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25 PAGES
(Including Cover Sheet)



CORONA "L" FLIGHT DATA BOOK

SYSTEM NO. L-2

VEHICLE NO. 1165

MISSION NO. 8002

PREPARED BY: _____

CHECKED BY: _____

APPROVED BY: [REDACTED] MANAGER
REQUIREMENTS AND ANALYSIS

APPROVED BY: [REDACTED] _____
PROGRAM MANAGER

APPROVED BY: _____
(S.E.T.D.)

Declassified and Released by the N R O

In Accordance with E. O. 12958

on NOV 26 1997

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L-2
SYSTEM NO _____
VEHICLE NO 1165
MISSION NO 8002
PANORAMIC INSTRUMENT NO 5

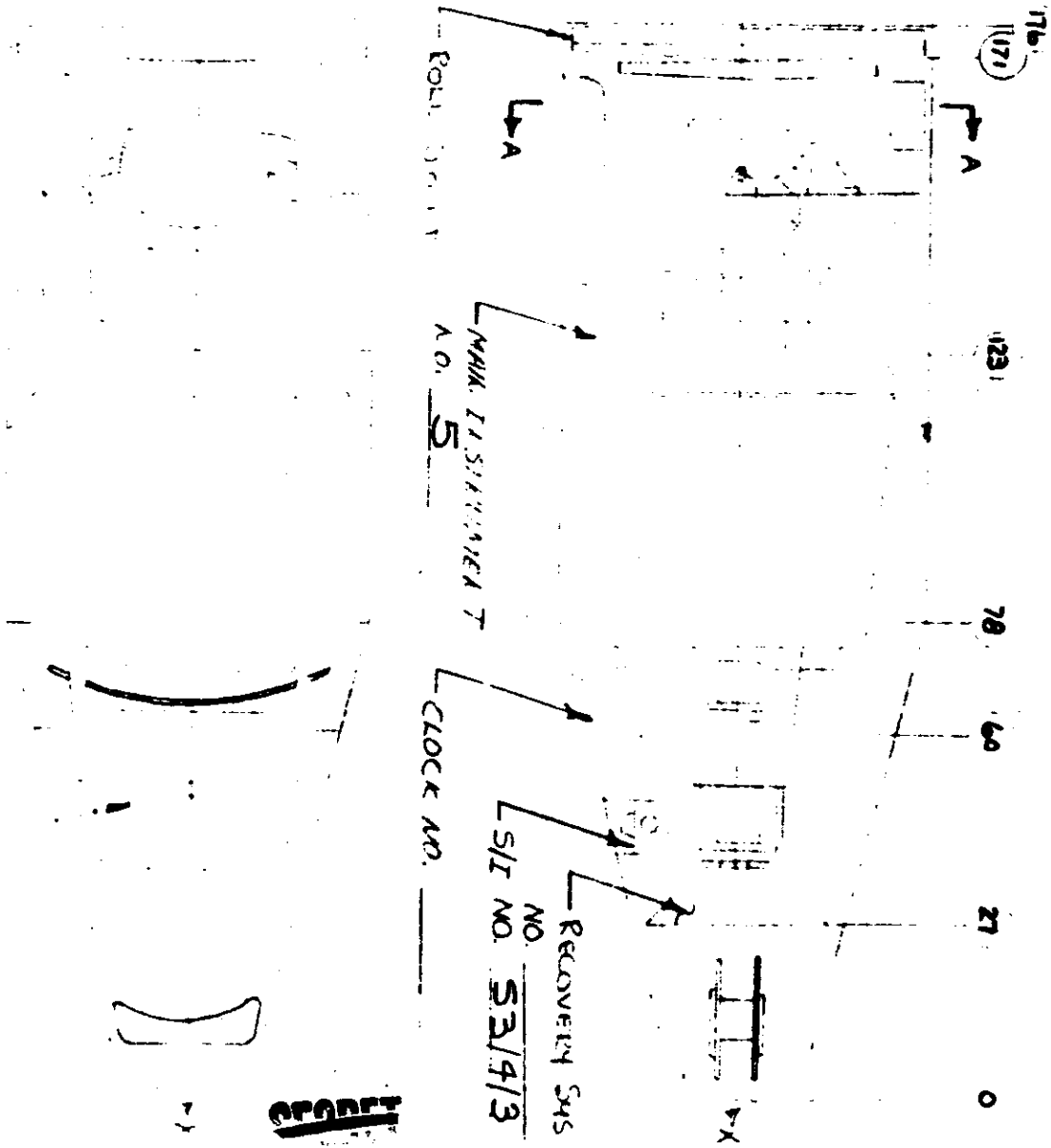
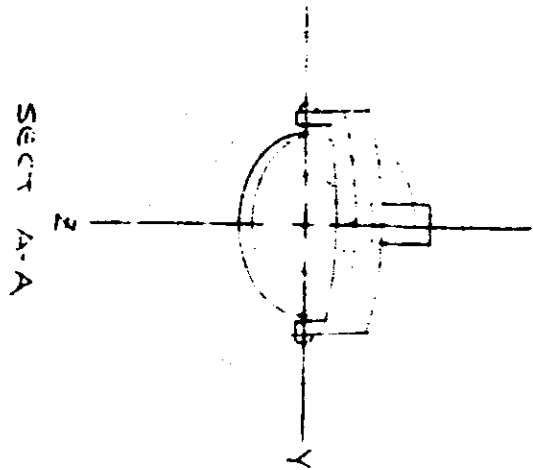
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Approved for Release
by NSA on 08-01-2013 pursuant to E.O. 13526

