


APOLLO 15	
LM RENDEZVOUS CHARTS	
PART NO.	S/N
SKB32100116-392	1001



RDOT1	F1	RDDT2	F2	RDDT3	F3	R3	F4	CSI BACKUP TABLE NOMINAL ASCENT	
								TIME (Min)	NOMINAL
-240.0	47.3	-140.0	45.2	-70.0	-27.6	120.0	-15.2		
-241.0	48.4	-141.0	43.4	-71.0	-26.6	121.0	-15.5		
-242.0	49.4	-142.0	41.6	-72.0	-25.6	122.0	-15.7		
-243.0	50.5	-143.0	39.8	-73.0	-24.5	123.0	-15.9		
-244.0	51.5	-144.0	37.9	-74.0	-23.5	124.0	-16.1	DSKY>TM	
-245.0	52.5	-145.0	36.1	-75.0	-22.5	125.0	-16.3	(-283.3)-1.4	
-246.0	53.6	-146.0	34.3	-76.0	-21.4	126.0	-16.5		
-247.0	54.6	-147.0	32.4	-77.0	-20.4	127.0	-16.7		
-248.0	55.7	-148.0	30.6	-78.0	-19.4	128.0	-16.9		
-249.0	56.7	-149.0	28.7	-79.0	-18.3	129.0	-17.1		
-250.0	57.8	-150.0	26.9	-80.0	-17.3	130.0	-17.3		
-251.0	58.8	-151.0	25.1	-81.0	-16.3	131.0	-17.5		
-252.0	59.9	-152.0	23.2	-82.0	-15.2	132.0	-17.7		
-253.0	60.9	-153.0	21.4	-83.0	-14.2	133.0	-17.9		
-254.0	62.0	-154.0	18.6	-84.0	-13.1	134.0	-18.1		
-255.0	63.0	-155.0	17.7	-85.0	-12.1	135.0	-18.4		
-256.0	64.1	-156.0	15.9	-86.0	-11.1	136.0	-18.6		
-257.0	65.1	-157.0	14.0	-87.0	-10.0	137.0	-18.8		
-258.0	66.2	-158.0	12.2	-88.0	-9.0	138.0	-19.0		
-259.0	67.2	-159.0	10.3	-89.0	-8.0	139.0	-19.2		
-260.0	68.3	-160.0	8.5	-90.0	-6.9	140.0	-19.4		
-261.0	69.3	-161.0	6.6	-91.0	-5.9	141.0	-19.6		
-262.0	70.4	-162.0	4.8	-92.0	-4.8	142.0	-19.8		
-263.0	71.4	-163.0	3.0	-93.0	-3.8	143.0	-20.0		
-264.0	72.5	-164.0	1.1	-94.0	-2.8	144.0	-20.2		
-265.0	73.5	-165.0	.7	-95.0	-1.7	145.0	-20.5		
-266.0	74.6	-166.0	-2.6	-96.0	-.7	146.0	-20.7		
-267.0	75.7	-167.0	-4.4	-97.0	.4	147.0	-20.9		
-268.0	76.7	-168.0	-6.3	-98.0	1.4	148.0	-21.1		
-269.0	77.8	-169.0	-8.1	-99.0	2.4	149.0	-21.3		
-270.0	78.8	-170.0	-10.0	-100.0	3.5	150.0	-21.5		
-271.0	79.9	-171.0	-11.9	-101.0	4.5	151.0	-21.7		
-272.0	81.0	-172.0	-13.7	-102.0	5.6	152.0	-21.9		
-273.0	82.0	-173.0	-15.6	-103.0	6.6	153.0	-22.1		
-274.0	83.1	-174.0	-17.4	-104.0	7.7	154.0	-22.4		
-275.0	84.2	-175.0	-19.3	-105.0	8.7	155.0	-22.6		
-276.0	85.2	-176.0	-21.1	-106.0	9.7	156.0	-22.8		
-277.0	86.3	-177.0	-23.0	-107.0	10.8	157.0	-23.0		
-278.0	87.4	-178.0	-24.9	-108.0	11.8	158.0	-23.2		
-279.0	88.4	-179.0	-26.7	-109.0	12.9	159.0	-23.4		
-280.0	89.5	-180.0	-28.6	-110.0	13.9	160.0	-23.6		
-281.0	90.6	-181.0	-30.4	-111.0	15.0	161.0	-23.8		

PREPARED BY FPRB/OPS
APRIL 19, 1971TPI BU
DIR ASC TWEAK
MIDCOURSE LOGGING
FIRST MIDCOURSECDH BACKUP
NOMINAL ASCENT
TPI BACKUP
DIRECT ASCENT
MIDCOURSE
CSI BACKUP
NOMINAL ASCENT

RDOT1	F1	RDOT2	F2	RDOT 3	F3	R3	F4	CSI BACKUP TABLE NOMINAL ASCENT			
								ΔΔT (min)	ΔΔV (fps)	TIG TPI	- TIG CSI
-282.0	91.6	-182.0	-32.3	-112.0	16.0	162.0	-24.0				
-283.0	92.7	-183.0	-34.2	-113.0	17.0	163.0	-24.2				
-284.0	93.8	-184.0	-36.0	-114.0	18.1	164.0	-24.5				
-285.0	94.8	-185.0	-37.9	-115.0	19.1	165.0	-24.7				
-286.0	95.9	-186.0	-39.8	-116.0	20.2	166.0	-24.9				
-287.0	97.0	-187.0	-41.6	-117.0	21.2	167.0	-25.1				
-288.0	98.1	-188.0	-43.5	-118.0	22.3	168.0	-25.3				
-289.0	99.2	-189.0	-45.4	-119.0	23.3	169.0	-25.5				
-290.0	100.2	-190.0	-47.2	-120.0	24.4	170.0	-25.7				
-291.0	101.3	-191.0	-49.1	-121.0	25.4	171.0	-25.9				
-292.0	102.4	-192.0	-51.0	-122.0	26.5	172.0	-26.1				
-293.0	103.5	-193.0	-52.9	-123.0	27.5	173.0	-26.3				
-294.0	104.6	-194.0	-54.7	-124.0	28.6	174.0	-26.5				
-295.0	105.6	-195.0	-56.6	-125.0	29.6	175.0	-26.7				
-296.0	106.7	-196.0	-58.5	-126.0	30.7	176.0	-26.9				
-297.0	107.8	-197.0	-60.4	-127.0	31.7	177.0	-27.1				
-298.0	108.9	-198.0	-62.2	-128.0	32.8	178.0	-27.3				
-299.0	110.0	-199.0	-64.1	-129.0	33.8	179.0	-27.5				
-300.0	111.1	-200.0	-66.0	-130.0	34.9	180.0	-27.7				
-301.0	112.2	-201.0	-67.9	-131.0	35.9	181.0	-27.9				
-302.0	113.2	-202.0	-69.8	-132.0	37.0	182.0	-28.1				
-303.0	114.3	-203.0	-71.6	-133.0	38.0	183.0	-28.3				
-304.0	115.4	-204.0	-73.5	-134.0	39.1	184.0	-28.5				
-305.0	116.5	-205.0	-75.4	-135.0	40.1	185.0	-28.7				
-306.0	117.6	-206.0	-77.3	-136.0	41.2	186.0	-28.9				
-307.0	118.7	-207.0	-79.2	-137.0	42.2	187.0	-29.1				
-308.0	119.8	-208.0	-81.1	-138.0	43.3	188.0	-29.3				
-309.0	120.9	-209.0	-83.0	-139.0	44.3	189.0	-29.5				
-310.0	122.0	-210.0	-84.9	-140.0	45.4	190.0	-29.7				
-311.0	123.1	-211.0	-86.8	-141.0	46.4	191.0	-29.9				
-312.0	124.2	-212.0	-88.7	-142.0	47.5	192.0	-30.1				
-313.0	125.3	-213.0	-90.5	-143.0	48.5	193.0	-30.3				
-314.0	126.4	-214.0	-92.4	-144.0	49.6	194.0	-30.5				
-315.0	127.5	-215.0	-94.3	-145.0	50.7	195.0	-30.7				
-316.0	128.6	-216.0	-96.2	-146.0	51.7	196.0	-30.9				
-317.0	129.7	-217.0	-98.1	-147.0	52.8	197.0	-31.0				
-318.0	130.8	-218.0	-100.0	-148.0	53.8	198.0	-31.2				
-319.0	131.9	-219.0	-101.9	-149.0	54.9	199.0	-31.4				
-320.0	133.0	-220.0	-103.8	-150.0	55.9	200.0	-31.6				
-321.0	134.1	-221.0	-105.7	-151.0	57.0	201.0	-31.8				
-322.0	135.3	-222.0	-107.7	-152.0	58.1	202.0	-32.0				
-323.0	136.4	-223.0	-109.6	-153.0	59.1	203.0	-32.2				

