APOLLO 8	
UPDATES	
PART NO.	S/N
SKB 32100042-201	1004

MANEUVER

MANEUVER

Burn Ref

SET STARS

R ALIGN 1 3 7
P ALIGN 1 5 5
Y ALIGN 2 1 0

ULLAGE

HORIZON/WINDOW

Aft -3
22°
Horiz

OTHER

Co-2

PURPOSE		
PROP/GUID		
WT		N47
P_{TRIM}	0 0 .	N48
Y_{TRIM}	0 0 .	
HRS	0 0 0 7 3	GET I
MIN	0 0 0 3 5	N33
SEC	0 0 5 . 7 0	
ΔV_X	− 0 1 3 5 . 0	N81
ΔV_Y	+ 0 0 0 0 . 0	
ΔV_Z	+ 0 0 0 0 . 0	
R	× × × 0 0 0	
P	× × × 1 7 5	
Y	× × × 3 5 8	
H_A	0 0 6 0 . 1	N44
Hp	+ 0 0 6 0 . 6	
ΔVT	0 1 3 6 . 0	
BT	× × × 0 : 0 7	
ΔVC	× 0 1 2 6 . 5	
SXTS	× × × × 0 2	
SFT	3 1 1 . 2 0	
TRN	1 7 . 7 0 0	
BSS	× × ×	
SPA	× × 0 1 6 . 2	
SXP	× × × L 0 . 1	
LAT	0 .	N61
LONG	.	
RTGO	+ .	EMS
VIO	+	
GET	: :	.05G

May 26, 1968

MANEUVER

SET STARS

R ALIGN ___ ___ ___
P ALIGN ___ ___ ___
Y ALIGN ___ ___ ___

ULLAGE ___

HORIZON/WINDOW ___

OTHER ___

	/	PURPOSE PROP/GUID
+		WT N47
	0 0 .	P_{TRIM} N48
	0 0 .	Y_{TRIM}
+ 0 0		HRS GET I
+ 0 0 0		MIN N33
+ 0 .		SEC
	.	ΔV_X N81
	.	ΔV_Y
	.	ΔV_Z
X X X		R
X X X		P
X X X		Y
+	.	H_A N44
	.	Hp
+	.	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
0	.	LAT N61
	.	LONG
+	.	RTGO EMS
+		VIO
	: :	GET .05G

MANEUVER

NOV 26, 1968

MANEUVER

Burn Prep
SET STARS

R ALIGN 1 2 2
P ALIGN 1 5 5
Y ALIGN 2 1 0

ULLAGE 40

HORIZON/WINDOW ___

OTHER ___

	252	PURPOSE
	SXTS / 60+40	PROP/GUID
+ 6		WT N47
-	0 0 1.61	P_{TRIM} N48
+	0 0 1.31	Y_{TRIM}
+ 0 0	0 6 9	HRS GET I
+ 0 0 0	0 5	MIN N33
+ 0	1 x 41	SEC
-	29 33.7	ΔV_X N81
+	0 2 31.3	ΔV_Y
+	0 0 9 9.4	ΔV_Z
X X X	0 0 0	R
X X X	8 0 0	P
X X X	0 0 5	Y
+ 0	1 6 9.3	H_A N44
+ 0	0 6 0.0	Hp
+ 2	9 7 4.9	ΔVT
X X X	4.0 2	BT
X 2	7 8.3	ΔVC
X X X X	0 1	SXTS
+ 0	6 8.7 0	SFT
+ 2	6. 0 0	TRN
X X X		BSS
X X	.	SPA
X X X	.	SXP
0	.	LAT N61
	.	LONG
+	.	RTGO EMS
+		VIO
	: :	GET .05G

MANEUVER

SET STARS

R ALIGN ___ ___ ___
P ALIGN ___ ___ ___
Y ALIGN ___ ___ ___

ULLAGE ___

HORIZON/WINDOW ___

OTHER ___

	/	PURPOSE
		PROP/GUID
+		WT N47
	0 0 .	P_{TRIM} N48
	0 0 .	Y_{TRIM}
+ 0 0		HRS GET I
+ 0 0 0		MIN N33
+ 0	.	SEC
	.	ΔV_X N81
	.	ΔV_Y
	.	ΔV_Z
X X X		R
X X X		P
X X X		Y
+	.	H_A N44
	.	Hp
+	.	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
0	.	LAT N61
	.	LONG
+	.	RTGO EMS
+		VIO
: :		GET .05G