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GENERAL FLIGHT DATA AND PRE-LAUNCH SETTINGS:



Panoramic Instrument Serial No. 5
Stellar/Index Serial Number 53/4/3
Launch Date 5-18-63

Command Settings at Launch:

Command	8	9	10	11	12	15
Setting	9	1	6	3	11	11

Panoramic Instrument Settings:
Slit Width 0.246 Inch
Filter Type WRATTEN 12

Stellar/Index Settings:

	Stellar	Index
Exposure Time	<u>2.0</u> sec.	<u>1/500</u> sec.
Aperture Setting	<u>F1.9</u>	<u>F4.5</u>
Filter Type	<u>NONE</u>	<u>WRATTEN 21</u>

Ratio: One Stellar/Index Frame Per 10 Panoramic Frames

Film:

	Panoramic	Stellar	Index
Type	<u>5J31(SO132)</u>	<u>35x75(SPEC)</u>	<u>7J-33-135</u>
Length	<u>8000</u>	<u>75</u>	<u>135</u>
No. of Splices	<u>3</u>	<u>1</u>	<u>NONE</u>
Emulsion Data	<u>29-2-3-3</u>	<u>4401/4400</u>	<u>1-6-2-3</u>

Orbital Parameters: (Orbit 12 Data)

Period 91.13 Min. Eccentricity .0266
Perigee 86.3 N.M. Perigee Latitude 39.3 deg.
Apogee 279 N.M. Inclination Angle 74.63 deg.
Recovery Orbit 33. Recovery Date 5-21-63.

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CYCLE PERIODS, IMC AND SCAN DATA

Scan Velocity:

$\frac{95.79}{\text{Cycle Period}}$ (inches/second)

$\frac{83.153}{\text{Cycle Period}}$ (degrees/second)

$\frac{1.451}{\text{Cycle Period}}$ (Radians/second)

IMC Velocity:

$\frac{4.127}{\text{Cycle Period}}$ (Inches/second)

$\frac{0.0625}{\text{Cycle Period}}$ (Radians/seconds)

Pre-Flight Cycle Period		
V/H Ramp	Time Up Ramp	Cycle Period
1	SEE V/H PLOTS PAGE 13-22	
2		
3		
4		
5		
6		
7		
8		
9		
10		

In-Flight Cycle Period		
V/H Ramp	Time Up Ramp	Cycle Period
	NOISE	
	AVAILABLE	

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PANORAMIC INSTRUMENT LENS DATA SUMMARY

Lens Serial Number 09
Flight Slit Width 0.246 Inch
Flight Filter Type WRATTEN 12
Effective Operational Focal Length 65.911 inches

Dynamic Resolution: (Figure of Merit)

	Lines/MM	Film Type	Target	Slit
Itak Pre-Vibration	<u>81.5</u>	<u>S0132</u>	<u>LOW</u>	<u>.133</u>
Itak Post-Vibration	<u>75.0</u>	<u>S0132</u>	<u>LOW</u>	<u>.133</u>
AP (THRU FOCUS)	<u>67.0</u>	<u>S0132</u>	<u>LOW</u>	<u>.246</u>
AP (POST SHAKE)	<u>48.0</u>	<u>S0132</u>	<u>LOW</u>	<u>.265</u>

Distortion:

Angle off Axis Deg.	-2.0	-1.5	-1.0	-0.5	0	+0.5	+1.0	+1.5	+2.0
Distortion Millimeters	.003	.003	.003	0	0	0	0	0	0

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SIDELINE NO. 4-2
 VEHICLE NO. 1165
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STELLAR/INDEX LENS DATA SUMMARY:

	Stellar	Index
Lens Serial No.	<u>80039</u>	<u>809932</u>
Reseau Serial No.	<u>3</u>	<u>4</u>
Flight Filter Type	<u>NONE</u>	<u>WRITTEN 21</u>
Flight Aperture	<u>F1.9</u>	<u>F4.5</u>
Flight Exposure Time	<u>2.0</u> Sec.	<u>1/500</u> Sec.
Equivalent Focal Length	<u>83.76</u> MM	<u>38.30</u> MM
Operational Focal Length	<u>83.76</u> MM	<u>38.37</u> MM

Resolution:

Angle Off Axis
Resolution L/MM High Contrast
Resolution L/MM Low Contrast

NOT AVAILABLE

0	10	20	30	35
113/113	118/115	112/101	64/59	58/33
71/64	77/75	78/66	54/36	48/32

 L/MM AWAR from film

72.8 L/MM AWAR from 50130 film

Distortion:

Angle Off Axis Deg.	0	2.5	5.0	7.5
Distortion Millimeters	.000	.000	.000	.004

0	10	20	30	35
.000	.013	.058	.137	.191

Perpendicularity of Reseau to Optical Axis .000 (IN 35 MM)

.060 (IN 57.15 MM)

Location of Principal Point:

X -0.055 MM +0.026 MM
 Y +0.065 MM -0.061 MM

Knee Calibration: NOT AVAIL. Deg. Min. Sec.

