JANAIR

JOINT ARMY-NAVY AIRCRAFT INSTRUMENTATION RESEARCH

RESULTS OF MAIN ROTOR RADAR BLADE FLIGHT TESTS, MODEL UH-1B, S/N AF622023

REPORT NO. 204-100-113

BELL HELICOPTER COMPANY
FORT WORTH, TEXAS
DIVISION OF BELL AEROSPACE CORPORATION • A textron COMPANY

BELL HELICOPTER COMPANY

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Chief Flight Test Engineer

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Project Engineer

MODEL UH-1B

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SUMMARY

Main rotor blades configured with leading edge radar antennas were installed on a Model UH-1B Helicopter, S/N AF 62-2023, Bell No. 543, for both ground and flight tests. At the conclusion of the flight test program, 0.7 hour of ground run time and 16.7 hours of flight time had been logged on the helicopter. The first phase of a two phase major test program was performed during these flights. Load level tests and basic electromagnetic radiation pattern tests comprise Phase I and both were successfully completed.

Load level tests confirmed previous measurements. All measured loads and vibrations were identical to production 204 blades. Flight characteristics are identical to a production UH-1B Helicopter. Radiation pattern tests were very successful and proved that the use of rotor blade antennas as a radar transmitting device is feasible.

Based on preliminary analysis of flight test data, it is concluded that use of the main rotor blades for radar transmissions is practical and warrants further study and tests to determine specific configurations for use in production operations. Final analysis of radiation test data (photographs) were performed by David W. Young & Associates, consultants for this development program.

INTRODUCTION

The feasibility of using a helicopter main rotor blade as a radar antenna has, for a long period of time, been a question involving application of a practical design. Bell Helicopter Company, in conjunction with David W. Young & Associates, consulting engineers, entered a design study and hardware development program which would ultimately result in a flyable system for flight test evaluation. This program was divided into two phases. Phase I consisted of modification of the leading edges of two standard Model 204 main rotor blades to house a 173-inch leaky waveguide antenna for pattern flight tests. Phase II will be the flight test of a special set of Bell funded blades designed to incorporate both a leading and a trailing edge antenna.

A set of limited life, 44-foot diameter blades from a Model UH-1B were modified for flight tests. The initial set of blades were installed on Bell Model UH-1B, S/N AF 62-2023. Following ground checks, edge bonding of the erosion boot protecting the waveguide antenna failed during the first flight. The blades were returned to the Bonding Department and a new erosion material applied. The blades were reinstalled on the helicopter and used for the remainder of the test program.

Hardware for the blade-to-cabin installation was delivered to Flight Test Engineering for installation on 20 August 1965. Pattern transmission tests were completed on 3 September 1965 and the configuration was removed following Flight 151 on 9 September 1965. At the time of removal, the blades had accumulated 0.7 hour ground run and 16.7 flight hours.

DESCRIPTION OF TEST EQUIPMENT

HELICOPTER INSTALLATIONS

Blade Waveguide Installation

Two 44-foot diameter blades, P/N 204-011-001-15, S/N's A-2-247 and A2-836, were modified to accept the leading edge radar antennas. The leading edge antenna installation was protected by a vinyl tape installation approximately 4 inches total width (2 inches on top of blade and 2 inches on the bottom) for the full span of each blade. Details of the antenna installation are shown on Drawing No. 299-018-001.

Hub Waveguide Installation

An installation consisting of both fixed and flexible waveguide was made on the standard UH-1B hub as shown on drawing number 299-760-003 and the photograph of Figure 1.

Mast Installation

The main rotor mast was used as a waveguide for this specific installation, drawing number 299-760-003. The main parts of this installation are the upper and lower cones which transition the signal from the standard rectangular waveguide cross section to the circular section of the main rotor mast. The upper mast installation can be seen in Figure 1 with the lower mast installation shown in Figure 2. The upper cone adapter installation was made through use of the special mast nut which was a standard instrumentation nut modified at the top to accept the cone adapter.

Cabin Installation

A Klystron transmitter (emitting CW, K_u band microwave energy) was installed on the instrumentation table in the passenger compartment. This installa-

DESCRIPTION OF TEST EQUIPMENT - (cont)

tion is shown in Figure 4 and includes the power supply, transmitter, and waveguide attached to the bulkhead. On the rear of the bulkhead, a flexible waveguide (TL-57-4-B-12N) was installed between the lower mast cone and the transmitter waveguide as shown in Figure 2.

INSTRUMENTATION

Load Level Tests

Standard blade instrumentation was used for these tests. All load level data was recorded on two oscillographs. Setup and calibration sheets are shown in Appendix C.

Transmission Tests

No special helicopter instrumentation was used for transmission tests since all signal data was recorded at the ground receiving station. Normal pilot and copilot instrument panel data was recorded using airspeed, altitude, and heading instruments. Calibration data for these instruments are shown in Appendix C.

GROUND RECEIVING INSTALLATIONS

The ground receiving equipment, located in the Flight Test Hangar at the Globe facility is shown in Figure 5.

Parabolic Disk

A 42-inch parabolic reflector, Ainslie 444020-33, with a one degree beamwidth was used to receive the signal from the helicopter. A four power 4.6 degree field of view sighting telescope was attached to, and boresighted with, the dish. This enabled the ground station to determine when the helicopter

DESCRIPTION OF TEST EQUIPMENT - (cont)

Parabolic Disk - (cont)

was on the point of test.

Preamplifier

An LEL KBH-2 low noise preamp and mixer together with a Hewlett Packard 628A signal generator was used to amplify and hetrodyne the incoming signal to IF frequency.

Attenuator

A precision attenuator FXR Model Y164-A was inserted between the receiving antenna and the preamp for calibration of the data equipment.

Oscilloscopes

Two Tektronix Model 545B oscilloscopes were used to display the received patterns for photographic analysis. Two recording type Poloroid cameras were used to photograph the displayed images.

Communications

A Bayside portable transceiver was used to communicate with the helicopter.

DESCRIPTION OF TESTS

Initial test plans and procedures were drawn in the report of Reference 1.

A major check point of the test program was to determine installation convenience of the modified blades and waveguide hardware. This was accomplished in two phases, first, during the blade installation for the load level flight, and second, prior to the pattern test flights when the aircraft was in work status for the waveguide installation. Results of installation discrepancies are discussed in the test results section.

Load level tests were performed with standard Model 204 blades and with radar blades for comparison purposes. Ground tests for blade balancing and tracking checks preceded flight tests. Flight test conditions checked were hover, climb, and level flight. Records were obtained in each condition using the instrumentation listed in Appendix C.

Transmission tests were performed at Bell Helicopter's Globe facility. A ground receiving station complete with instrumentation and photographic facilities was set up in the flight test hangar. Figure 5 shows the ground station setup. Three basic check points over the terrain were chosen to accommodate the positioning of the helicopter in the fixed parabolic reflector cone. The parabolic reflector sighting telescope was used to position the helicopter in hover, and to mark the point of photography during fly-by's through the point on other maneuvers. Three points were checked: 800, 1800, and 2500 feet above the ground. Flight conditions performed at these points were hover, level flight up to 120 knots IAS, vertical climb, vertical descent, angular climb, and angular descent. Photographs were obtained "on the point" during each maneuver. Level flight points were performed at compass headings of 0, 45, 90, 135, 180, 225, 270 and 315 degrees.

INSTALLATION AND TEST RESULTS

Load Level Tests

Prior to flight with the radar blade configuration, a base data flight was made using the production 204 configuration. A standard 204 hub installation was used for both blade configurations. For comparative purposes, the data from the base flight is shown in conjunction with the radar blade data in Appendices D and E.

When the radar blades were installed, a ground run was made to check tracking and balance. The blades were trimmed out and two disc weights were removed from each side. Flight with these blades was very good from a vibration standpoint. Handling characteristics were normal for a UH-1B. Load level data was obtained on two flights, 143A and 143B, with center of gravity locations of 125.4 F.S. and 133.2 F.S., respectively. Figures 11 through 78 of Appendix D present the plots of these two flights. Tabular data is shown in Figures 85 through 136 in Appendix E. For all practical purposes, the radar blades are identical to the production 204 blades used for base data.

Installation Trials

Following the load level tests, the helicopter was configured with the necessary waveguide hardware and associated equipment to permit transmission of electromagnetic signals to a ground station. The specific installations are discussed in a previous section of this report. Since this was the first installation of its kind in a helicopter, a discussion of its adaptability to the helicopter is of prime importance.

Generally speaking, the waveguide installation on the hub was performed with relative ease. The only discrepancy encountered in installation was the necessity of drilling oversize holes in the retaining cap (299-760-001-15) which holds the "T" waveguide to the upper mast adapter cone. The holes were opened up with a #26 drill. This operation permitted an eleven degree offset of the "T" waveguide to the main rotor centerline.

INSTALLATION AND TEST RESULTS - (cont)

Installation of main rotor mast hardware was also relatively easy. The purpose of this hardware is to convert the mast to a waveguide link between the blade and the cabin transmitter equipment. This is the point where blade rotation is accommodated through use of the lower cone installation. The first piece of equipment installed was the lower cone. This was made using a special tool which allows the cone to be lowered to its position in the bottom of the mast. Two discrepancies occurred during this operation. First, the special tool failed, and second, the lower cone was accidently lowered too far into the mast.

The special tool failed when the retaining ring holding the small Teflon cone slipped out of place. This was caused by the extremely high force required to freeze the adapter cone to the tool cone in order to rotate the adapter in the mast for insertion of the set screw (204-010-224-1). This probem was alleviated through use of a very tight fitting washer between the Teflon surface (which had a radius) and the locking ring.

The lower cone was accidently pushed out of the bottom of the mast causing the Teflon bearing surface to strike the transmission case (see drawing 299-760-003). Fortunately, no damage was done to the Teflon bearing, although this could easily occur in a field installation when maintenance personnel are trying to locate the set screw hole in the lower cone. A fix for this discrepancy is discussed in the recommendations of this report. A photograph of the lower cone following removal at the conclusion of flight tests is shown in Figure 3. Note the Teflon dust worn from the seal as it worked into its seated position.

The upper cone adapter installation was very easily installed.

INSTALLATION AND TEST RESULTS -(cont)

Electromagnetic Radiation Tests

Results of the transmission tests are being analyzed by David W. Young and Associates, Inc. and will be published in a report on JANAIR Contract Nonr 4148(00). The final report will combine this flight test report and the analytical report of David W. Young and Associates.

CONCLUSIONS AND RECOMMENDATIONS

From the installation and tests of the main rotor radar blades performed on the UH-1B Helicopter, S/N AF 62-2023, the following conclusions can be drawn:

1. The installation is relatively easy from a maintenance standpoint.

2. The helicopter flying characteristics with this installation is identical to a production type 204 rotor blade installation.

3. The life of the flexible waveguides (used to connect the blade waveguide to the hub waveguide) is unsatisfactory for blade to hub use. These guides failed after 17.4 hours total time. The pylon to bulkhead flexible waveguide was satisfactory for this same period of time.

4. The leading edge protective coat bonding is unsatisfactory. The best time was approximately 15 hours of flight, which is unsatisfactory for a production configuration.

The following recommendations are made from operational experience gained on these tests and are applicable to the specific configuration of hardware tested on this program:

1. A very tight fitting washer be installed on the special "T" handle installation tool used to position the lower mast cone.

2. The design of the lower mast cone should be changed to prevent damage to the Teflon bearing surface during installation. A collar should be made as part of the lower mast cone. The collar centerline should be approximately 4.5 inches above the bottom edge of the cone. The outside diameter should be of sufficient dimension to rest on the inside lip of the mast, thus preventing the cone from slipping down the shaft to a point

CONCLUSIONS AND RECOMMENDATIONS - (cont)

where the Teflon bearing surface would be damaged.

3. A new type of hub-to-blade flexible waveguide should be researched.

4. A new type (or method of attaching the old type) of main rotor blade leading edge protective coating should be researched.

APPENDIX A

Photographs

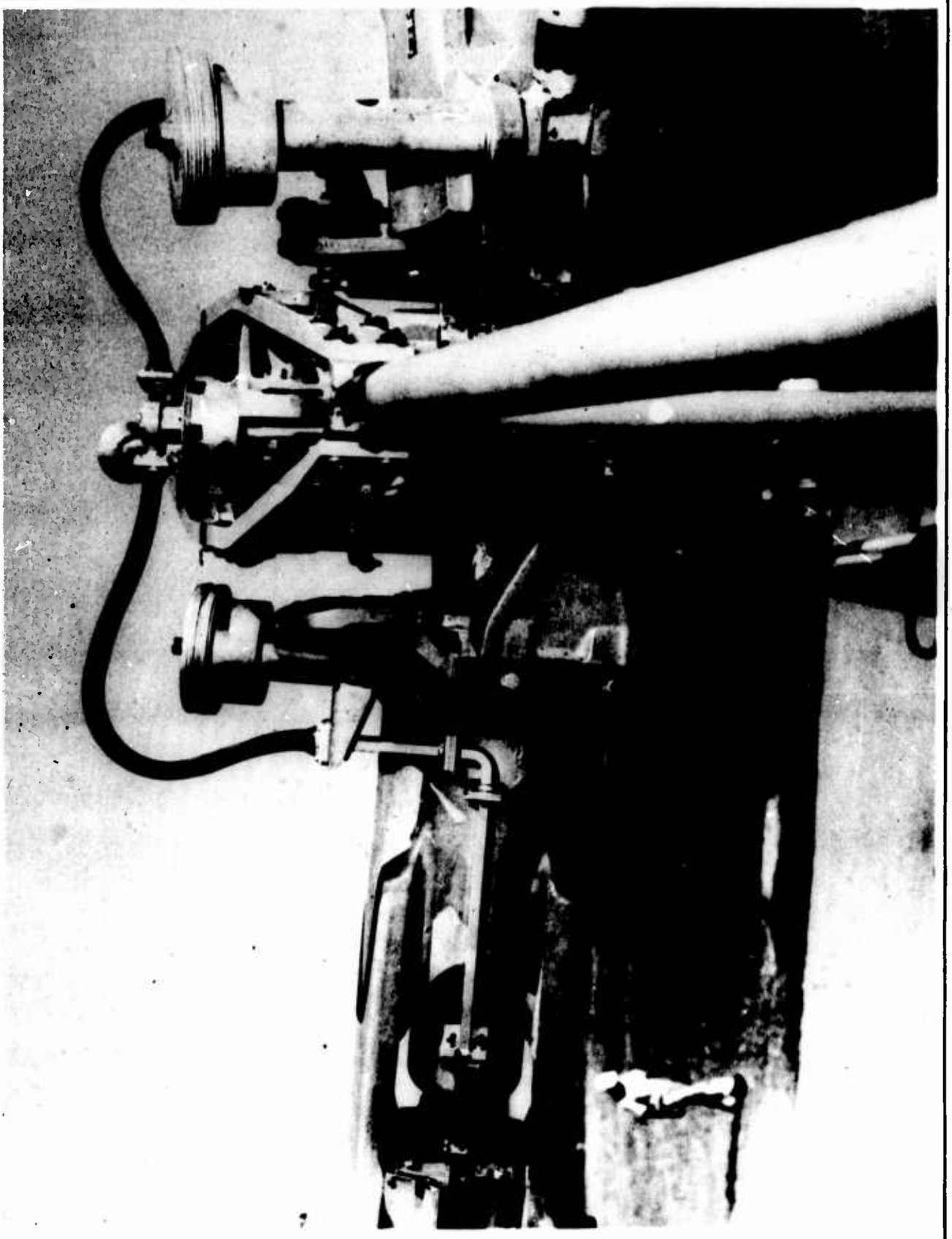


Fig. 1 - Model UH-1B, S/N AF 62-023; Main Rotor Blade Radar - Upper Mast Assembly Installation

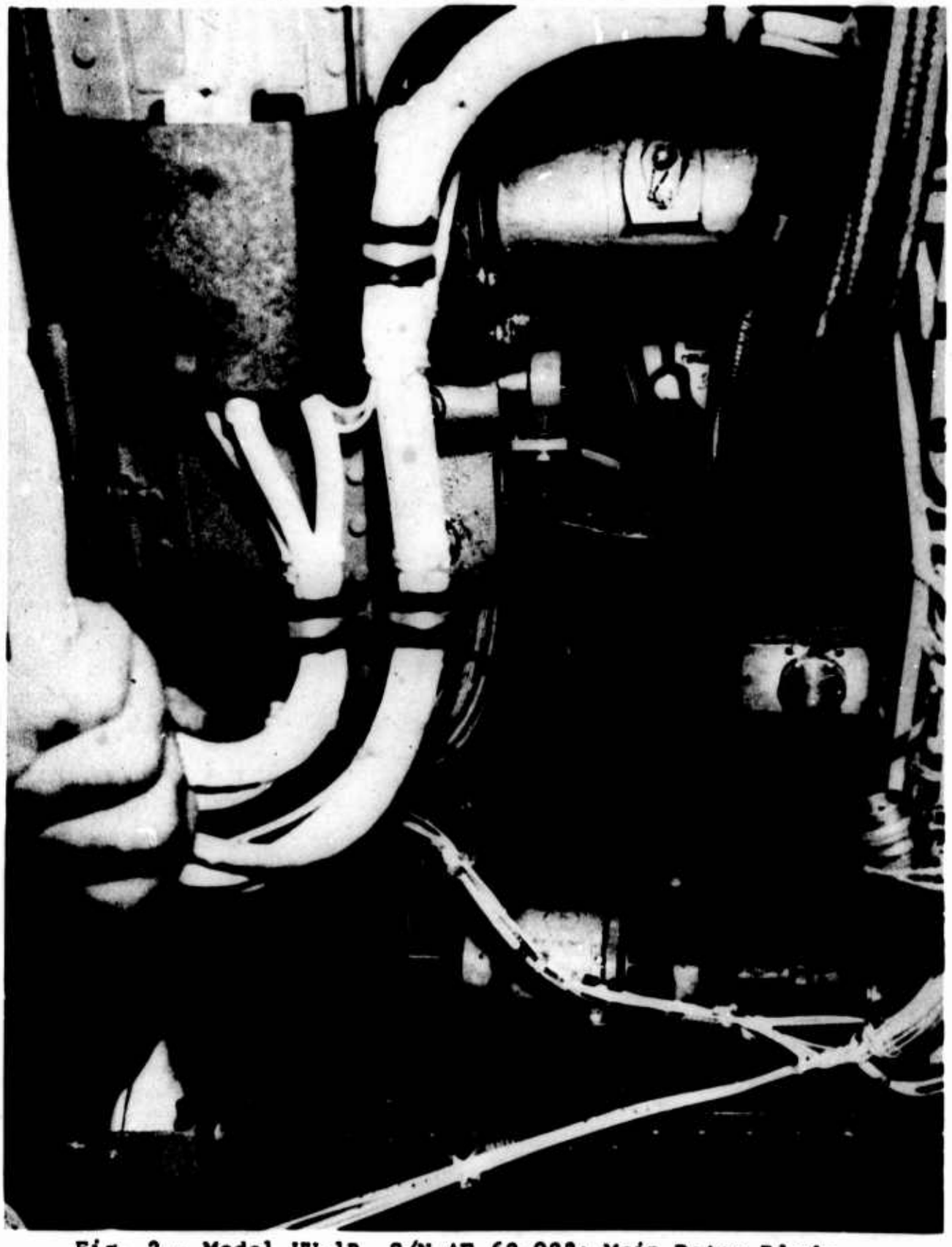


Fig. 2 - Model UH-1B, S/N AF 62-023; Main Rotor Blade Radar Installation - Lower Mast Assembly

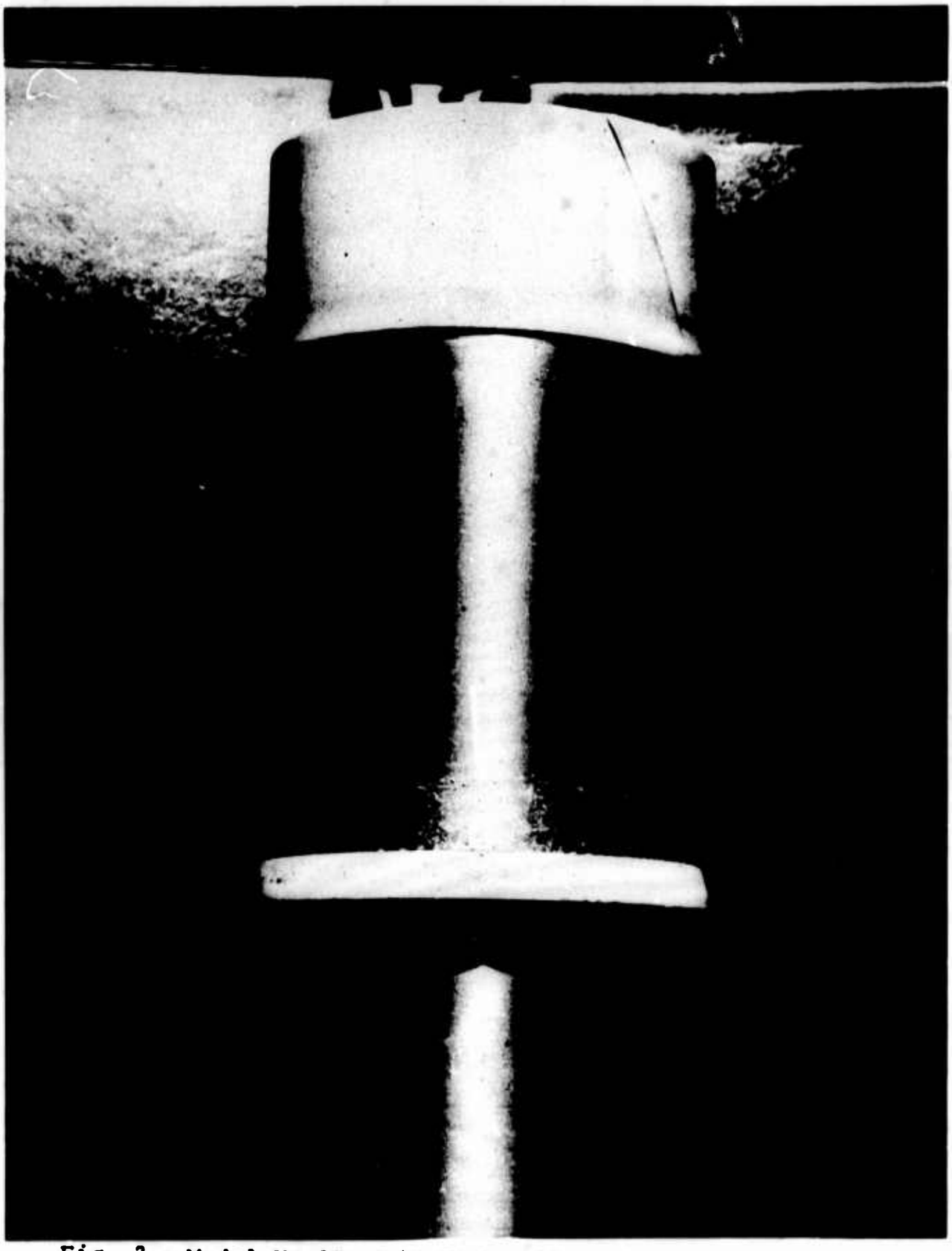


Fig. 3 - Model UH-1B, S/N AF 62 023; Main Rotor Blade Radar Installation - Lower Mast Cone Removal From Helicopter Following 16.1 Total Operating Hours.

7872 86438

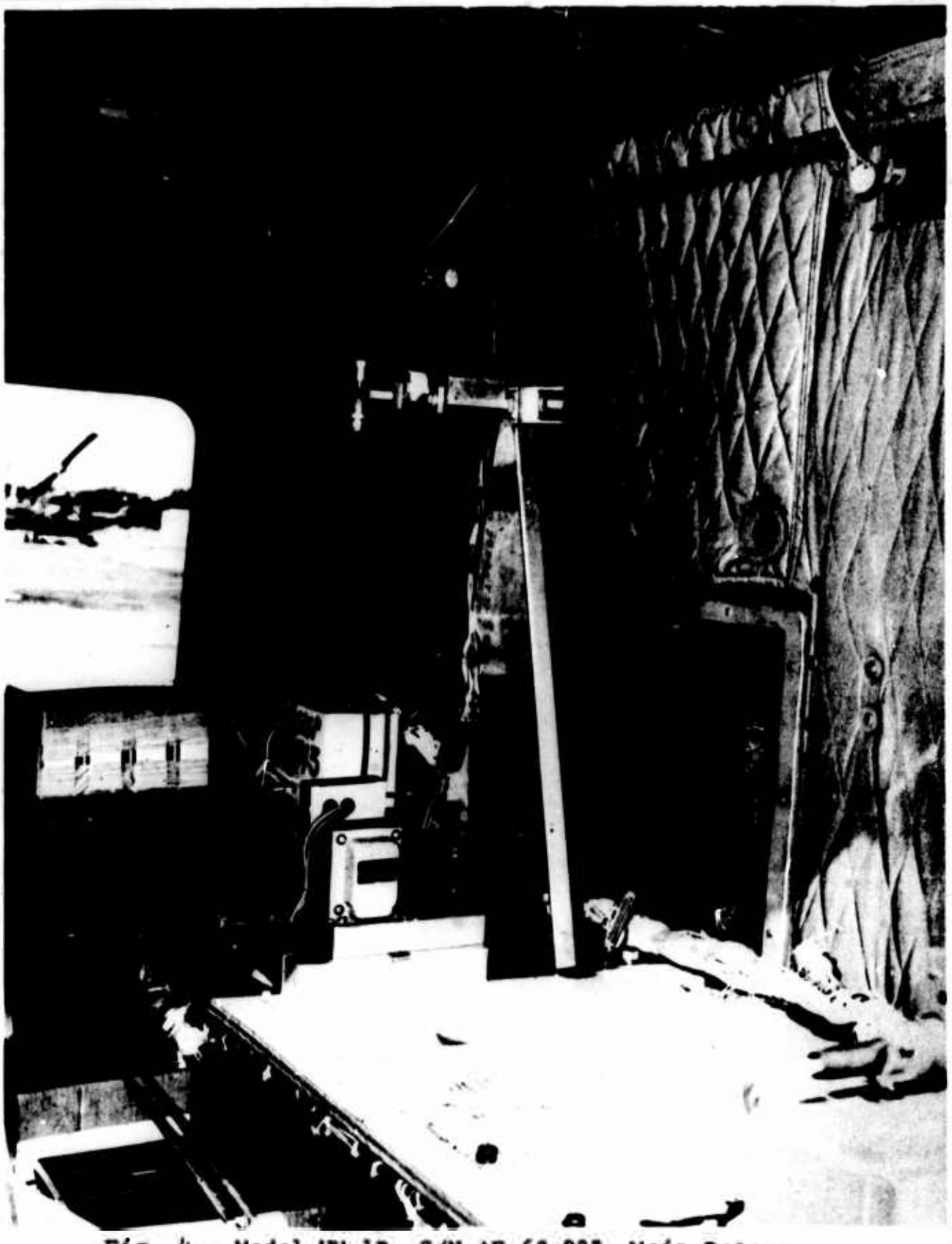


Fig. 4 - Model UH-1B, S/N AF 62 023; Main Rotor Blade Radar Installation - Transmitter & Power Supply Mounted in Cabin

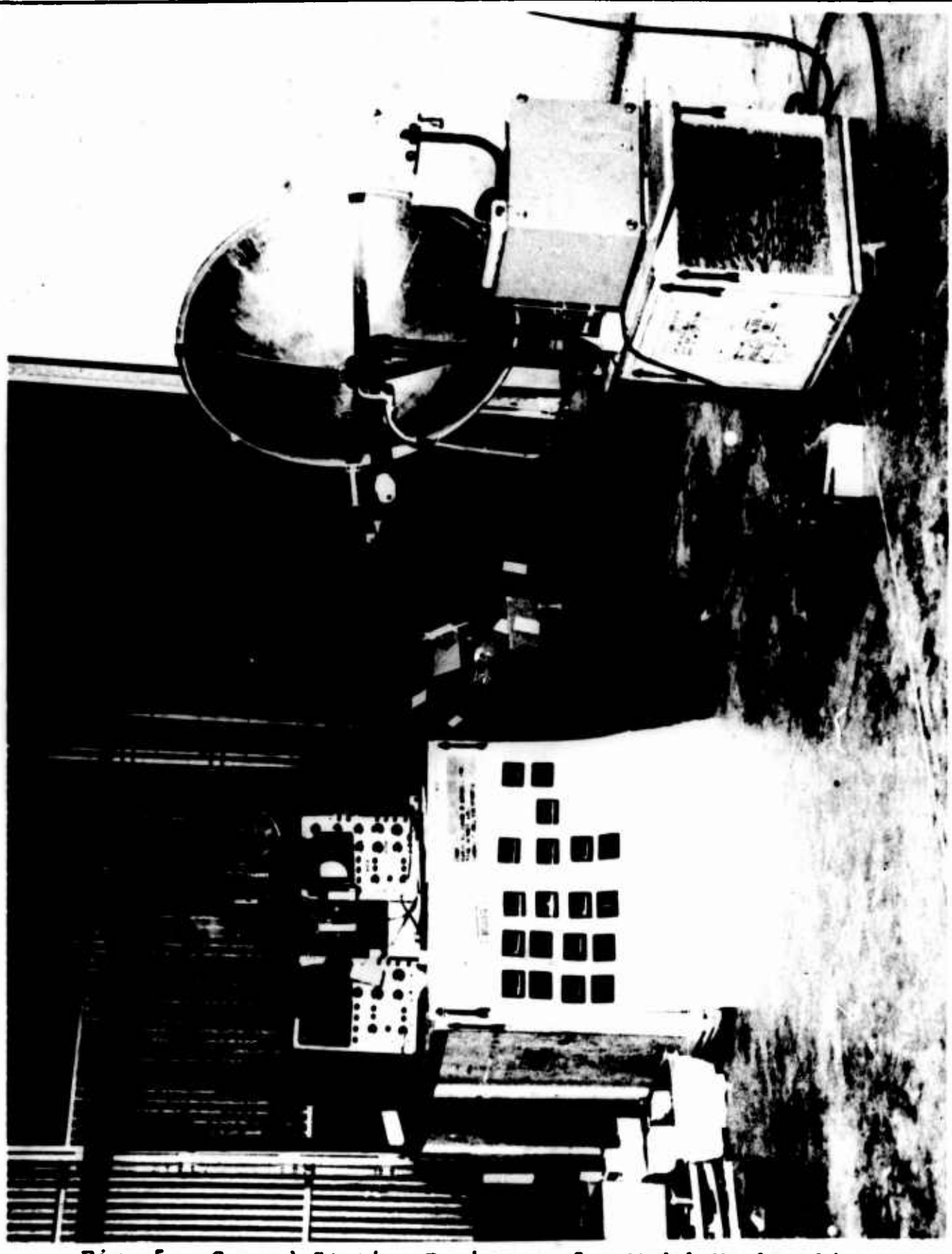


Fig. 5 - Ground Station Equipment for Model UH-1B Flight Tests of Main Rotor Blade Radar Installation (299-760-003)

APPENDIX B

Block Diagrams of Electronic Equipment Used in Helicopter and Ground Station Installations.