MANEUVER

NOV 26, 1968

MANEUVER

SET STARS

R ALIGN ___ ___ ___
P ALIGN ___ ___ ___
Y ALIGN ___ ___ ___

ULLAGE ___

HORIZON/WINDOW ___

OTHER ___

2 3 2	/	PURPOSE
		PROP/GUID
✦		WT N47
— 0 0 / . 6 1		P_{TRIM} N48
+ 0 0 / . 2 —		Y_{TRIM}
✦ 0 0 8 6 7		HRS GET I
✦ 0 0 0 0 4		MIN N33
✦ 0 1 9 . 5 2		SEC
— 2 . 8 4 6		ΔV_X N81
/ 0 . 3 2 . 4		ΔV_Y
/ 0 / 0 6 . 3		ΔV_Z
✖ ✖ ✖ 3 0 0		R
✖ ✖ ✖ Q . 0 0		P
✖ ✖ ✖ 0 0 5		Y
✦ 0 1 6 9 . 3		H_A N44
+ 0 0 6 0 . 0		Hp
✦ 2 9 7 5 . 4		ΔVT
✖ ✖ ✖ :		BT
✖	.	ΔVC
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
+		VIO
: :		GET .05G

MANEUVER

SET STARS

R ALIGN ___ ___ ___
P ALIGN ___ ___ ___
Y ALIGN ___ ___ ___

ULLAGE _____

HORIZON/WINDOW _____

OTHER _____

		PURPOSE PROP/GUID
+		WT N47
	0 0 .	PTRIM N48
	0 0 .	YTRIM
+ 0 0		HRS GETI
+ 0 0 0		MIN N33
+ 0	.	SEC
	.	ΔVX N81
	.	ΔVY
	.	ΔVZ
X X X		R
X X X		P
X X X		Y
+	.	HA N44
	.	Hp
+	.	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
0	.	LAT N61
	.	LONG
+	.	RTGO EMS
+		VIO
:	:	GET .05G

MANEUVER

MANEUVER

SET STARS

R ALIGN ___ ___ ___
P ALIGN ___ ___ ___
Y ALIGN ___ ___ ___

ULLAGE _____

HORIZON/WINDOW _____

OTHER _____

		PURPOSE PROP/GUID
+		WT N47
	0 0 .	PTRIM N48
	0 0 .	YTRIM
+ 0 0		HRS GETI
+ 0 0 0		MIN N33
+ 0	.	SEC
	.	ΔVX N81
	.	ΔVY
	.	ΔVZ
X X X		R
X X X		P
X X X		Y
+	.	HA N44
	.	Hp
+	.	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
0	.	LAT N61
	.	LONG
+	.	RTGO EMS
+		VIO
:	:	GET .05G

NOV 26, 1968

MANEUVER

SET STARS

R ALIGN ___ ___ ___
P ALIGN ___ ___ ___
Y ALIGN ___ ___ ___

ULLAGE _____

HORIZON/WINDOW _____

OTHER _____

	PURPOSE PROP/GUID
+	WT N47
0 0 •	PTRIM N48
0 0 •	YTRIM
+ 0 0	HRS GETI
+ 0 0 0	MIN N33
+ 0 •	SEC
•	ΔVX N81
•	ΔVY
•	ΔVZ
X X X	R
X X X	P
X X X	Y
+ •	HA N44
•	HP
+ •	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
0 •	LAT N61
•	LONG
+ •	RTGO EMS
+	VIO
• •	GET .05G

