLIGHT PLAN UPDATE

PHOTO LOG

P27 UPDATE

16mm
CAM TYPE

PHOTO LOG

✓
MAG ID

DATE _____

16 mm
CAM TYPE

PHOTO LOG

K
MAG ID

DATE _____

PHOTO LOG
70MM E.L.

PHOTO LOG

LDMK TRACKING

FLIGHT PLAN UPDATE

PHOTO LOG

P27 UPDATE

16mm
CAM TYPE

PHOTO LOG

K
MAG ID

DATE _____

16 mm
CAM TYPE

PHOTO LOG

L
MAG ID

DATE _____

PHOTO LOG
70 MM E

PHOTO LOG

LDMK TRACKING

FLIGHT PLAN UPDATE

PHOTO LOG

P27 UPDATE

16 mm
CAM TYPE

PHOTO LOG

L
MAG ID

DATE _____

70 mm
CAM TYPE

PHOTO LOG

M
MAG ID

GET	MAG	NO.	REMARKS (f, t, LENS, FILTER)
250:00			
104:02	143		
	151		T SCHALKOWSKI - SPEYER FLOW
104:37	48		LITTRAW RIDGES FROM ABOVE
	49		ODD CRATER IN SCREPITATIS
104:47	150		Imbrrium NORTH - 2
	153		3 arch - 1
250:00	KK	167	
	LL	181	
	MM	132	
	NN	167	
	OO	176	
	PP	169	
	QQ	183	
	RR	145	
	SS	176	
	TT	166	
	UU		
	VV		
	WW	169	
		183	

DATE _____

PHOTO LOG
35 MM N/K

PHOTO LOG
70 MM E/L

LDMK TRACKING

FLIGHT PLAN UPDATE

PHOTO LOG

PHOTO LOG

70mm
CAM TYPE

PHOTO LOG

M
MAG ID

DATE _____

-30
+98

70mm
CAM TYPE

PHOTO LOG

N
MAG ID

PHOTO LOG
35 MM

DATE _____

RECEIVED LDMK TRAVERS

FLIGHT PLAN UPDATE

PHOTO LOG

PHOTO LOG

70mm
CAM TYPE

PHOTO LOG

N
MAG ID

DATE

70 mm
CAM TYPE

PHOTO LOG

O
MAG ID

PHOTO LOG
35 MM M-4

DATE

-4 LDMK TRACKING

FLIGHT PLAN UPDATE

PHOTO LOG

PHOTO LOG

70 mm
CAM TYPE

PHOTO LOG

O
MAG ID

DATE

70 mm
CAM TYPE

PHOTO LOG

P
MAG ID

HOTO LOG
35 MM N

PHOTO LOG

FLIGHT PLAN UPDATE

PHOTO LOG

T-4 LDMK TRACKING

70mm
CAM TYPE

PHOTO LOG

P
MAG ID

DATE _____

70 mm
CAM TYPE

PHOTO LOG

Q
MAG ID

GET	MAG	NO.	REMARKS (f, t, LENS, FILTER)
149:25	1- 20	TSIOLKOVSKY	CENTRAL PEAK WATKEMAN SPENCER SOUTH WALL
142:04	17 10	FR 20-30 PHOTO TBT 25	
190-200	30- 63	ARISTARCHUS	
248:00	Q	115	UV PHOTO - EARTH
268:00	Q	116	UV PHOTO - EARTH
290:00	148		UV PHOTO - EARTH