Date of Stellar Calibration: NOT AVAILABLE

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ANGULAR RELATIONS:

Optical Axis of Index to optical axis of Panoramic Instrument:

Perpendicularity 90° ± 5.25'
Rotational ± 24.4'

Mirror Positions with respect to yaw axis:

Forward Position 52° 16' 35"
Normal Position 49° 41' 06"
Aft Position 37° 08' 17"

Roll Steering Angles

Nominal	Calibrated
<u>+30</u>	<u> </u>
<u>+15</u>	<u> </u>
<u>0</u>	<u> </u>
<u>-15</u>	<u> </u>
<u>-30</u>	<u> </u>

NOT AVAILABLE
(ACCEPT. LIMITS = Nom. ± 1/4°)

Angular relation between Stellar and Index:

NOT AVAILABLE

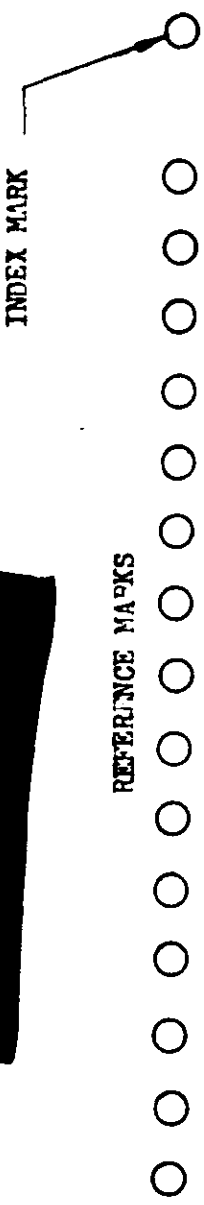
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DATA BLOCK LAYOUT:



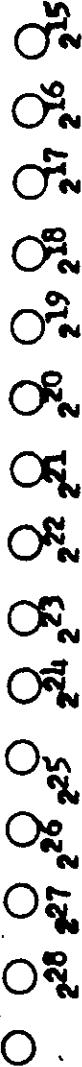
REFERENCE MARKS



TIME LABEL



SPARE



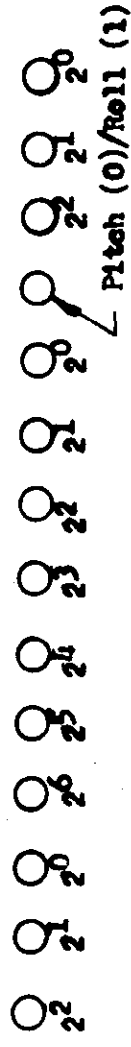
SCAN RATE
ERROR



ROLL STEERING

ATTITUDE

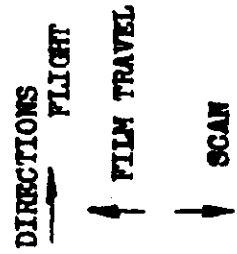
MIRROR POSITION



		ATTITUDE						
		26	25	24	23	22	21	20
	-5	0	0	0	0	0	0	0
	0	1	0	0	0	0	0	0
	4.9	1	1	1	1	1	1	1

		ROLL STEERING		
		22	21	20
+30°	1	0	1	1
+15°	0	1	0	0
0°	0	0	1	0
-15°	0	1	0	0
-30°	1	0	0	0

		MIRROR POSITION		
		22	21	20
Forward	1	0	0	0
Vertical	0	1	0	0
Aft	0	0	0	1



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VEHICLE NO

1165

MISSION NO

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DESCRIPTION OF ANGULAR RELATIONS