MANEUVER

NOV 26, 1968

MANEUVER

SET STARS

R ALIGN ___ ___ ___
P ALIGN ___ ___ ___
Y ALIGN ___ ___ ___

ULLAGE _____

HORIZON/WINDOW _____

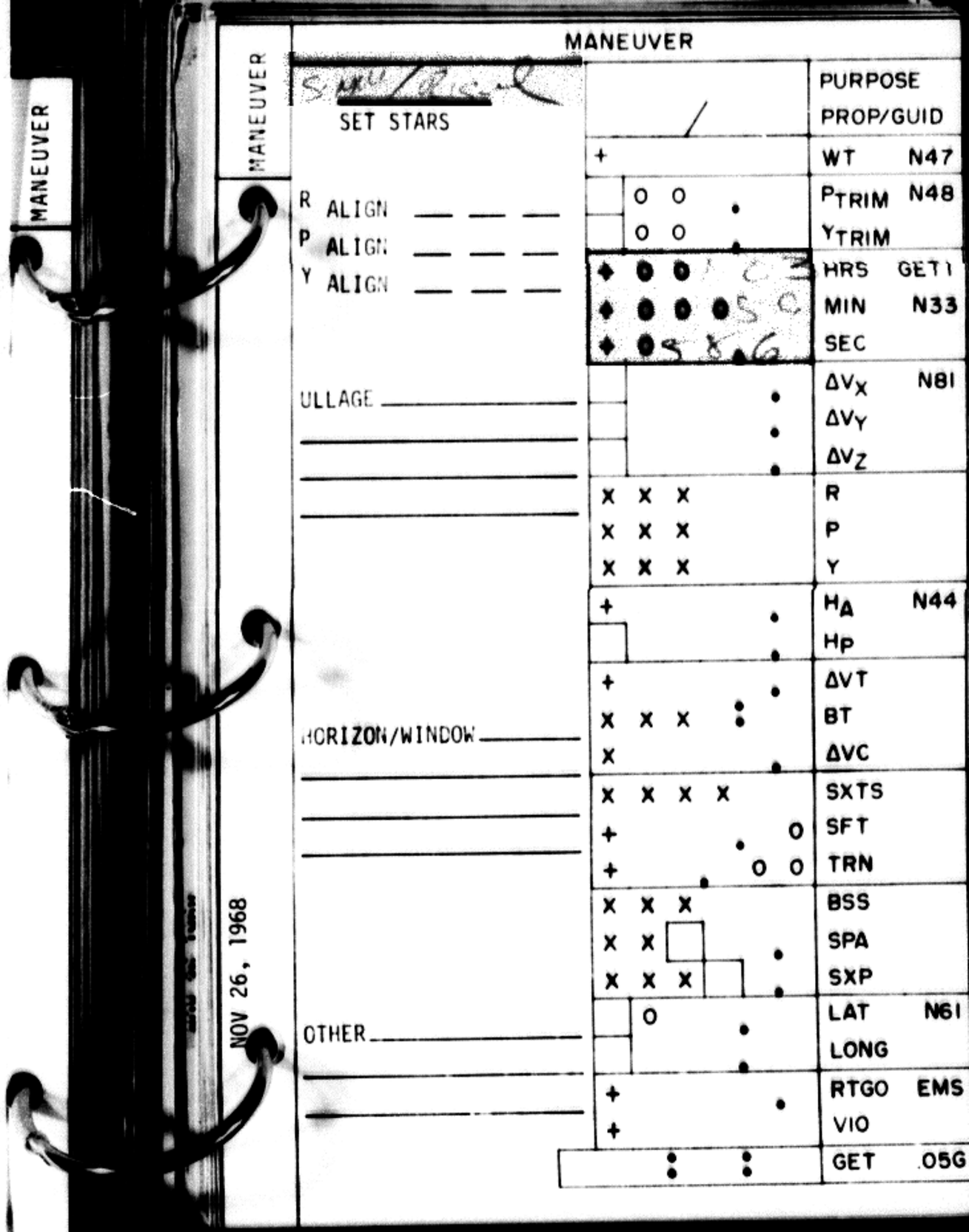
OTHER _____

	PURPOSE PROP/GUID
+	WT N47
0 0 •	PTRIM N48
0 0 •	YTRIM
+ 0 0	HRS GETI
+ 0 0 0	MIN N33
+ 0 •	SEC
•	ΔVX N81
•	ΔVY
•	ΔVZ
X X X	R
X X X	P
X X X	Y
+ •	HA N44
•	HP
+ •	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
0 •	LAT N61
•	LONG
+ •	RTGO EMS
+	VIO
• •	GET .05G

PAGE

5 thru 26

BLANK



MANEUVER

MANEUVER

SET STARS

R ALIGN
P ALIGN
Y ALIGN

ULLAGE

HORIZON/WINDOW

OTHER

	PURPOSE	
	PROP/GUID	
+ 31600	WT	N47
00	PTRIM	N48
00	YTRIM	
+ 00	HRS	GETI
+ 0000	MIN	N33
+ 0	SEC	
−	ΔVX	N81
+	ΔVY	
+	ΔVZ	
XXX	R	
XXX	P	
XXX	Y	
+	HA	N44
+	HP	
+	ΔVT	
XXX	BT	
X	ΔVC	
XXXX	SXTS	
+	SFT	
+	TRN	
XXX	BSS	
XX	SPA	
XXX	SXP	
+ 0	LAT	N61
−	LONG	
+	RTGO	EMS
+	VIO	
	GET	.05G

MANEUVER

SET STARS

R ALIGN
P ALIGN
Y ALIGN

ULLAGE

HORIZON/WINDOW

OTHER

	PURPOSE	
	PROP/GUID	
+	WT	N47
00	PTRIM	N48
00	YTRIM	
+ 00	HRS	GETI
+ 000	MIN	N33
+ 0	SEC	
	ΔVX	N81
	ΔVY	
	ΔVZ	
XXX	R	
XXX	P	
XXX	Y	
+	HA	N44
	HP	
+	ΔVT	
XXX	BT	
X	ΔVC	
XXXX	SXTS	
+	SFT	0
+	TRN	00
XXX	BSS	
XX	SPA	
XXX	SXP	
0	LAT	N61
	LONG	
+	RTGO	EMS
+	VIO	
	GET	.05G