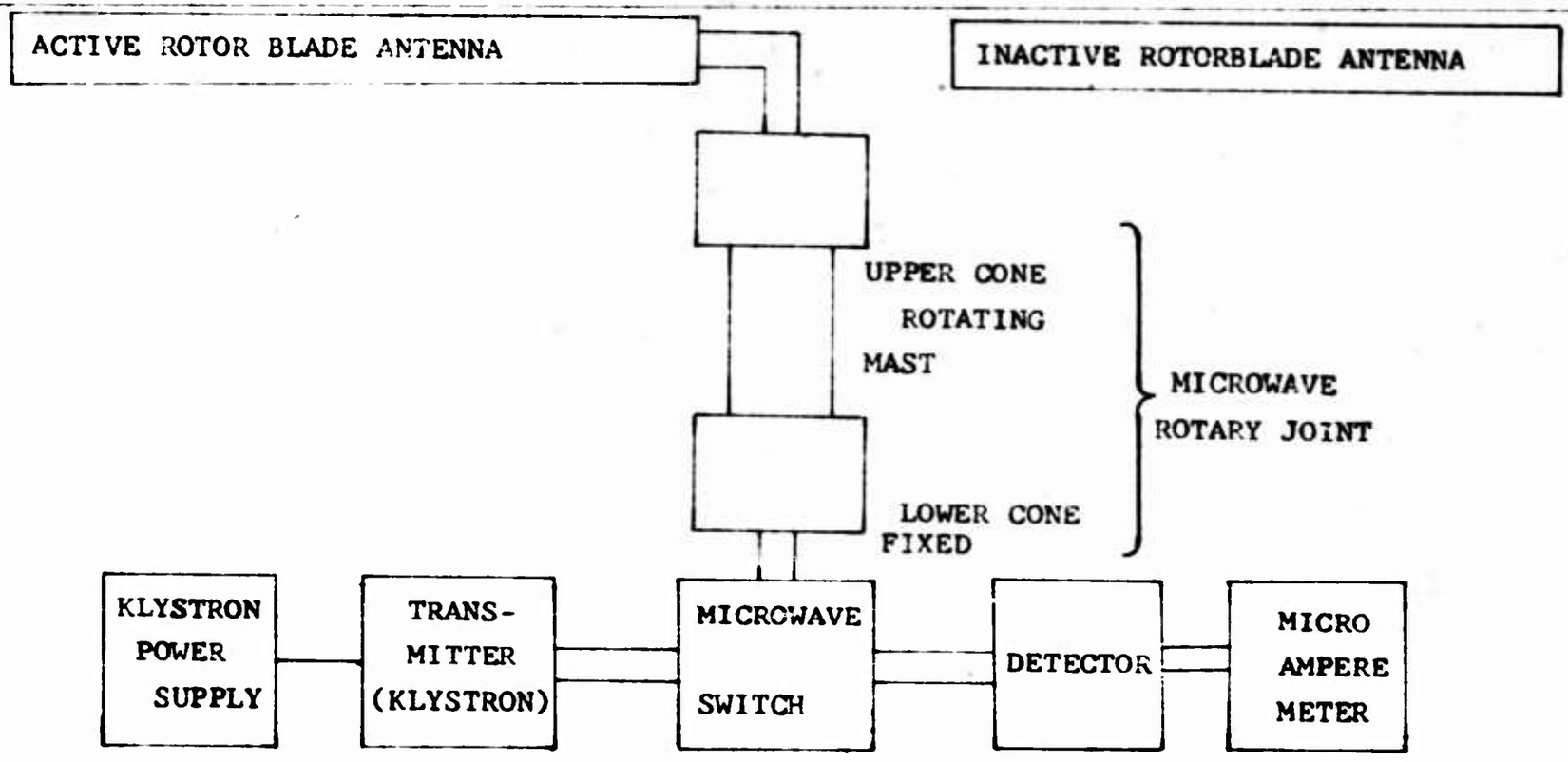


FIGURE 6

ELECTRONIC EQUIPMENT MOUNTED
IN UH-1 HELICOPTER
FOR
ROTOR BLADE ANTENNA PATTERN FLIGHT TESTS
LEADING & TRAILING EDGE ANTENNAS

BY J. A. Mangum
CHECKED R. H. Wheelock
BELL HELICOPTER COMPANY
MODEL UH-1B PAGE 19
RPT 204-100-113

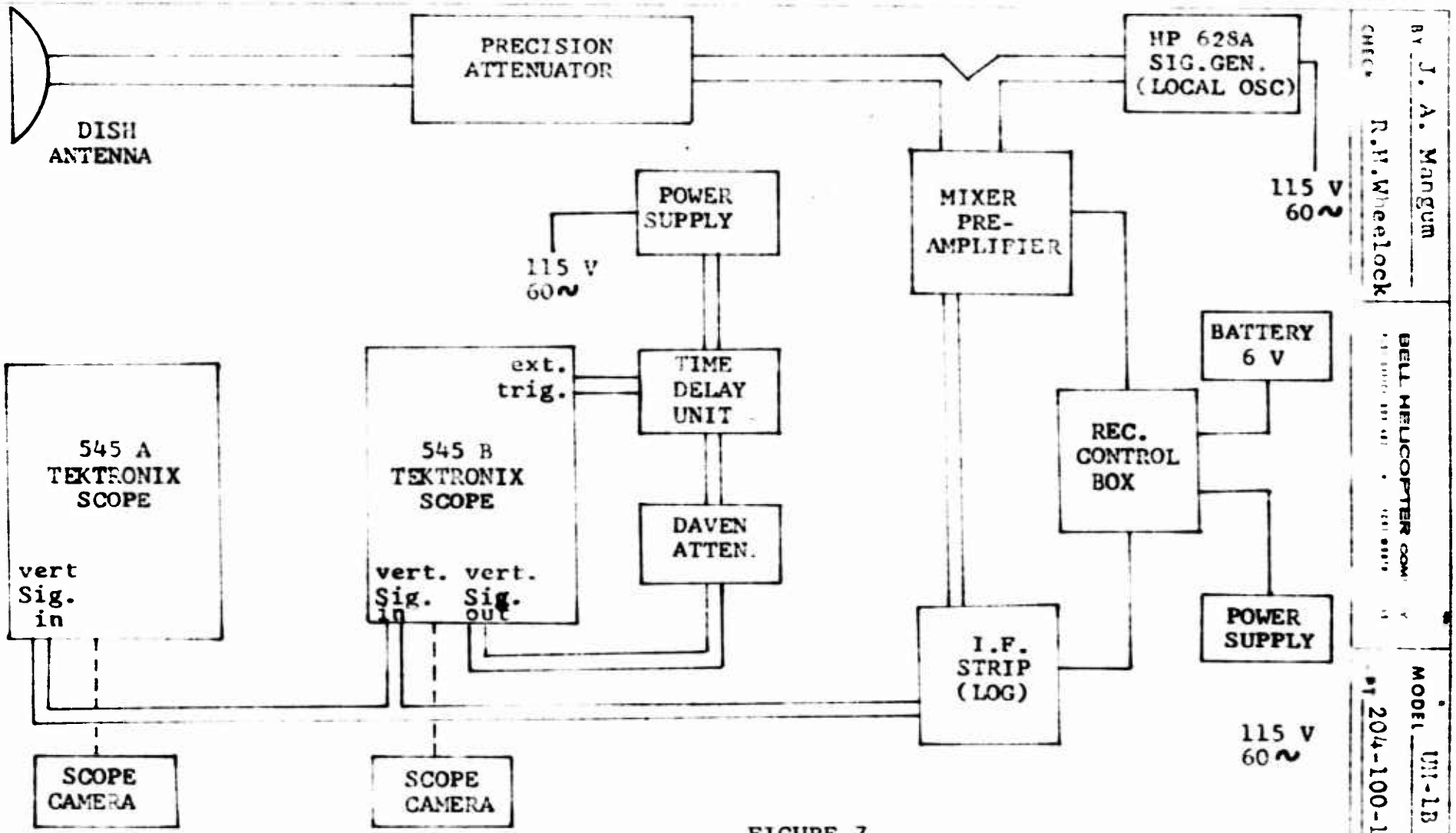


FIGURE 7

ELECTRONIC GROUND EQUIPMENT FOR ROTOR BLADE ANTENNA PATTERN FLIGHT TESTS (LEADING & TRAILING EDGE ANTENNAS)

APPENDIX C

Instrument Calibrations and
Oscillograph Set-Up Sheets

STANDARDS AND CALIBRATION SECTION DATA SHEET

DESCRIPTION Airspeed DATE CALIBRATED 4/14/65

MODEL/TYPE MS-28-45-WI CALIBRATION PERIOD 7/14/65

RANGE Aerosonic Corp.

MFG, 5799

SERIAL NO 727 EMC NO.

LAB. NO. CALIBRATED BY: E. R.

STD. KNOTS	INDICATED KNOTS
0	0
10	10
20	17
30	27
40	37
50	48
60	61
70	70
80	80
90	89
100	100
110	110
120	120
130	131
140	141
150	149

BY J. Mangum	BELL HELICOPTER COMPANY	MODEL UH-1B PAGE 22
CHECKED R.H.Wheelock		RPT 204-100-113

STANDARDS AND CALIBRATION SECTION DATA SHEET

DESCRIPTION Altimeter — DATE CALIBRATED 4/14/65

MODEL/TYPE A-80-AAU-8 A/A — CALIBRATION PERIOD 7/14/65

RANGE 80,000 Ft.

MFG. Kollsman Inst. Corp.

SERIAL NO. 30891 — BHC NO.

LAB. NO. 1029 — CALIBRATION BY: E.K.

STD. ALT. PRESS.FT.	IND. ALT. PRESS.FT.
0	-20
500	500
1000	1000
1500	1500
2000	2000
2500	2500
3000	3000
3500	3500
4000	4000
4500	4500
5000	5000
6000	6000
7000	7010
8000	8020
9000	9020
10000	10020
11000	11000
12000	12000
13000	13000
14000	14000

BY J. A. Mangum	BELL HELICOPTER COMPANY	MODEL UH-1B PAGE 23
CHECKED R.H.Wheelock		RPT 204-100-113

STANDARDS AND CALIBRATION SECTION DATA SHEET

DESCRIPTION Tachometer DATE CALIBRATED 4/14/65

MODEL/TYPE YDJ67-FBC-1 CALIBRATION PERIOD 7/14/65

RANGE ENG 0-7200 Rotor 0-360

MFG. General Electric

SERIAL NO. W11695 BHC NO.

LAB. NO. 1028 CALIBRATED BY E.K.

STD RPM 2 Pole Gen.	ENGINE RPM	ROTOR RPM
0	0	0
800	1250	61
1600	2525	122
2400	3825	183
3200	5100	245
3800	6025	290
4000	6325	305
4200	6625	320
4400	6925	335
4600	7225	350

INSTRUMENTATION OSCILLOGRAPH SET-UP

ENGR. Goodman MODEL UH-1B SHIP NO. 543 DATE 8-18-65 SER.NO. 513

TECH. Wakefield Osc. No. 1 of 1 Flt. 142A

PURPOSE OF FLIGHT Rotor Blade Antenna G/Run 37

BY J.A. Mangum CHECKED R.H. Wheelock

BELL HELICOPTER COMPANY

MODEL UH-1B PAGE 24 RPT 204-100-113

	ITEM MEASURED	LAB. NO.	GALVO	UNITS	STA NO.	100K C.E.	REF. VALUE	Sig Swt Pos	Ship Cable No.	Bal. Box Chan
1	M/R Blade Bm	3709TP	312	IN/LBS	140	11,413	5,005	R	53	1
2			312		84	14,733	10,202	R	49	2
3			312		60	22,323	12,825	R	54	3
4			312		35	35,745	16,340	R	48	4
5	Pitch Link (Red)	1588TP	339	LBS		4,455		0	50	5
6	Drag Brace	1577TP	312	LBS		12,600		0	51	6
7	Yoke Bm	1576TP	312	IN/LBS	6.0	135,360	21,024	R	47	7
8	Blade Ch.	3709TP	315		140	52,800		R	52	8
9			315		60	130,150		R	55	9
10	Yoke	1576TP	315		6.0	73,720		R	46	10
11	Flapping		315	% Full Throw				0	68	11
12	Pilots Seat Vert Accel	374	325	G's		1.81		0	11	12
13	Copilots Seat Vert Accel	345	325			1.83		0	15	13
14	C.G. Vert Accel	348	325			1.80		R	21	14
15	R/H Cyc.Boost Tube	1583TP	315	LBS		2,650		0	23	15
16	L/H Cyc.Boost Tube	1582TP	315	LBS		2,625		0	24	16
17	Collective Boost T.	1581TP	339	LBS		2,500		0	25	17
18	M/R Azimuth		323							18

APPENDIX D

Vibration and Load Plots

MODEL UH-1B 543
SHIP AF62-2023
FLT 195A
DATE 9 JULY 65

DTM RPM
□ 324
▷ 305

CONFIG. BASELINE DTD BLADES

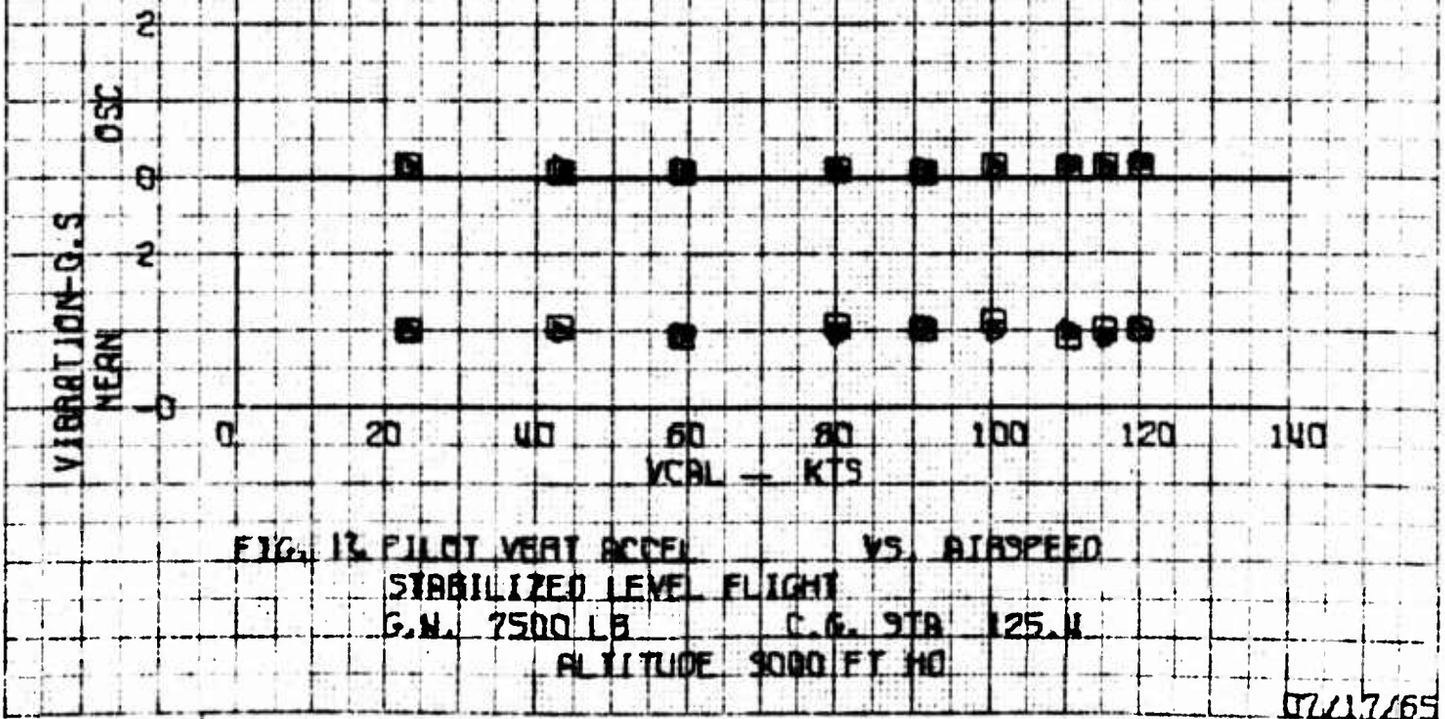


FIG. 13 PILOT VERT ACCEL VS. AIRSPEED
STABILIZED LEVEL FLIGHT
G.W. 7500 LB C.G. STA 125.4
ALTITUDE 5000 FT MD

07/17/65

MODEL UH-1B 543
SHIP AF 62-2023
FLT 143-A
DATE 19 AUG 65

STM RPM
□ 324
▷ 310

CONFIG. LOAD SURVEY - PROBE ANTENNA R/R
BLADES

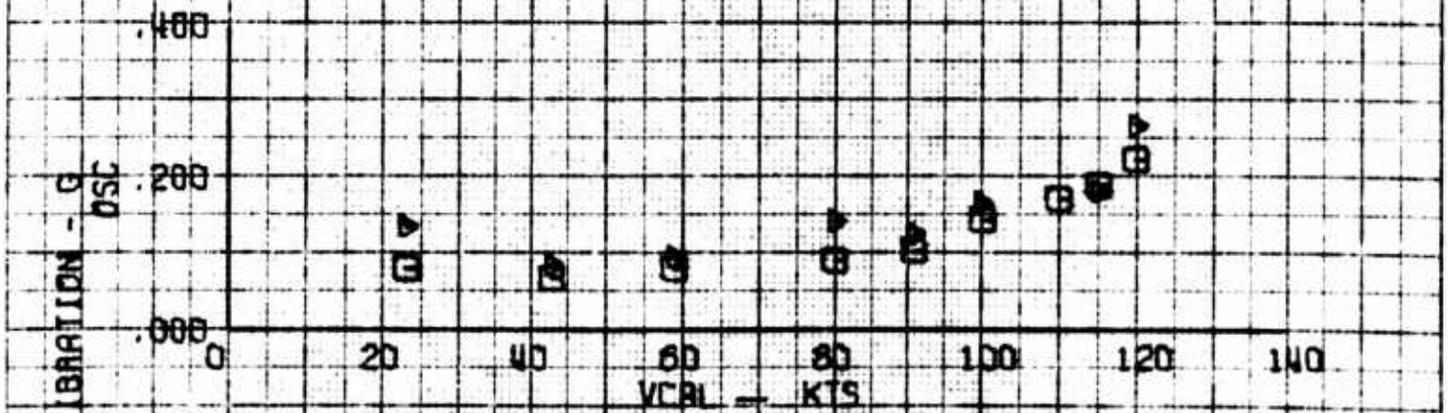


FIG. 13 PILOT VERT VIBRATION VS AIRSPEED
STABILIZED LEVEL FLIGHT
G.W. 7500 LB. C.G. STA 125.4
ALTITUDE 3000 FT MD

08/25/65

MODEL UH-1B 543
SHIP AF62-2023
FLT L35A
DATE 9 JULY 65

STM RPM
G 324
▶ 305

CONFIG. BASELINE STD BLADES

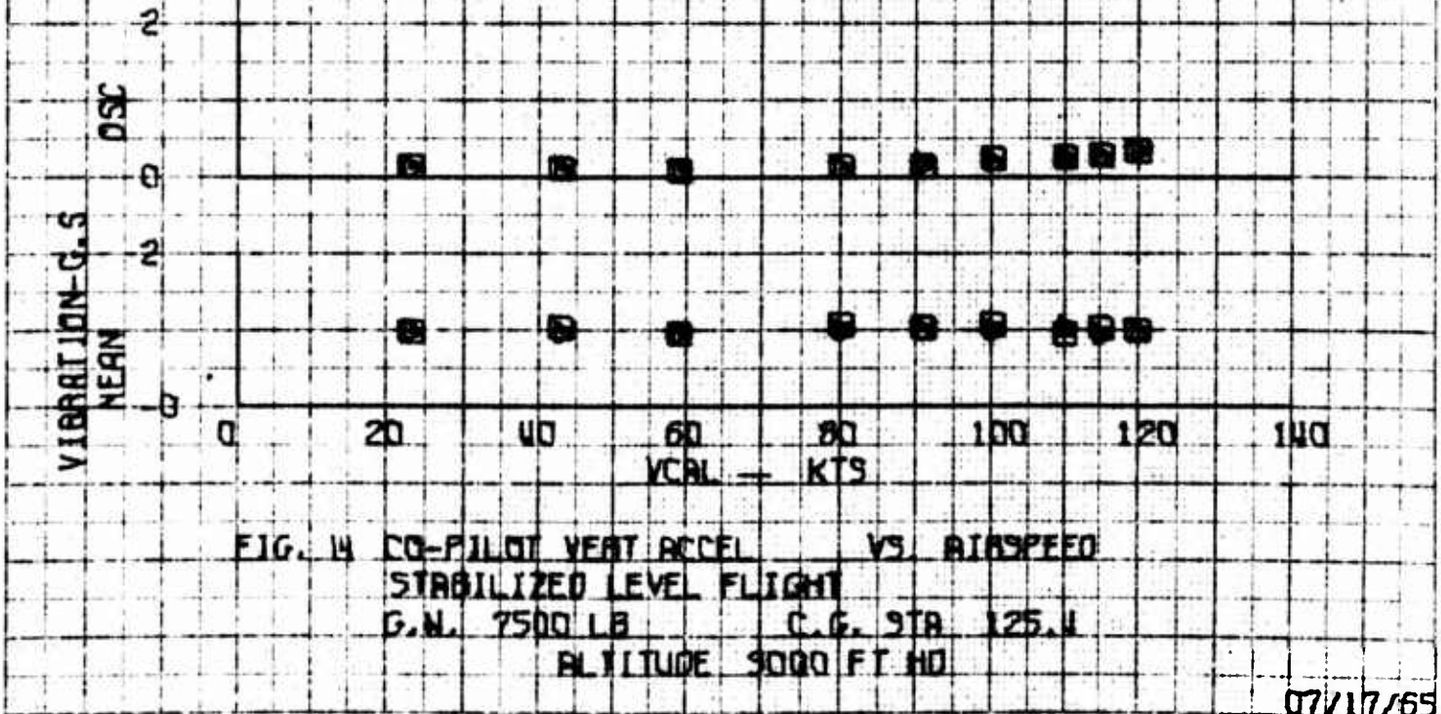


FIG. 14 CO-PILOT YEAT ACCEL VS. AIRSPEED
STABILIZED LEVEL FLIGHT
G.W. 7500 LB C.G. STA 125.1
ALTITUDE 5000 FT HD

07/17/65

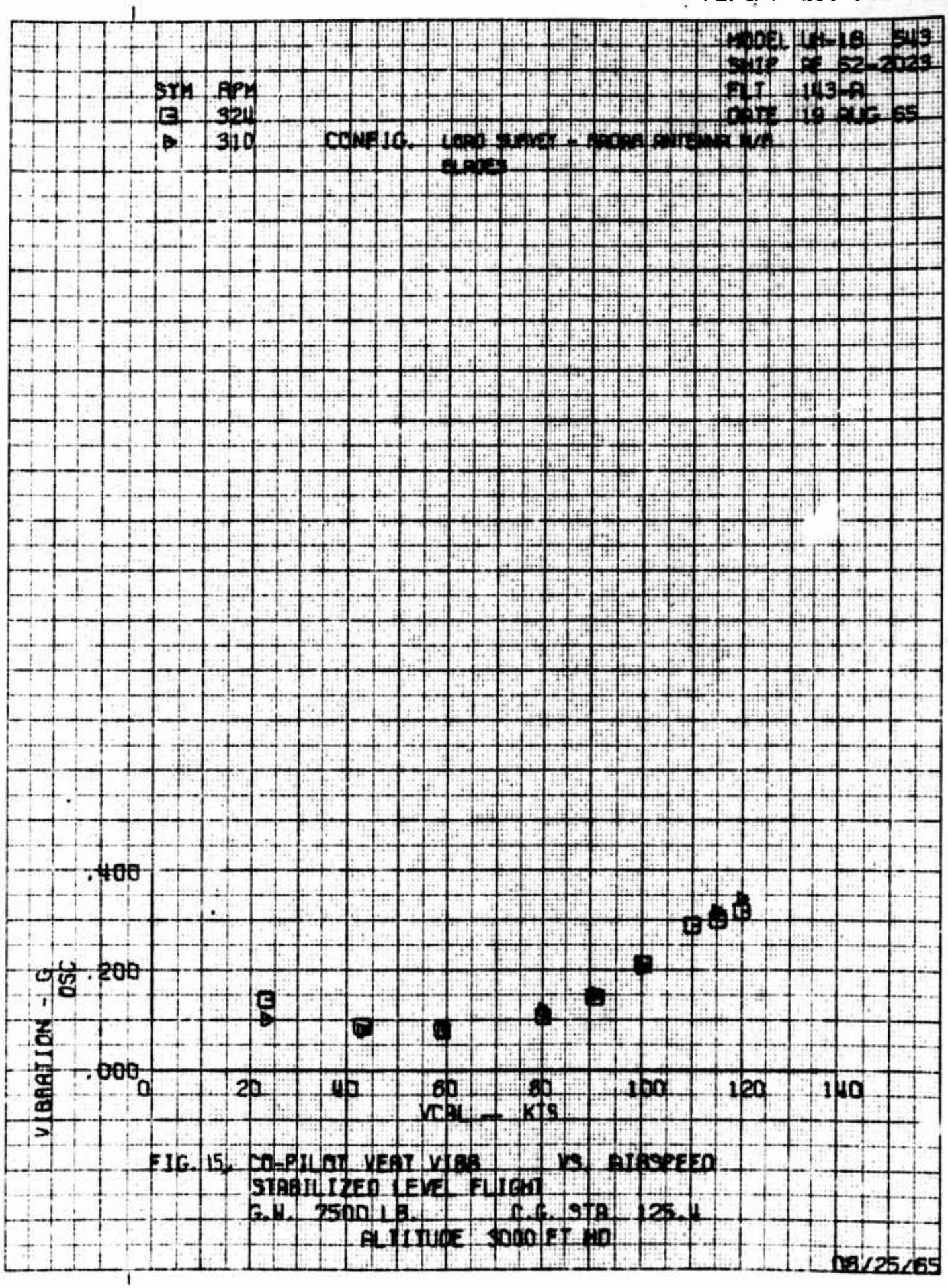


FIG. 15. CO-PILOT VERT VIBR VS. AIRSPEED
STABILIZED LEVEL FLIGHT
G.W. 7500 LB. C.G. STA 125.4
ALTITUDE 3000 FT MD

08/25/65

MODEL UH-1B 543
SHIP BE62-2023
FLT 135A
DATE 9 JULY 65

STA RPM
□ 324
▷ 309

CONFIG. BASELINE STD BLADES

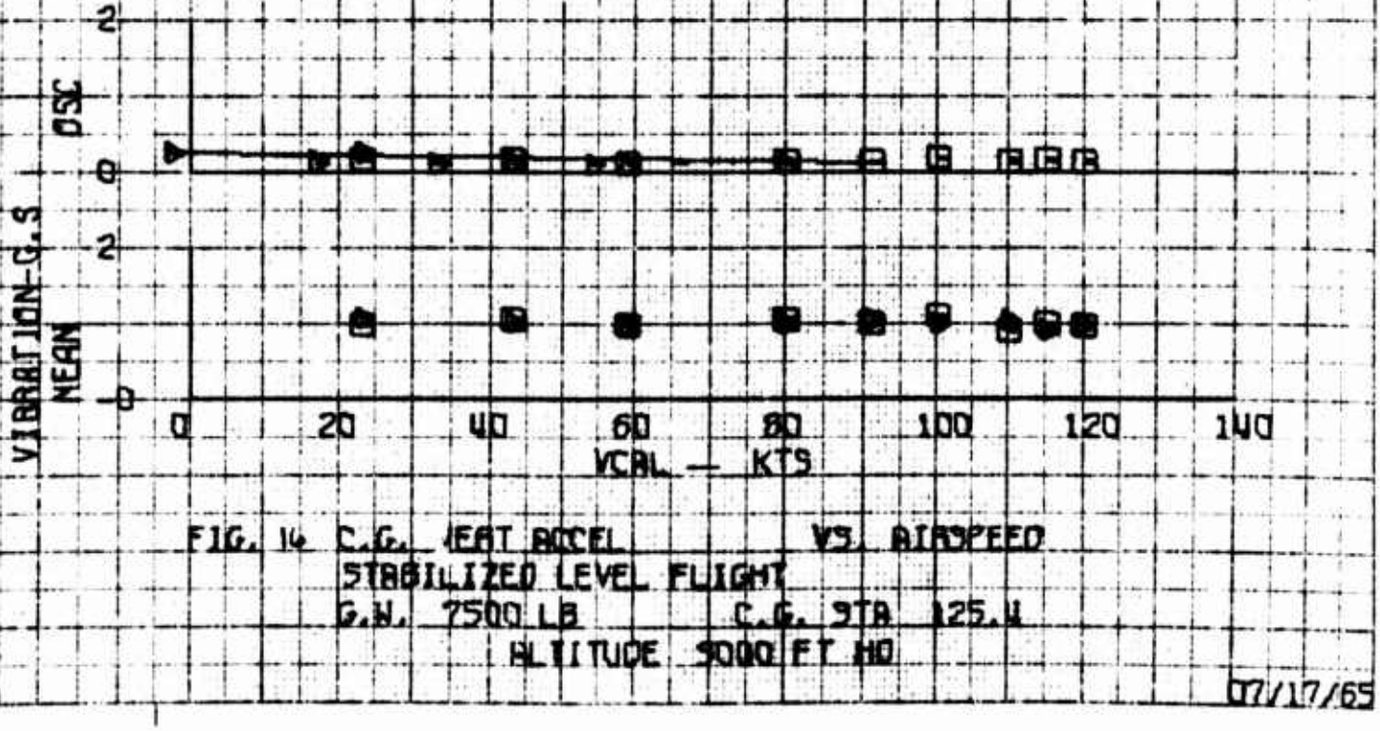


FIG. 14 C.G. LEAT ACCEL VS. AIRSPEED
STABILIZED LEVEL FLIGHT
G.W. 7500 LB C.G. STA 125.4
ALTITUDE 5000 FT HD

07/17/65

MODEL UH-1B 543
SHIP BF 62-2023
FLT 143-A
DATE 19 AUG 65

SYM RPM
□ 324
▷ 310

CONFIG. LOAD SURVEY - PROBE ANTENNA W/S BLADES

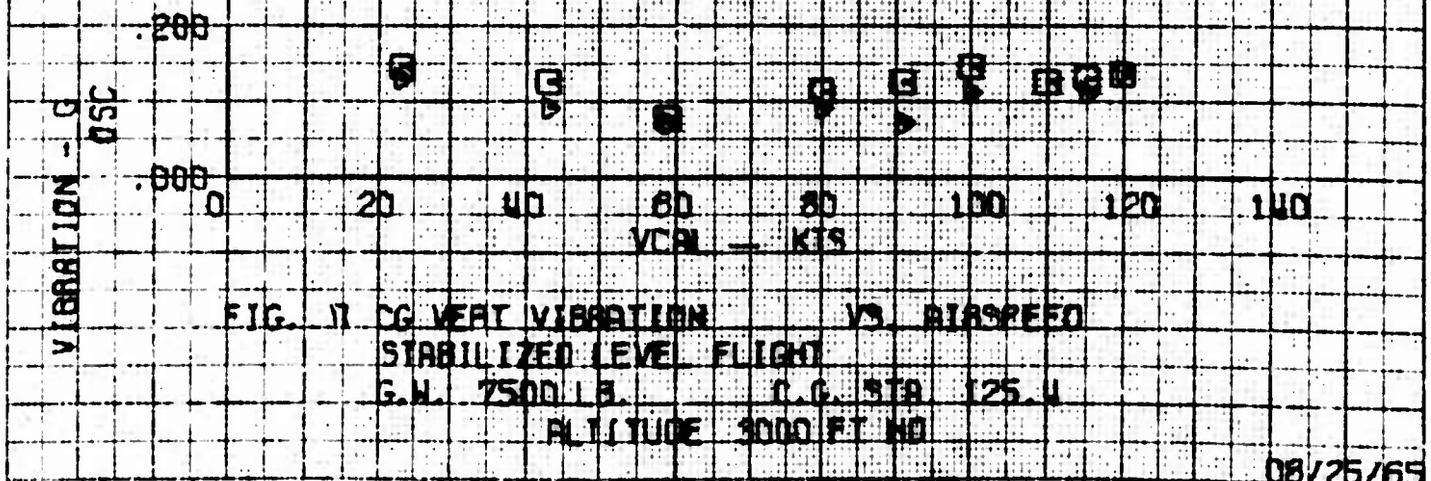
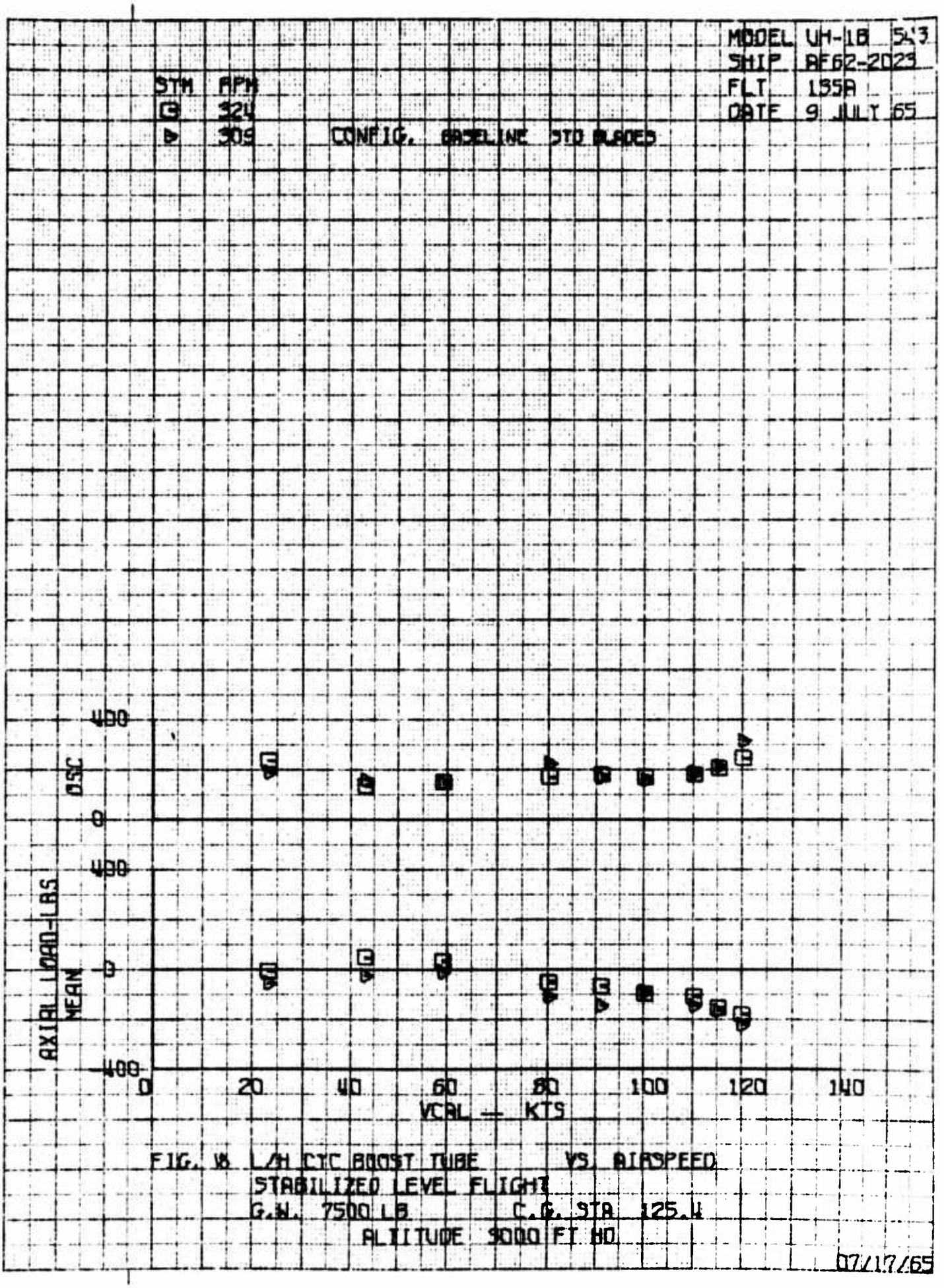


FIG. 11 CG VERT VIBRATION VS. AIRSPEED
STABILIZED LEVEL FLIGHT
G.W. 7500 LB. C.G. STA 125.4
ALTITUDE 3000 FT MD

08/25/65


MODEL UH-1B 543
SHIP BF62-2023
FLT 135A
DATE 9 JULY 65
STM RPM
G 324
▶ 309
CONFIG. BASELINE STD BLADES
AXIAL LOAD-LBS
MEAN OSC
400
0
-400
0
20
40
60
80
100
120
140
VCAL — KTS
FIG. 16 L/H CYC BOOST TUBE VS AIRSPEED
STABILIZED LEVEL FLIGHT
G.W. 7500 LB C.G. STA 125.4
ALTITUDE 9000 FT HD
07/17/65