PREPARED BY FPRB/OPS
APRIL 19, 1971

RDOT	CDH BACKUP TABLE NOMINAL ASCENT					
	X1	Z1	X2	Z2	X3	Z3
-50.0	67.3	254.8	-17.2	-193.9	-50.2	-60.7
-51.0	67.6	253.9	-17.5	-191.8	-50.3	-62.0
-52.0	68.0	253.0	-17.8	-189.6	-50.3	-63.2
-53.0	68.3	252.0	-18.2	-187.5	-50.3	-64.4
-54.0	68.7	251.1	-18.5	-185.4	-50.3	-65.6
-55.0	69.0	250.2	-18.9	-183.2	-50.3	-66.8
-56.0	69.4	249.3	-19.2	-181.1	-50.3	-68.0
-57.0	69.7	248.3	-19.5	-179.0	-50.3	-69.2
-58.0	70.1	247.4	-19.9	-176.8	-50.3	-70.5
-59.0	70.4	246.5	-20.2	-174.7	-50.3	-71.7
-60.0	70.8	245.6	-20.5	-172.5	-50.4	-72.9
-61.0	71.1	244.6	-20.9	-170.4	-50.4	-74.1
-62.0	71.5	243.7	-21.2	-168.3	-50.4	-75.3
-63.0	71.8	242.8	-21.6	-166.1	-50.4	-76.5
-64.0	72.2	241.9	-21.9	-164.0	-50.4	-77.7
-65.0	72.5	240.9	-22.2	-161.8	-50.4	-78.9
-66.0	72.9	240.0	-22.6	-159.7	-50.4	-80.2
-67.0	73.2	239.1	-22.9	-157.5	-50.5	-81.4
-68.0	73.6	238.1	-23.2	-155.4	-50.5	-82.6
-69.0	73.9	237.2	-23.6	-153.2	-50.5	-83.8
-70.0	74.3	236.3	-23.9	-151.1	-50.5	-85.0
-71.0	74.6	235.3	-24.3	-149.0	-50.5	-86.2
-72.0	75.0	234.4	-24.6	-146.8	-50.5	-87.4
-73.0	75.3	233.5	-24.9	-144.7	-50.6	-88.6
-74.0	75.7	232.5	-25.3	-142.5	-50.6	-89.8
-75.0	76.0	231.6	-25.6	-140.4	-50.6	-91.1
-76.0	76.4	230.6	-25.9	-138.2	-50.6	-92.3
-77.0	76.7	229.7	-26.3	-136.1	-50.6	-93.5
-78.0	77.1	228.8	-26.6	-133.9	-50.6	-94.7
-79.0	77.4	227.8	-26.9	-131.8	-50.7	-95.9
-80.0	77.8	226.9	-27.3	-129.6	-50.7	-97.1
-81.0	78.1	225.9	-27.6	-127.5	-50.7	-98.3
-82.0	78.5	225.0	-27.9	-125.3	-50.7	-99.5
-83.0	78.8	224.1	-28.3	-123.2	-50.7	-100.7
-84.0	79.2	223.1	-28.6	-121.0	-50.8	-102.0
-85.0	79.5	222.2	-28.9	-118.9	-50.8	-103.2
-86.0	79.9	221.2	-29.3	-116.7	-50.8	-104.4
-87.0	80.2	220.3	-29.6	-114.6	-50.8	-105.6
-88.0	80.6	219.3	-29.9	-112.4	-50.8	-106.8
-89.0	80.9	218.4	-30.3	-110.2	-50.9	-108.0
-90.0	81.3	217.4	-30.6	-108.1	-50.9	-109.2
-91.0	81.6	216.5	-30.9	-105.9	-50.9	-110.4
-92.0	82.0	215.5	-31.3	-103.8	-50.9	-111.6
-93.0	82.3	214.6	-31.6	-101.6	-50.9	-112.9

PREPARED BY FPRB/OPS
APRIL 19, 1971

FIRST
MIDCOURSE
LOGGING

TPI BU
DIR ASC TWEAK

TPI BACKUP
DIRECT ASCENT

CDH BACKUP
NOMINAL ASCENT

CDH BACKUP
MIDCOURSE

FIRST
MIDCOURSE

RDOT	X1	Z1	X2	Z2	X3	Z3
-93.0	82.3	214.6	-31.6	-101.6	-50.9	-112.9
-94.0	82.7	213.6	-31.9	-99.5	-51.0	-114.1
-95.0	83.0	212.7	-32.3	-97.3	-51.0	-115.3
-96.0	83.4	211.7	-32.6	-95.1	-51.0	-116.5
-97.0	83.7	210.8	-32.9	-93.0	-51.0	-117.7
-98.0	84.1	209.8	-33.3	-90.8	-51.0	-118.9
-99.0	84.5	208.9	-33.6	-88.7	-51.1	-120.1
-100.0	84.8	207.9	-33.9	-86.5	-51.1	-121.3
-101.0	85.2	207.0	-34.2	-84.3	-51.1	-122.5
-102.0	85.5	206.0	-34.6	-82.2	-51.1	-123.7
-103.0	85.9	205.1	-34.9	-80.0	-51.2	-125.0
-104.0	86.2	204.1	-35.2	-77.8	-51.2	-126.2
-105.0	86.6	203.1	-35.6	-75.7	-51.2	-127.4
-106.0	86.9	202.2	-35.9	-73.5	-51.2	-128.6
-107.0	87.3	201.2	-36.2	-71.4	-51.3	-129.8
-108.0	87.6	200.3	-36.6	-69.2	-51.3	-131.0
-109.0	88.0	199.3	-36.9	-67.0	-51.3	-132.2
-110.0	88.3	198.3	-37.2	-64.9	-51.3	-133.4
-111.0	88.7	197.4	-37.5	-62.7	-51.4	-134.6
-112.0	89.1	196.4	-37.9	-60.5	-51.4	-135.8
-113.0	89.4	195.5	-38.2	-58.4	-51.4	-137.0
-114.0	89.8	194.5	-38.5	-56.2	-51.4	-138.3
-115.0	90.1	193.5	-38.9	-54.0	-51.5	-139.5
-116.0	90.5	192.6	-39.2	-51.8	-51.5	-140.7
-117.0	90.8	191.6	-39.5	-49.7	-51.5	-141.9
-118.0	91.2	190.6	-39.8	-47.5	-51.6	-143.1
-119.0	91.5	189.7	-40.2	-45.3	-51.6	-144.3
-120.0	91.9	188.7	-40.5	-43.2	-51.6	-145.5
-121.0	92.2	187.7	-40.8	-41.0	-51.6	-146.7
-122.0	92.6	186.8	-41.2	-38.8	-51.7	-147.9
-123.0	93.0	185.8	-41.5	-36.6	-51.7	-149.1
-124.0	93.3	184.8	-41.8	-34.5	-51.7	-150.3
-125.0	93.7	183.8	-42.1	-32.3	-51.7	-151.5
-126.0	94.0	182.9	-42.5	-30.1	-51.8	-152.8
-127.0	94.4	181.9	-42.8	-27.9	-51.8	-154.0
-128.0	94.7	180.9	-43.1	-25.8	-51.8	-155.2
-129.0	95.1	180.0	-43.4	-23.6	-51.9	-156.4
-130.0	95.4	179.0	-43.8	-21.4	-51.9	-157.6
-131.0	95.8	178.0	-44.1	-19.2	-51.9	-158.8
-132.0	96.2	177.0	-44.4	-17.1	-52.0	-160.0
-133.0	96.5	176.0	-44.7	-14.9	-52.0	-161.2
-134.0	96.9	175.1	-45.1	-12.7	-52.0	-162.4
-135.0	97.2	174.1	-45.4	-10.5	-52.1	-163.6
-136.0	97.6	173.1	-45.7	-8.3	-52.1	-164.8