NOV 26, 1968

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

ENTRY

		MID-PAC	AREA
X X X		X X X 3 5 7	R 05G
X X X		X X X 1 5 2	P 05G
X X X		X X X 3 5 9	Y 05G
: :		1 4 6 : 2 9 : 1 3	GET HOR
X X X		X X X 2 6 8	P [illegible] dk
0 .	+	0 0 8 . 1 3	LAT N61
.	−	1 6 5 . 0 3	LONG
X X X .		X X X 0 6 . 8	MAX G
+		+ 3 6 2 2 1	V_{400K} N60
- 0 0 .		- 0 0 6 . 5 1	T_{400K}
+ .		+ 1 2 2 0 . 2	RTGO EMS
+		+ 3 6 3 0 1	VIO
: :		1 4 6 : 4 6 : 1 3	RRT
X X :		X X 0 0 : 2 8	RET 05G*
+ 0 0 .		+ 0 0 1 . 4	D_L MAX*
+ 0 0 .		+ 0 0 1 . 4	D_L MIN* N69
+		+ 1 . 4	V_L MAX*
+		+ 1 . 4	V_L MIN*
X X X .		X X X 4 . 0 0	D_O
X X . :		X X 0 2 : 0 7	RET V_{CIRC}
X X . :		X X 0 0 : 2 5	RETBBO
X X . :		X X 0 3 : 3 3	RETEBO
X X . :		X X 0 8 : 1 6	RETDRO
X X X X		X X X X 1 6	SXTS
+ . 0		+ 0 5 7 . 0 0	SFT
+ . 0 0		+ 3 1 . 2 0 0	TRN
X X X		X X X [illegible]	BSS
X X □ .		X X [illegible] 6 . 5	SPA
X X X □ .		X X X 1 3 . 4	SXP
X X X X		X X X X [illegible]	LIFT VECTOR

NOV . 1968

ENTRY

MAP

EARTH ORB ENTRY

BLK DATA

ENTRY

		AREA
X X X	X X X	R 05G
X X X	X X X	P 05G
X X X	X X X	Y 05G
		GET HOR
X X X	X X X	P CK
O	O	LAT N61
		LONG
X X X	X X X	MAX G
+	+	V_{400K} N60
- O O	- O O	T_{400K}
+	+	RTGO EMS
+	+	VIO
		RRT
X X	X X	RET 05G*
+ O O	+ O O	D_L MAX*
+ O O	+ O O	D_L MIN* N69
+	+	V_L MAX*
+	+	V_L MIN*
X X X	X X X	D_O
X X	X X	RET V_{CIRC}
X X	X X	RETBBO
X X	X X	RETEBO
X X	X X	RETDRO
X X X X	X X X X	SXTS
+ O	+ O	SFT
+ O O	+ O O	TRN
X X X	X X X	BSS
X X	X X	SPA
X X X	X X X	SXP
X X X X	X X X X	LIFT VECTOR

P21

ENTRY

ENTRY

MAP UPDATE

REV 1/2 REMARKS

GET (hrs:min:sec)

LOS __ __:__ __:__ __

PM __ __:__ __:__ __

AOS __ __:__ __:__ __

SS __ __:__ __:__ __

LOS __ __:__ __:__ __

SR __ __:__ __:__ __

PM __ __:__ __:__ __

AOS __ __:__ __:__ __

SS __ __:__ __:__ __

REV 2/3 REMARKS R-1 74:16 2K

GET (hrs:min:sec)

LOS 23:04:57

SR 23:09:37

PM 23:19:01

AOS 23:48:53

SS 24:01:22

REV 3/4 REMARKS L.L.L.P.P.

GET (hrs:min:sec) 75:40:55

LOS 25:01:23

25:20:16

PM 25:17:16

AOS 25:47:28

SS 26:23:11

MAP

EARTH ORB ENTRY

EARTH ORB BLK DATA

MAP UPDATE

REV 4/5 REMARKS TP. CR 77:29:42

GET (hrs:min:sec) TP. TCA 8/78:10:25

LOS 76:52:57

SR 77:01:06

PM 77:15:47

AOS 77:41:50

SS 78:22:03

REV 5/6 REMARKS

GET (hrs:min:sec)

LOS __:__:__

SR __:__:__

PM __:__:__

AOS __:__:__

SS __:__:__

REV 6/7 REMARKS

GET (hrs:min:sec)

LOS __:__:__

SR __:__:__

PM __:__:__

AOS __:__:__

SS __:__:__

P26

MAP

EARTH ORBIT ENTRY UPDATE

X -	X -	AREA
X X -	X X -	Δ V TO
X X X X X X X X X	X X X X X X X X X	R .05G P .05G Y .05G
+ +	+ +	RTGO EMS VIO
X X	X X	RET .05G
O	O	LAT N61 LONG
X X	X X	RET 0.2G DRE (55°) N66
R R / X X	R R / X X	BANK AN RET RB
X X X X X X	X X X X X X	RETBBO RETEBO RETDROG
X X X X X	X X X X X	(90°/fps) CHART DRE (90°) UPDATE
POST BURN		
X X X	X X X	R .05G
+ +	+ +	RTGO EMS VIO
X X	X X	RET .05G
X X	X X	RET 0.2G DRE ±100nm N68
R R / X X	R R / X X	BANK AN RETRB
X X X X X X	X X X X X X	RETBBO RETEBO RETDROG +53sec to main