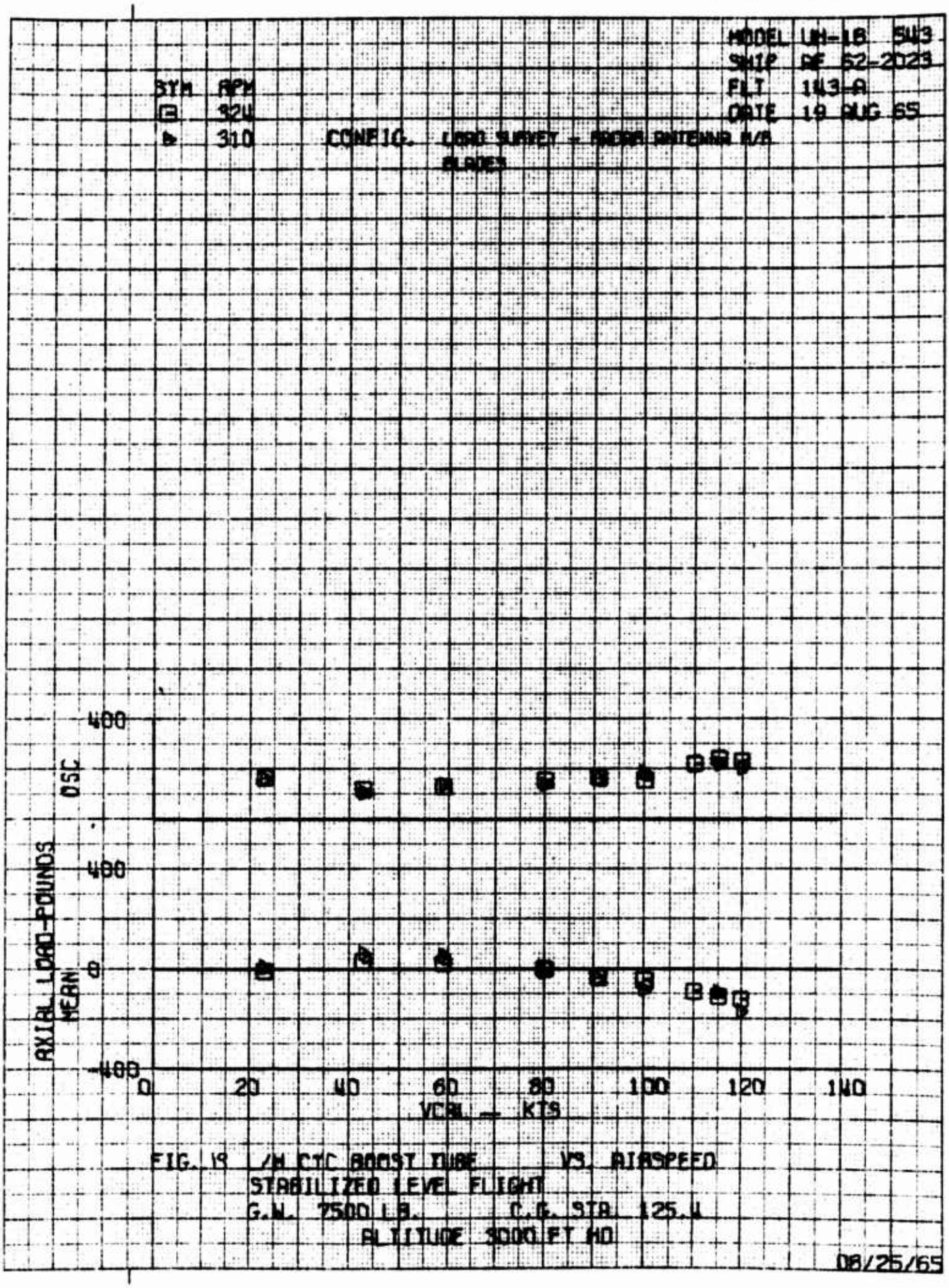


FIG. 18 /M CTC BOOST TUBE VS. AIRSPEED
STABILIZED LEVEL FLIGHT
G.W. 7500 LB. C.G. STA. 125.4
ALTITUDE 3000 FT MD

08/25/65

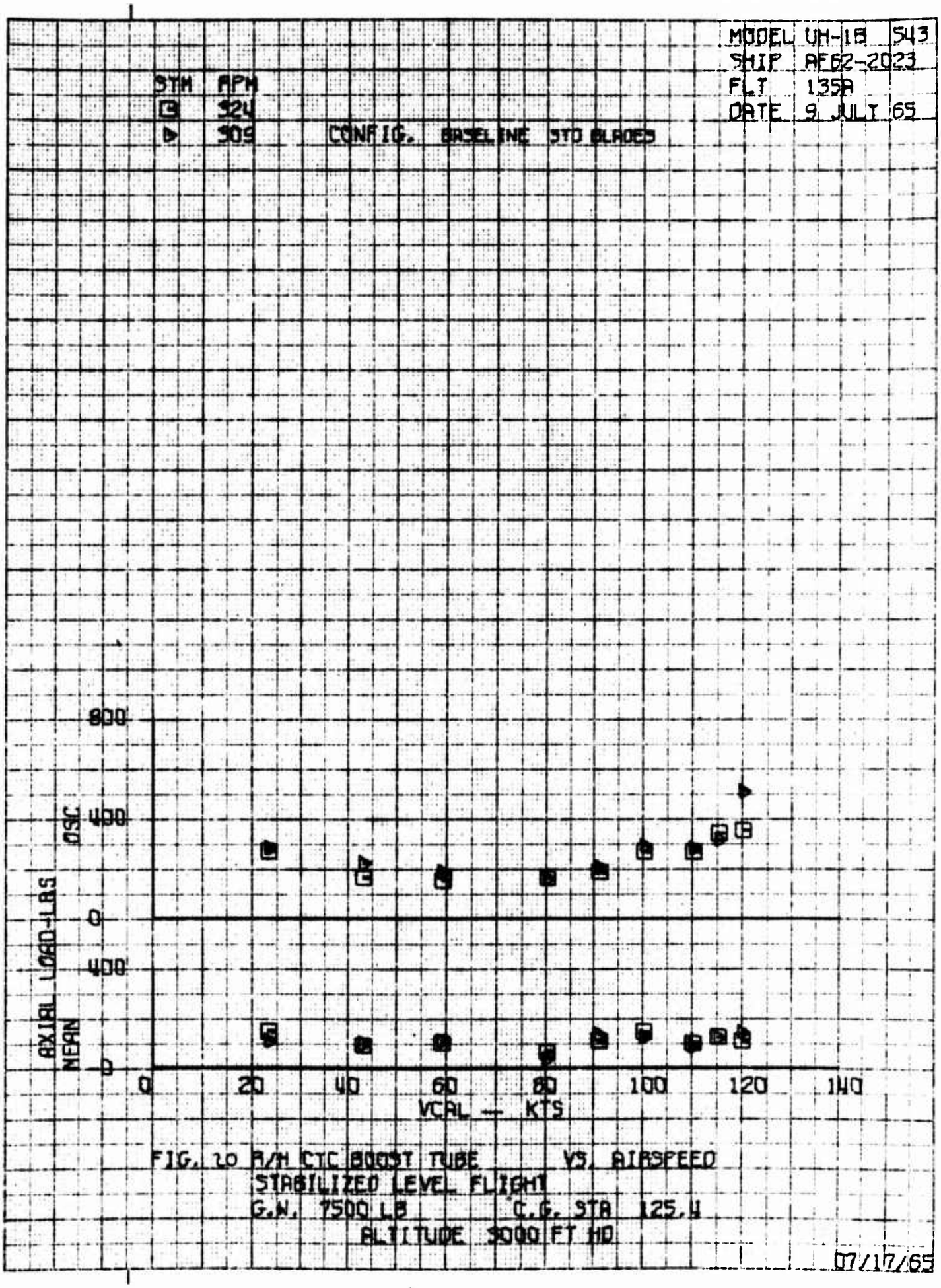


FIG. 10 R/H CTC BOOST TUBE VS. AIRSPEED
STABILIZED LEVEL FLIGHT
G.W. 7500 LB C.G. STA 125.4
ALTITUDE 3000 FT HD

07/17/65

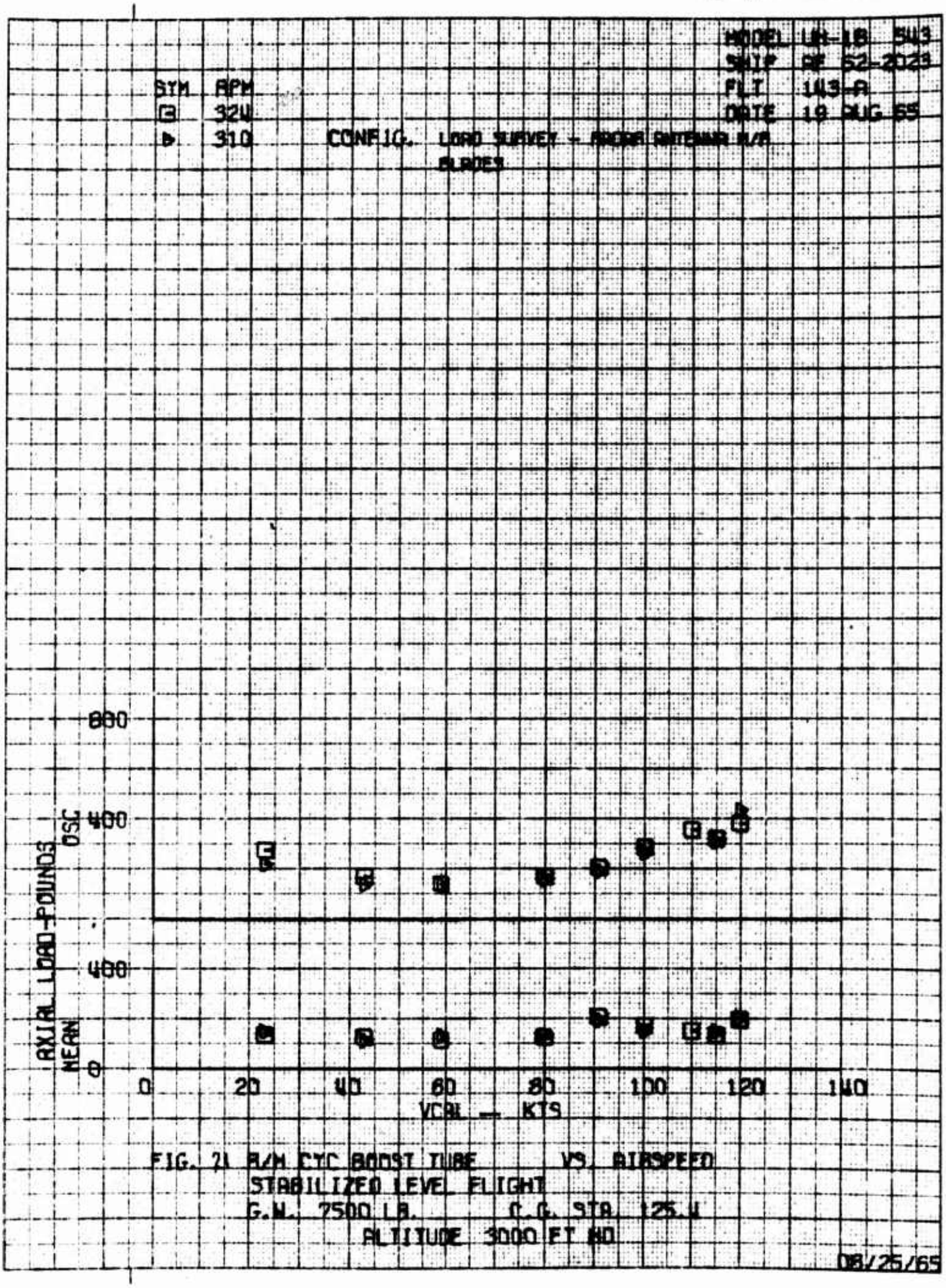


FIG. 21 R/M CTC BOOST TUBE VS. AIRSPEED
STABILIZED LEVEL FLIGHT
G.W. 7500 LB. C.G. STA. 125.4
ALTITUDE 3000 FT MD

08/25/65

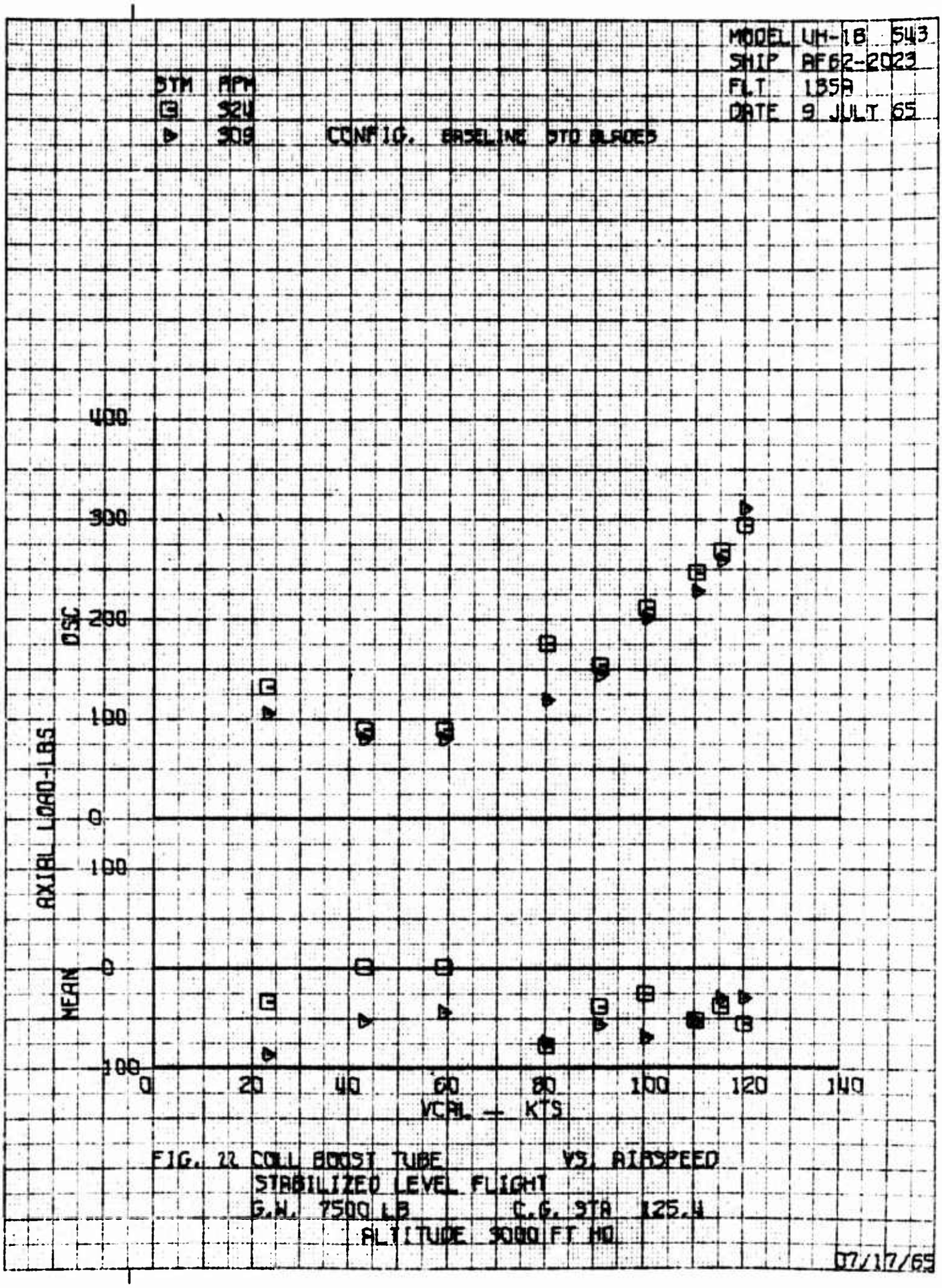


FIG. 22 COLL BOOST TUBE VS AIRSPEED
STABILIZED LEVEL FLIGHT
G.W. 7500 LB C.G. STA 125.4
ALTITUDE 3000 FT MD

07/17/65

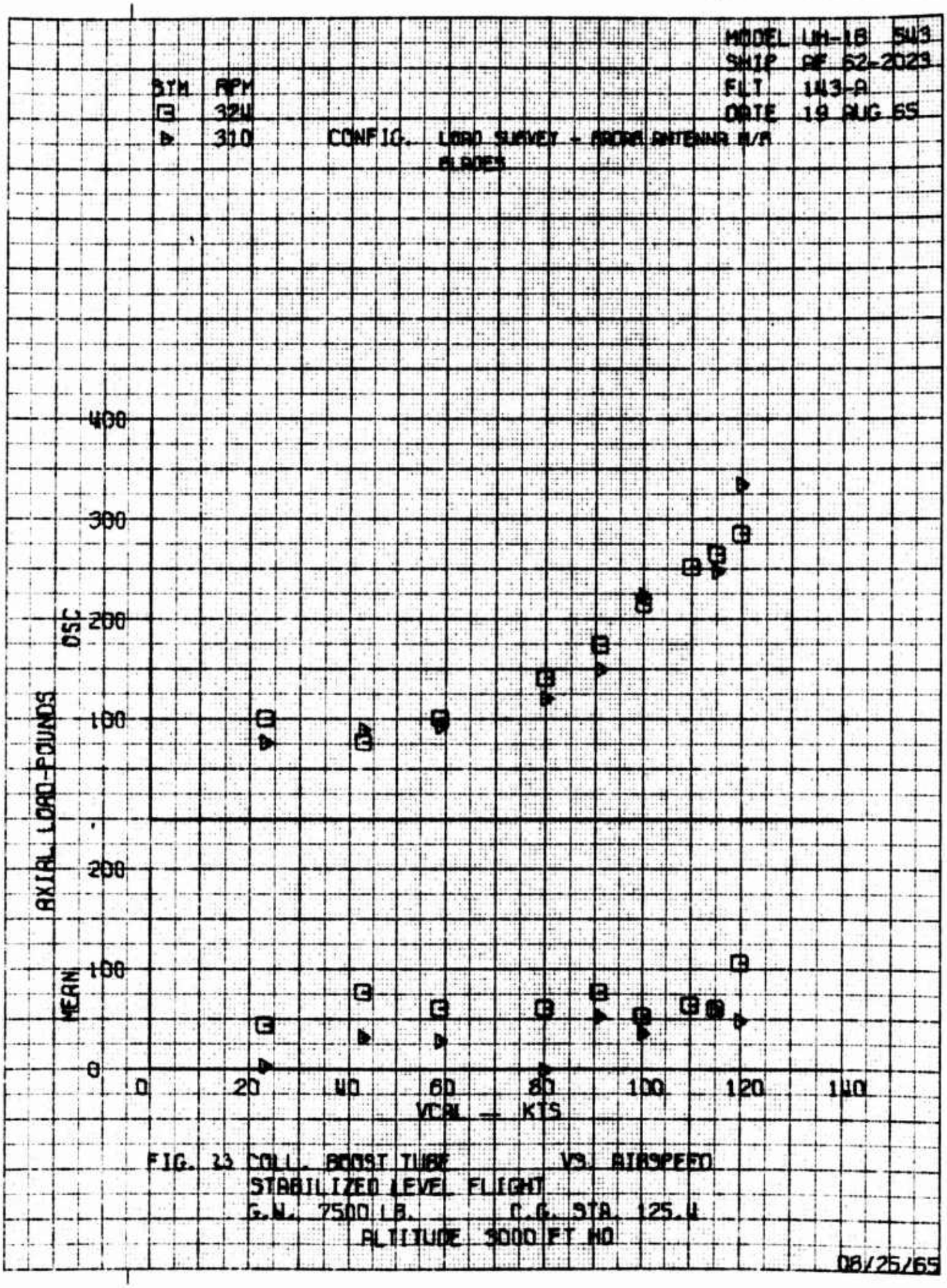


FIG. 23 COLL. BOOST TUBE VS. AIRSPEED
STABILIZED LEVEL FLIGHT
G.W. 7500 LB. C.G. STA. 125.4
ALTITUDE 3000 FT MD

08/25/65

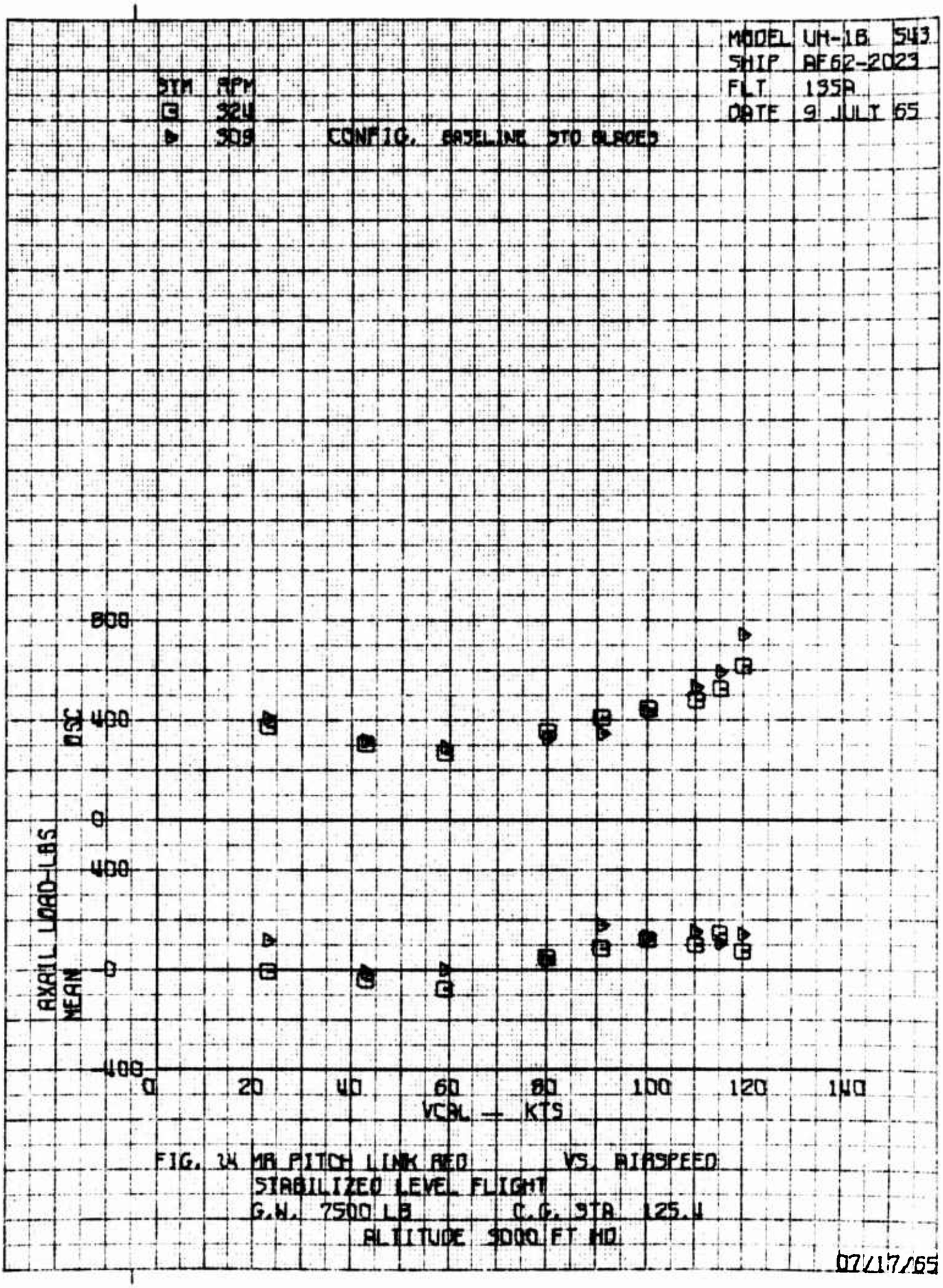


FIG. 34 MR PITCH LINK REQ VS. AIRSPEED
STABILIZED LEVEL FLIGHT
G.W. 7500 LB C.G. STA 125.4
ALTITUDE 5000 FT MD

07/17/65

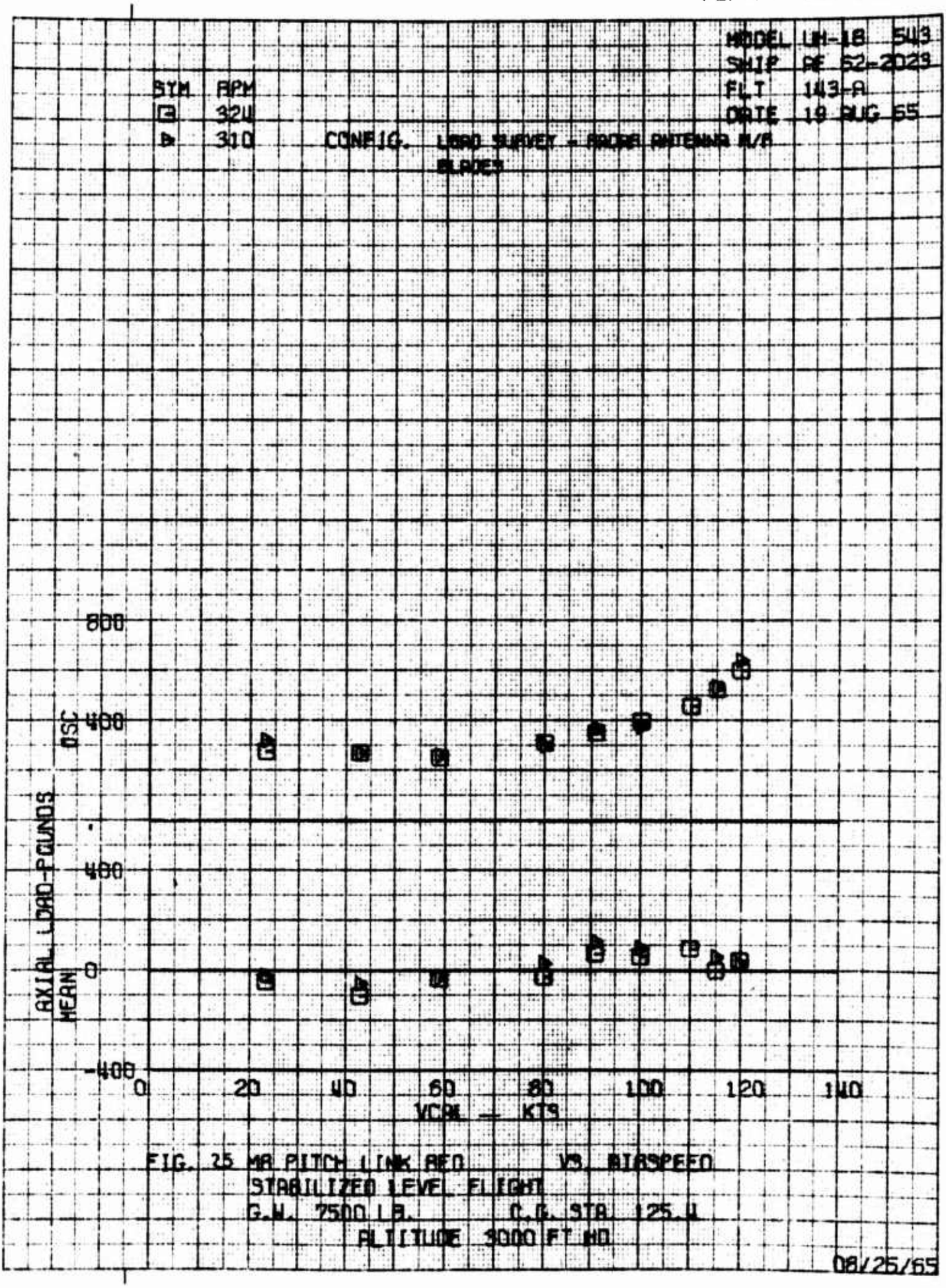


FIG. 25 MR PITCH LINK REQ VS. AIRSPEED
STABILIZED LEVEL FLIGHT
G.W. 7500 LB. C.G. STA 125.4
ALTITUDE 3000 FT MD

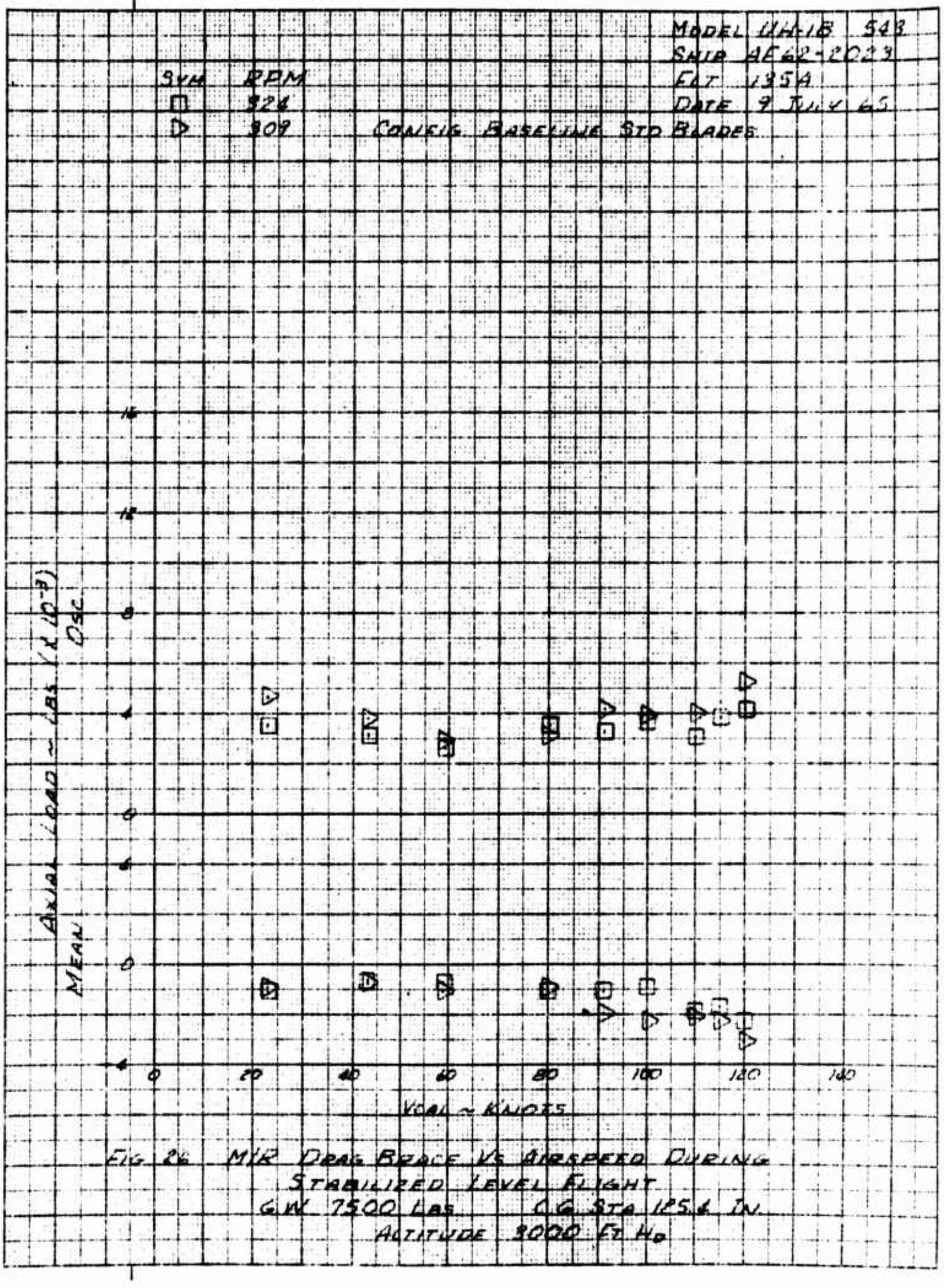


FIG 26 MR DRAG BRAKE VS AIRSPEED DURING STABILIZED LEVEL FLIGHT
GW 7500 LBS C.G. STA 125.6 IN.
ALTITUDE 3000 FT HD

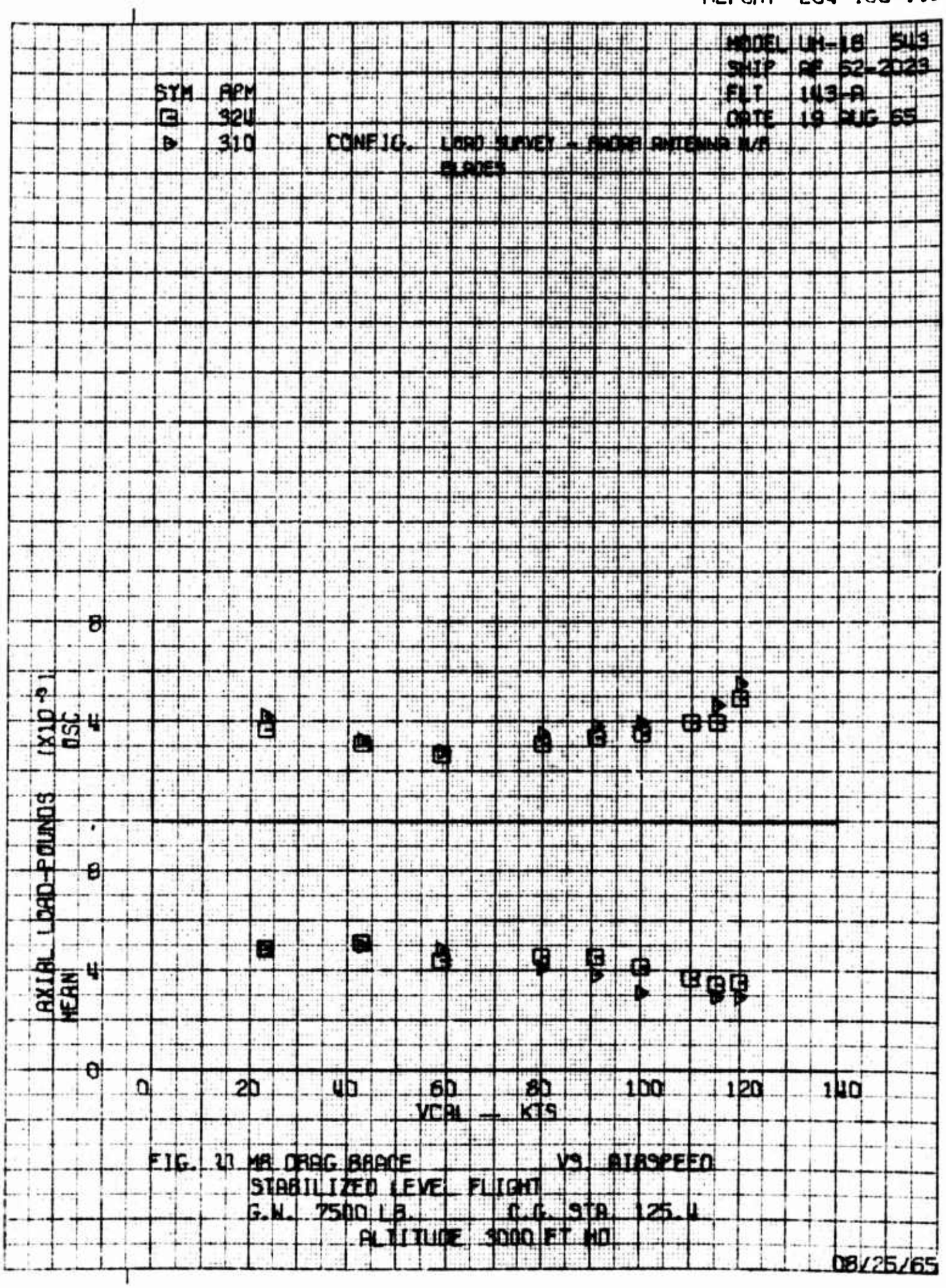


FIG. 20 MR DRAG BRACE VS. AIRSPEED
STABILIZED LEVEL FLIGHT
G.W. 7500 LB. C.G. STA 125.4
ALTITUDE 3000 FT MD

08/25/65

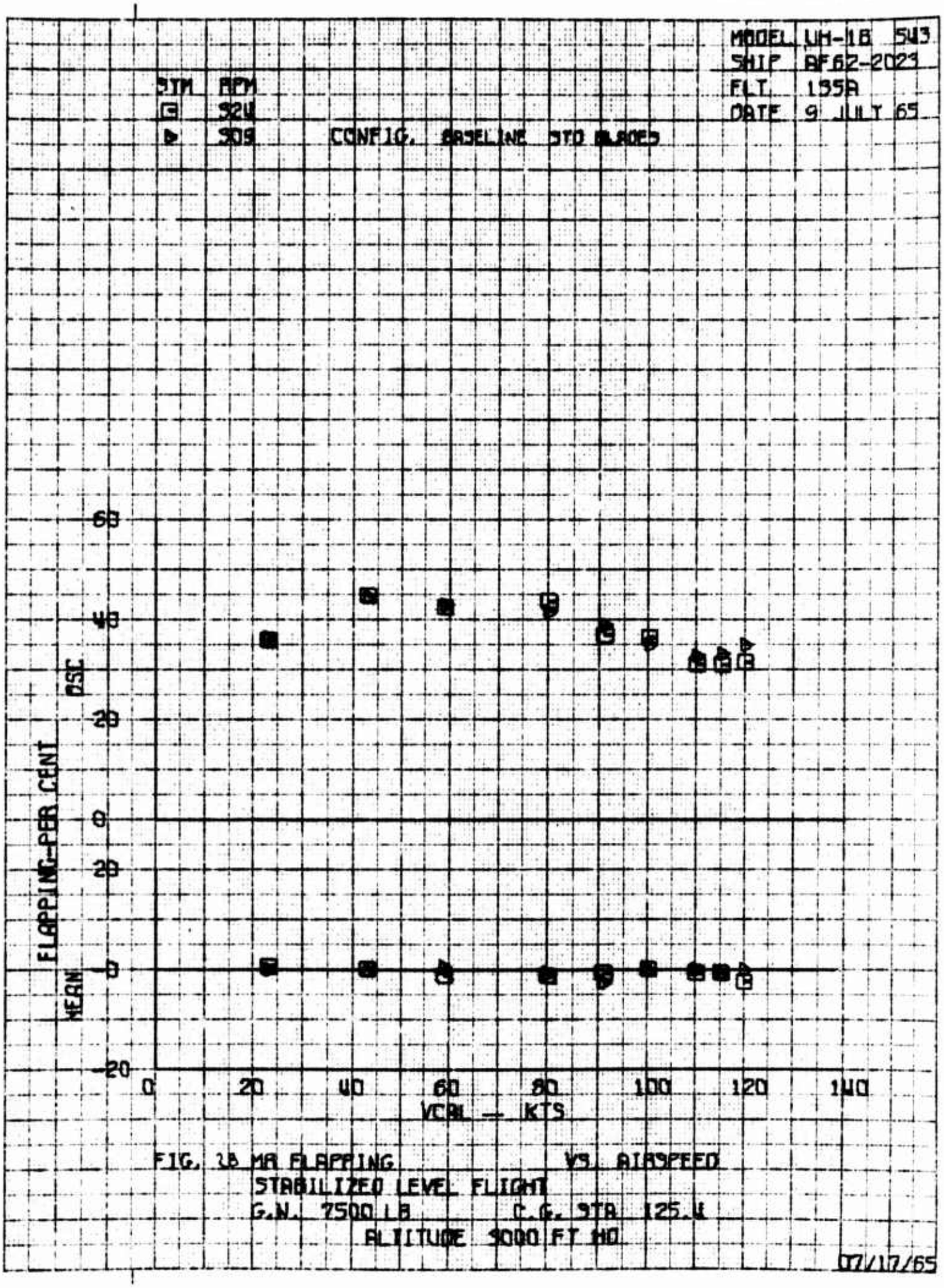


FIG. 38 MR FLAPPING VS. AIRSPEED
STABILIZED LEVEL FLIGHT
G.W. 7500 LB C.G. STA 125.4
ALTITUDE 3000 FT HD

07/17/65

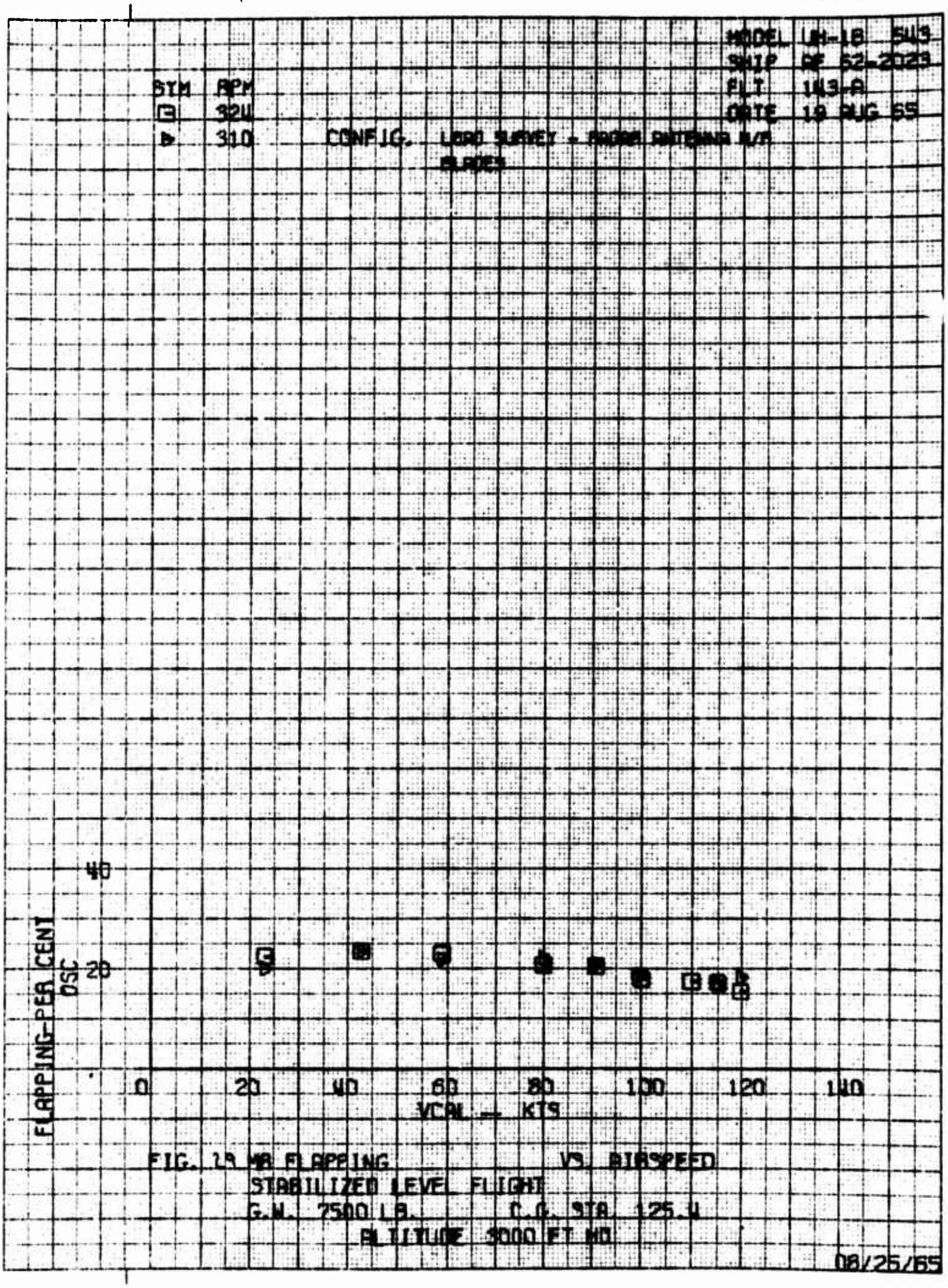


FIG. 29 MB FLAPPING VS. AIRSPEED
STABILIZED LEVEL FLIGHT
G.W. 7500 LB. C.G. STA. 125.4
ALTITUDE 3000 FT MD

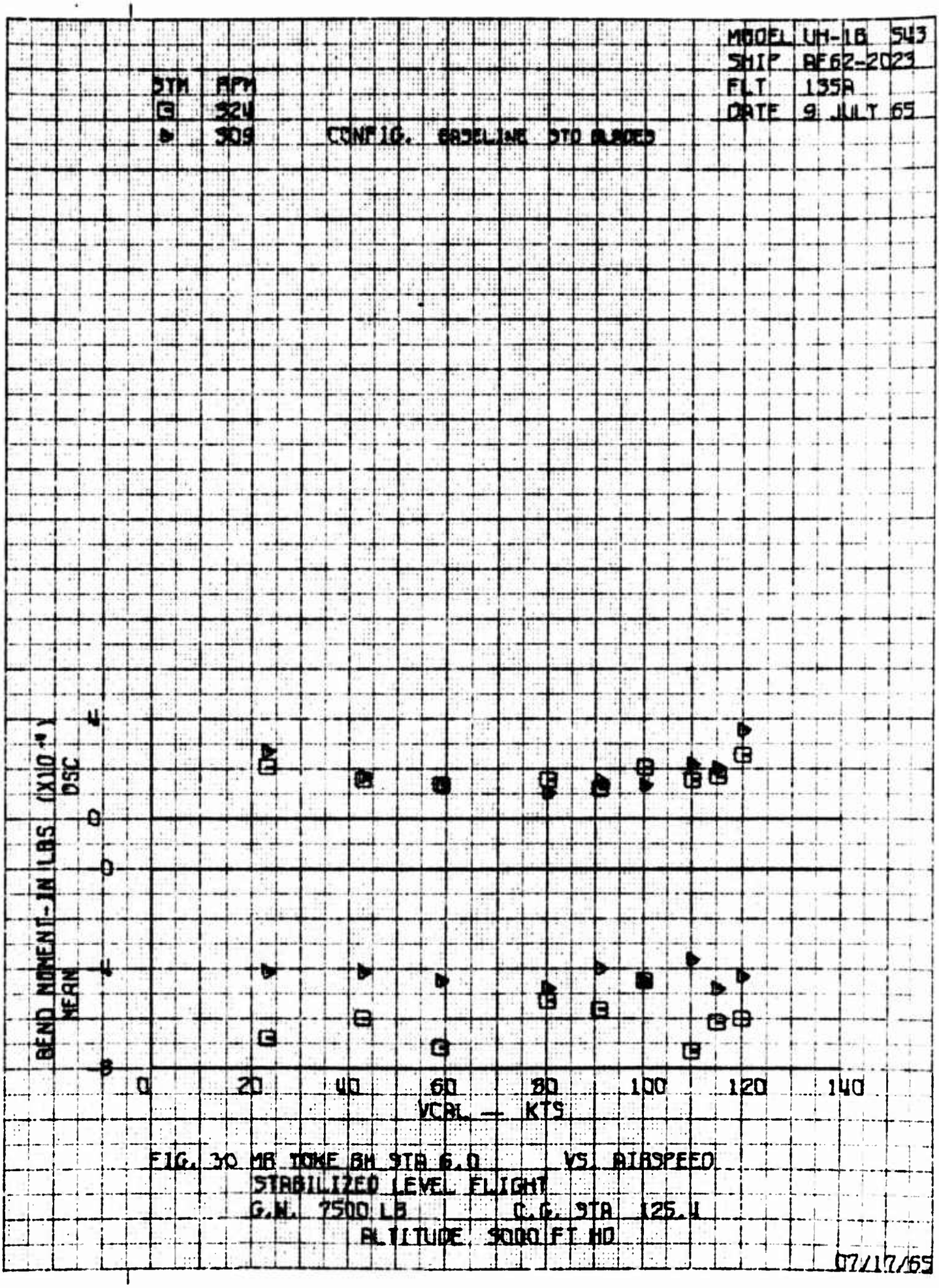


FIG. 30 MR YOKE BM STA 6.0 VS AIRSPEED
STABILIZED LEVEL FLIGHT
G.W. 7500 LB C.G. STA 125.4
ALTITUDE 5000 FT HD

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MODEL UH-1B SN3
SHIP AF 62-2023
FLT 1N3-A
DATE 19 AUG 65