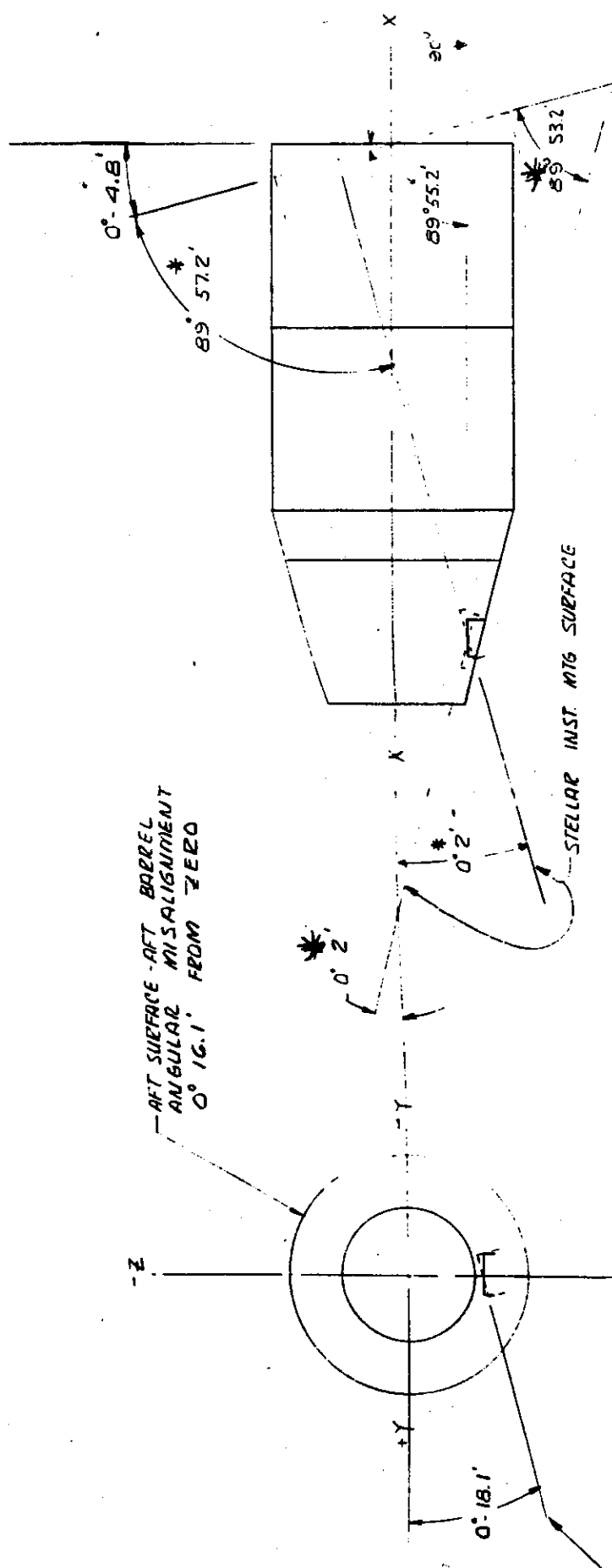
Reflector Alignment

Reflector alignment is performed by positioning the camera subsystem in a test fixture with the plane defined by the pitch and roll axes vertical. With the reflector removed, a theodolite is sighted through the lens cell and centered on the platen center. The reflector is then installed in the normal position and a second theodolite is positioned so the reflector can be viewed normally in all three positions. This theodolite is focused on the platen center through the lens cell by viewing through the reflector. The alignment errors and repeatability are then obtained by measuring the angular relationship of the two theodolites related to the camera subsystem after cycling the reflector. Tests are run on the forward, rear, and normal positions of the reflector.

Optical Axis of Index to Optical Axis of Panoramic Instrument

The optical axis of the Index camera to the Panoramic Instrument has not been calibrated. The tolerances given are mechanical tolerances. Diagrams showing the possible mechanical variations in the location of the instrument mounting surfaces are included.

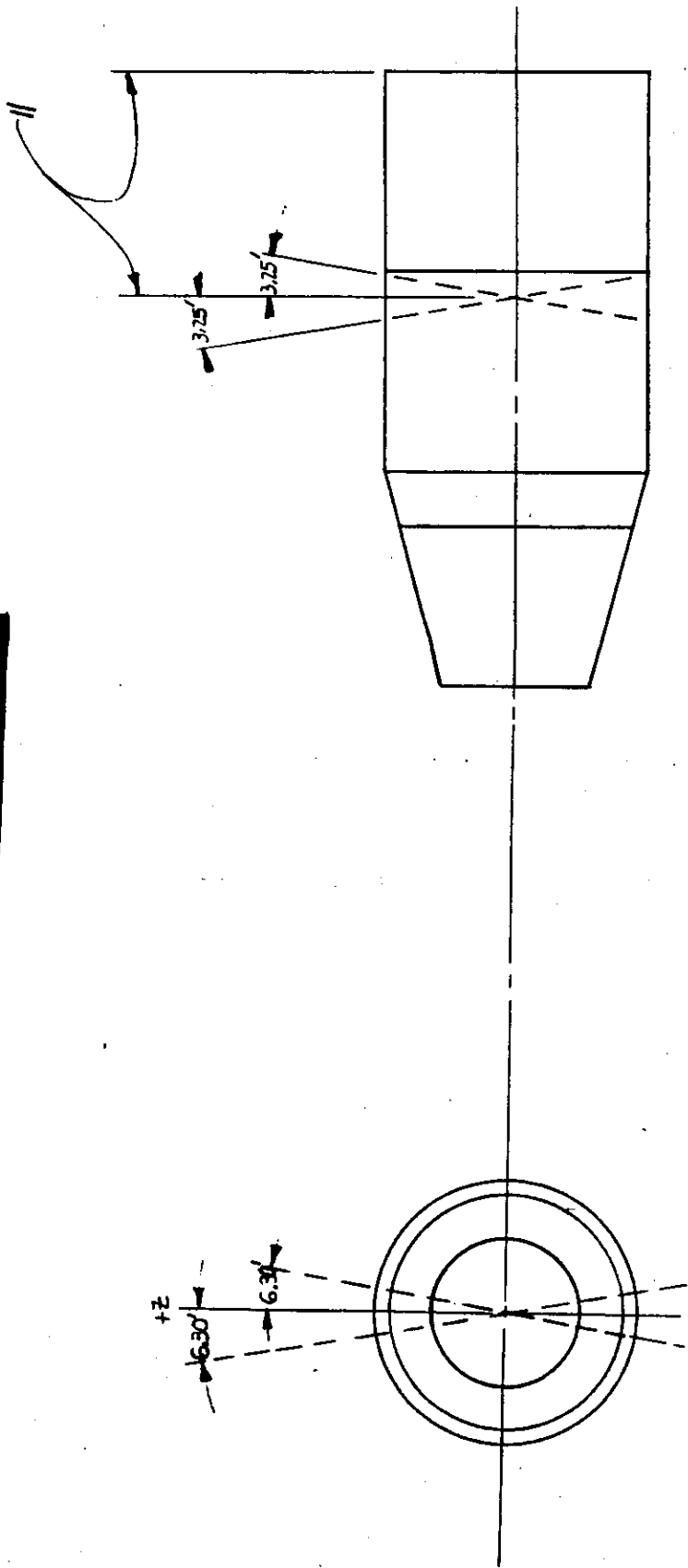
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— ZERO POSITION
 - - - FINAL POSITION - WORST
 3-13-63