PREPARED BY FPRB/OPS
APRIL 19, 1971

RDOT	X1	Z1	X2	Z2	X3	Z3
-136.0	97.6	173.1	-45.7	-8.3	-52.1	-164.8
-137.0	97.9	172.1	-46.0	-6.2	-52.1	-166.0
-138.0	98.3	171.2	-46.4	-4.0	-52.2	-167.2
-139.0	98.7	170.2	-46.7	-1.8	-52.2	-168.4
-140.0	99.0	169.2	-47.0	.4	-52.2	-169.7
-141.0	99.4	168.2	-47.3	2.6	-52.2	-170.9
-142.0	99.7	167.2	-47.7	4.8	-52.3	-172.1
-143.0	100.1	166.2	-48.0	6.9	-52.3	-173.3
-144.0	100.4	165.3	-48.3	9.1	-52.4	-174.5
-145.0	100.8	164.3	-48.6	11.3	-52.4	-175.7
-146.0	101.2	163.3	-49.0	13.5	-52.4	-176.9
-147.0	101.5	162.3	-49.3	15.7	-52.5	-178.1
-148.0	101.9	161.3	-49.6	17.9	-52.5	-179.3
-149.0	102.2	160.3	-49.9	20.1	-52.5	-180.5
-150.0	102.6	159.3	-50.3	22.2	-52.6	-181.7
-151.0	103.0	158.4	-50.6	24.4	-52.6	-182.9
-152.0	103.3	157.4	-50.9	26.6	-52.6	-184.1
-153.0	103.7	156.4	-51.2	28.8	-52.7	-185.3
-154.0	104.0	155.4	-51.5	31.0	-52.7	-186.5
-155.0	104.4	154.4	-51.9	33.2	-52.7	-187.7
-156.0	104.7	153.4	-52.2	35.4	-52.8	-189.0
-157.0	105.1	152.4	-52.5	37.6	-52.8	-190.2
-158.0	105.5	151.4	-52.8	39.8	-52.8	-191.4
-159.0	105.8	150.4	-53.1	42.0	-52.9	-192.6
-160.0	106.2	149.4	-53.5	44.2	-52.9	-193.8
-161.0	106.5	148.4	-53.8	46.3	-53.0	-195.0
-162.0	106.9	147.4	-54.1	48.5	-53.0	-196.2
-163.0	107.3	146.4	-54.4	50.7	-53.0	-197.4
-164.0	107.6	145.4	-54.8	52.9	-53.1	-198.6
-165.0	108.0	144.4	-55.1	55.1	-53.1	-199.8
-166.0	108.3	143.4	-55.4	57.3	-53.2	-201.0
-167.0	108.7	142.4	-55.7	59.5	-53.2	-202.2
-168.0	109.1	141.4	-56.0	61.7	-53.2	-203.4
-169.0	109.4	140.4	-56.4	63.9	-53.3	-204.6
-170.0	109.8	139.4	-56.7	66.1	-53.3	-205.8
-171.0	110.1	138.4	-57.0	68.3	-53.4	-207.0
-172.0	110.5	137.4	-57.3	70.5	-53.4	-208.2
-173.0	110.9	136.4	-57.6	72.7	-53.4	-209.4
-174.0	111.2	135.4	-57.9	74.9	-53.5	-210.6
-175.0	111.6	134.4	-58.3	77.1	-53.5	-211.9
-176.0	111.9	133.4	-58.6	79.3	-53.6	-213.1
-177.0	112.3	132.4	-58.9	81.5	-53.6	-214.3
-178.0	112.7	131.4	-59.2	83.7	-53.6	-215.5
-179.0	113.0	130.4	-59.5	85.9	-53.7	-216.7