SYM RPM
□ 324
▷ 310

CONFIG. LOAD SURVEY - RADAR ANTENNA R/S BLADES

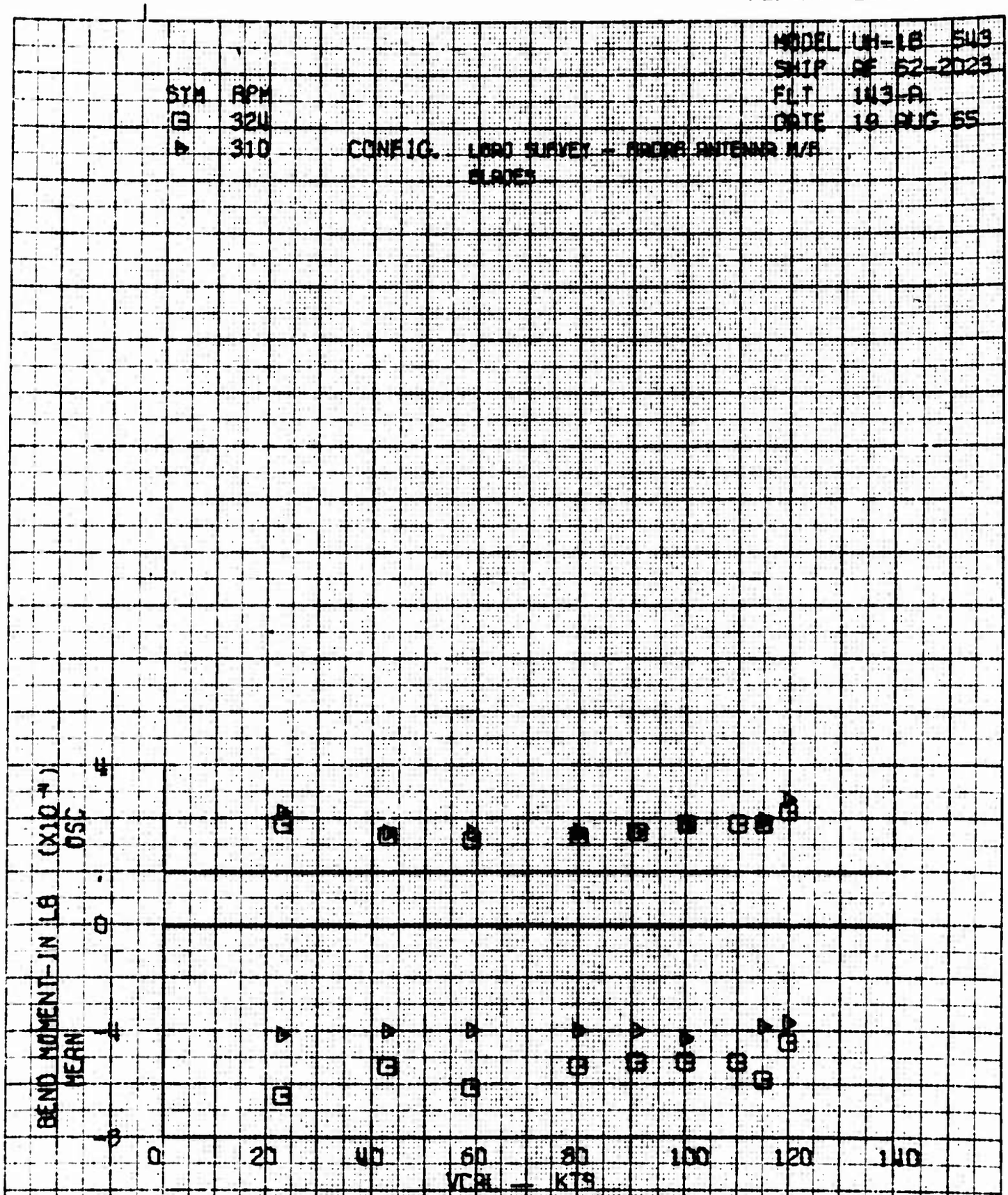


FIG. 31 MR TENKE BEAM STA 6 VS. AIRSPEED
STABILIZED LEVEL FLIGHT
G.W. 7500 LB. C.G. STA 125.4
ALTITUDE 3000 FT MSL

08/25/65

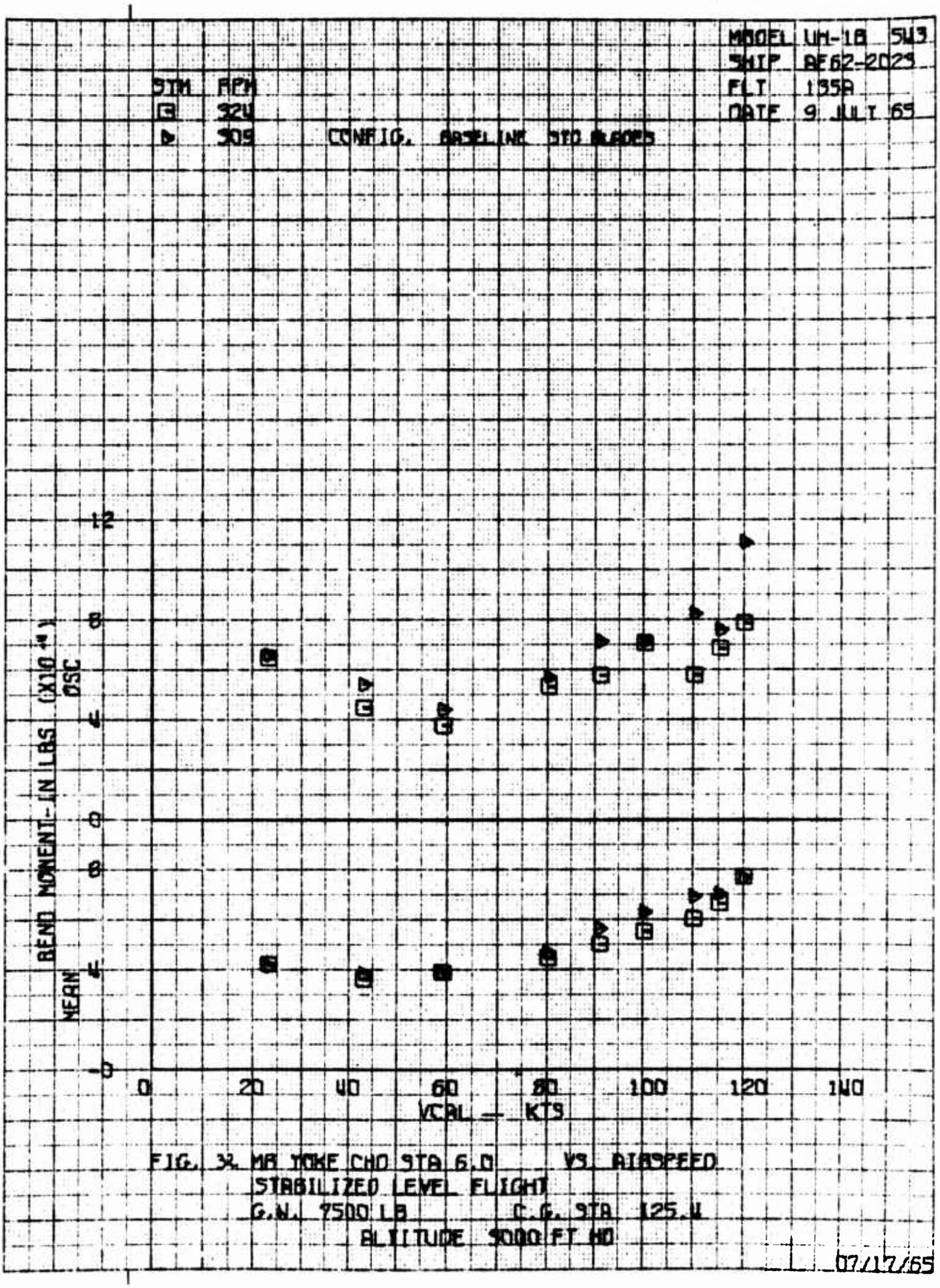


FIG. 34 MR YOKE CHO STA 6.0 VS AIRSPEED
STABILIZED LEVEL FLIGHT
G.W. 7500 LB C.G. STA 125.4
ALTITUDE 5000 FT HD

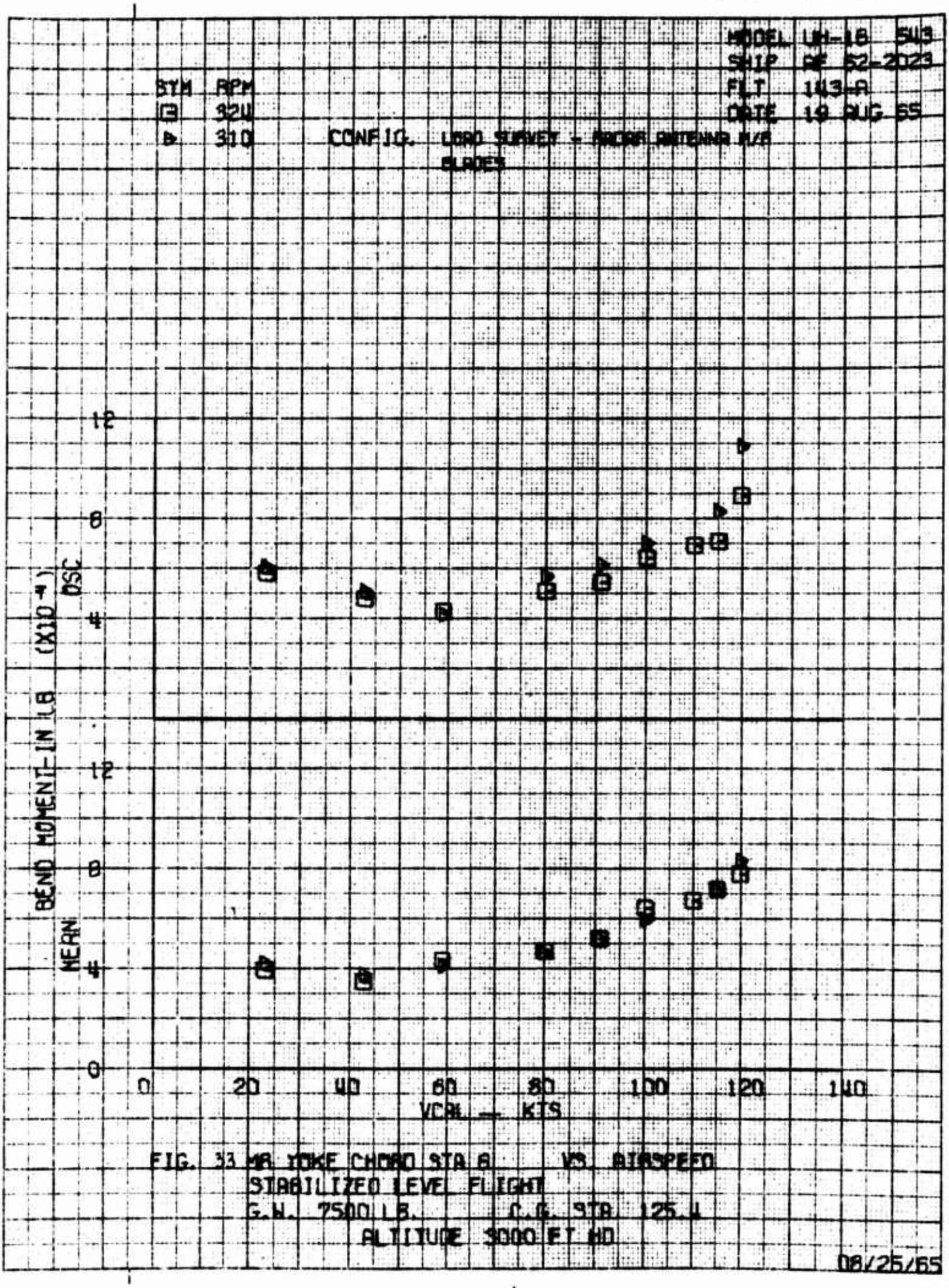


FIG. 33 MR YOKE CHORD STA 6 VS. AIRSPEED
STABILIZED LEVEL FLIGHT
G.W. 7500 LB. C.G. STA 125.4
ALTITUDE 3000 FT HD

08/25/65

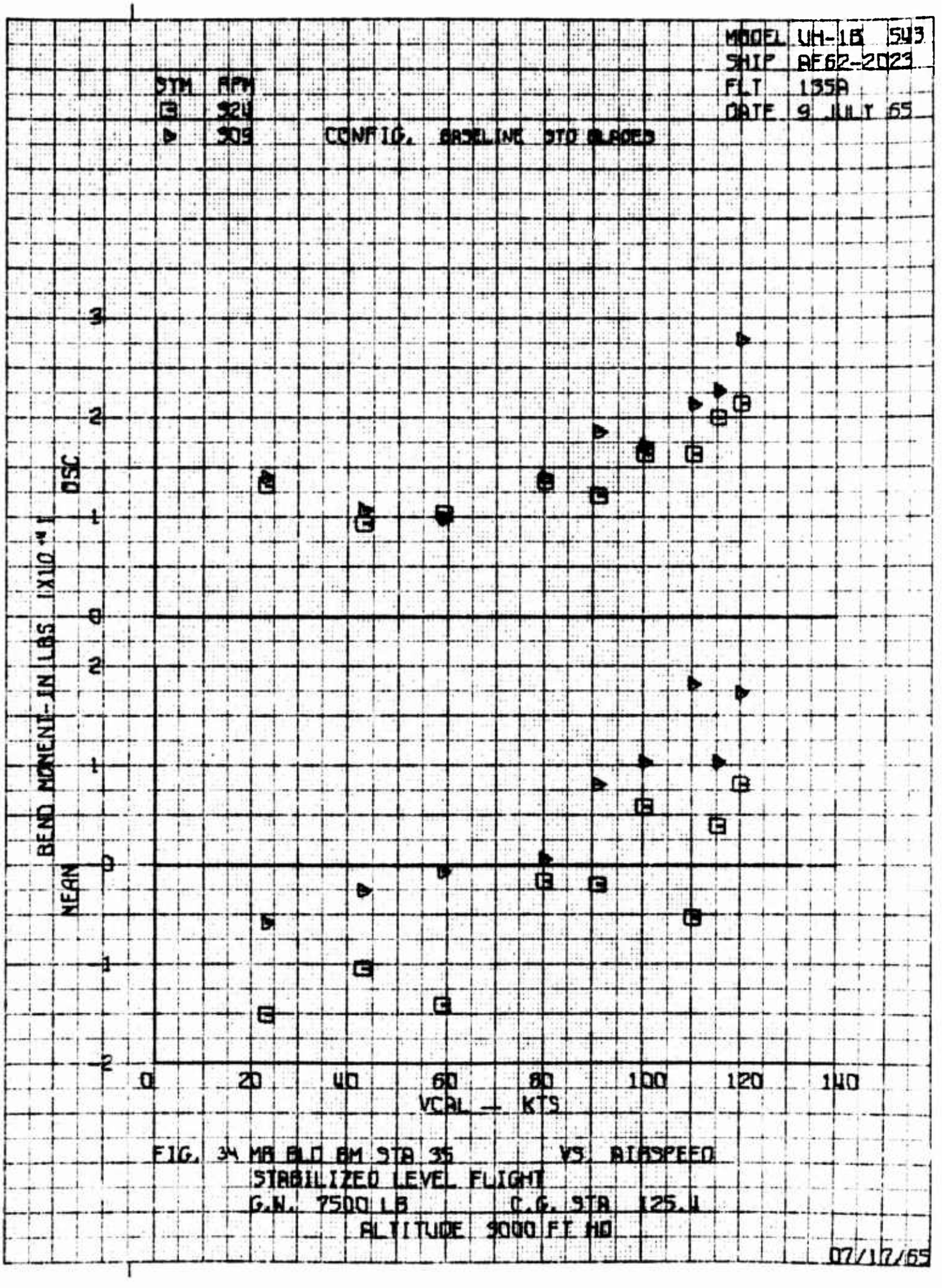


FIG. 34 MB BLD BM STA 35 VS. AIRSPEED
STABILIZED LEVEL FLIGHT
G.W. 7500 LB C.G. STA 125.4
ALTITUDE 9000 FT HD

07/12/65

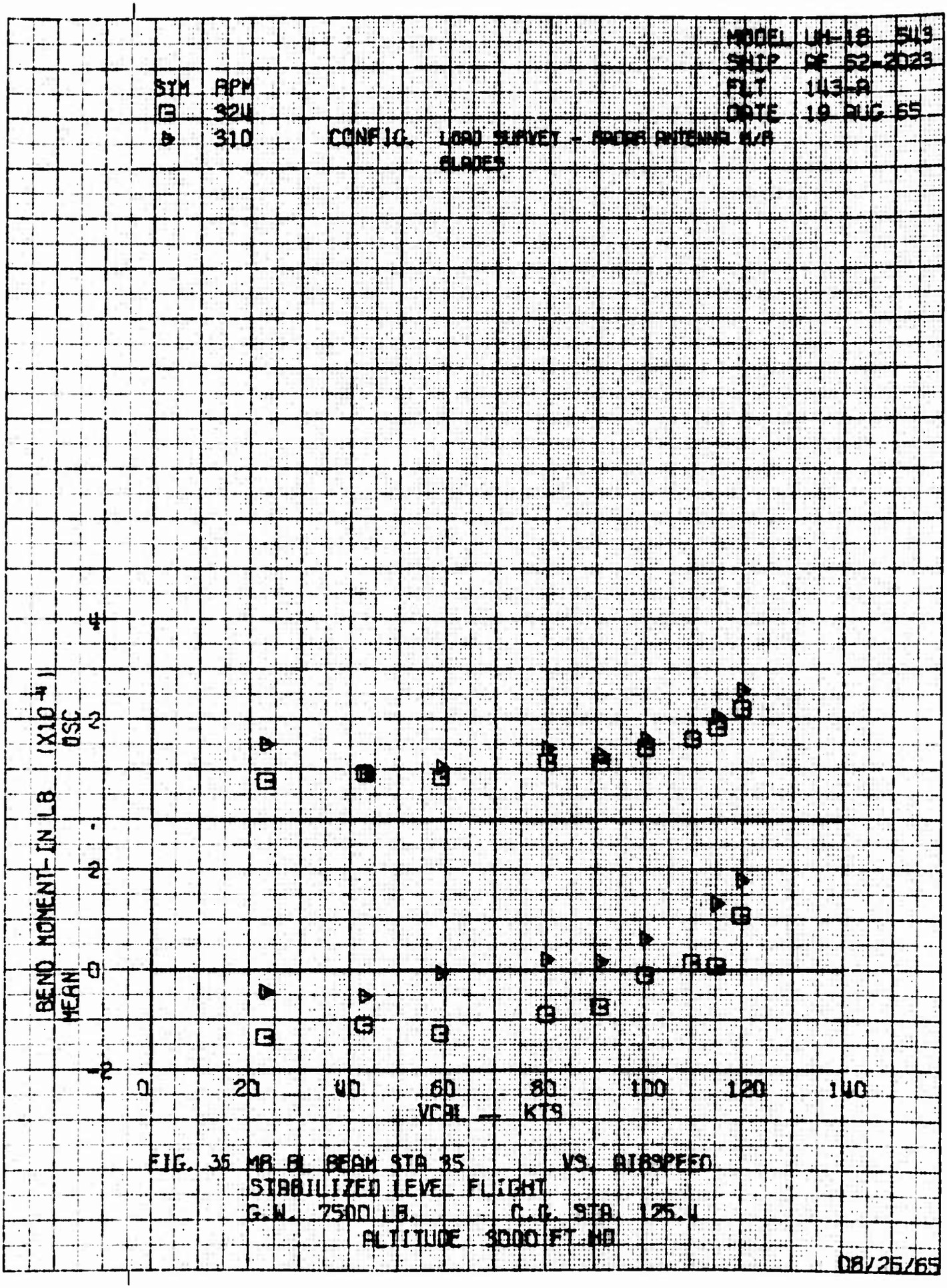


FIG. 35 MR BL BEAM STA 35 VS. AIRSPEED
STABILIZED LEVEL FLIGHT
G.W. 7500 LB. C.G. STA 125.1
ALTITUDE 3000 FT MD

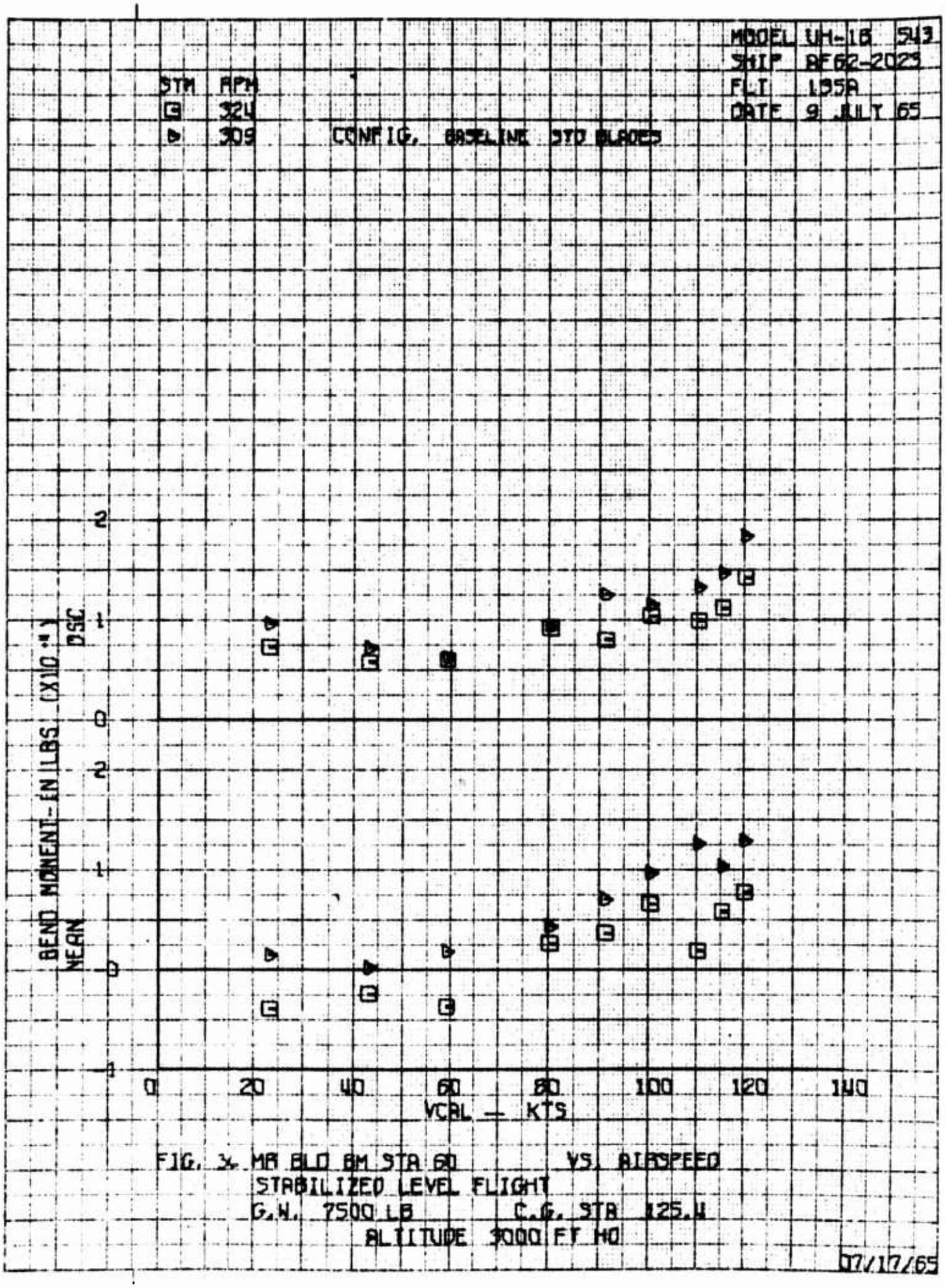


FIG. 34 MR BLD BM STA 60 VS. AIRSPEED
STABILIZED LEVEL FLIGHT
G.W. 7500 LB C.G. STA 125.4
ALTITUDE 3000 FT HD

07/17/65

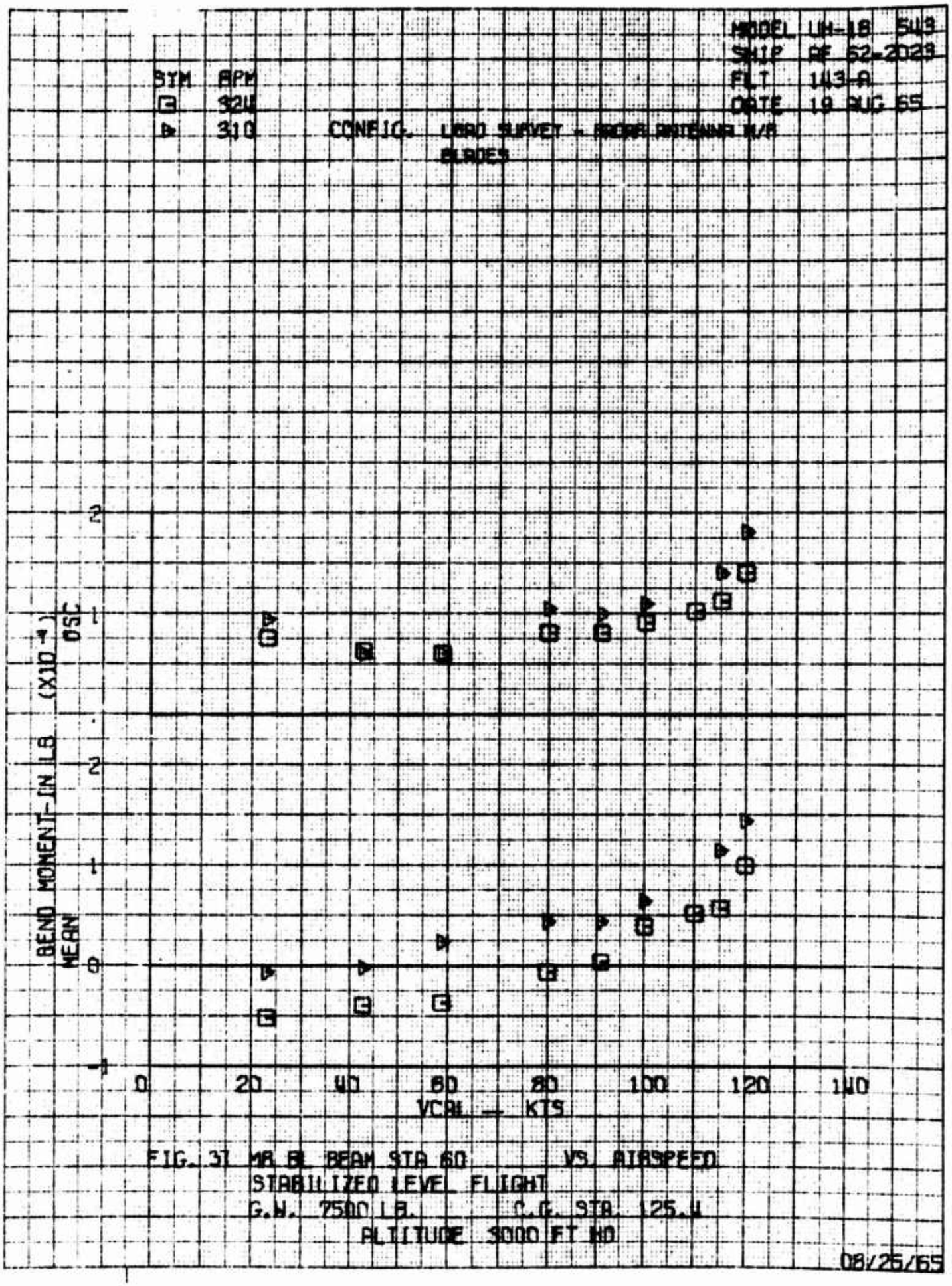


FIG. 31 MR BL BEAM STA 60 VS. AIRSPEED
STABILIZED LEVEL FLIGHT
G.W. 7500 LB. C.G. STA. 125.4
ALTITUDE 3000 FT MD

08/25/65

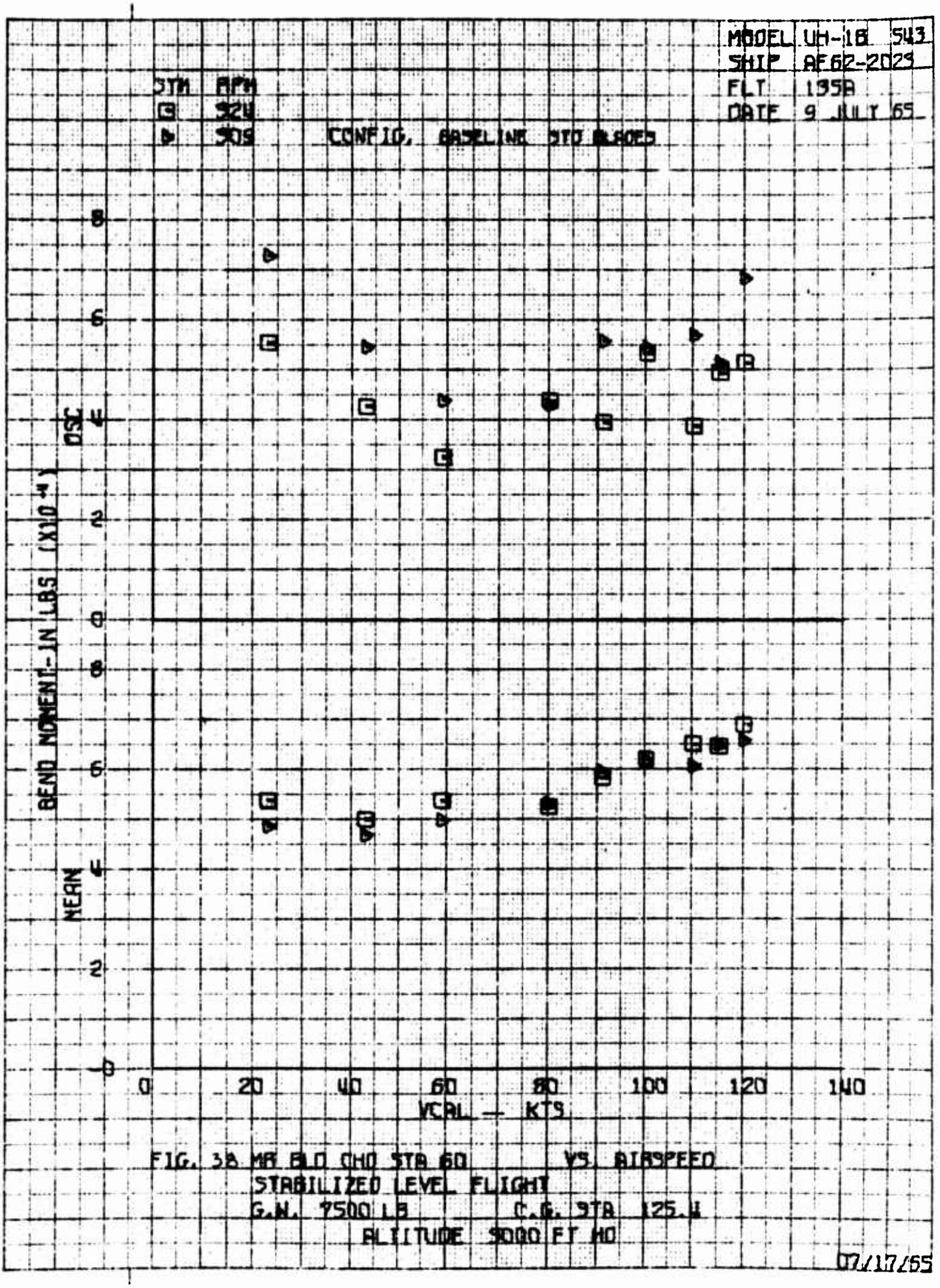


FIG. 38 MR BLD CHD STA 60 VS. AIRSPEED
STABILIZED LEVEL FLIGHT