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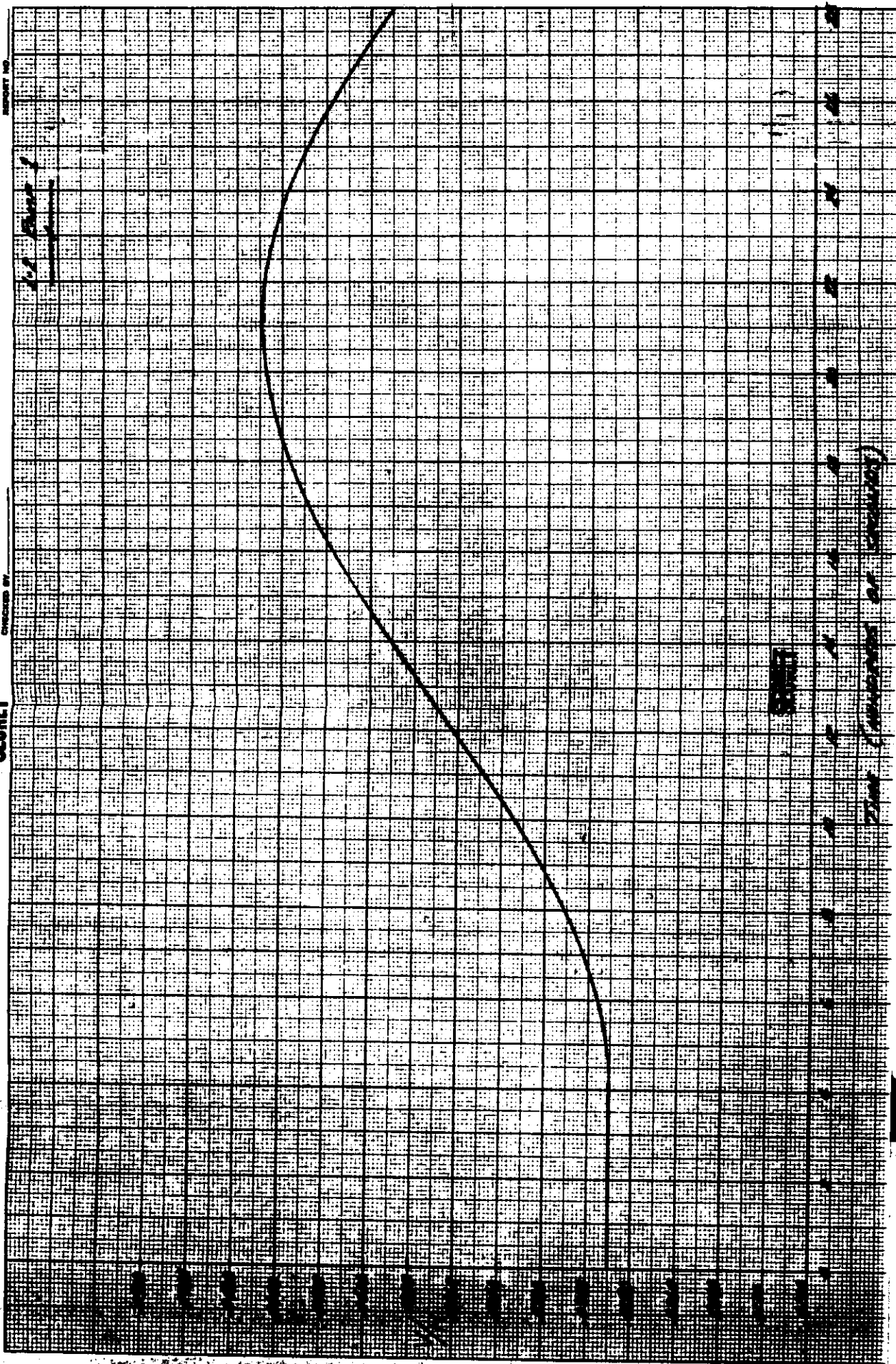
MAIN INSTRUMENT

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DATE: [redacted]
CHECKED BY: [redacted]