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APRIL 19, 1971

FIRST MIDCOURSE LOGGING

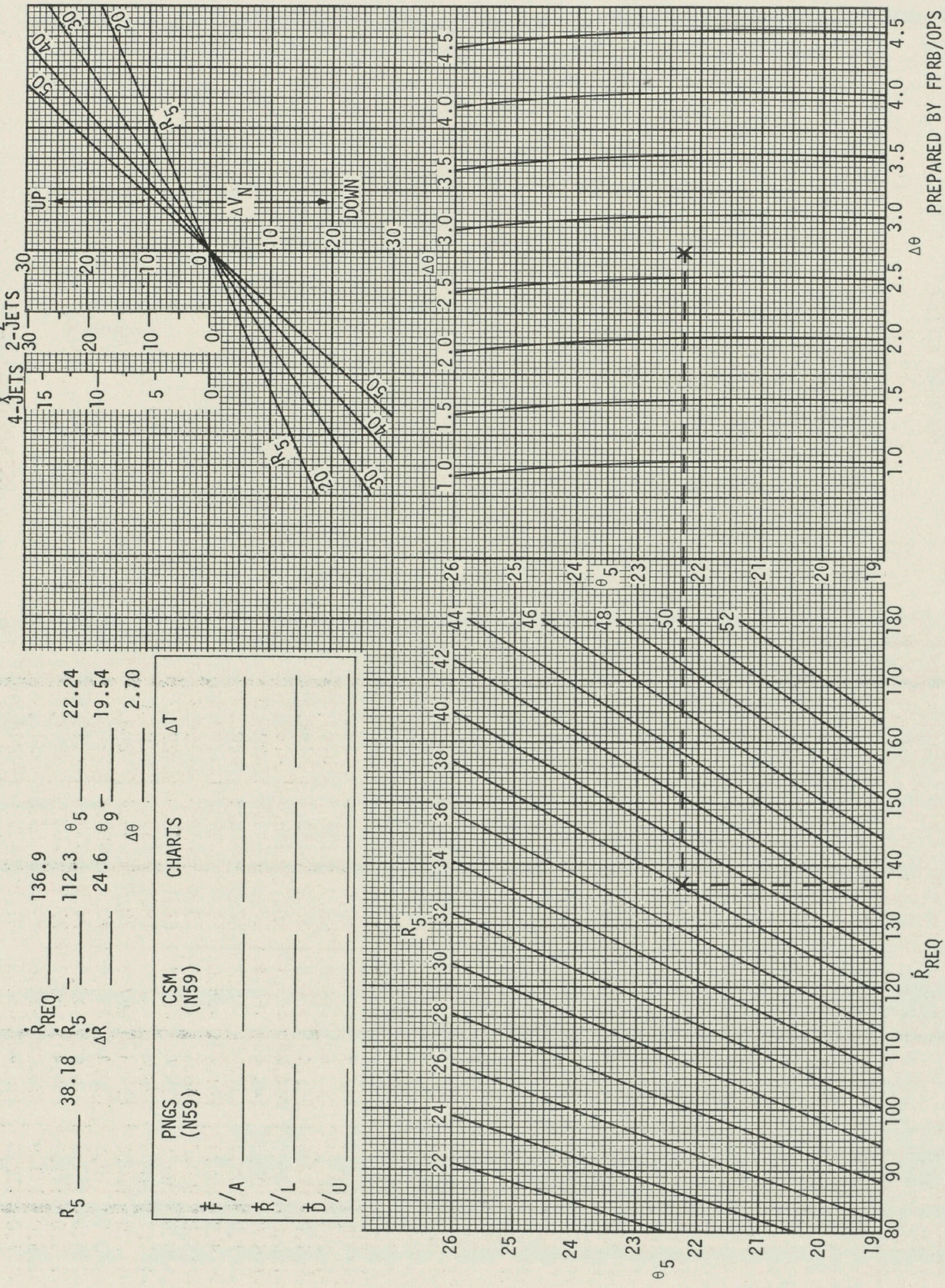
TPI BACKUP DIR ASC TWEAK

CDH BACKUP NOMINAL ASCENT

SECOND MIDCOURSE

MIDCOURSE FIRST

H-3 MISSION TERMINAL PHASE INITIATION



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NOVEMBER 23, 1970

DATE 4/21/71

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DIRECT ASCENT TPI BACKUP TABLE

R1	V1	R1	TPI LOGGING					TIME	DATA	NOMINAL
			V2	R2	V3	R2	V4			
79	1687.5	378	-788.2	27	-522.4	216	-261.8	103.1	103.3	103.3
80	1690.2	377	-790.1	28	-530.4	215	-260.3	103.3	103.6	103.6
81	1692.7	376	-792.0	29	-537.8	214	-258.8	103.3	103.6	103.6
82	1694.9	375	-793.9	30	-544.5	213	-257.3	103.8	104.0	104.1
83	1696.9	374	-795.8	31	-550.8	212	-255.9	104.0	104.2	104.2
84	1698.7	373	-797.6	32	-556.5	211	-254.4	104.2	104.5	104.5
85	1700.3	372	-799.5	33	-561.6	210	-253.0	104.5	104.7	104.7
86	1701.7	371	-801.4	34	-566.3	209	-251.5	104.7	104.9	104.9
87	1702.9	370	-803.3	35	-570.4	208	-250.1	104.9	105.1	105.1
88	1703.9	369	-805.1	36	-574.1	207	-248.7	105.1	105.3	105.3
89	1704.8	368	-807.0	37	-577.4	206	-247.3	105.3	105.5	105.5
90	1705.5	367	-808.9	38	-580.3	205	-245.9	105.5	105.7	105.7
91	1706.1	366	-810.7	39	-582.7	204	-244.5	105.7	106.1	106.1
92	1706.5	365	-812.6	40	-584.8	203	-243.1	105.9	106.3	106.3
93	1706.8	364	-814.4	41	-586.5	202	-241.8	106.1	106.4	106.4
94	1707.0	363	-816.3	42	-587.9	201	-240.4	106.3	106.5	106.5
95	1707.1	362	-818.1	43	-588.9	200	-239.1	106.5	106.7	106.7
96	1707.1	361	-819.9	44	-589.7	199	-237.7	106.7	106.9	106.9
97	1707.0	360	-821.8	45	-590.2	198	-236.4	106.9	107.0	107.0
98	1706.8	359	-823.6	46	-590.5	197	-235.1	107.0	107.2	107.2
99	1706.5	358	-825.4	47	-590.5	196	-233.8	107.2	107.4	107.4
100	1706.2	357	-827.2	48	-590.3	195	-232.4	107.4	107.5	107.5
101	1705.9	356	-829.0	49	-589.9	194	-231.2	107.5	107.7	107.7
102	1705.5	355	-830.8	50	-589.4	193	-229.9	107.7	107.9	107.9
103	1705.1	354	-832.6	51	-588.7	192	-228.6	107.9	108.0	108.0
104	1704.6	353	-834.4	52	-587.9	191	-227.3	108.0	108.2	108.2
105	1704.2	352	-836.2	53	-586.9	190	-226.0	108.2	108.3	108.3
106	1703.7	351	-838.0	54	-585.9	189	-224.8	108.3	108.5	108.5
107	1703.2	350	-839.7	55	-584.9	188	-223.5	108.5	108.6	108.6
108	1702.8	349	-841.5	56	-583.7	187	-222.3	108.6	108.8	108.8
109	1702.4	348	-843.2	57	-582.6	186	-221.1	108.8	108.9	108.9
			-845.0	58	-581.5	185	-219.8	108.9	109.1	109.1
			-846.7	59	-580.4	184	-218.6	108.9	109.2	109.2
			-848.5	60	-579.3	183	-217.4	109.2	109.3	109.3
			-850.2	61	-578.3	182	-216.2	109.3	109.5	109.5
			-851.9		181		-215.0	109.5	109.6	109.6
			-853.6		180		-213.8	109.5	109.7	109.7
			-855.3		179		-212.6	109.7	110.1	110.1
			-857.0		178		-211.4	109.9	110.2	110.2
			-858.7		177		-210.3	110.0	110.3	110.3
			-860.4		176		-209.1	110.1	110.4	110.4
			-862.0		175		-207.9	110.1	110.5	110.5
			-863.7		174		-206.8	110.3	110.6	110.6
			-865.3		173		-205.6	110.4	110.7	110.7
			-867.0		172		-204.5	110.5	110.8	110.8
			-868.6		171		-203.3	110.5	111.0	111.0
			-870.2		170		-202.2	110.6	111.1	111.1
			-871.9		169		-201.1	110.9	111.2	111.2
			-873.5		168		-200.0	111.0		
			-875.1		167		-198.9			
			-876.6		166		-197.7			