G.W. 7500 LB C.G. STA 125.4
ALTITUDE 5000 FT MD

07/17/65

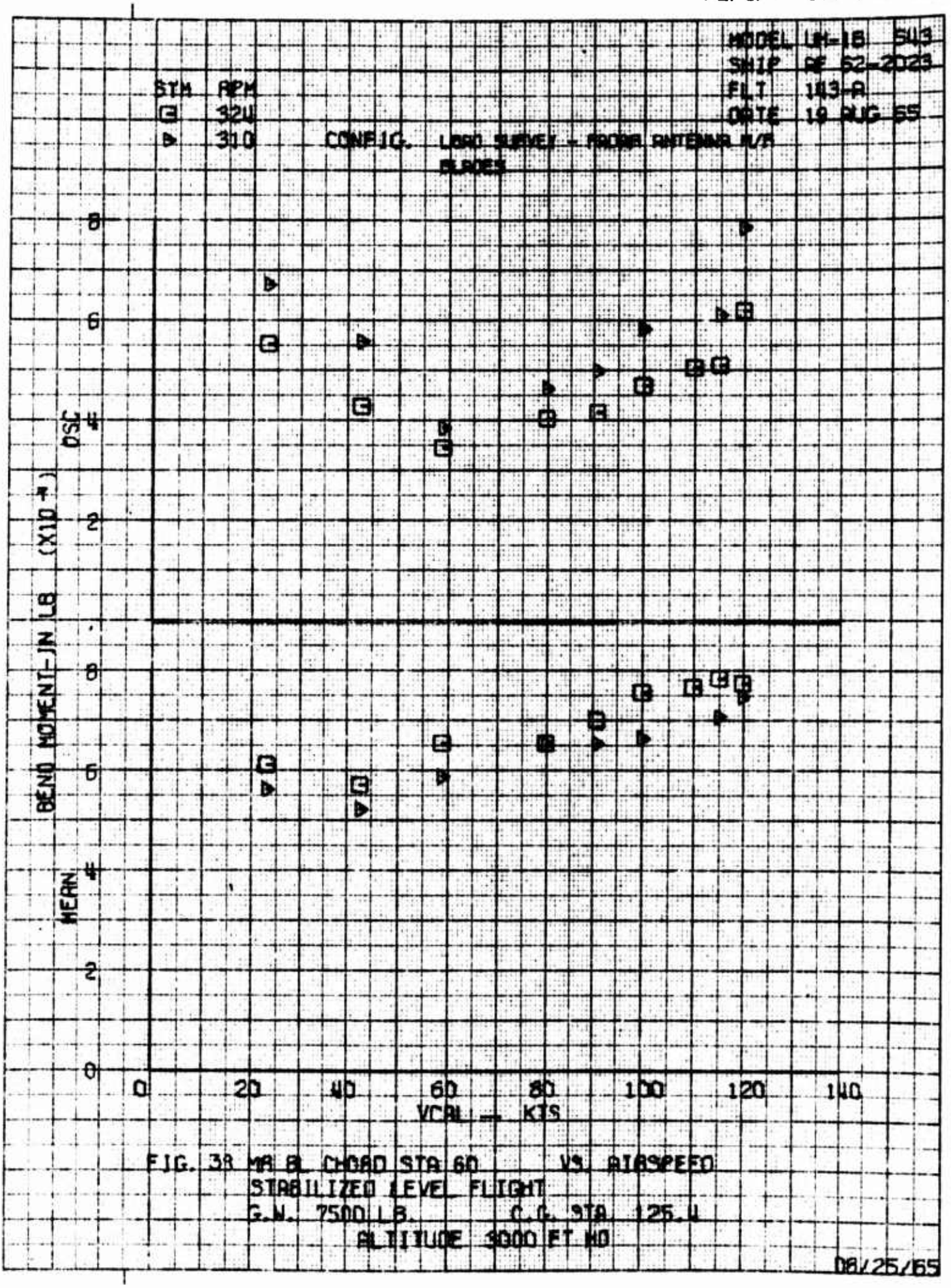


FIG. 38 MR BL CHORD STA 60 VS. AIRSPEED
STABILIZED LEVEL FLIGHT
G.W. 7500 LB. C.G. STA 125.4
ALTITUDE 3000 FT MD

08/25/65

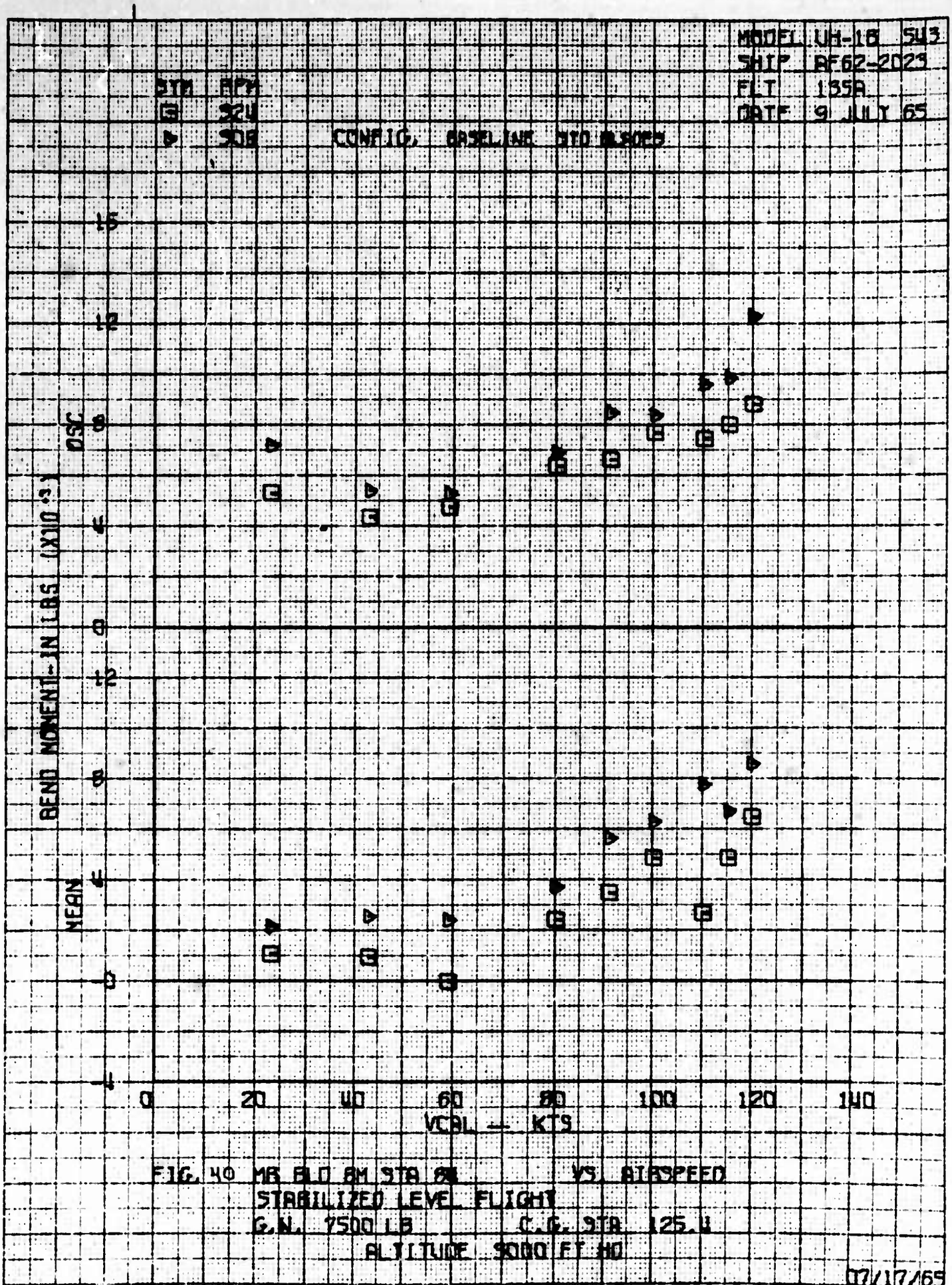


FIG. 40 MB BLO BM STA 88 VS. AIRSPEED
STABILIZED LEVEL FLIGHT
G.W. 7500 LB C.G. STA 125.4
ALTITUDE 9000 FT HD

07/17/65

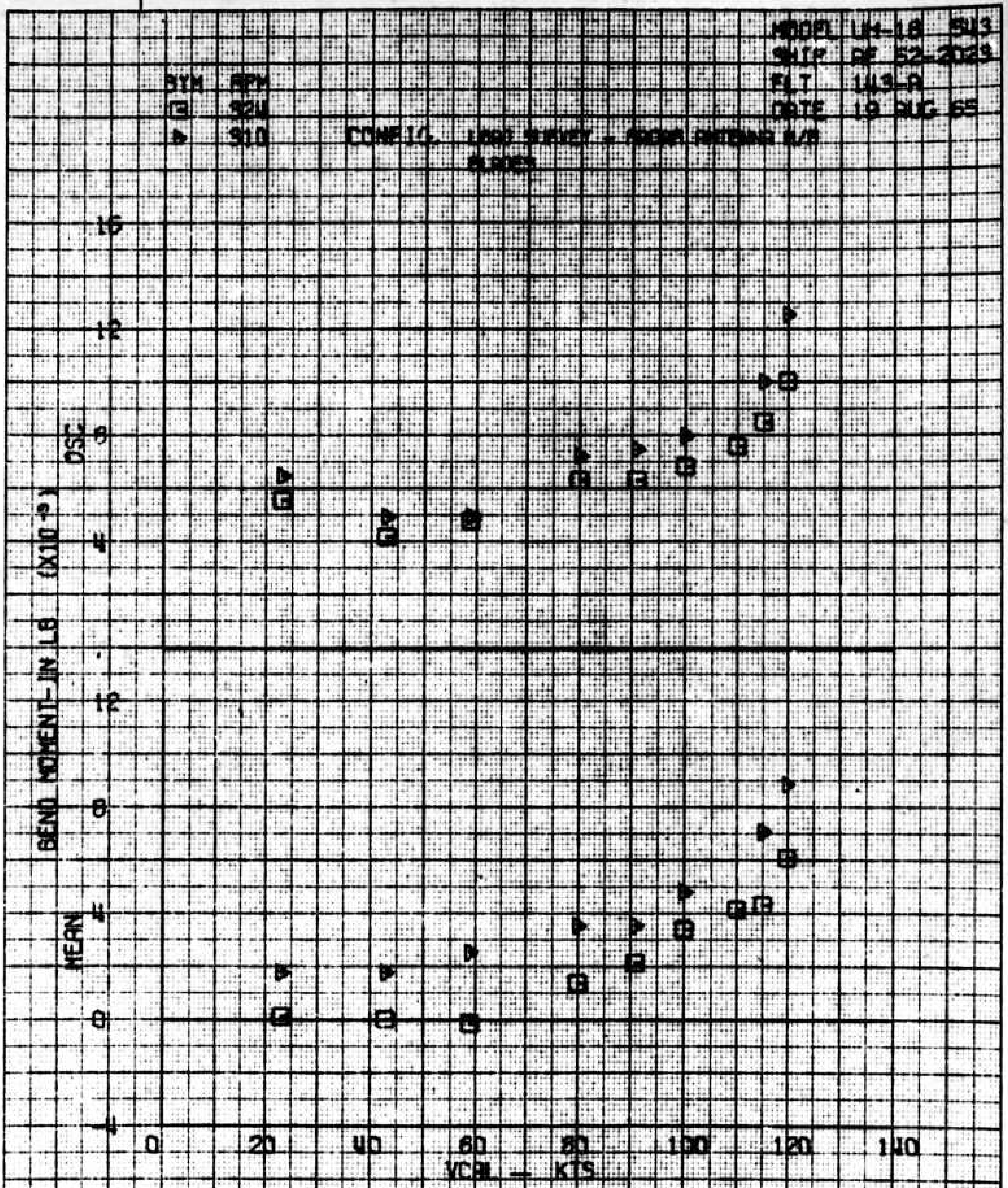


FIG. 41 MR BL BEAM STA 44 VS. AIRSPEED
STABILIZED LEVEL FLIGHT
G.W. 7500 LB. C.G. STA. 125.4
ALTITUDE 3000 FT HD

08/25/65

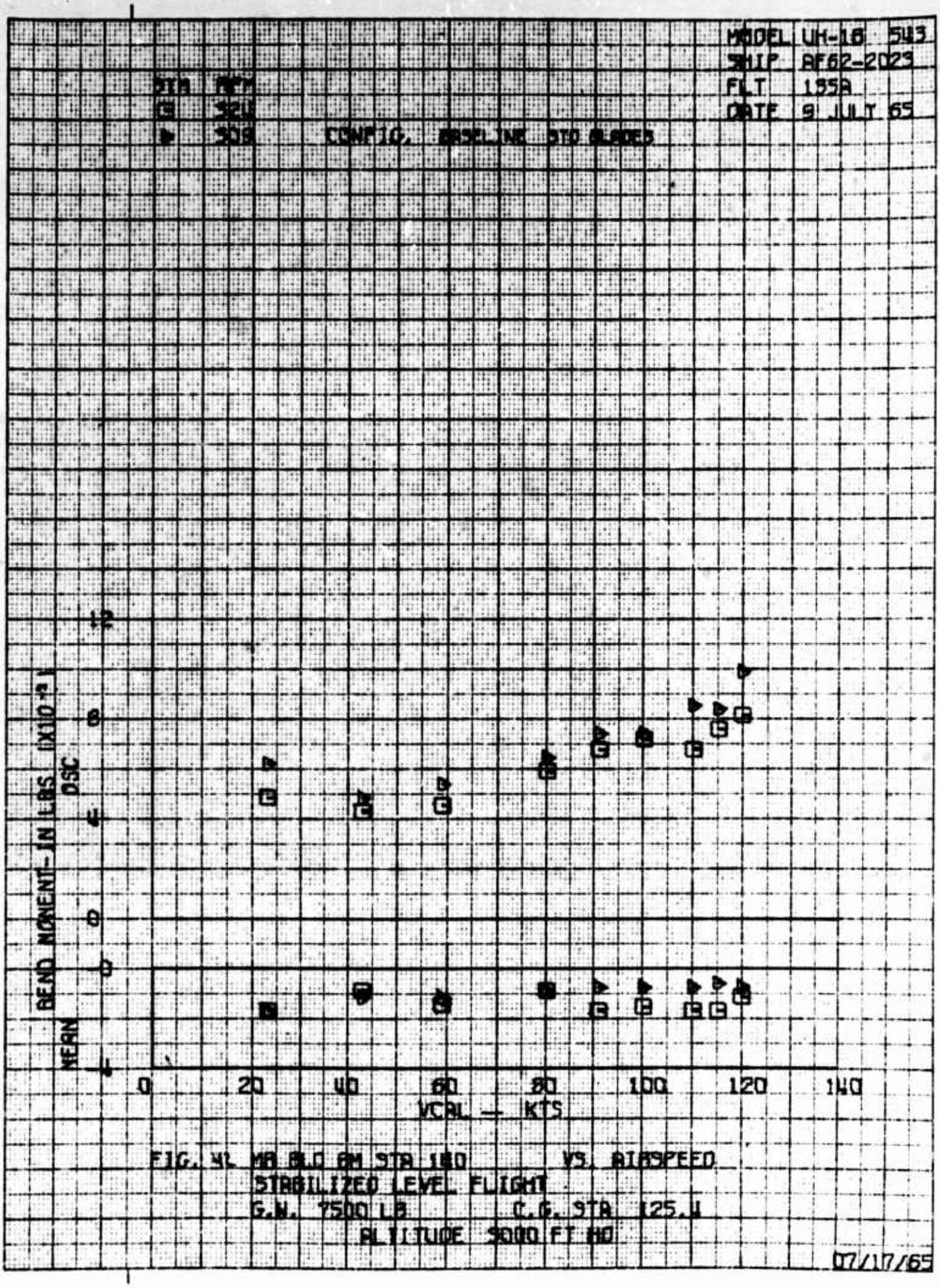


FIG. 41 MB BLO 6M STA 180 VS AIRSPEED
STABILIZED LEVEL FLIGHT
G.W. 7500 LB C.G. STA 125.4
ALTITUDE 9000 FT MD

07/17/65

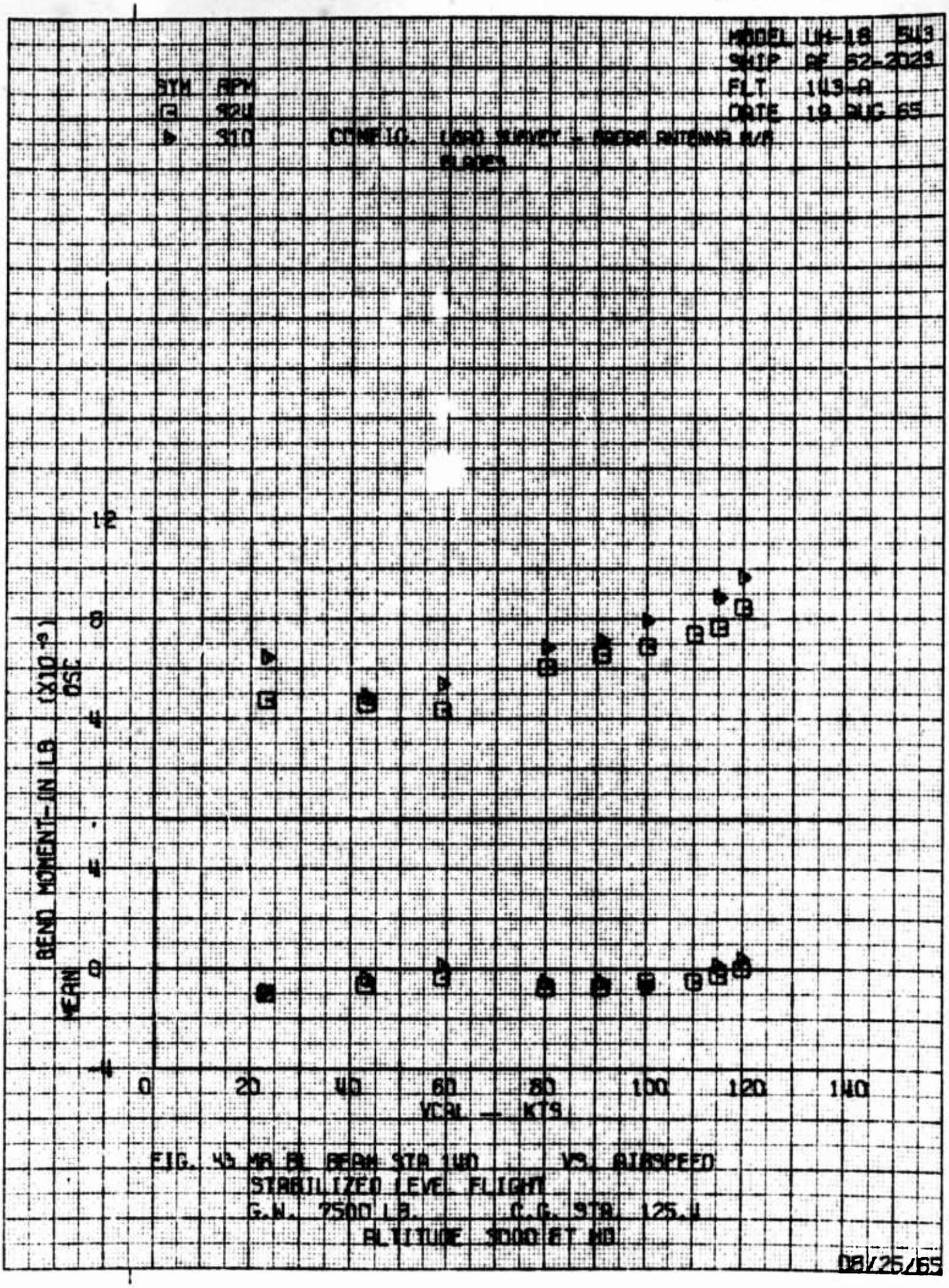


FIG. 45 MR BL BEAM STA 140 VS. AIRSPEED
STABILIZED LEVEL FLIGHT
G.W. 7500 LB. C.G. STA 125.4
ALTITUDE 5000 FT MSL

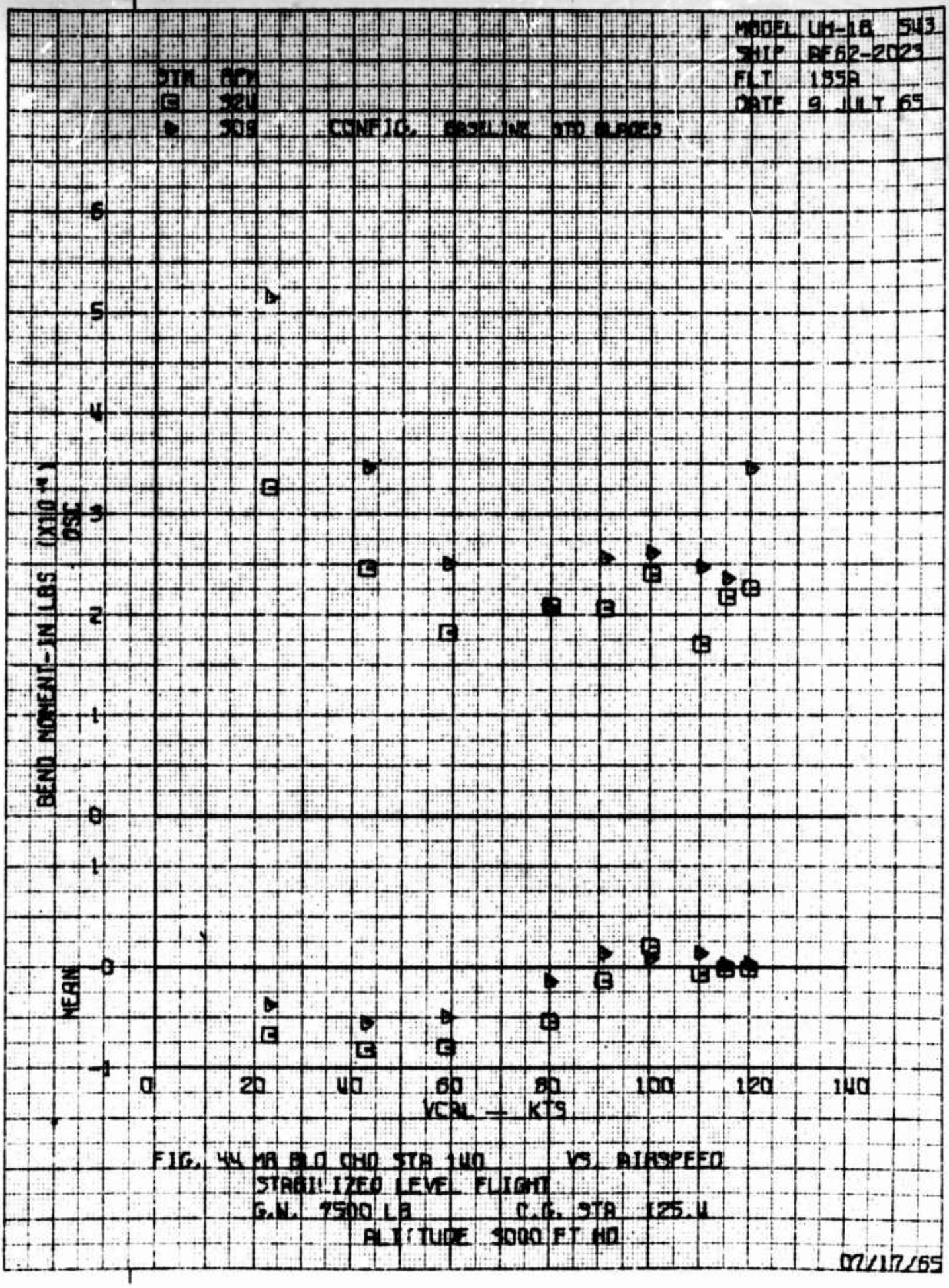


FIG. 44 MR BLD CHD STA 140 VS AIRSPEED
STABILIZED LEVEL FLIGHT
G.W. 7500 LB C.G. STA 125.4
ALTITUDE 3000 FT MD

07/17/65

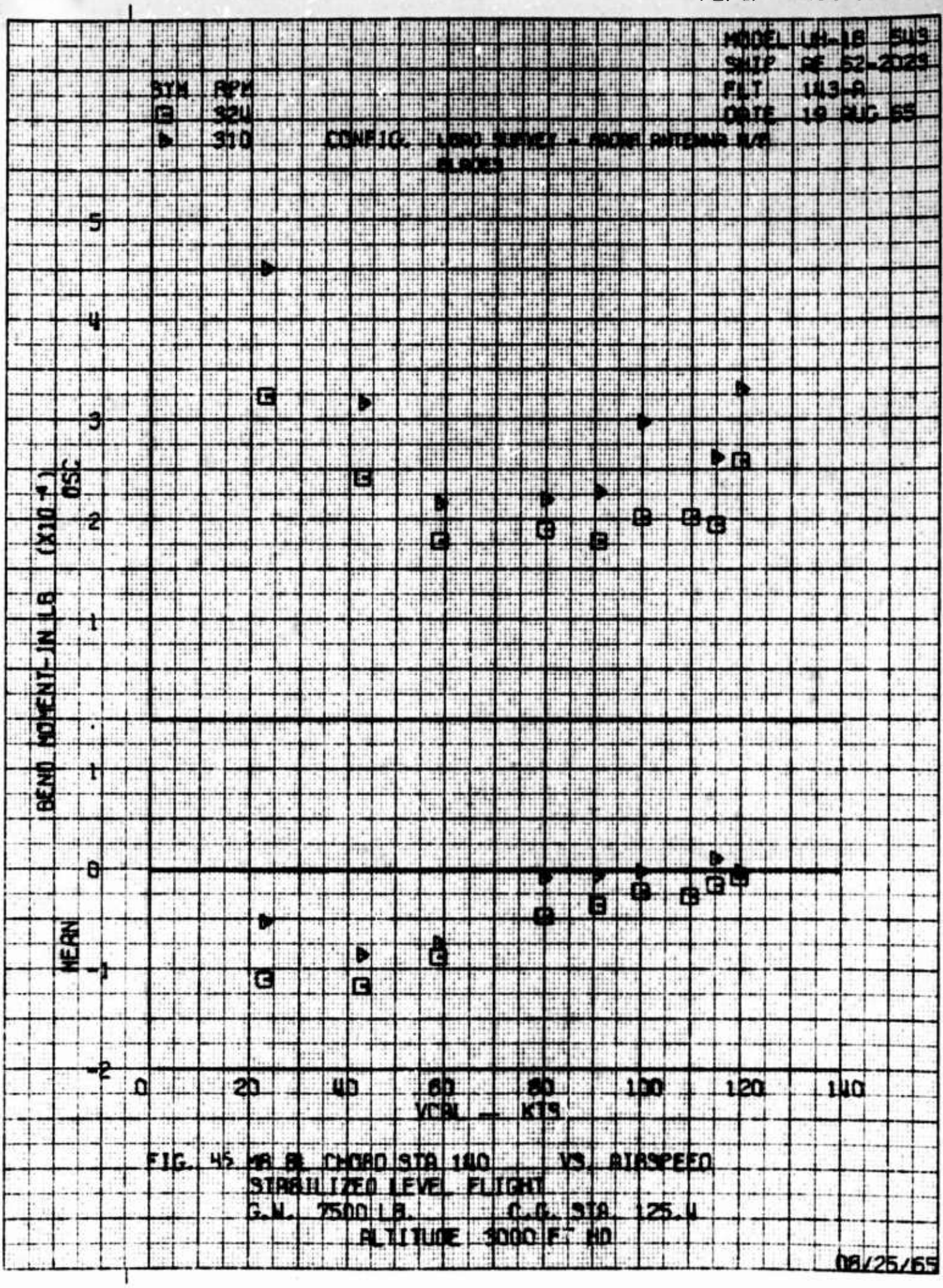


FIG. 45 WB BL CHORD STA 140 VS. AIRSPEED
STABILIZED LEVEL FLIGHT
G.W. 7500 LB. C.G. STA 125.4
ALTITUDE 3000 FT HD

08/25/65

MODEL UH-1B 543
SHIP AF62-2023
FLT 1358
DATE 9 JULY 65

STM RPM
⊡ 324
▷ 309

CONFIG. BASELINE OTD BLADES