Nov 26, 1968

AGC DSKY

BLK DATA

ENTRY

MAP

EARTH ORB ENTRY

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EARTH ORB BLK DATA

EARTH ORBIT ENTRY UPDATE

X -	X -	AREA
X X - .	X X - .	Δ V TO
X X X	X X X	R .05G
X X X	X X X	P .05G
X X X	X X X	Y .05G
+ .	+ .	RTGO EMS
+	+	VIO
X X :	X X :	RET .05G
☐ O .	☐ O .	LAT N61
☐ :	☐ :	LONG
X X :	X X :	RET 0.2G
☐ .	☐ .	DRE (55°) N66
R R /	R R /	BANK AN
X X :	X X :	RET RB
X X :	X X :	RETBBO
X X :	X X :	RETEBO
X X :	X X :	RETDROG
X X X	X X X	(90°/fps) CHART
X X ☐	X X ☐	DRE (90°) UPDATE
POST BURN		
X X X	X X X	R .05G
+ .	+ .	RTGO EMS
+	+	VIO
X X :	X X :	RET .05G
X X :	X X :	RET 0 2G
☐ .	☐ .	DRE ±100nm N66
R R /	R R /	BANK AN
X X :	X X :	RETRB
X X :	X X :	RETBBO
X X :	X X :	RETEBO
X X :	X X :	RETDROG +53sec to main

EARTH ORBIT ENTRY UPDATE

X -	X -	AREA
X X - .	X X - .	Δ V TO
X X X	X X X	R .05G
X X X	X X X	P .05G
X X X	X X X	Y .05G
+ .	+ .	RTGO EMS
+	+	VIO
X X :	X X :	RET .05G
☐ O .	☐ O .	LAT N61
☐ :	☐ :	LONG
X X :	X X :	RET 0.2G
☐ .	☐ .	DRE (55°) N66
R R /	R R /	BANK AN
X X :	X X :	RET RB
X X :	X X :	RETBBO
X X :	X X :	RETEBO
X X :	X X :	RETDROG
X X X	X X X	(90°/fps) CHART
X X ☐	X X ☐	DRE (90°) UPDATE
POST BURN		
X X X	X X X	R .05G
+ .	+ .	RTGO EMS
+	+	VIO
X X :	X X :	RET .05G
X X :	X X :	RET 0 2G
☐ .	☐ .	DRE ±100nm N66
R R /	R R /	BANK AN
X X :	X X :	RETRB
X X :	X X :	RETBBO
X X :	X X :	RETEBO
X X :	X X :	RETDROG +53sec to main

EARTH ORBIT ENTRY UPDATE

X -	X -	AREA
X X - .	X X - .	Δ V TO
X X X X X X X X X	X X X X X X X X X	R .05G P .05G Y .05G
+ . +	+ . +	RTGO EMS VIO
X X :	X X :	RET .05G
☐ O . ☐ :	☐ O . ☐ :	LAT N61 LONG
X X : ☐ .	X X : ☐ .	RET 0.2G DRE (55°) N66
R R / X X :	R R / X X :	BANK AN RET RB
X X : X X : X X :	X X : X X : X X :	RETBBO RETEBO RETDROG
X X X X X ☐	X X X X X ☐	(90°/fps) CHART DRE (90°) UPDATE
POST BURN		
X X X	X X X	R .05G
+ . +	+ . +	RTGO EMS VIO
X X :	X X :	RET .05G
X X : ☐ .	X X : ☐ .	RET 0.2G DRE ±100nm N66
R R / X X :	R R / X X :	BANK AN RETRB
X X : X X : X X :	X X : X X : X X :	RETBBO RETEBO RETDROG +53sec to main