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APRIL 19, 1971

FIRST MIDCOURSE LOGGING

TPI BACKUP DIR ASC TWEAK

FIRST MIDCOURSE

TPI BACKUP
DIRECT ASCENTCDH BACKUP
NOMINAL ASCENTCSI BACKUP
NOMINAL ASCENT

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DATE 4/21/71

R2	V4	H1	R2	V4	H1	θ2	V5	H2	V5	H2
166	-197.7	111.2	116	-146.5	113.5	7.5	-19.6	-16.9	-96.1	-45.6
165	-196.6	111.2	115	-145.5	113.6	8.0	-21.0	-17.9	-97.9	-45.9
164	-195.5	111.3	114	-144.5	113.6	8.5	-22.3	-18.8	-99.8	-46.3
163	-194.4	111.4	113	-143.5	113.6	9.0	-23.6	-19.7	-101.7	-46.6
162	-193.4	111.5	112	-142.5	113.6	9.5	-25.0	-20.6	-103.6	-47.0
161	-192.3	111.6	111	-141.5	113.6	10.0	-26.3	-21.4	-105.5	-47.3
160	-191.2	111.7	110	-140.5	113.6	10.5	-27.7	-22.3	-107.4	-47.6
159	-190.1	111.8	109	-139.5	113.6	11.0	-29.0	-23.1	-109.3	-48.0
158	-189.0	111.8	108	-138.5	113.6	11.5	-30.4	-23.9	-111.3	-48.3
157	-188.0	111.9	107	-137.5	113.6	12.0	-31.8	-24.7	-113.3	-48.7
156	-186.9	112.0	106	-136.5	113.6	12.5	-33.1	-25.5	-115.3	-49.0
155	-185.8	112.1	105	-135.5	113.6	13.0	-34.5	-26.2	-117.3	-49.4
154	-184.8	112.1	104	-134.5	113.6	13.5	-35.9	-26.9	-119.4	-49.7
153	-183.7	112.2	103	-133.5	113.7	14.0	-37.3	-27.6	-121.4	-50.0
152	-182.7	112.3	102	-132.5	113.7	14.5	-38.7	-28.3	-123.5	-50.4
151	-181.6	112.3	101	-131.5	113.7	15.0	-40.1	-29.0	-125.6	-50.8
150	-180.6	112.4	100	-130.5	113.7	15.5	-41.5	-29.7	-127.7	-51.1
149	-179.6	112.4	99	-129.5	113.7	16.0	-43.0	-30.3	-129.9	-51.5
148	-178.5	112.5	98	-128.5	113.7	16.5	-44.4	-31.0	-132.1	-51.8
147	-177.5	112.6	97	-127.5	113.7	17.0	-45.8	-31.6	-134.2	-52.2
146	-176.5	112.6	96	-126.4	113.7	17.5	-47.3	-32.2	-136.4	-52.6
145	-175.4	112.7	95	-125.4	113.7	18.0	-48.7	-32.8	-138.7	-52.9
144	-174.4	112.7	94	-124.4	113.7	18.5	-50.2	-33.4	-140.9	-53.3
143	-173.4	112.8				17.0	-45.8	-31.6	-143.2	-53.7
142	-172.4	112.8				17.5	-47.3	-32.2	-145.5	-54.1
141	-171.4	112.9				18.0	-48.7	-32.8	-147.8	-54.5
140	-170.4	112.9				18.5	-50.2	-33.4	-150.2	-54.9
139	-169.3	112.9				19.0	-45.8	-31.6	-152.5	-55.3
138	-168.3	113.0				19.5	-47.3	-32.2		
137	-167.3	113.0				20.0	-48.7	-32.8		
136	-166.3	113.1				20.5	-50.2	-33.4		
135	-165.3	113.1				21.0	-51.7	-33.9		
134	-164.3	113.1				21.5	-53.2	-34.5		
133	-163.3	113.2				22.0	-54.7	-35.0		
132	-162.3	113.2				22.5	-56.2	-35.5		
131	-161.3	113.2				23.0	-57.7	-36.1		
130	-160.3	113.3				23.5	-59.2	-36.6		
129	-159.3	113.3				24.0	-60.8	-37.1		
128	-158.3	113.3				24.5	-62.3	-37.5		
127	-157.4	113.3				25.0	-63.9	-38.0		
126	-156.4	113.4				25.5	-65.5	-38.5		
125	-155.4	113.4				26.0	-67.0	-38.9		
124	-154.4	113.4				26.5	-68.6	-39.4		
123	-153.4	113.4				27.0	-70.2	-39.8		
122	-152.4	113.4				27.5	-71.9	-40.2		
121	-151.4	113.5				28.0	-73.5	-40.7		
120	-150.4	113.5				28.5	-75.2	-41.1		
119	-149.4	113.5				29.0	-76.8	-41.5		
118	-148.4	113.5				29.5	-78.5	-41.9		
117	-147.5	113.5				30.0	-80.2	-42.3		
116	-146.5	113.5				30.5	-81.9	-42.7		

DIRECT ASCENT TPI BACKUP TABLE TWEAK									
R1	V1	$\dot{R}1$	V2	$\dot{R}1$	TPI LOGGING				
					V2	R2	V3	TIME	DATA
80	1693.3	386	-680.4	349	-736.8	31	-329.2	TPI - 30:00	R1
81	1693.5	385	-682.5	348	-737.9	32	-337.6	TPI - 30:00	R1
82	1693.8	384	-684.6	347	-739.0	33	-345.7	.	(94.1)
83	1694.1	383	-686.6	346	-740.1	34	-353.4	.	(353.1)
84	1694.4	382	-688.5	345	-741.3	35	-360.8	TPI - 10:00	R2
85	1694.7	381	-690.5	344	-742.4	36	-367.8	.	(44.0)
86	1695.0	380	-692.4	343	-743.4	37	-374.4	.	(154.5)
87	1695.3	379	-694.2	342	-744.5	38	-380.7	.	1.5
88	1695.6	378	-696.1	341	-745.6	39	-386.8	.	(26.8)
89	1695.9	377	-697.8	340	-746.7	40	-392.5	N81	
90	1696.2	376	-699.6	339	-747.8	41	-397.9	F+/A-	
91	1696.5	375	-701.3	338	-748.9	42	-403.1	H1	
92	1696.7	374	-703.0	337	-750.0	43	-408.0	.	(1697.1)
93	1696.9	373	-704.6	336	-751.0	44	-412.7	H2	.
94	1697.1	372	-706.2	335	-752.1	45	-417.1	.	(-732.0)
95	1697.2	371	-707.8	334	-753.2	46	-421.4	ΔV_X	.
96	1697.3	370	-709.4	333	-754.3	47	-425.4		(965.1)
97	1697.3	369	-710.9	332	-775.4	48	-429.2	V3	.
98	1697.2	368	-712.4	331	-756.5	49	-432.9	.	(-412.7)
99	1697.1	367	-713.9	330	-757.6	50	-436.4	V4	.
100	1696.9	366	-715.3	329	-758.7	51	-439.8	.	(-56.4)
101	1696.6	365	-716.8	328	-759.9	52	-443.0	V5	.
102	1696.3	364	-718.2	327	-761.0	53	-446.1	ΔV_Z	(552.4)
103	1695.8	363	-719.5	326	-762.1	54	-449.1		(496.0)
104	1695.2	362	-720.9	325	-763.3	55	-452.0		
105	1694.6	361	-722.2	324	-764.5	56	-454.8		
106	1693.8	360	-723.5	323	-765.6	57	-457.5		
107	1692.9	359	-724.8	322	-766.8				
108	1691.9	358	-726.1	321	-768.1				
		357	-727.3	320	-769.3				
		356	-728.6						
		355	-729.8						
		354	-731.0						
		353	-732.2						
		352	-733.3						
		351	-734.5						
		350	-735.6						
		349	-736.8						

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MAY 29, 1971TPI BU
DIR ASC TWEAKMIDCOURSE
LOGGINGFIRST
MIDCOURSESECOND
MIDCOURSE