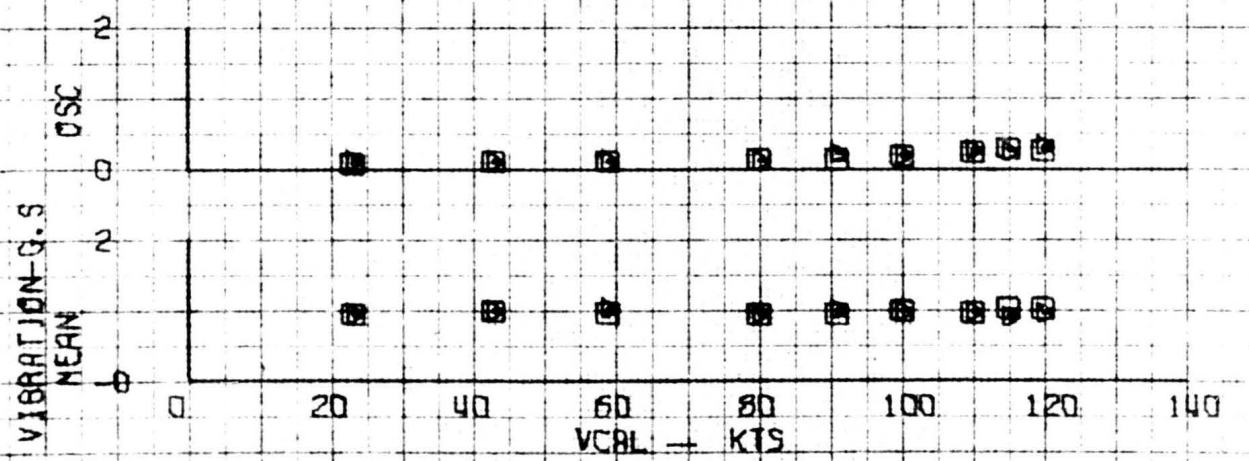


FIG. 46 PILOT VERT ACCEL VS. AIRSPEED
STABILIZED LEVEL FLIGHT
G.W. 7500 LB C.G. STA 133.2
ALTITUDE 3080 FT MD

07/17/65

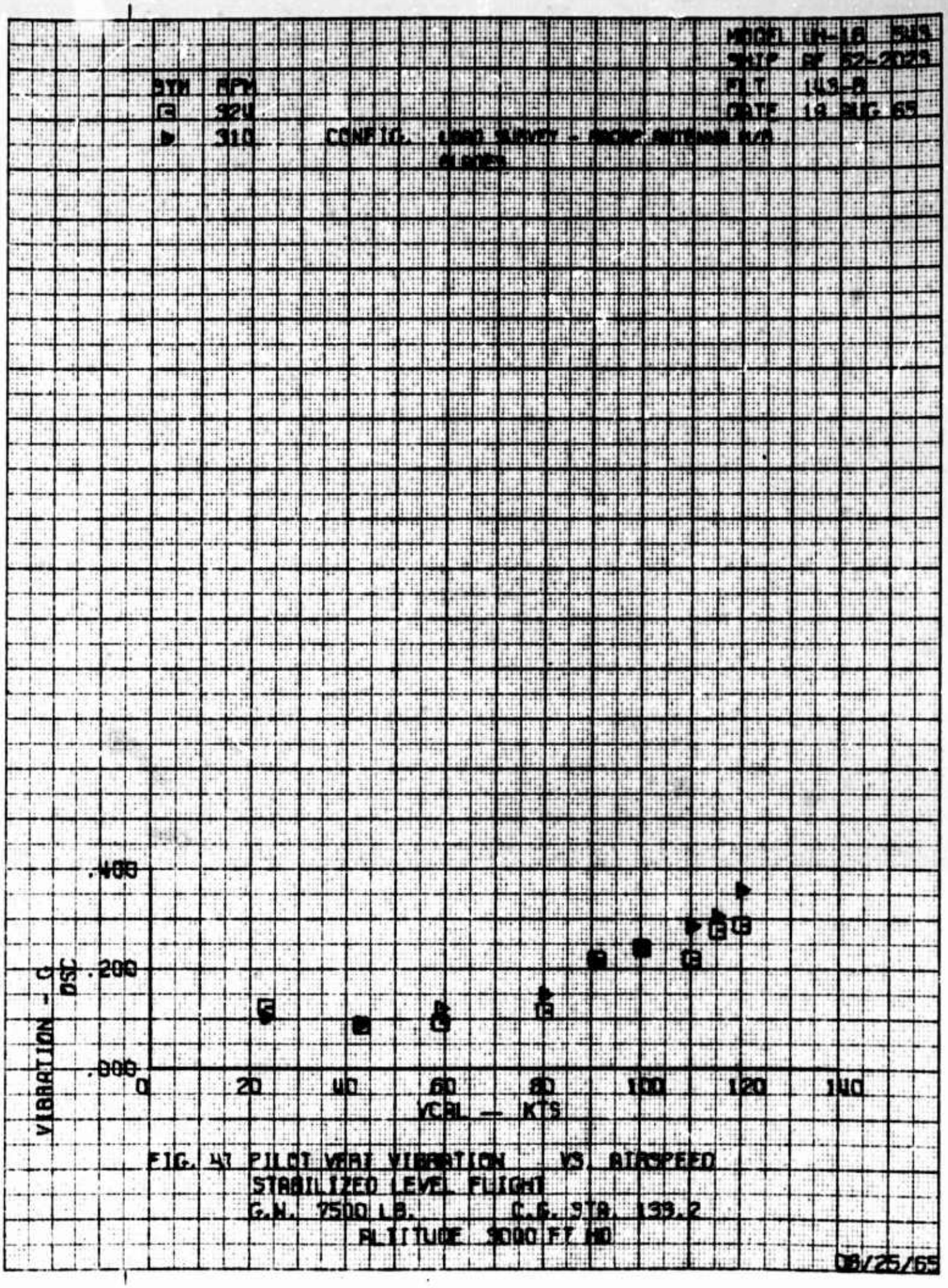


FIG. 47 PILOT VERT VIBRATION VS. AIRSPEED
STABILIZED LEVEL FLIGHT
G.W. 7500 LB. C.G. STA. 133.2
ALTITUDE 3000 FT MD

MODEL UH-1D 543
SHIP AF62-2023
FLT 1356
DATE 9 JULY 65

STN RPM
(G) 324
◆ 309 CONFIG. BASELINE STD BLADES

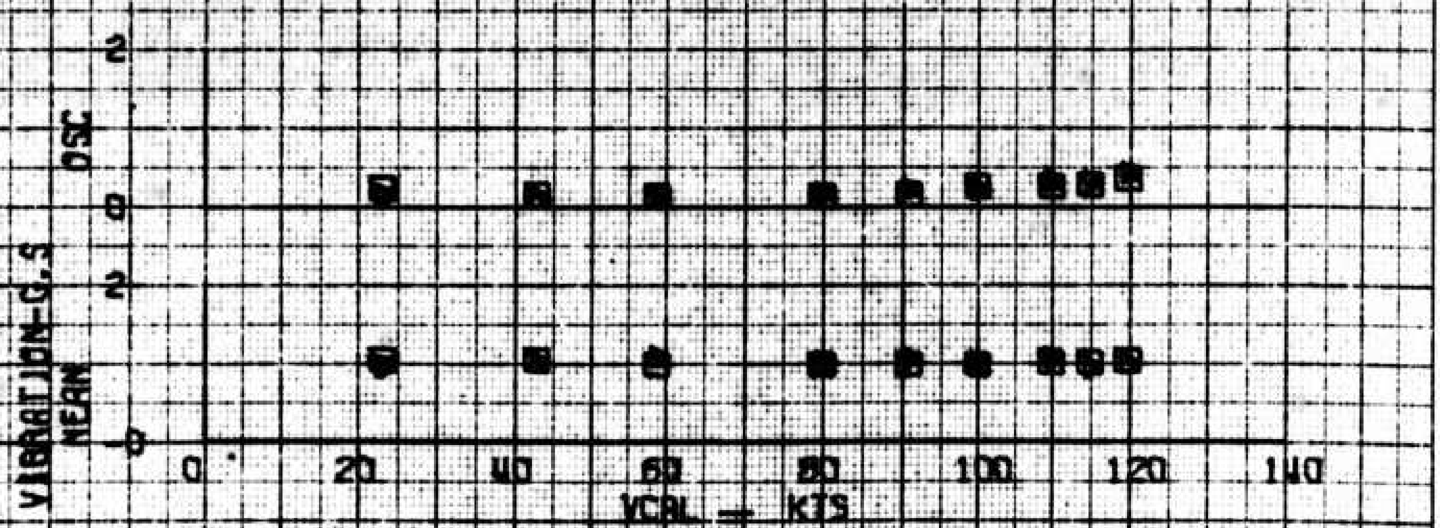


FIG. 48 CO-PILOT VERT ACCEL VS. AIRSPEED
STABILIZED LEVEL FLIGHT
G.W. 7500 LB C.G. STA 155.2
ALTITUDE 5000 FT HD

07/17/65

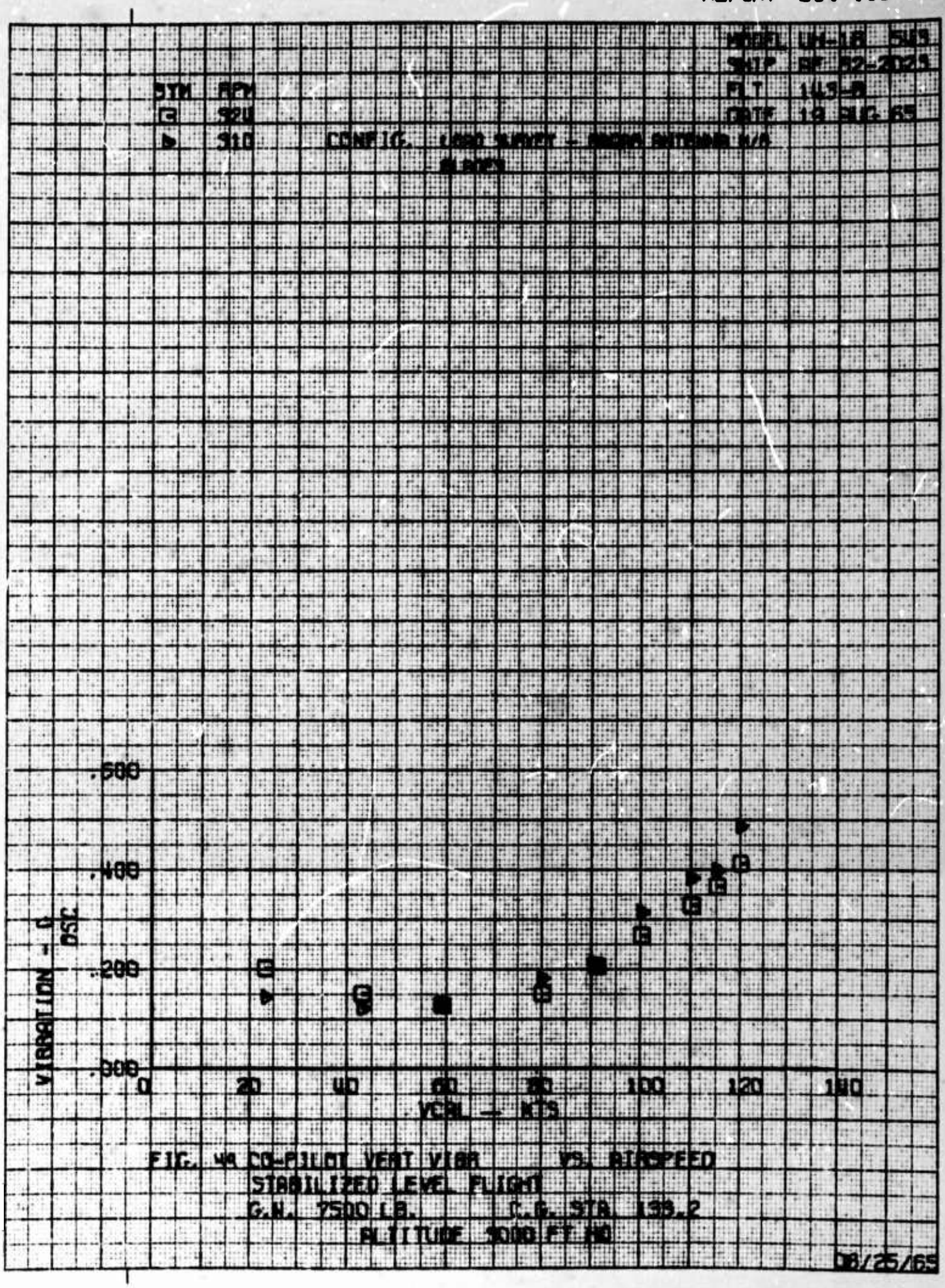


FIG. 48 CO-PILOT VERT VIBR VS. AIRSPEED
STABILIZED LEVEL FLIGHT
G.W. 7500 LB. C.G. STA. 138.2
ALTITUDE 5000 FT MD

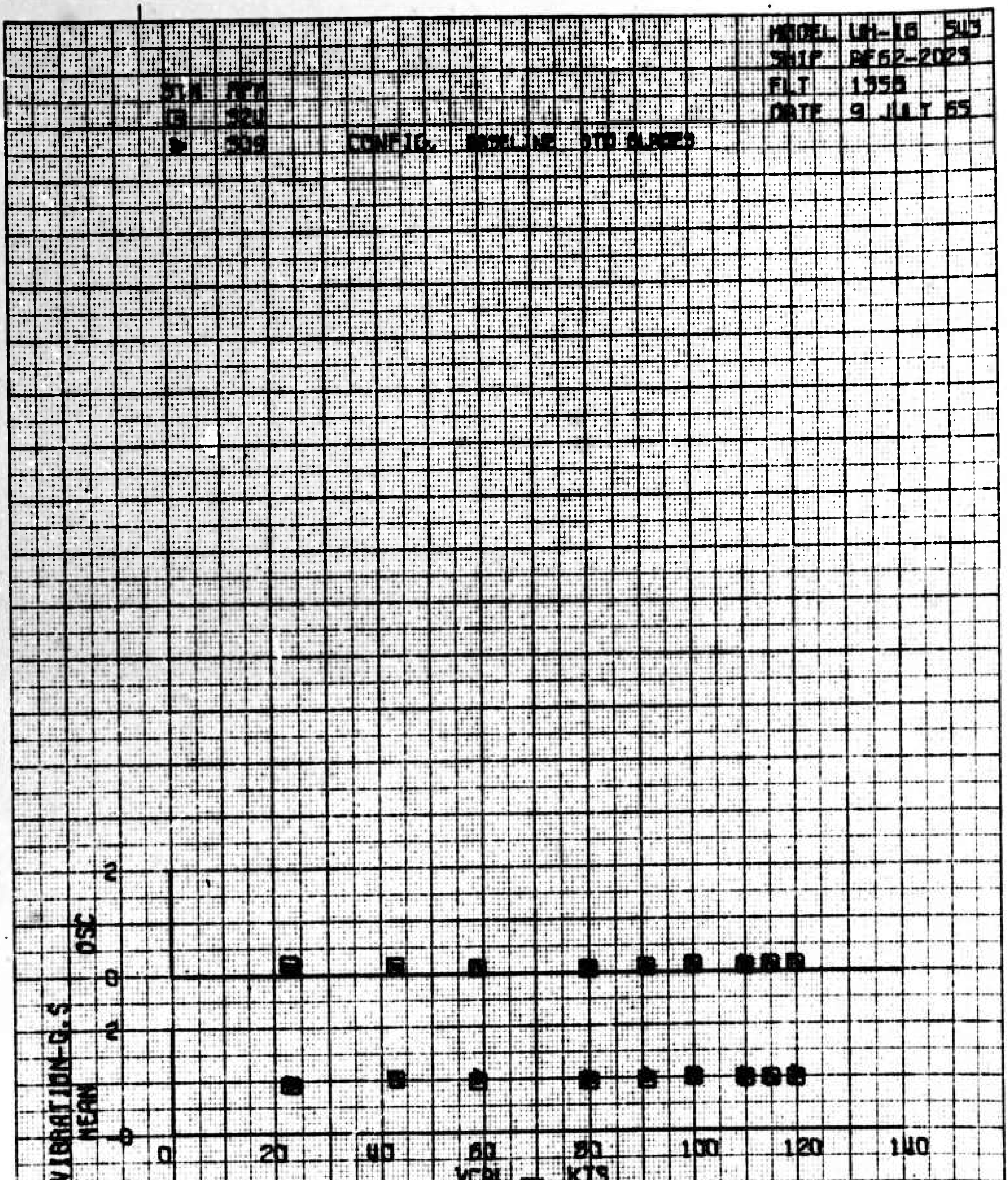


FIG. 50 C.G. VERT ACCEL VS. AIRSPEED
STABILIZED LEVEL FLIGHT
G.W. 7500 LB C.G. STA 135.2
ALTITUDE 5000 FT HD

07/17/65

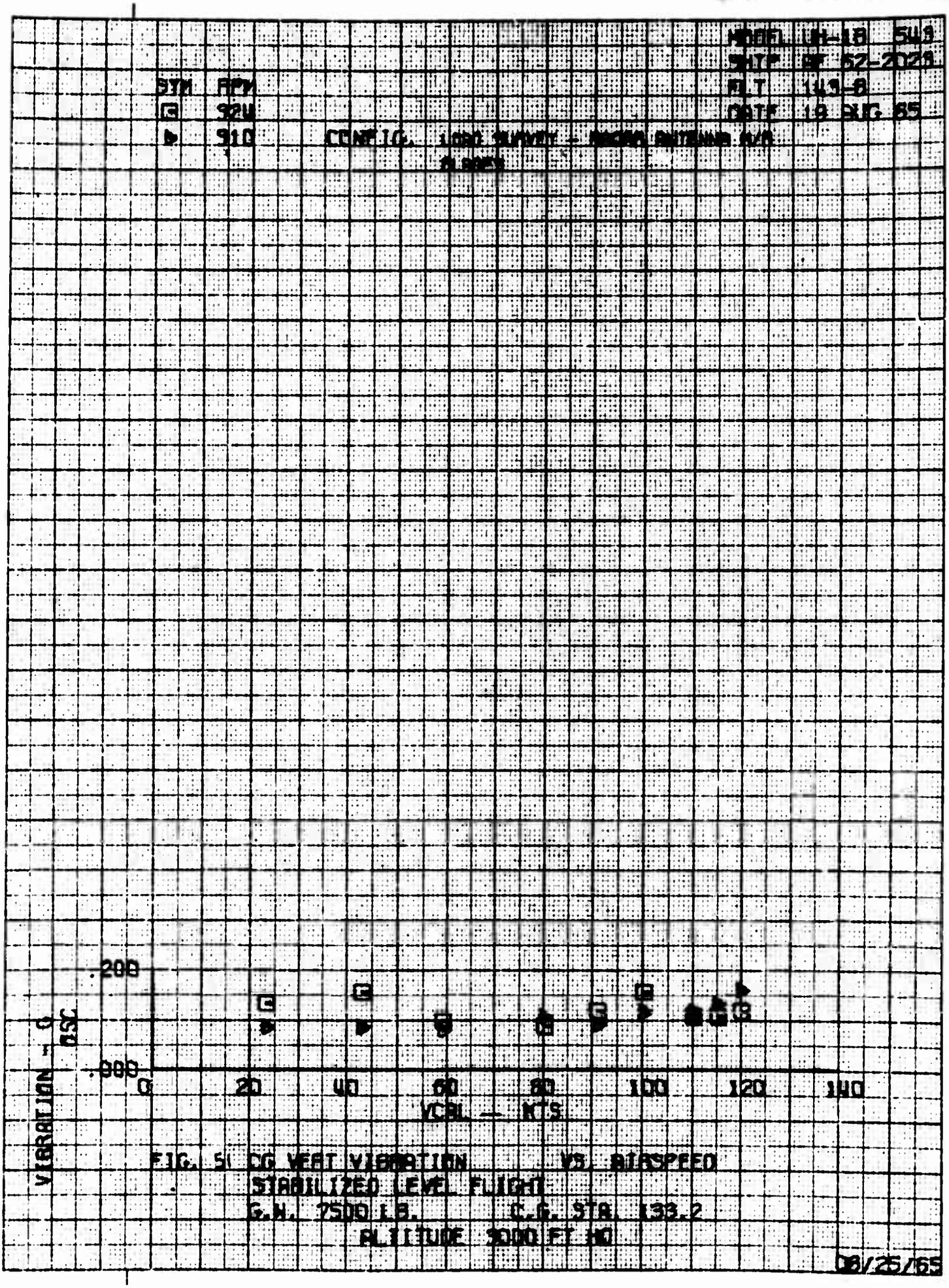


FIG. 51 CG VERT VIBRATION VS. AIRSPEED
STABILIZED LEVEL FLIGHT
G.W. 7500 LB. C.G. STA. 133.2
ALTITUDE 5000 FT MD

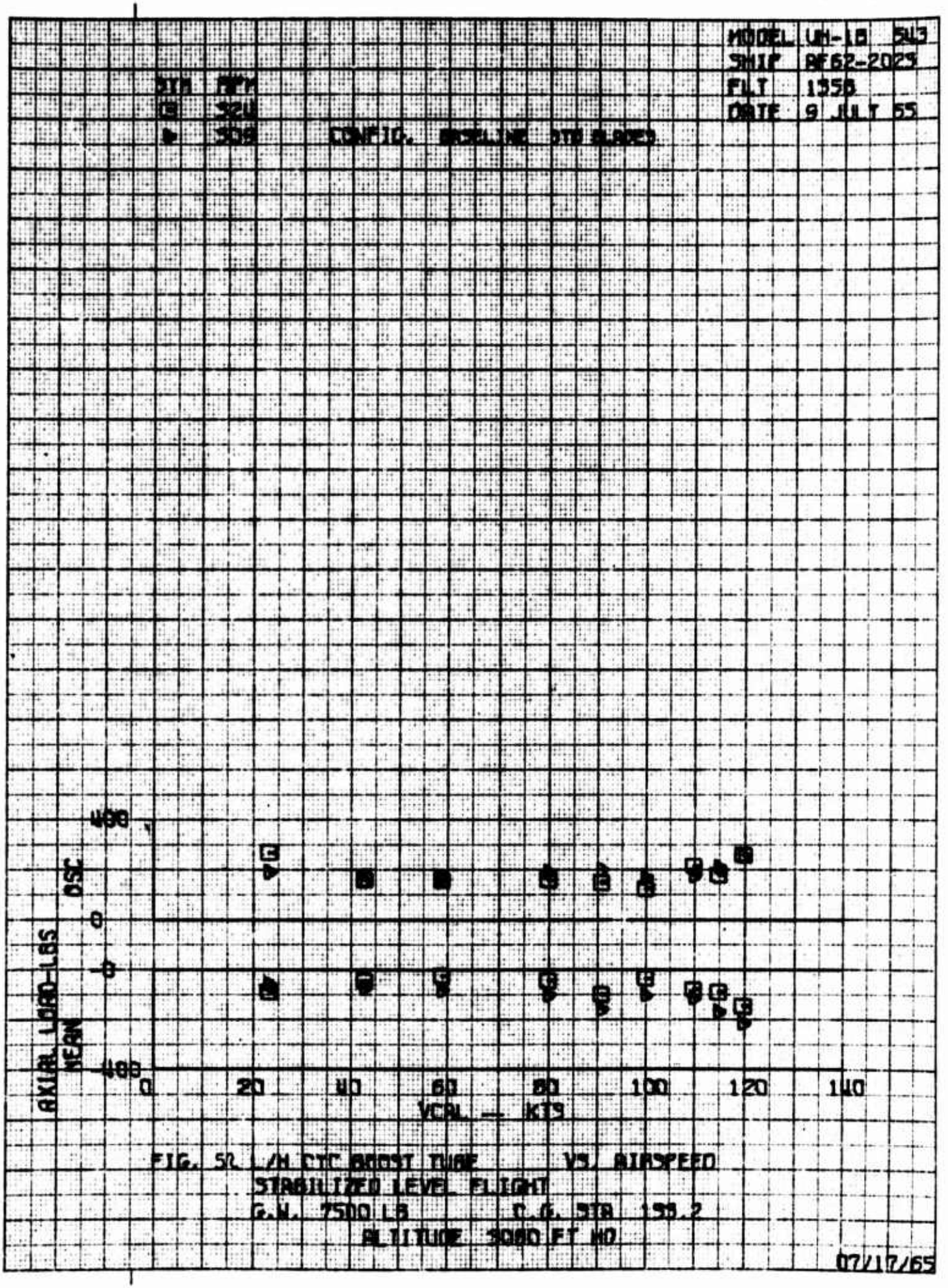


FIG. 5R L/H CTC BOOST THRF VS AIRSPEED
STABILIZED LEVEL FLIGHT
G.W. 7500 LB C.G. STA 155.2
ALTITUDE 3000 FT MD

07/17/65

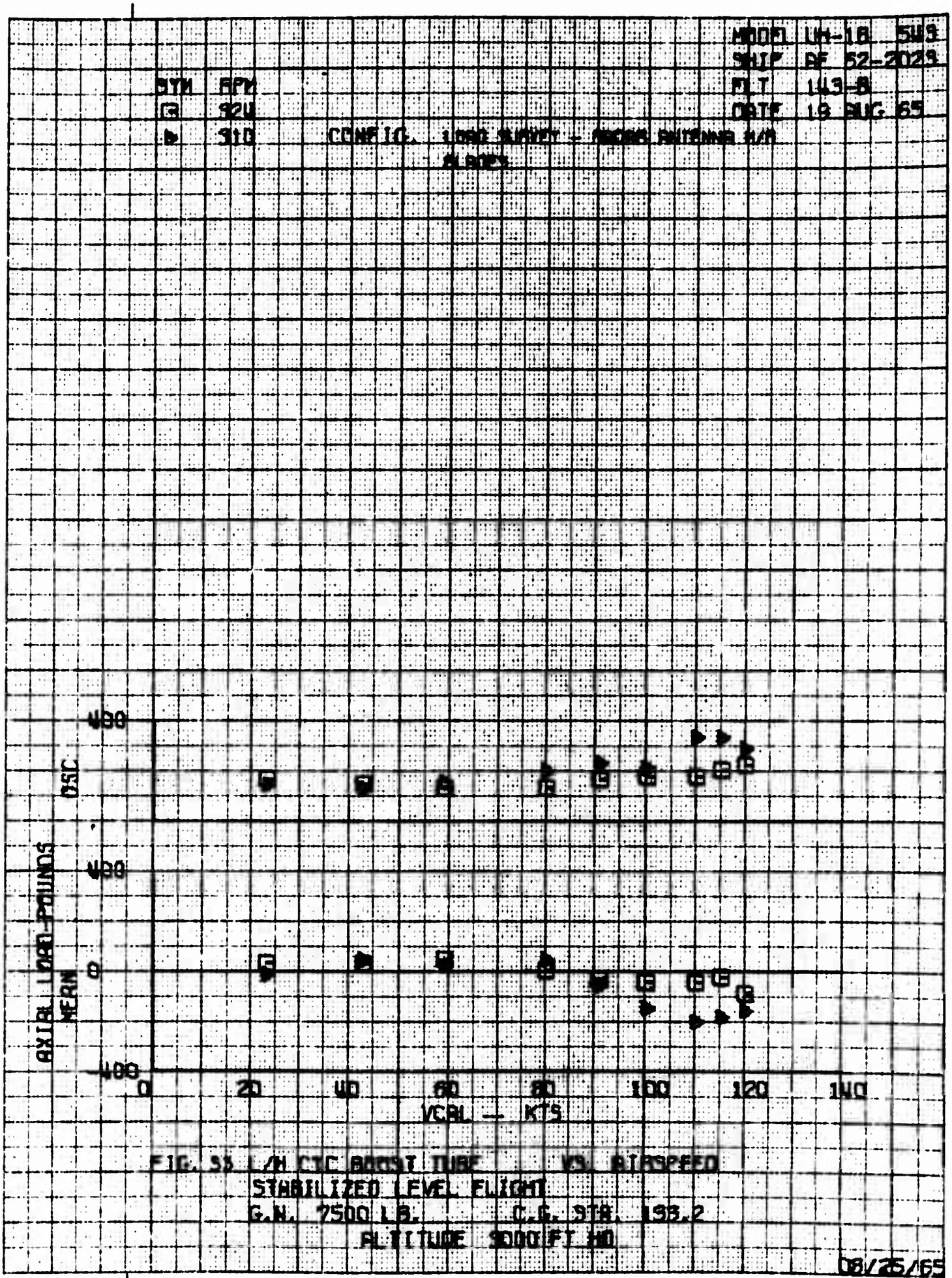
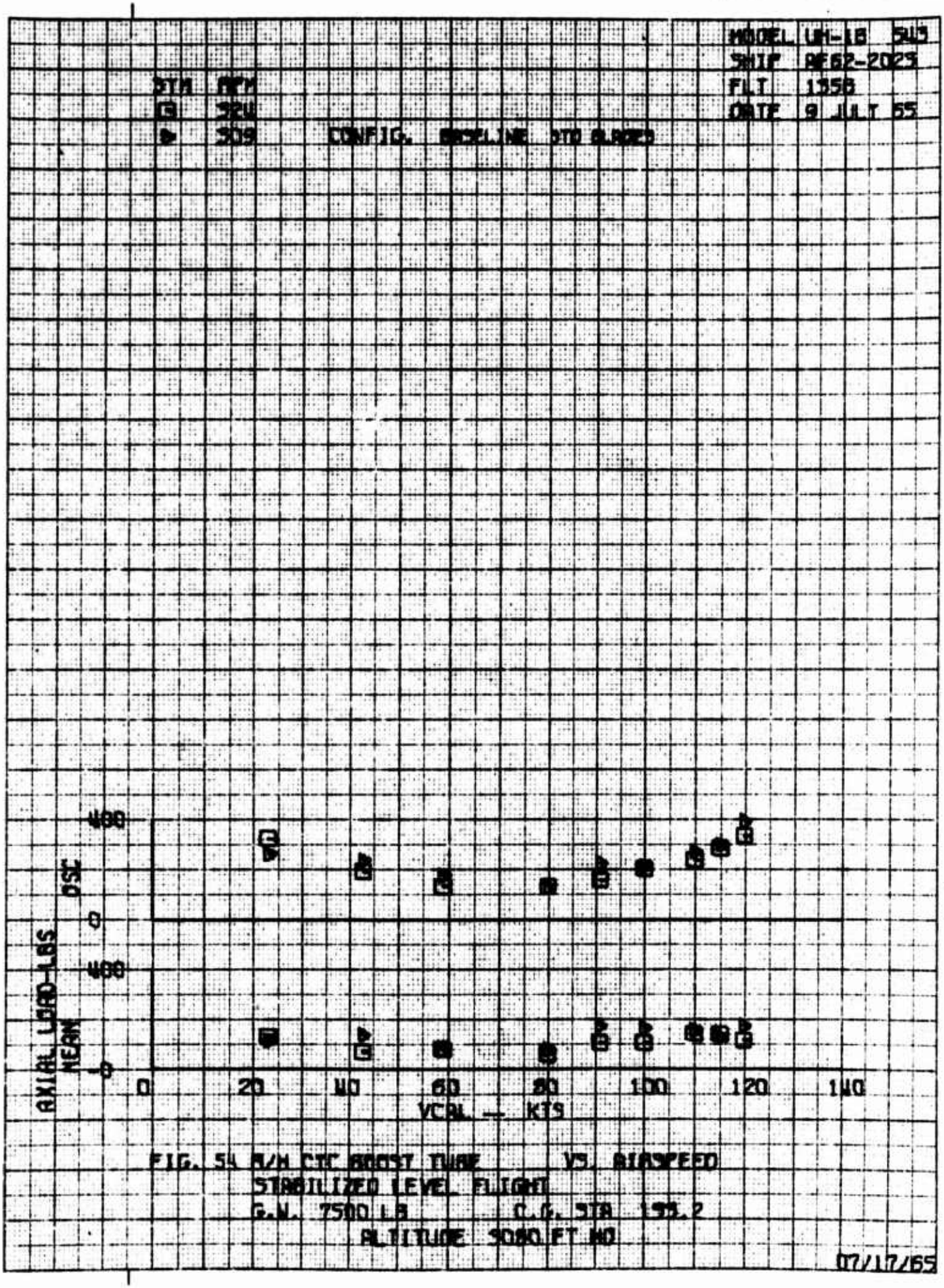