DATE _____

PHOTO LOG
35 MM NK

-C4 LDMK TRACKING

FLIGHT PLAN UPDATE

PHOTO LOG

PHOTO LOG

70 mm
CAM TYPE

PHOTO LOG

Q
MAG ID

DATE

70mm
CAM TYPE

PHOTO LOG

R
MAG ID

PHOTO LOG

FLIGHT PLAN UPDATE

PHOTO LOG

PHOTO LOG

— 2 —

PHOTO LOG

R

MAG ID

70mm
CAM TYPE

DATE _____

70 mm
CAM TYPE

PHOTO LOG

S
MAG ID

GET	MAG	NO.	REMARKS (f, t, LENS, FILTER)
107:54		15	Custer Pair
108:		16-40	THE RIM OF CEISIUM TO LE MONTIER. 3 STEREO OF ROMER. SHOTS OF RIDGES & DEPRESSIONS IN SERENITATIS.
126:04	—	40-70	LICK-LITROW STRIP
126:19	—	70-90	HANLEY RILLE CONC. STEREO
149:16		81	Walewney - long blow
		82-85	Spenny long - pancake
149:27		86-95	PT 9 Meltner - Pancake.
149:57		96-111	NW Ceisum to Litrow

DATE

PHOTO LOG
35 MM NK

FLIGHT PLAN UPDATE

PHOTO LOG

PHOTO LOG

• 4 LDMK TRACKING

70 mm
CAM TYPE

PHOTO LOG

S
MAG ID

DATE _____

DATE 7 15 71

35 MM
CAM TYPE

PHOTO LOG

T
MAG ID

52 FRAMES

DATE 7/15/71

PHOTO LOG
35 MM M

FLIGHT PLAN UPDATE

PHOTO LOG

PHOTO LOG

PHOTO LOG
MM 52

35 MM
CAM TYPE

PHOTO LOG

U
MAG ID
52 FRAMES

DATE 7 15 71

35 MM
CAM TYPE

PHOTO LOG

V
MAG ID

52 FRAMES

DATE 7/15/71

FLIGHT PLAN UPDATE

PHOTO LOG

PHOTO LOG

PHOTO LOG

PHOTO LOG

35 MM
CAM TYPE

W

MAG ID

SENSITOMETRIC CALIBRATION

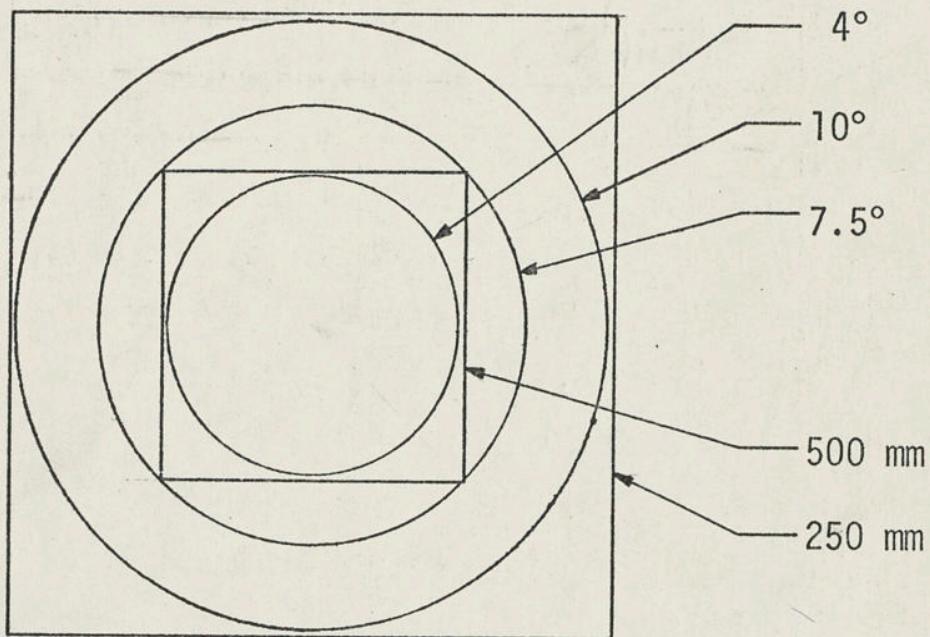
REMARKS

**REMARKS
+ LENS**

(f,t, LENS, FILTER)

DATE 7 15 71

RING SIGHT FOV



60 mm $\rightarrow 47^\circ$ along a side
80 mm $\rightarrow 38^\circ$ along a side
250 mm $\rightarrow 12^\circ$ along a side
500 mm $\rightarrow 6^\circ$ along a side