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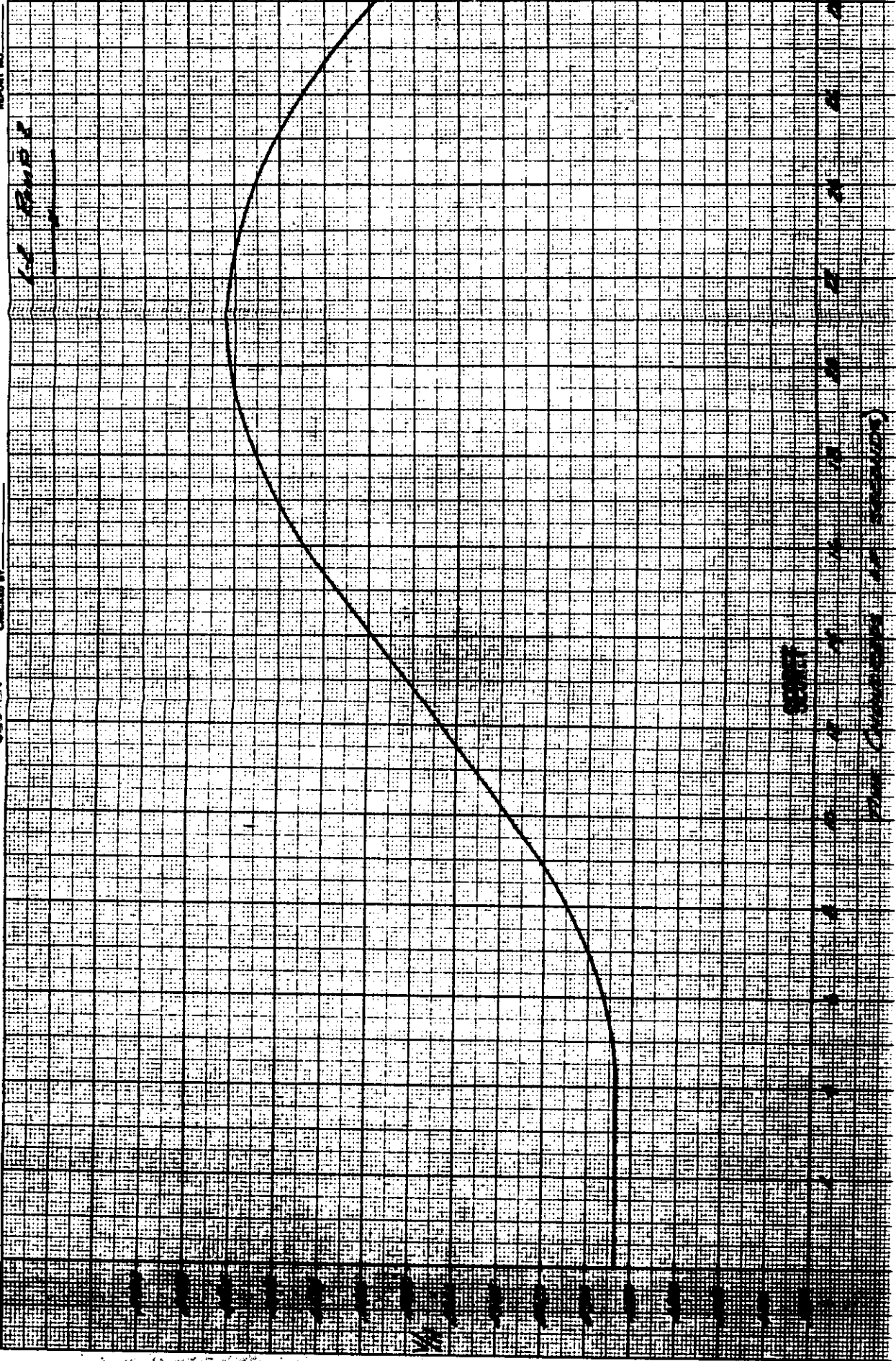
Time (minutes or seconds)