ENTRY

MAP

EARTH ORB ENTRY

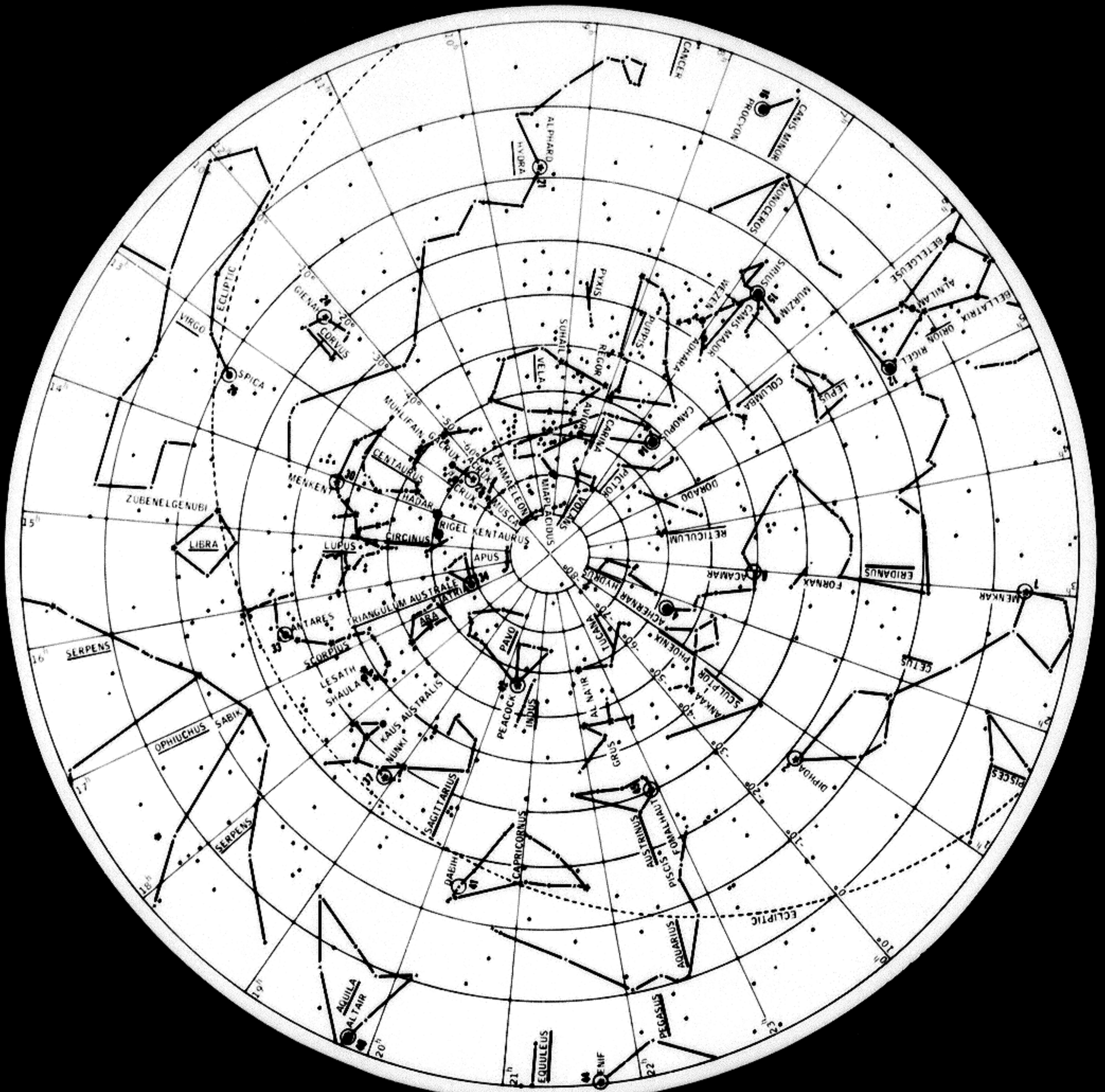
EARTH ORBIT BLOCK DATA

X X 0 0 1 - 4	X X	AREA
X X X + 1 4 . 3 X X - 1 6 5 . 0	X X X ☐ . X X ☐ .	LAT LONG
0 0 0 : 5 8 : 2 3 X X X 3 1 9 . 0	: : : X X X .	GETI ΔV_C
X X 0 0 2 - 1	X X	AREA
X X X + 2 5 . 2 X X - 0 7 2 . 0	X X X ☐ . X X ☐ .	LAT LONG
0 0 1 : 2 0 : 2 8 X X X 3 1 9 . 0	: : : X X X .	GETI ΔV_C
X X 0 0 2 - 4	X X	AREA
X X X + 1 1 . 3 X X - 1 6 5 . 0	X X X ☐ . X X ☐ .	LAT LONG
0 0 2 : 2 8 : 4 4 X X X 3 1 9 . 0	: : : X X X .	GETI ΔV_C
X X 0 0 3 - 4	X X	AREA
X X X + 2 8 . 0 X X - 1 5 4 . 0	X X X ☐ . X X ☐ .	LAT LONG
0 0 4 : 0 5 : 0 7 X X X 3 1 9 . 0	: : : X X X .	GETI ΔV_C
X X 0 0 4 - 4	X X	AREA
X X X + 3 3 . 0 X X - 1 5 4 . 0	X X X ☐ . X X ☐ .	LAT LONG
0 0 5 : 3 7 : 1 6 X X X 3 1 9 . 0	: : : X X X .	GETI ΔV_C