TPI BU
DIR ASC TWEAK
DIRECT ASCENT
DIRECT

TPI BACKUP
DIRECT ASCENT
CDH BACKUP

CSI BACKUP
NOMINAL ASCENT

DIRECT ASCENT TPI BACKUP TABLE TWEAK

R2	V4	H1	R2	V4	H1	R2	V4	H1	R2	V4	H1	R2	V5	H2	V5	H2
212	-44.2	85.3	174	-51.0	91.5	136	-63.3	95.2	12.0	-280.0	-10.3	31.0	-511.5	-25.9	-511.5	-25.9
211	-44.4	85.5	173	-51.2	91.6	135	-63.7	95.2	12.5	-288.8	-10.7	31.5	-515.6	-26.3	-515.6	-26.3
210	-44.5	85.7	172	-51.5	91.7	134	-64.1	95.3	13.0	-297.5	-11.2	32.0	-519.6	-26.6	-519.6	-26.6
209	-44.6	85.9	171	-51.7	91.9	133	-64.6	95.4	13.5	-306.0	-11.6	32.5	-523.5	-27.0	-523.5	-27.0
208	-44.8	86.1	170	-52.0	92.0	132	-65.0	95.5	14.0	-314.3	-12.0	33.0	-527.4	-27.3	-527.4	-27.3
207	-44.9	86.3	169	-52.2	92.1	131	-65.5	95.5	14.5	-322.4	-12.5	33.5	-531.2	-27.6	-531.2	-27.6
206	-45.1	86.5	168	-52.5	92.2	130	-65.9	95.6	15.0	-330.4	-12.9	34.0	-535.0	-28.0	-535.0	-28.0
205	-45.2	86.7	167	-52.8	92.3	129	-66.4	95.7	15.5	-338.1	-13.4	34.5	-538.7	-28.3	-538.7	-28.3
204	-45.3	86.9	166	-53.0	92.4	128	-66.9	95.7	16.0	-345.7	-13.8	35.0	-542.4	-28.6	-542.4	-28.6
203	-45.5	87.0	165	-53.3	92.5	127	-67.3	95.8	16.5	-353.2	-14.2	35.5	-546.1	-28.9	-546.1	-28.9
202	-45.6	87.2	164	-53.6	92.6	126	-67.8	95.9	17.0	-360.4	-14.7	36.0	-549.7	-29.3	-549.7	-29.3
201	-45.8	87.4	163	-53.8	92.8	125	-68.3	96.0	17.5	-367.5	-15.1	36.5	-553.4	-29.6	-553.4	-29.6
200	-46.0	87.6	162	-54.1	92.9	124	-68.8	96.0	18.0	-374.5	-15.5	37.0	-557.0	-29.9	-557.0	-29.9
199	-46.1	87.8	161	-54.4	93.0	123	-69.3	96.1	18.5	-381.3	-15.9	37.5	-560.5	-30.2	-560.5	-30.2
198	-46.3	87.9	160	-54.7	93.1	122	-69.8	96.2	19.0	-387.9	-16.4	38.0	-564.1	-30.5	-564.1	-30.5
197	-46.4	88.1	159	-55.0	93.2	121	-70.3	96.2	19.5	-394.4	-16.8	38.5	-567.6	-30.7	-567.6	-30.7
196	-46.6	88.3	158	-55.3	93.3	120	-70.9	96.3	20.0	-400.8	-17.2	39.0	-571.2	-31.0	-571.2	-31.0
195	-46.8	88.5	157	-55.6	93.4	119	-71.4	96.4	20.5	-407.0	-17.7	39.5	-574.7	-31.3	-574.7	-31.3
194	-46.9	88.6	156	-55.9	93.5	118	-71.9	96.4	21.0	-413.1	-18.1	40.0	-578.2	-31.6	-578.2	-31.6
193	-47.1	88.8	155	-56.3	93.6	117	-72.5	96.5	21.5	-419.0	-18.5	40.5	-581.8	-31.8	-581.8	-31.8
192	-47.3	89.0	154	-56.6	93.6	116	-73.0	96.6	22.0	-424.8	-18.9	41.0	-585.3	-32.1	-585.3	-32.1
191	-47.5	89.1	153	-56.9	93.7	115	-73.6	96.6	22.5	-430.5	-19.3	41.5	-588.9	-32.3	-588.9	-32.3
190	-47.7	89.3	152	-57.2	93.8	114	-74.1	96.7	23.0	-436.1	-19.7	42.0	-592.4	-32.6	-592.4	-32.6
189	-47.8	89.4	151	-57.6	93.9	113	-74.7	96.8	23.5	-441.6	-20.1					
188	-48.0	89.6	150	-57.9	94.0	112	-75.3	96.8	24.0	-446.9	-20.5					
187	-48.2	89.7	149	-58.3	94.1	111	-75.9	96.9	24.5	-452.1	-21.0					
186	-48.4	89.9	148	-58.6	94.2	110	-76.5	97.0	25.0	-457.2	-21.4					
185	-48.6	90.0	147	-59.0	94.3	109	-77.1	97.0	25.5	-462.3	-21.8					
184	-48.8	90.2	146	-59.3	94.4	108	-77.7	97.1	26.0	-467.2	-22.1					
183	-49.0	90.3	145	-59.7	94.4	107	-78.3	97.2	26.5	-472.0	-22.5					
182	-49.2	90.4	144	-60.1	94.5	106	-78.9	97.2	27.0	-476.7	-22.9					
181	-49.4	90.6	143	-60.5	94.6	105	-79.6	97.3	27.5	-481.3	-23.3					
180	-49.6	90.7	142	-60.8	94.7	104	-80.2	97.4	28.0	-485.9	-23.7					
179	-49.9	90.9	141	-61.2	94.8	103	-80.9	97.4	28.5	-490.3	-24.1					
178	-50.1	91.0	140	-61.6	94.9	102	-81.5	97.5	29.0	-494.7	-24.5					
177	-50.3	91.1	139	-62.0	94.9	101	-82.2	97.6	29.5	-499.0	-24.8					
176	-50.5	91.2	138	-62.4	95.0	100	-82.8	97.6	30.0	-503.3	-25.2					
175	-50.8	91.4	137	-62.9	95.1	99	-83.5	97.7	30.5	-507.4	-25.6					
174	-51.0	91.5	136	-63.3	95.2	97	-84.9	97.8	31.0	-511.5	-25.9					

MCC1 CHART LOGGING

R_{REQ} ————— 103.0
 R_{13} ————— 16.92 R_{13}^- ————— 103.0 θ_{13} ————— 43.87
 ΔR ————— 0.0 θ_9^- ————— 37.97
 $\Delta \theta$ ————— 5.90

MCC1	PGNS (N59)	CMC (N59)	AGS	PGNS (N85)	CHART
ΔV_x	— .	— .	— .	— .	— .
ΔV_y	— .	— .	— .	— .	— .
ΔV_z	— .	— .	— .	— .	— .

MCC2 CHART LOGGING

R_{REQ} ————— 50.2
 R_{28} ————— 33.1 kFT R_{28}^- ————— 50.2 θ_{28} ————— 78.09
 ΔR ————— 0.0 θ_{24}^- ————— 66.79
 $\Delta \theta$ ————— 11.30

MCC2	PGNS (N59)	CMC (N59)	AGS	PGNS (N85)	CHART
ΔV_x	— .	— .	— .	— .	— .
ΔV_y	— .	— .	— .	— .	— .
ΔV_z	— .	— .	— .	— .	— .