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DATE
CHECKED BY

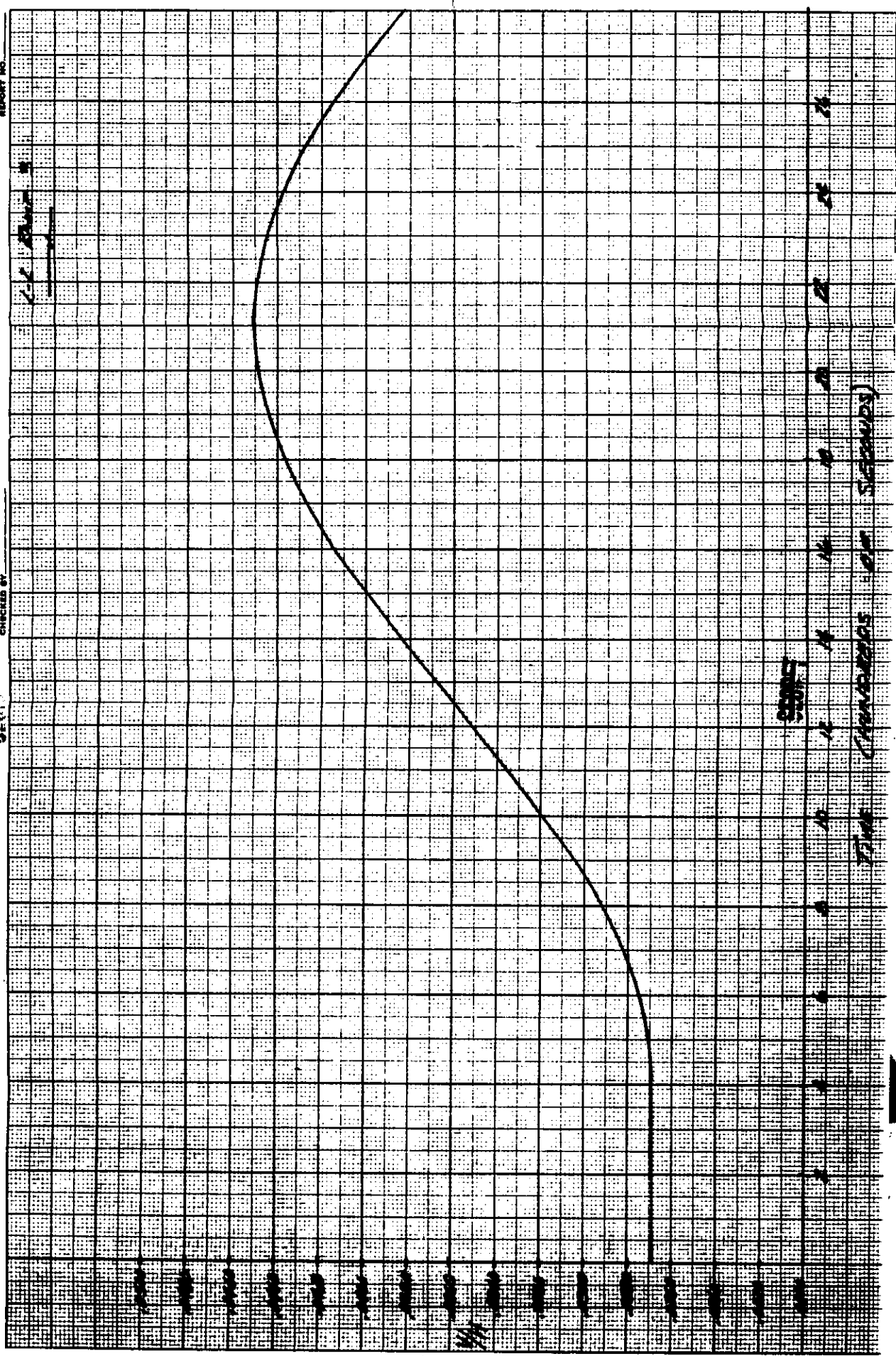
OFFICE
ADDRESS

11 BUREAU



PREPARED BY
DATE
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REVISED
DATE