REMARKS: Roll Rt 90° Do not use 2-1 for launch azimuth > 86°

NOV 26, 1968

EARTH ORB BLK DATA


CANCER
PROCYON
CANIS MINOR
HYDRA
ALPHARD
MONOCEROS
ECLIPTIC
VIRGO
SPICA
GIENAH
CORVUS
PYXIS
PUPPIS
SUHAIL
VELA
REGOR
ADHARA
SIRIUS
MUREIM
WEZEN
CANIS MAJOR
BETELGEUSE
ALNILAM
BELLATRIX
ORION
RIGEL
COLUMBA
LEPUS
MUHLIFAIN
GACRUX
ACRUX
MIMOSA
CENTAURUS
HADAR
MENKENT
ZUBENELGENUBI
CHAMAELEON
AVIOR
CARINA
CANOPUS
VOLANS
PICTOR
MIAPLACIDUS
DORADO
RETICULUM
LIBRA
CIRCINUS
RIGEL KENTAURUS
LUPUS
APUS
ACHERNAR
ERIDANUS
FORNAX
MENKAR
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ANKAA
CETUS
ANTARES
TRIANGULUM AUSTRALE
ARA
PAVO
SCORPIUS
LESATH
SHAULA
KAUS AUSTRALIS
NUNKI
PEACOCK
INDUS
AL NAIR
GRUS
SERPENS
OPHIUCHUS
SABIK
DIPHDA
PISCES
SAGITTARIUS
DAEIH
CAPRICORNUS
AUSTRINUS
FOMALHAUT
PISCIS
ECLIPTIC
AQUARIUS
AQUILA
ALTAIR
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13h