FIG. 55 L/H CIC BOOST TUBE VS. AIRSPEED
STABILIZED LEVEL FLIGHT
G.W. 7500 LB. C.G. STA. 138.2
ALTITUDE 3000 FT HD

08/25/65


MODEL UH-1B SN3
SHIP BF62-2025
FLT 1356
DATE 9 JULY 65
STA REV
321
309
CONFIG. BASELINE STD BLADES
AXIAL LOAD-LBS
MEAN
DSC
400
0
400
0
0
20
40
60
80
100
120
140
VCAL — KTS
FIG. 54 R/H CTC BOOST TUBE VS. AIRSPEED
STABILIZED LEVEL FLIGHT
G.W. 7500 LB C.G. STA 155.2
ALTITUDE 5080 FT MD
07/17/65

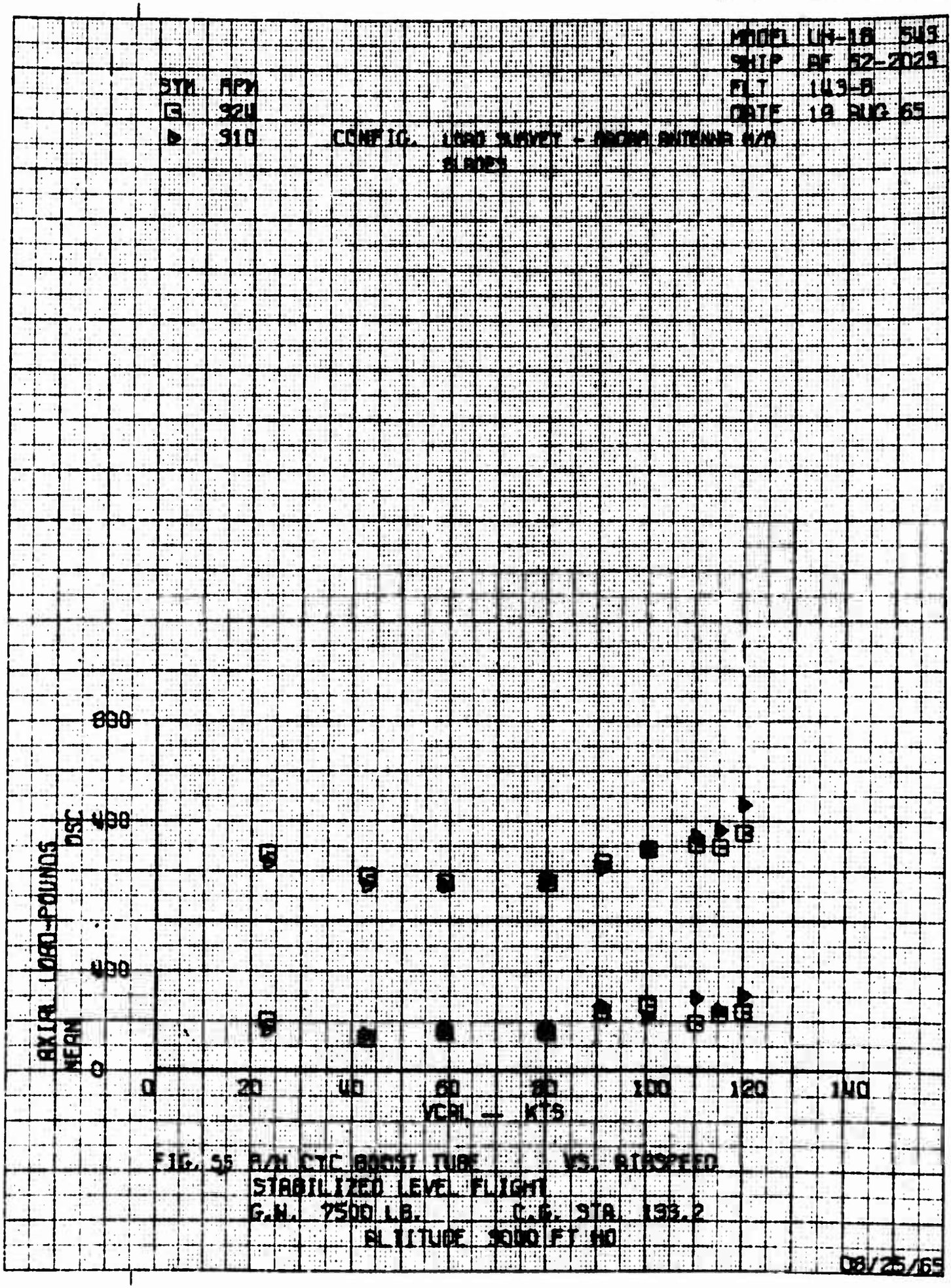


FIG. 55 R/H CTC BOOST TUBE VS. AIRSPEED
STABILIZED LEVEL FLIGHT
G.W. 7500 LB. C.G. STA 133.2
ALTITUDE 5000 FT HD

08/25/65

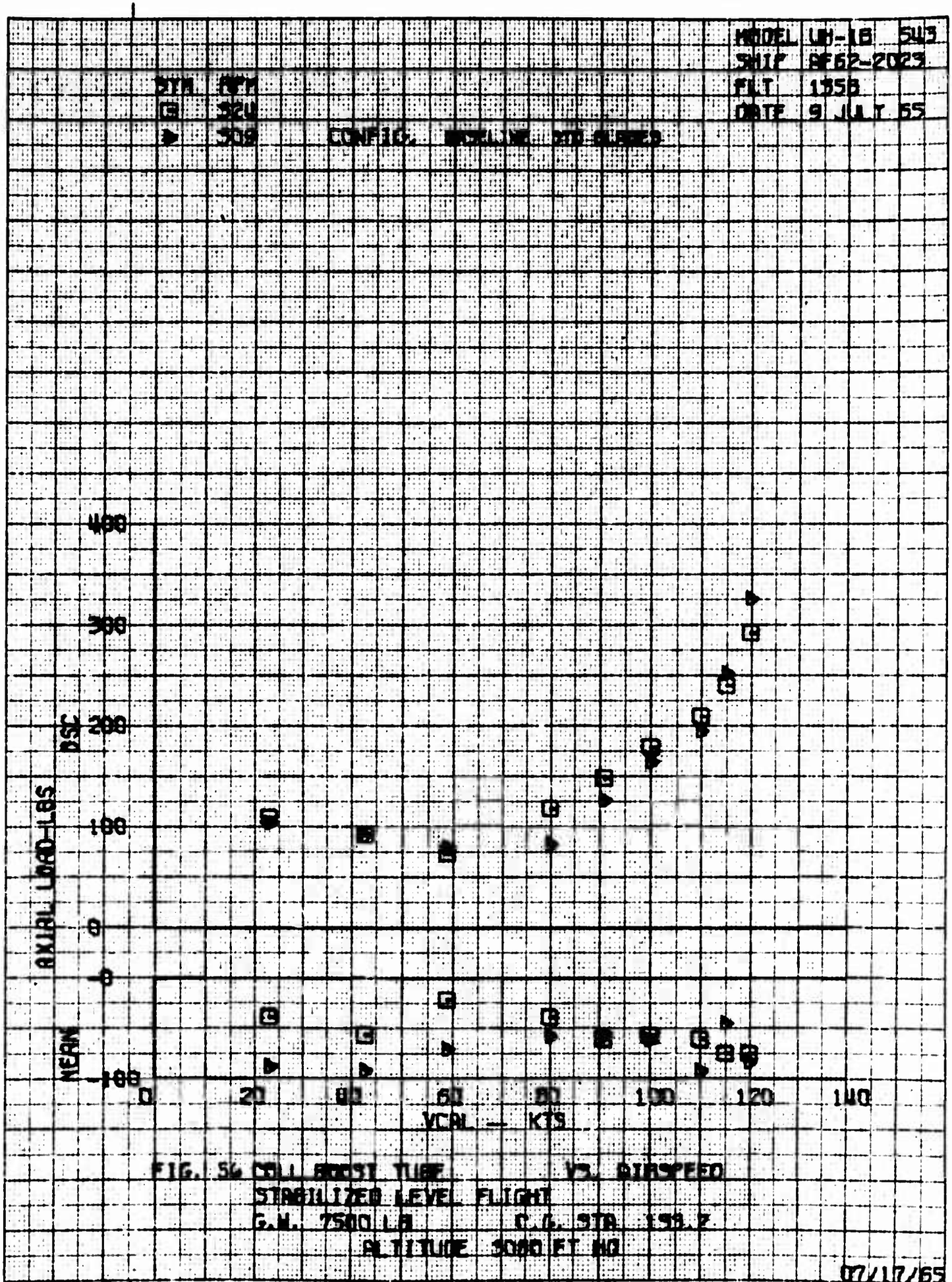


FIG. 54 COLL BOOST TUBE VS. AIRSPEED
STABILIZER LEVEL FLIGHT
G.W. 7500 LB C.G. STA 158.2
ALTITUDE 3000 FT MSL

07/17/65

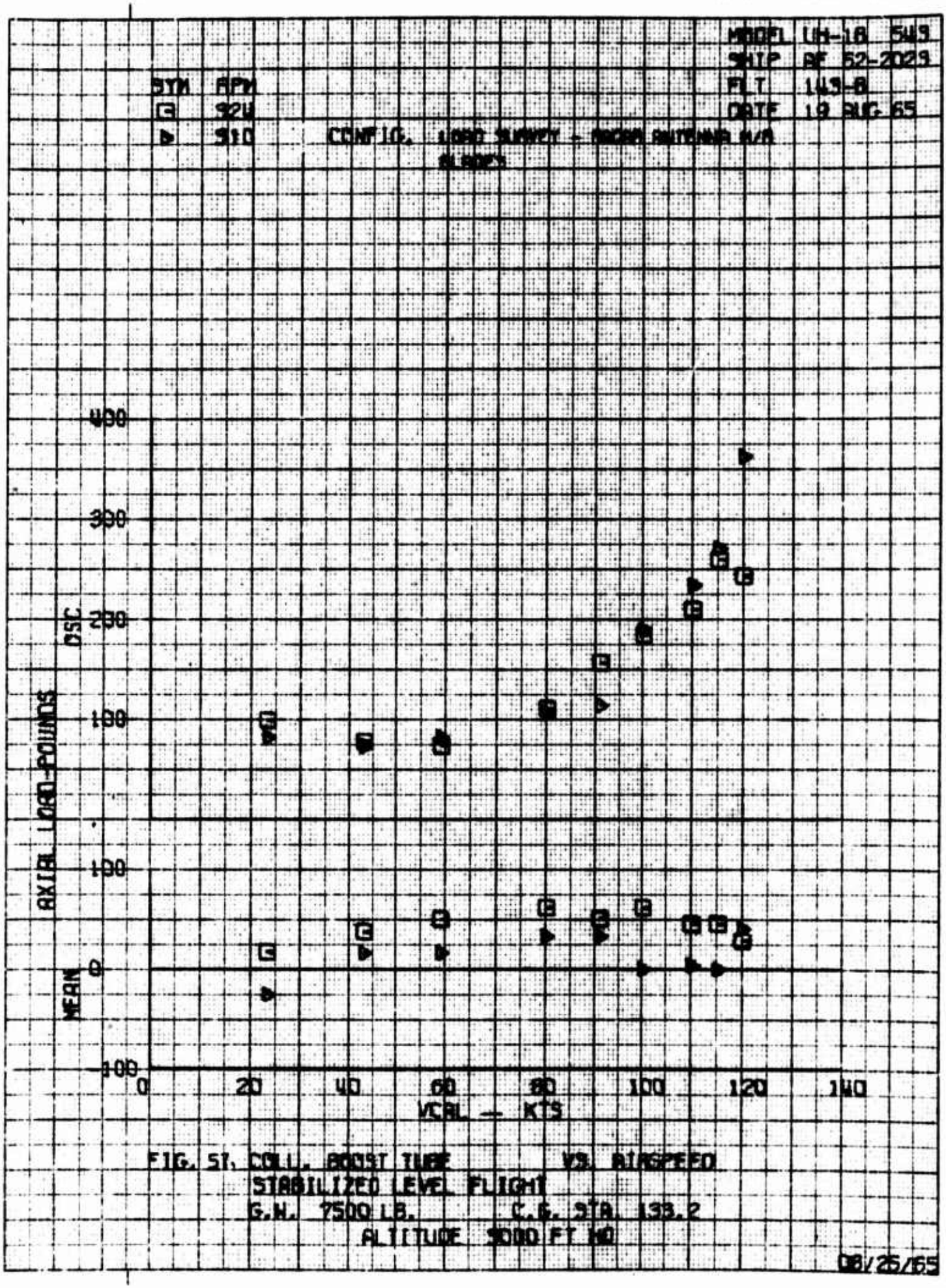


FIG. 51. COLL. BOOST TUBE VS. AIRSPEED
STABILIZED LEVEL FLIGHT
G.W. 7500 LB. C.G. STA. 133.2
ALTITUDE 5000 FT MD

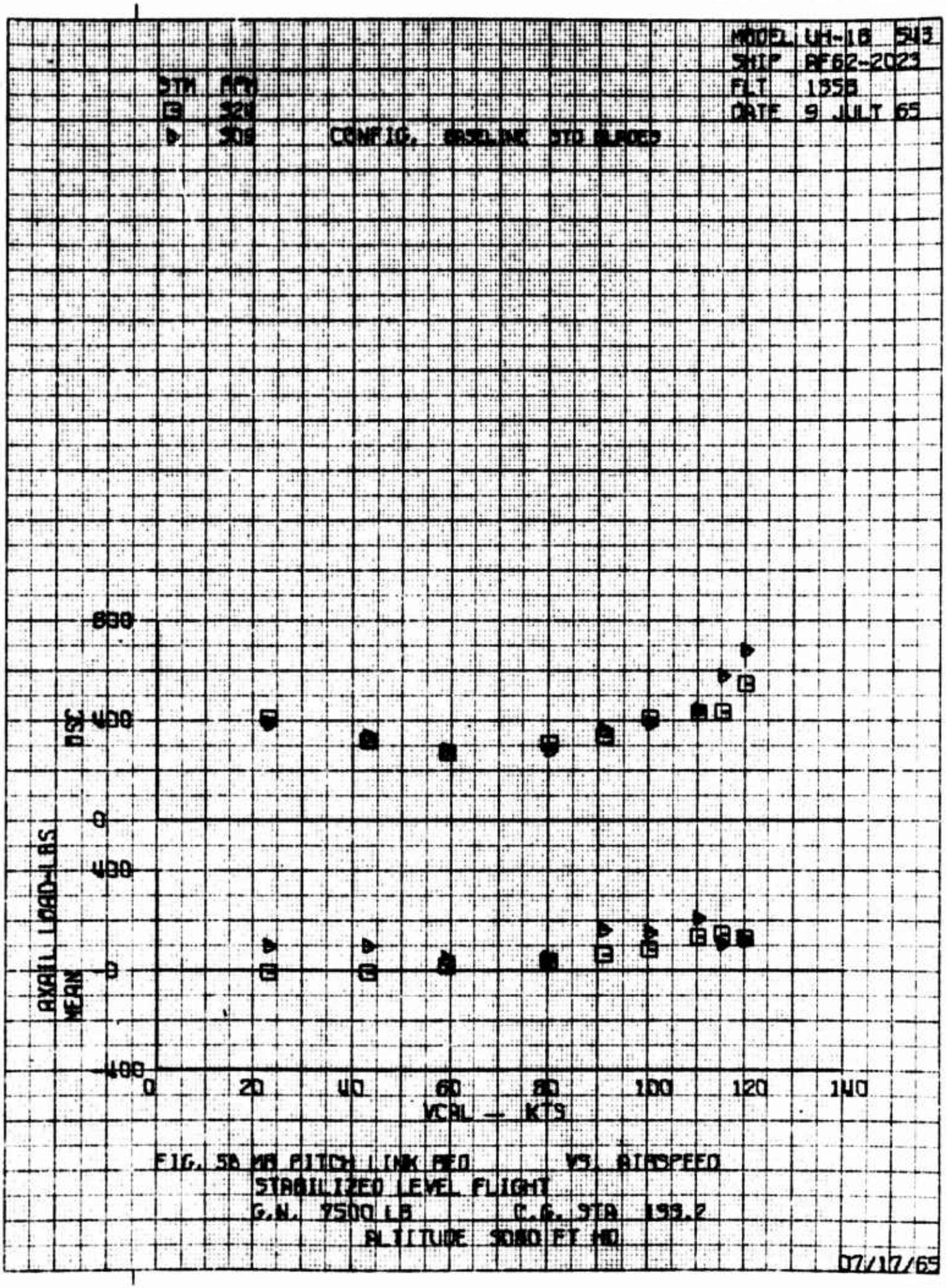


FIG. 5B MR PITCH LINK REQ VS. AIRSPEED
STABILIZED LEVEL FLIGHT
G.W. 7500 LB C.G. STA 199.2
ALTITUDE 5080 FT MD

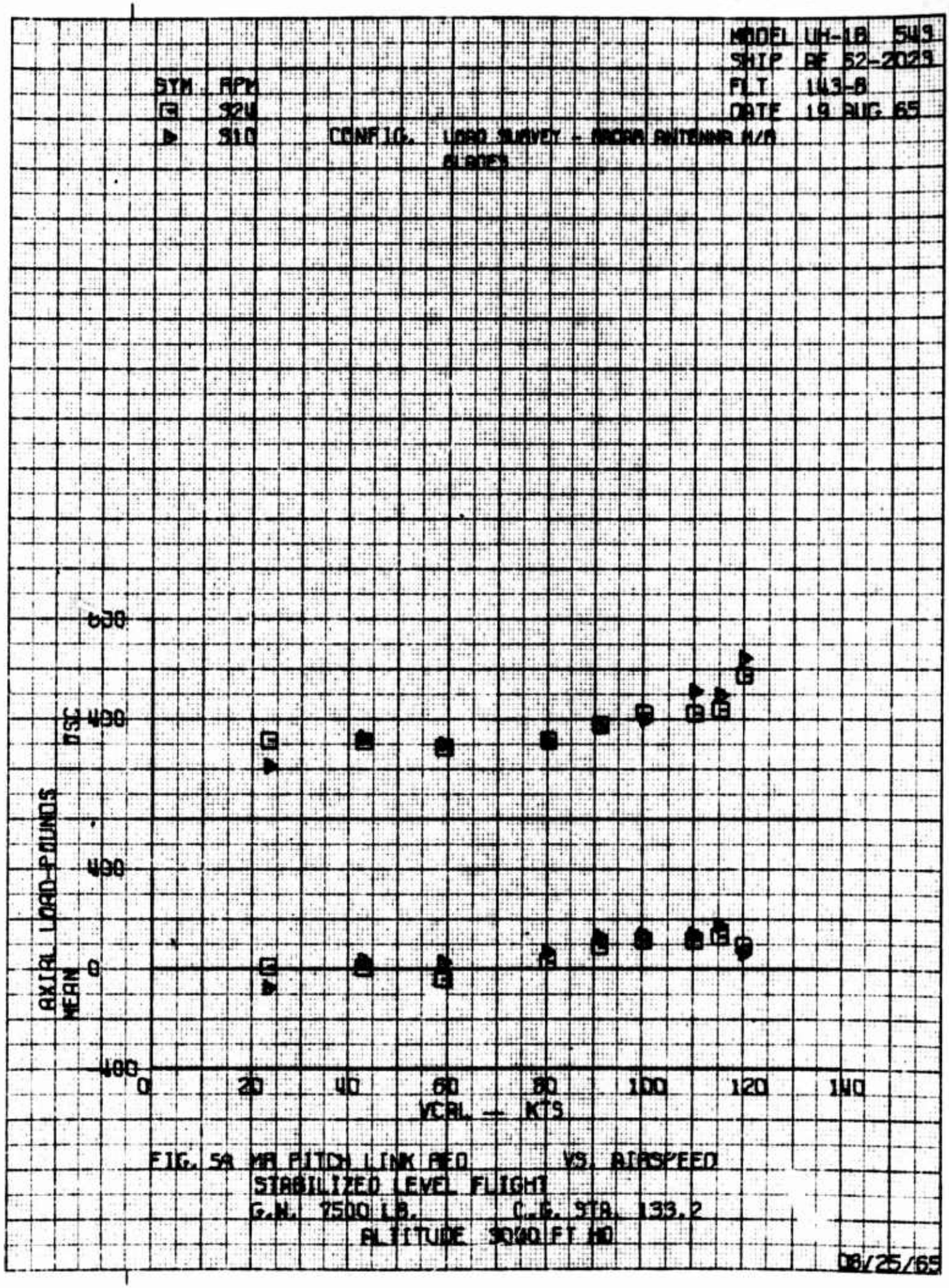


FIG. 5A MR PITCH LINK REQ VS. AIRSPEED
STABILIZED LEVEL FLIGHT
G.W. 7500 LB. C.G. STA. 133.2
ALTITUDE 3040 FT HD

08/25/65

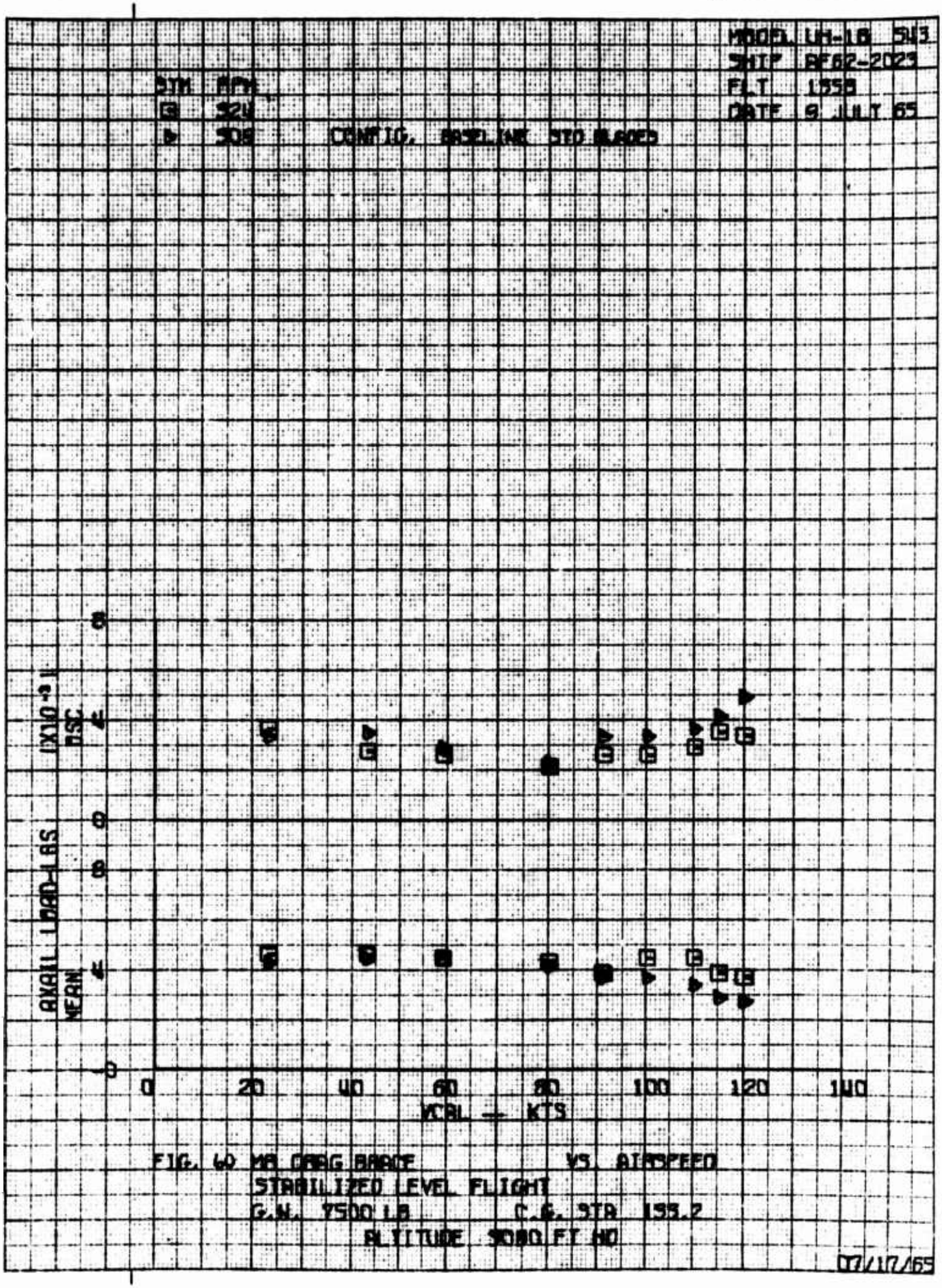


FIG. 60 MR DRAG BARGE VS AIRSPEED
STABILIZED LEVEL FLIGHT
G.W. 9500 LB C.G. STA 138.2
ALTITUDE 5000 FT MD

07/17/65

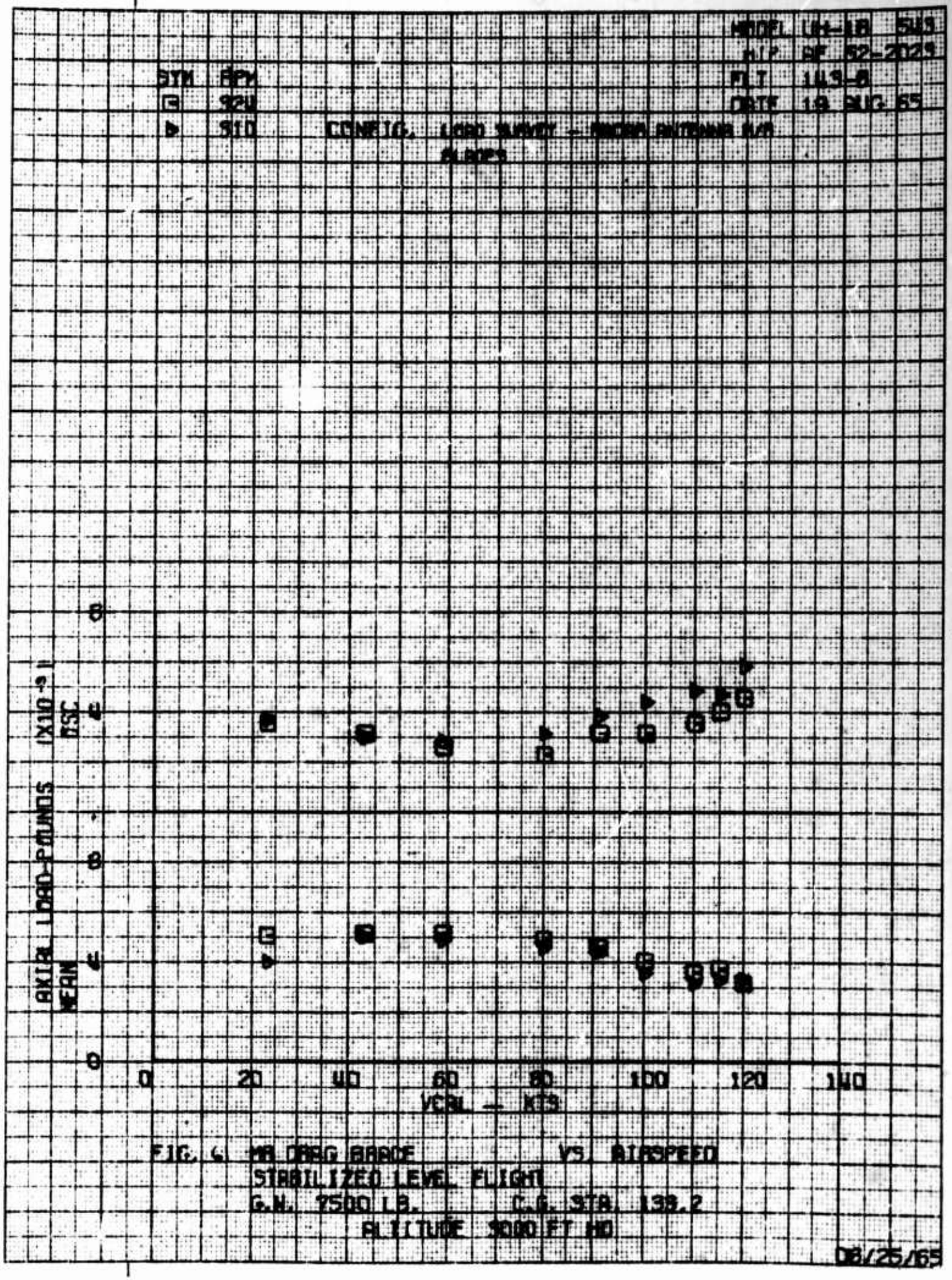


FIG. 6 MR DRAG BRAKE VS. AIRSPEED
STABILIZED LEVEL FLIGHT
G.W. 7500 LB. C.G. STA. 138.2
ALTITUDE 3000 FT MD

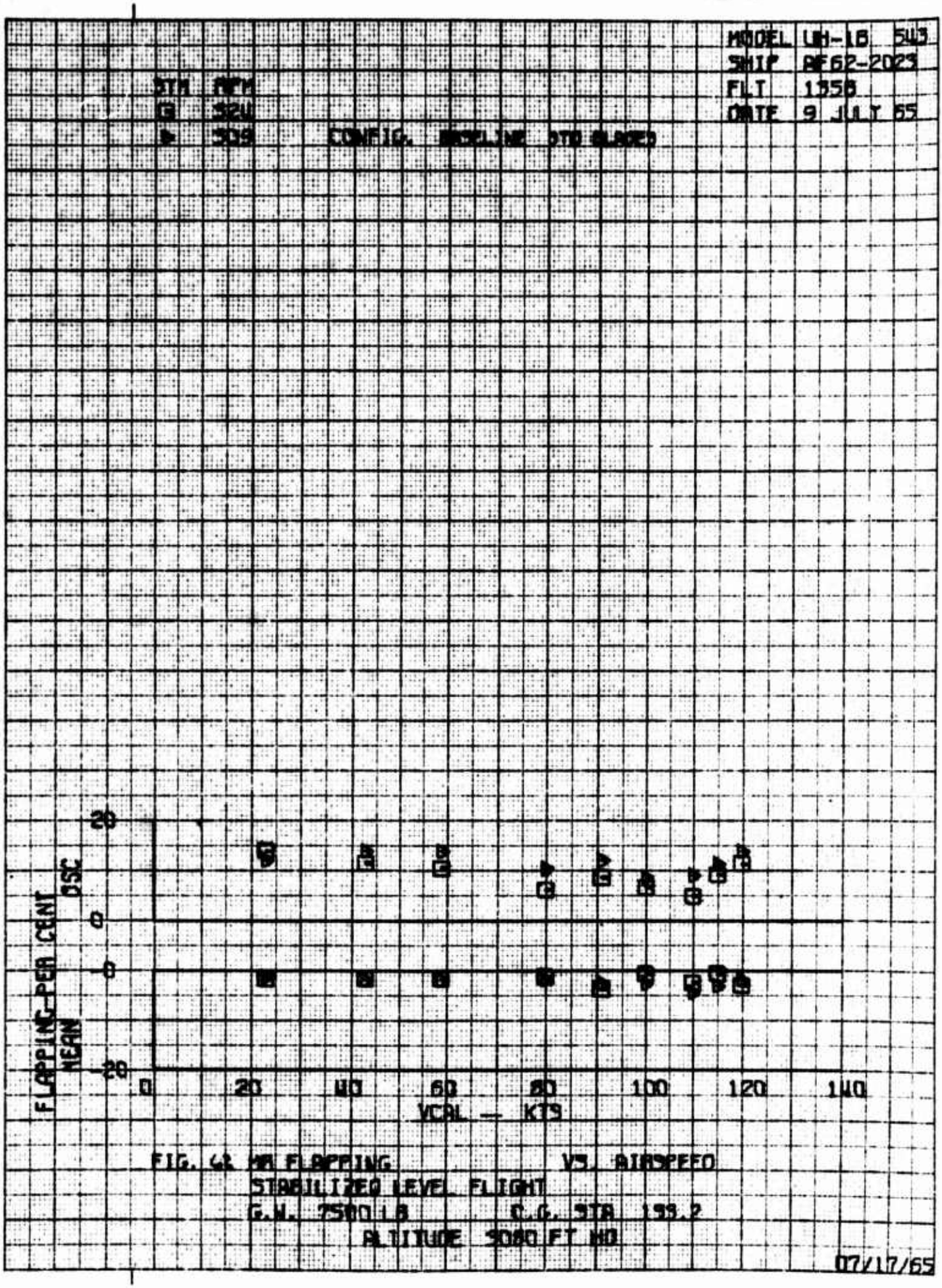


FIG. 42 MR FLAPPING VS. AIRSPEED
STABILIZED LEVEL FLIGHT
G.W. 7500 LB C.G. STA 193.2
ALTITUDE 5000 FT MD

MODEL UH-1B 549
SHIP AF 62-2029
FLT 143-B
DATE 19 AUG 65

STA RPM
□ 92U