MIDCOURSE
LOGGING

TPI BU
DIR ASC TWEAK

TPI BACKUP
DIRECT ASCENT

CDH BACKUP
NOMINAL ASCENT

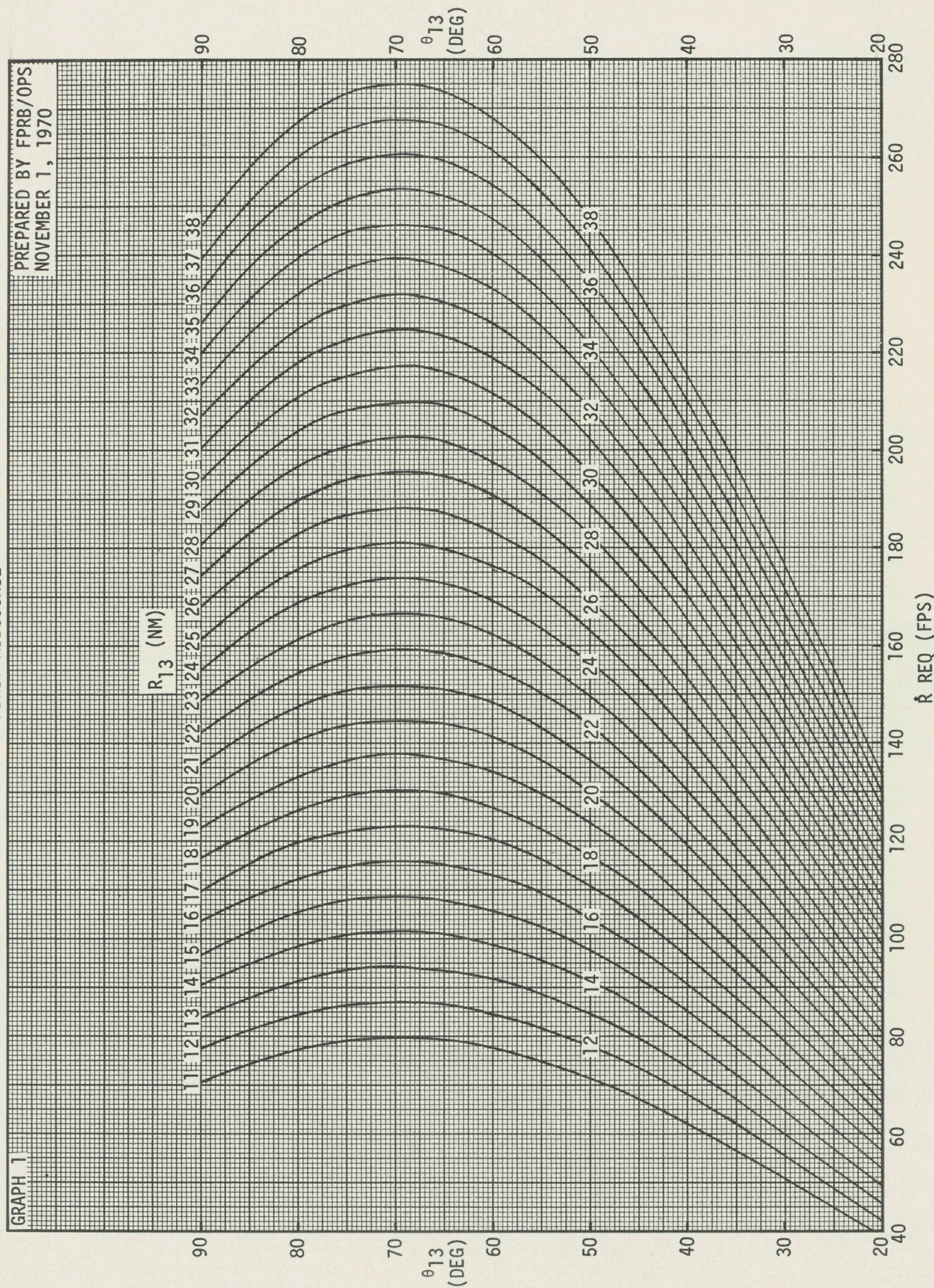
CSI BACKUP
NOMINAL ASCENT

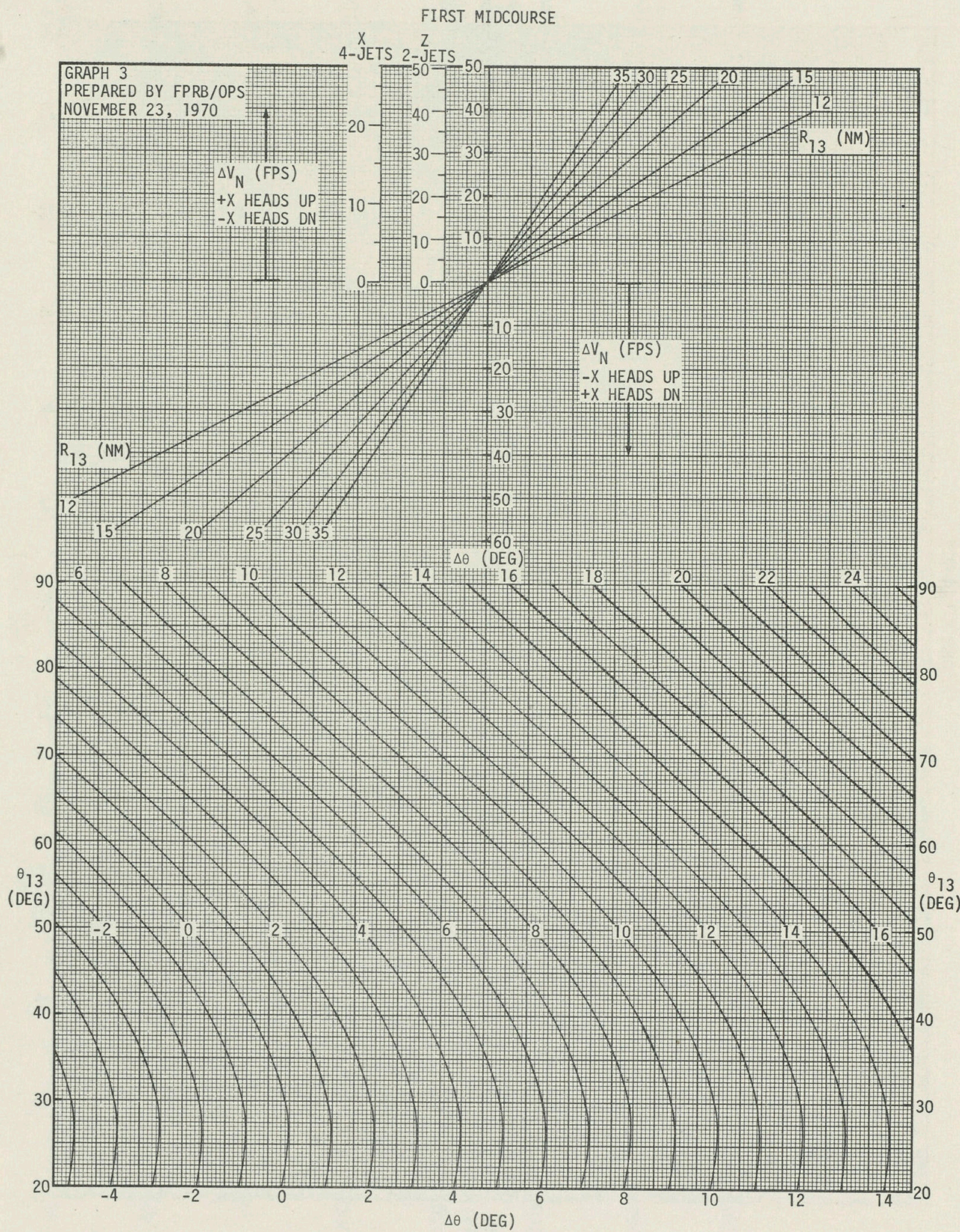
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FIRST
MIDCOURSE

SECOND
MIDCOURSE

FIRST
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FIRST
MIDCOURSESECOND
MIDCOURSE