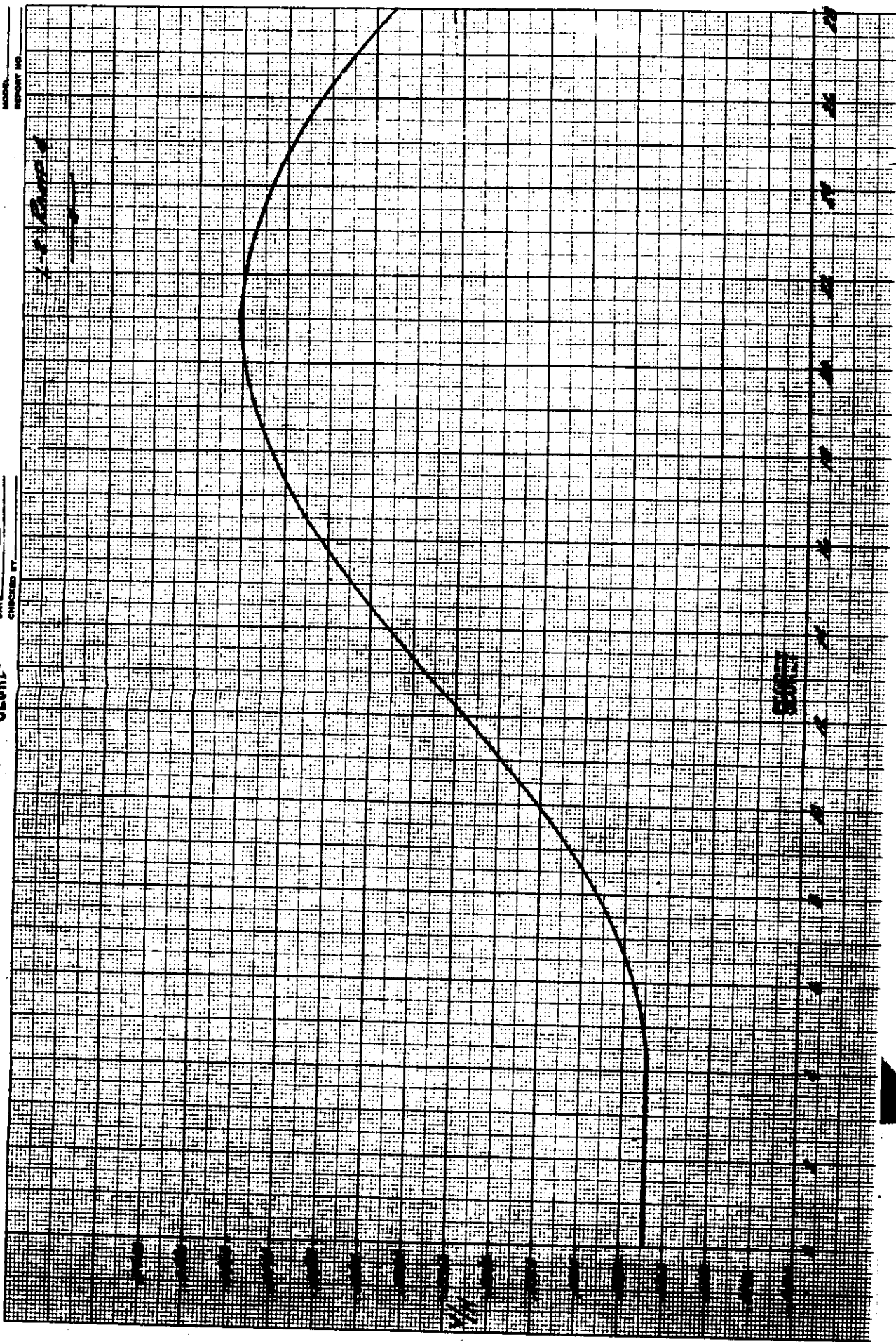


SCALE

TIME (HOURS OF SECOND)

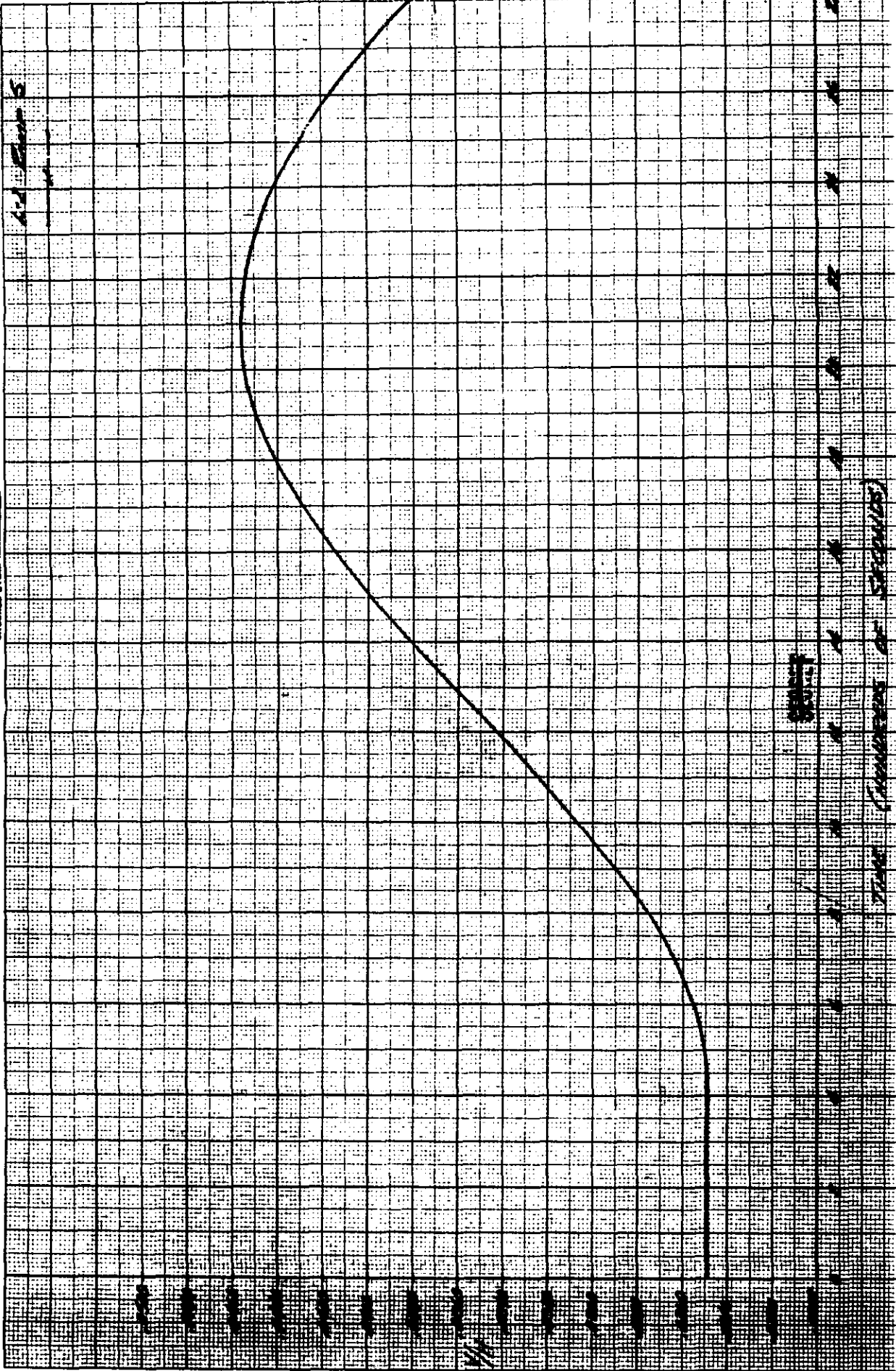
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DATE
CHECKED BY

SECURITY
CLASSIFICATION



TIME (HOURS OF SPEEDS)