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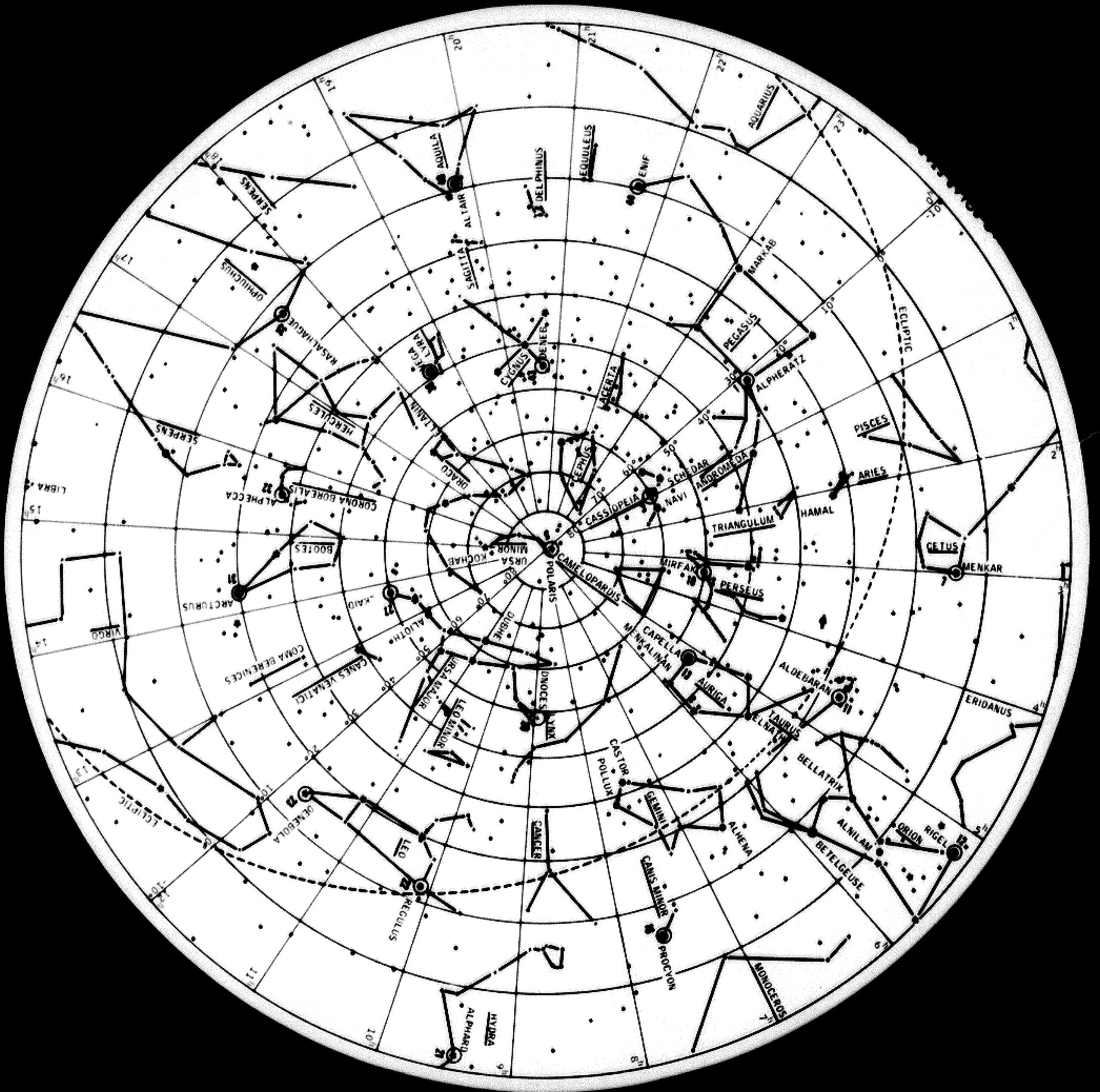
AQUILA
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RASALHAGUE
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LYRA
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DENEB
LACERTA
PEGASUS
MARKAB
ECLIPTIC
ALPHERATZ
HERCULES
SERPENS
LIBRA
CORONA BOREALIS
ALPHECCA
DRACO
ETAMIN
EPHUS
CASSIOPEIA
SCHEDAR
NAVI
ANDROMEDA
PISCES
ARIES
TRIANGULUM
HAMAL
BOOTES
URSA MINOR
KOCHAB
POLARIS
CAMELOPARDIS
MIRFAK
PERSEUS
CETUS
MENKAR
ARCTURUS
DUBHE
CAPELLA
MENKALINAN
VIRGO
ALIOTH
COMA BERENICES
CANES VENATICI
URSA MAJOR
LEO MINOR
UNOCES
LYNX
AURIGA
ALDEBARAN
ERIDANUS
TAURUS
ELNATH
CASTOR
POLLUX
GEMINI
BELLATRIX
DENEBOLA
LEO
CANCER
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PROCYON
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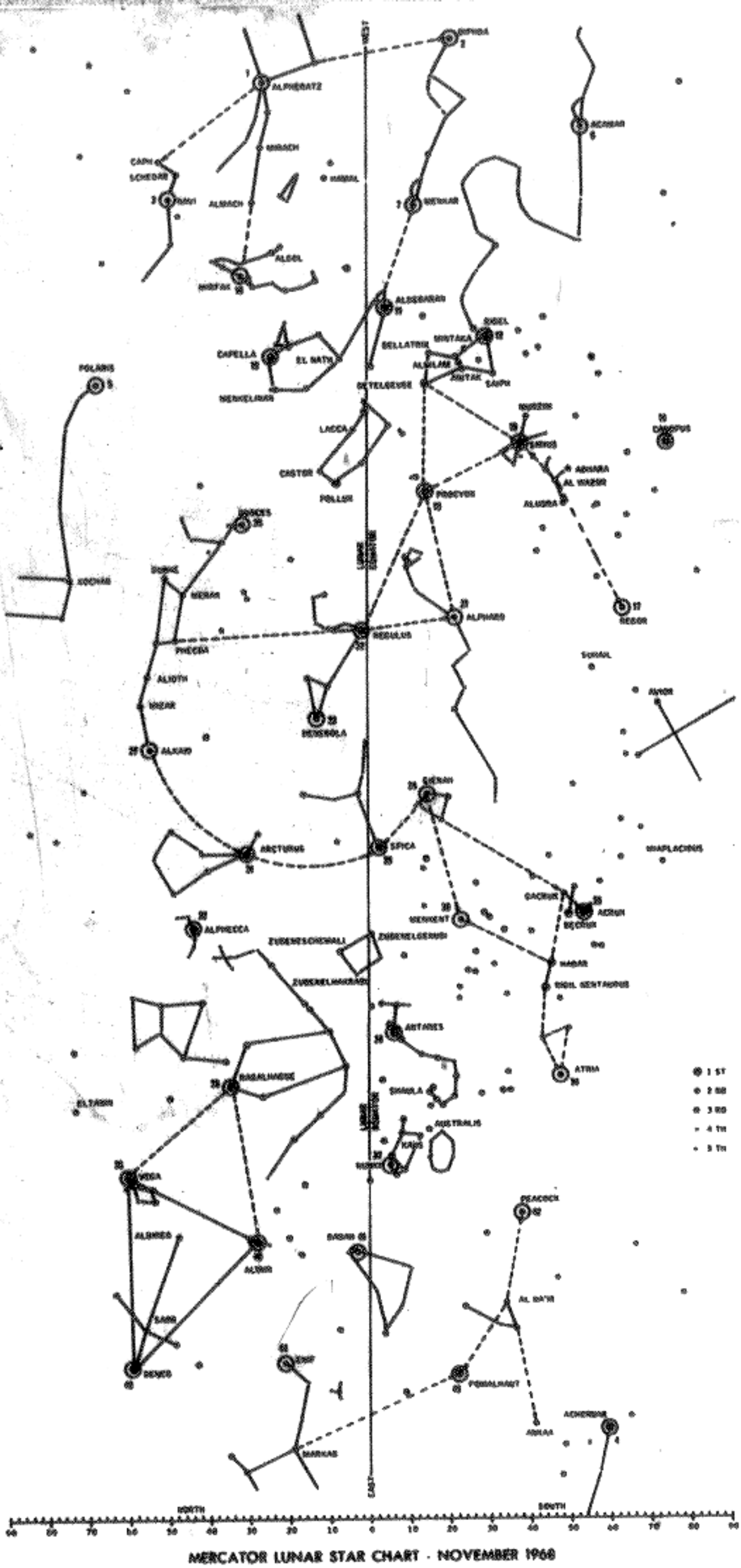
HYDRA



MERCATOR LUNAR STAR CHART - NOVEMBER 1968