SECOND

MIDCOURSE

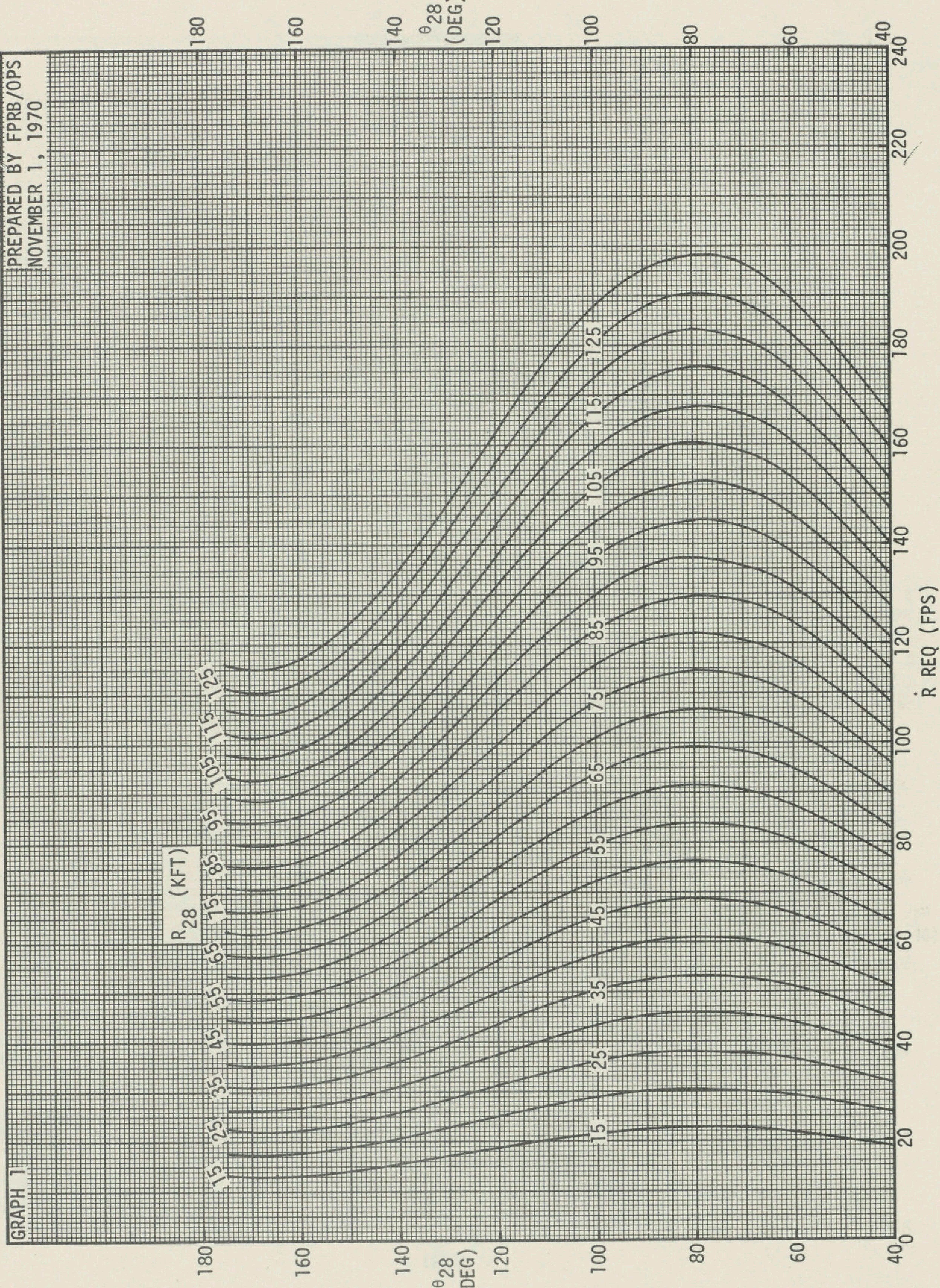
CDH BACKUP
TPI BACKUP
NOMINAL ASCENT

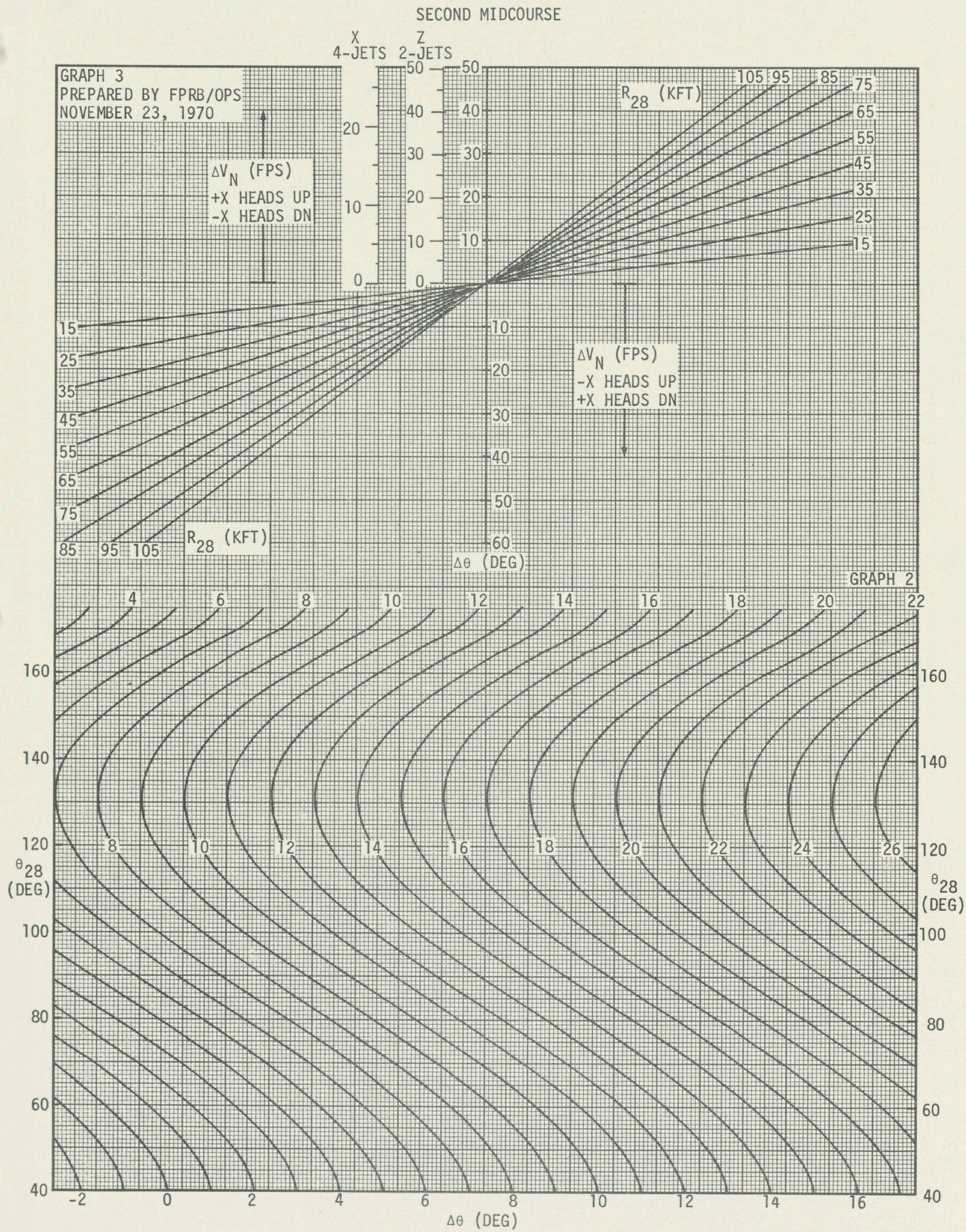
DIRECT ASCENT

TPI BU
DIR ASC TWEAK
DIRECT ASCENTMIDCOURSE
LOGGINGFIRST
MIDCOURSE

SECOND MIDCOURSE

GRAPH 1



SECOND
MIDCOURSE

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