▶ 510 CONFIG. LOAD SURVEY - MODEL ANTENNA H/B
4 BLADES

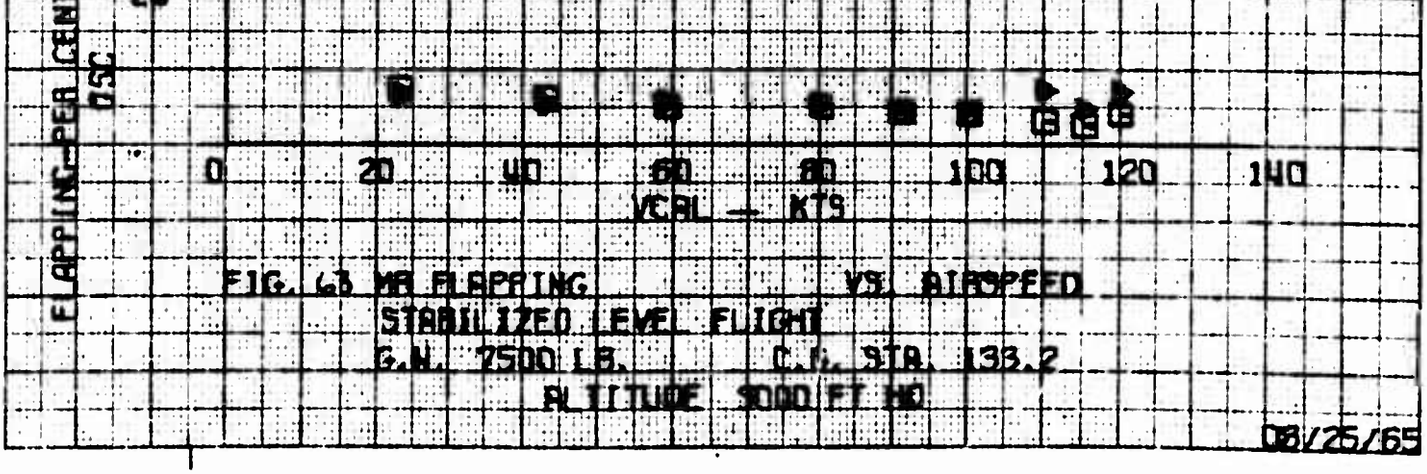


FIG. 43 MR FLAPPING VS. AIRSPEED
STABILIZED LEVEL FLIGHT
G.W. 7500 LB. C.G. STA. 133.2
ALTITUDE 3000 FT MD

08/25/65

MODEL UH-1B 543
SHIP BF67-2023
FLT 1355
DATE 9 JULY 65

PTM REV
G 328
▶ 305

CONFIG. BASELINE STD BLADES

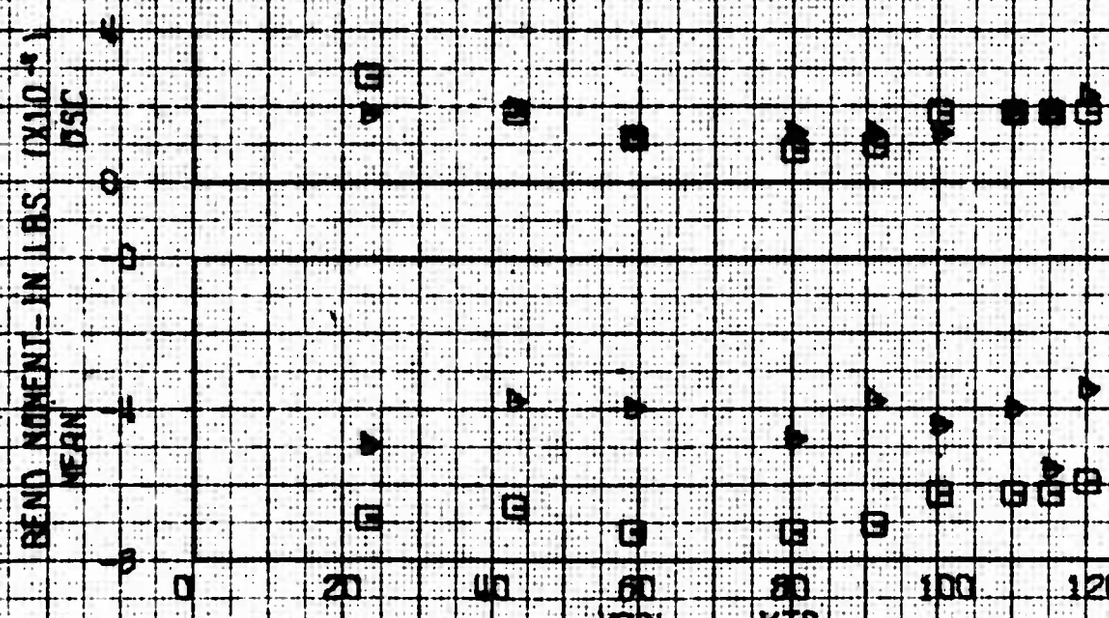


FIG. 64 MR YOKE BM STA 6.0 VS AIRSPEED
STABILIZED LEVEL FLIGHT
G.W. 7500 LB C.G. STA 133.2
ALTITUDE 5000 FT HD

07/17/65

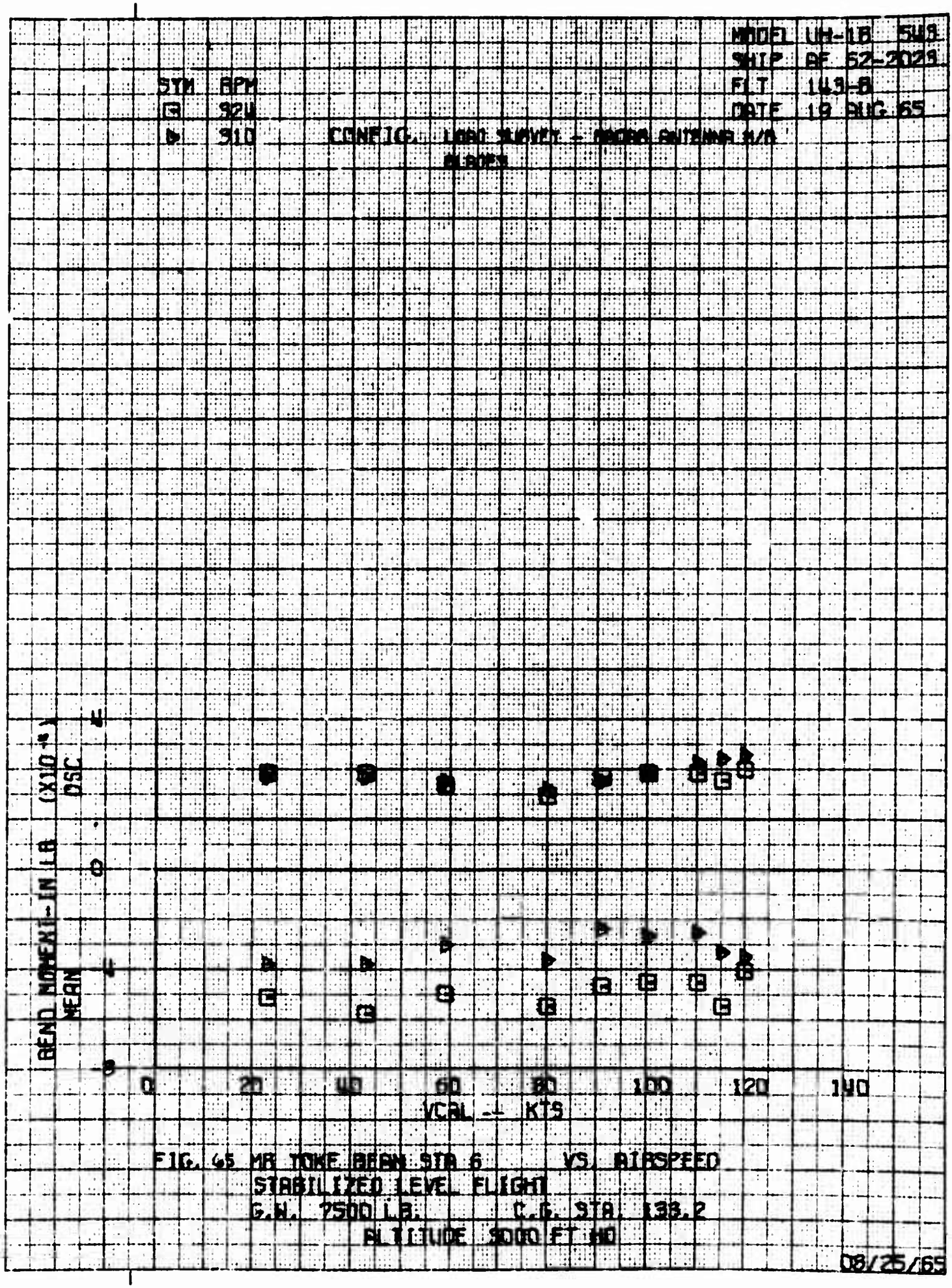


FIG. 65 MR YOKE BEAM STA 6 VS. AIRSPEED
STABILIZED LEVEL FLIGHT
G.W. 7500 LB. C.G. STA. 138.2
ALTITUDE 5000 FT MD

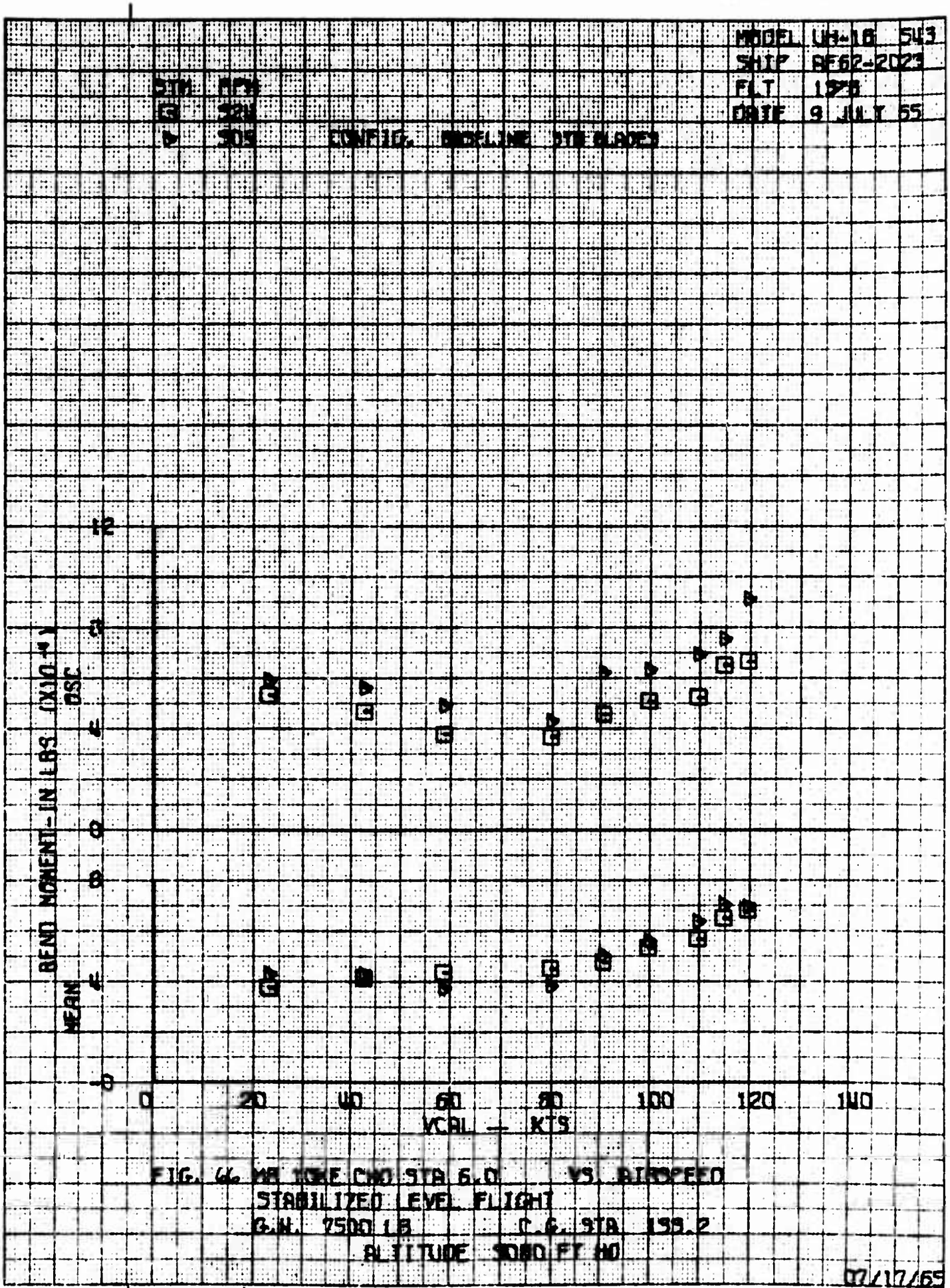


FIG. 66 MR TUBE CHO STA 6.0 VS AIRSPEED
STABILIZED LEVEL FLIGHT
G.W. 7500 LB C.G. STA 139.2
ALTITUDE 5000 FT HD

07/17/65

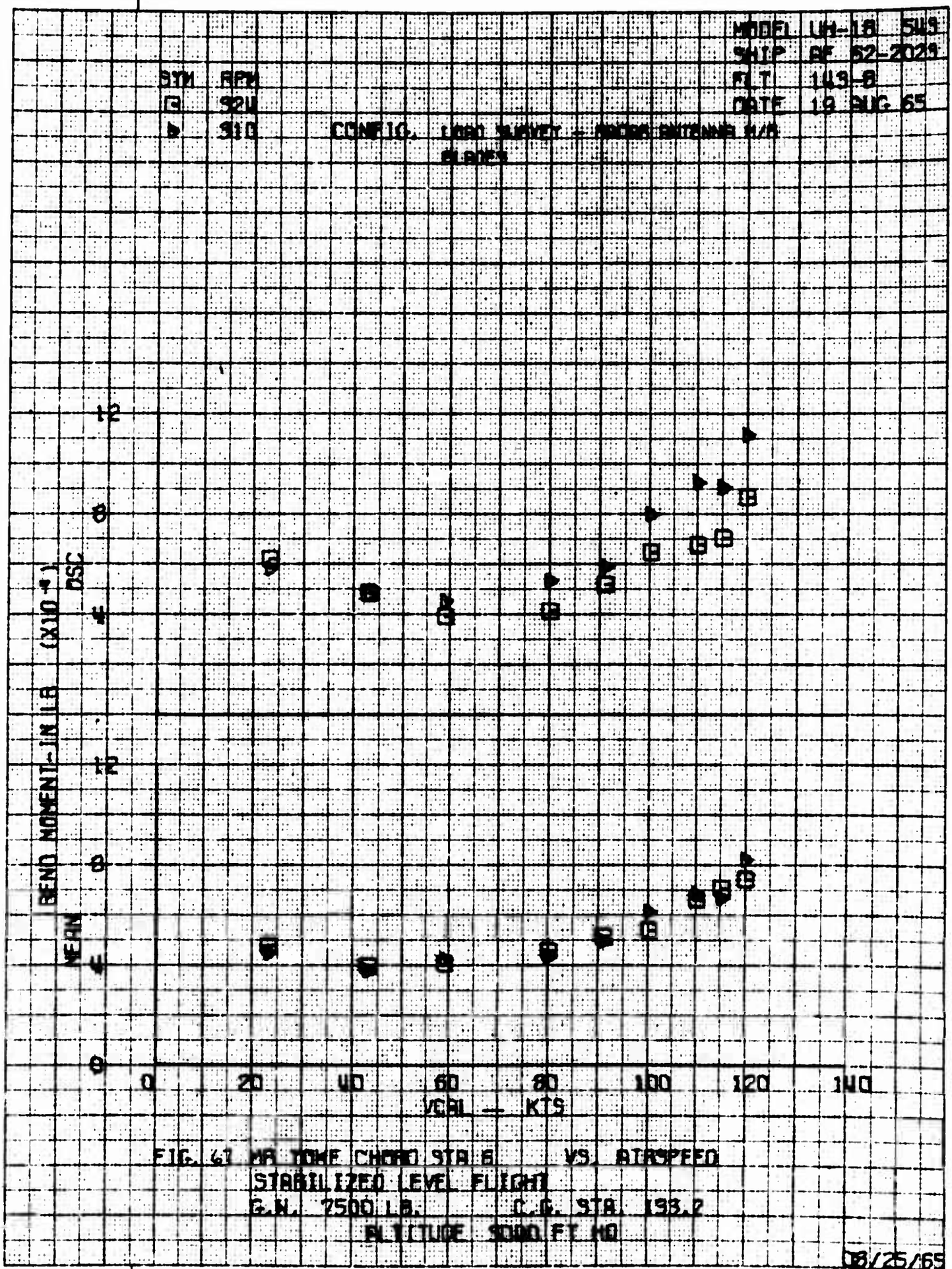


FIG. 61 MR YOKE CHORD STA 6 VS. AIRSPEED
STABILIZED LEVEL FLIGHT
G.W. 7500 LB. C.G. STA. 193.2
ALTITUDE 5000 FT MD

08/25/65

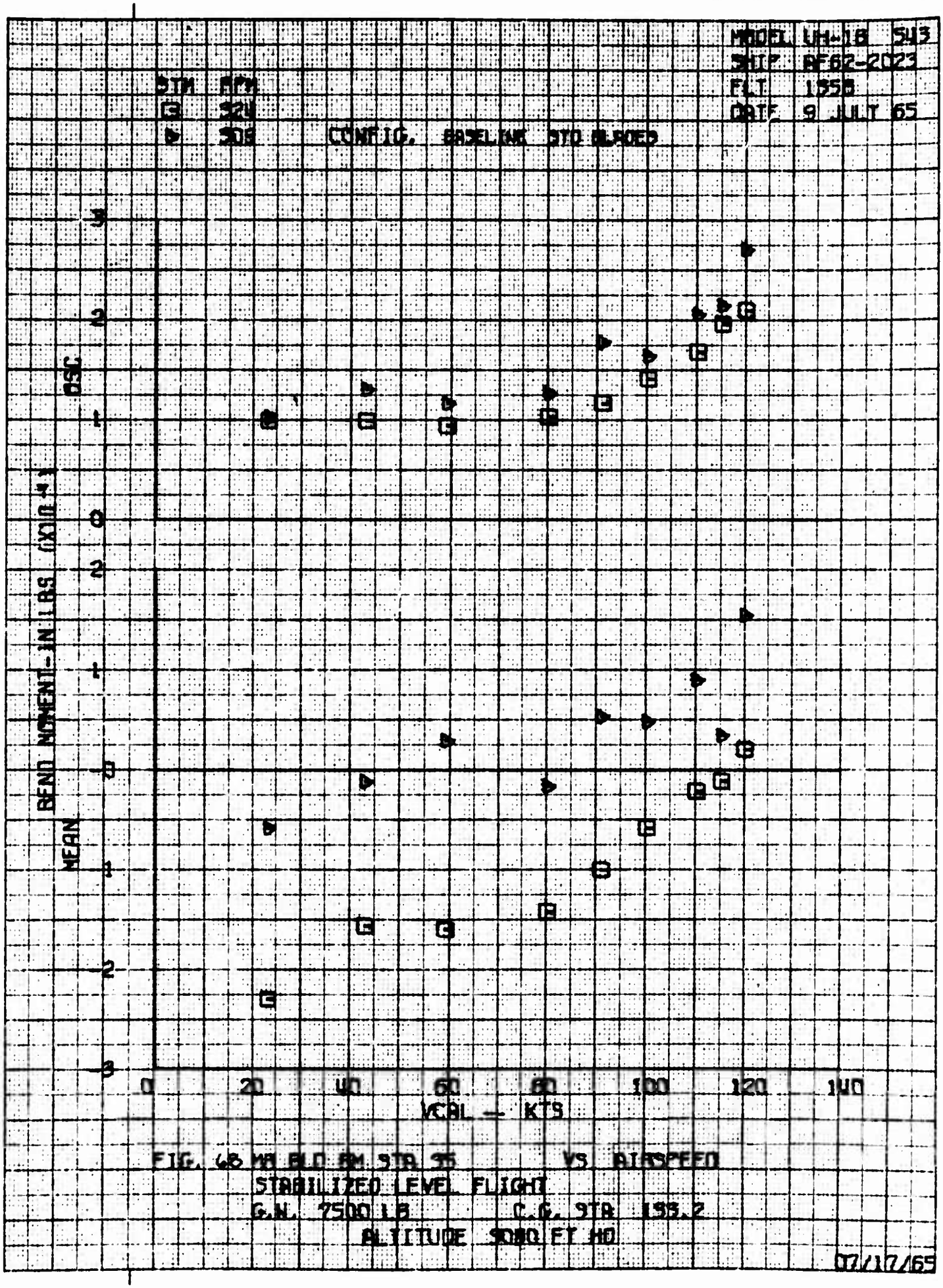


FIG. 48 MR BLD BM STA 35 VS AIRSPEED
STABILIZED LEVEL FLIGHT
G.W. 7500 LB C.G. STA 193.2
ALTITUDE 5000 FT MD

07/17/65

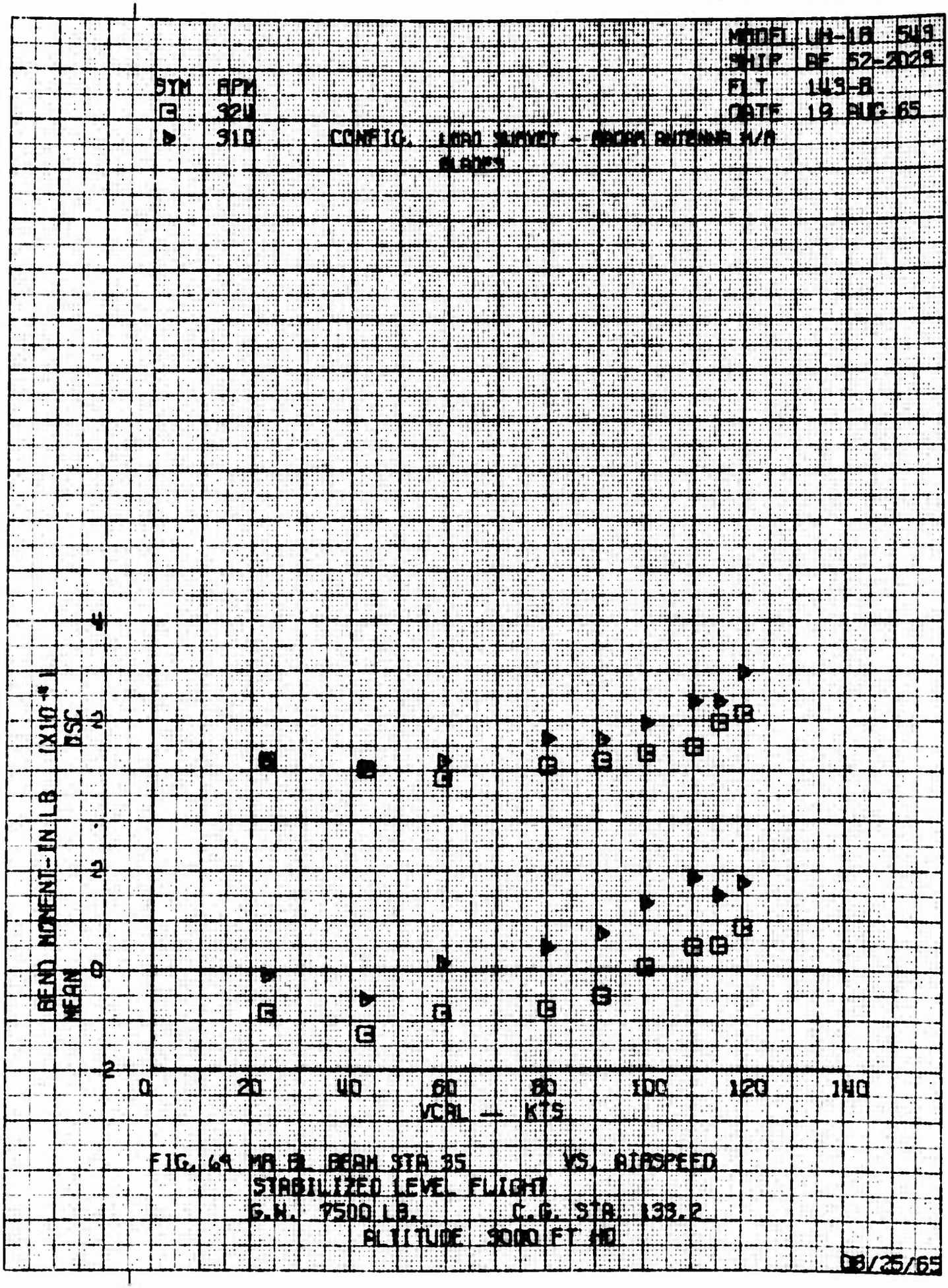


FIG. 69 MR BL BEAM STA 35 VS. AIRSPEED
STABILIZED LEVEL FLIGHT
G.W. 7500 LB. C.G. STA 133.2
ALTITUDE 3000 FT MD

08/25/65

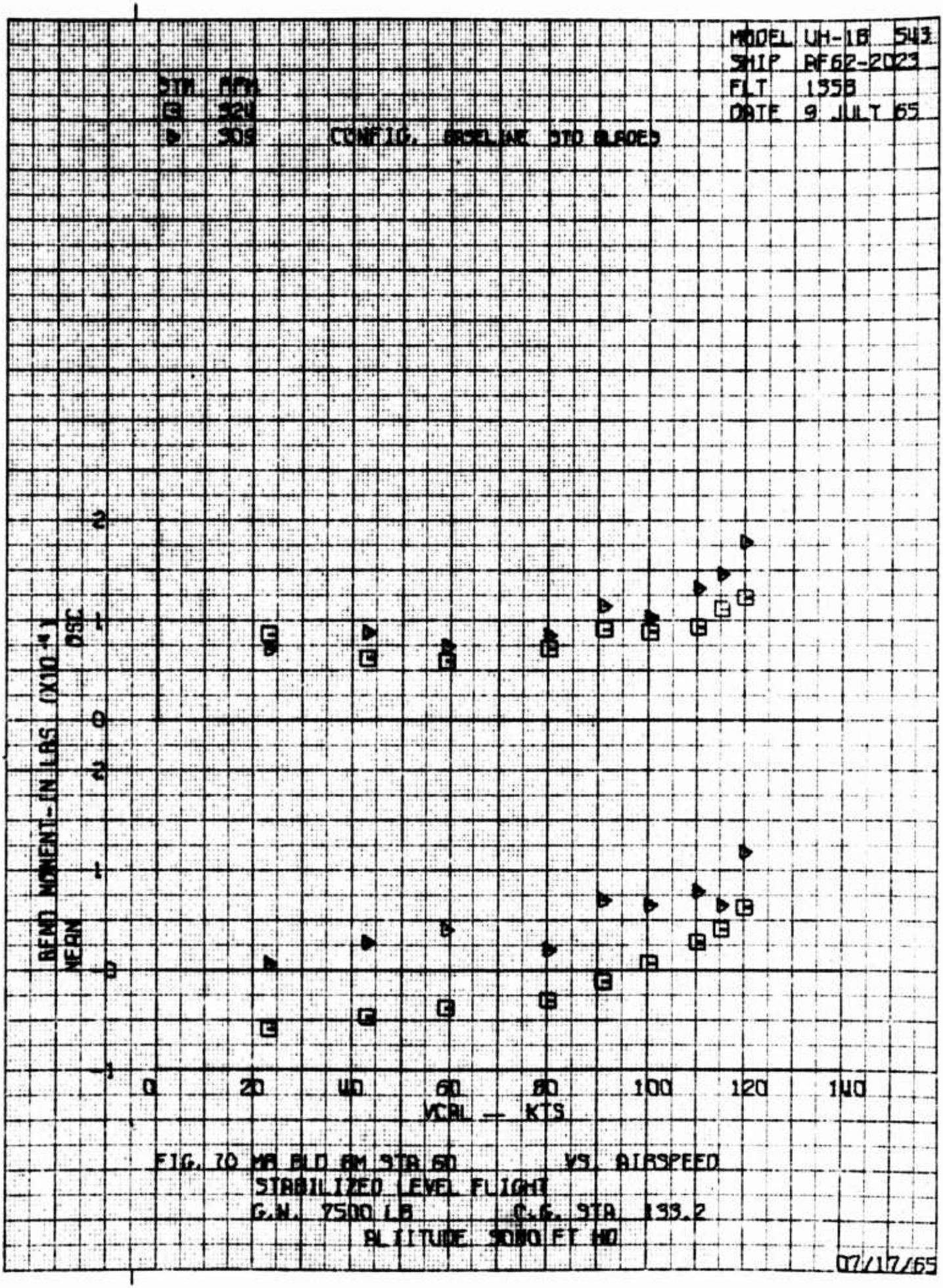


FIG. 70 MR BLD BM STA 60 VS. AIRSPEED
STABILIZED LEVEL FLIGHT
G.W. 7500 LB C.G. STA 133.2
ALTITUDE 5000 FT MD

07/17/65

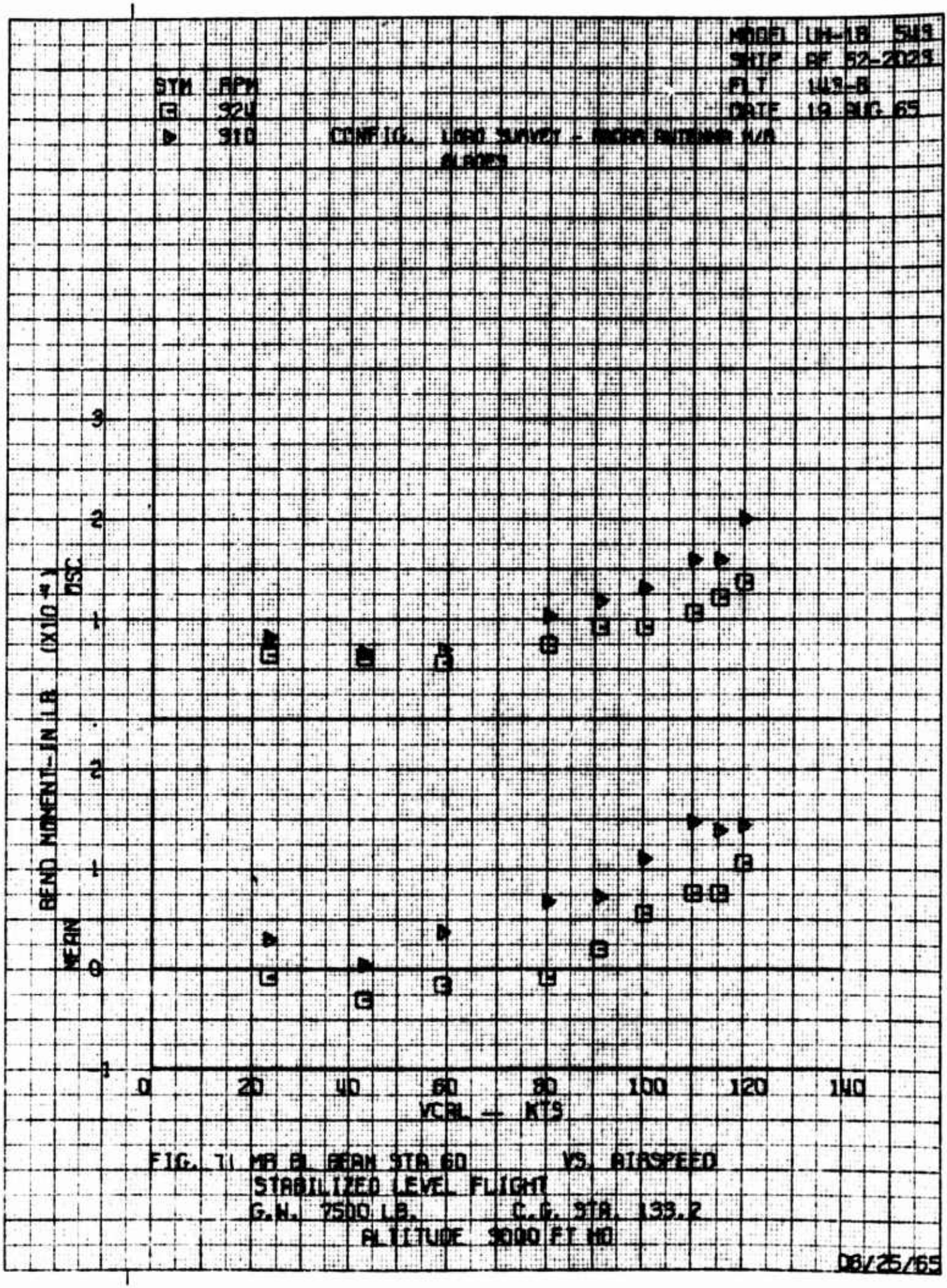


FIG. 11 MB BL BEAM STA 60 VS. AIRSPEED
STABILIZED LEVEL FLIGHT
G.W. 7500 LB. C.G. STA. 133.2
ALTITUDE 3000 FT MD

08/25/65

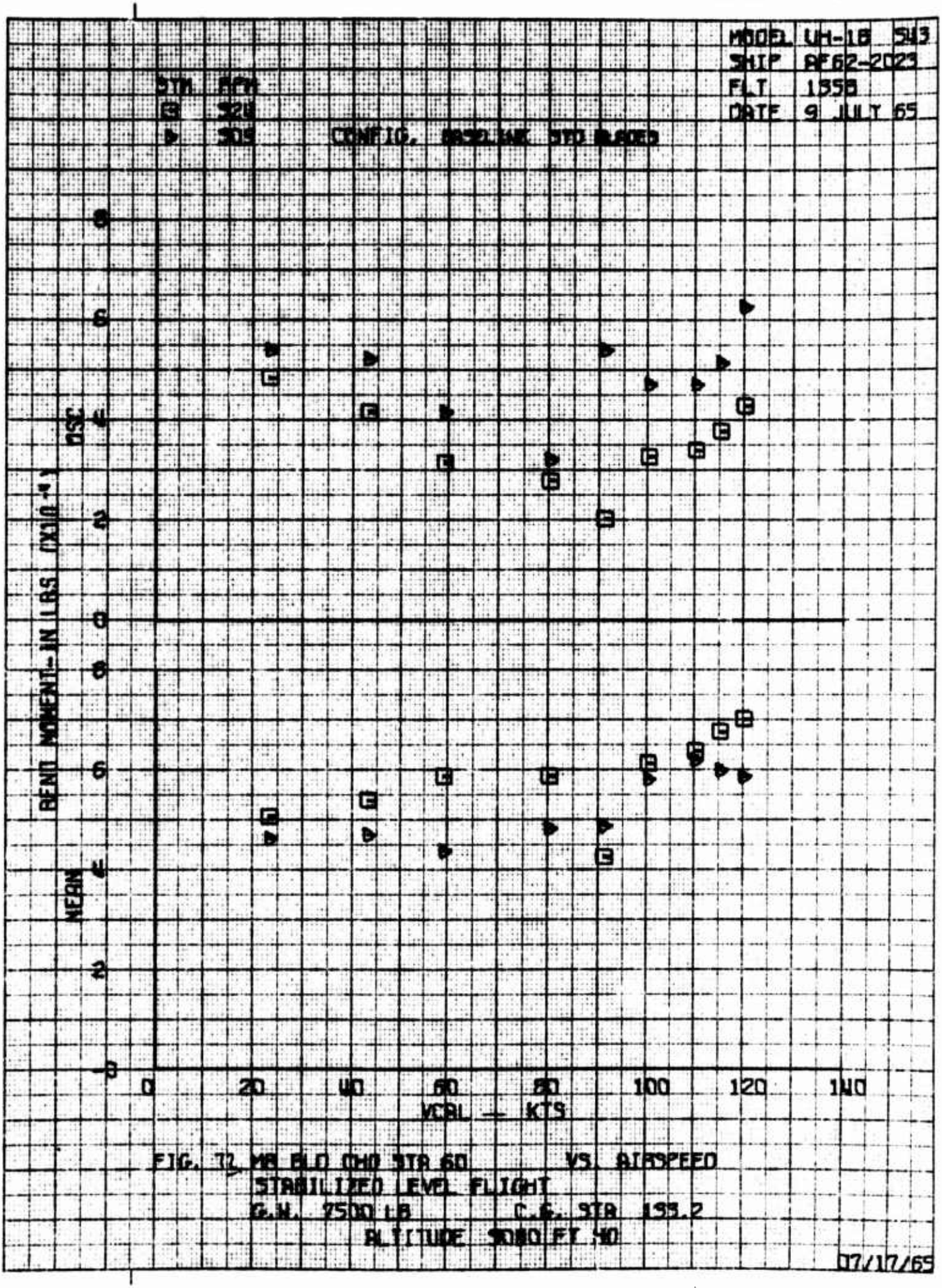


FIG. 72 MB BLO OHD STA 60 VS AIRSPEED
STABILIZED LEVEL FLIGHT
G.W. 7500 LB C.G. STA 133.2
ALTITUDE 5080 FT MD

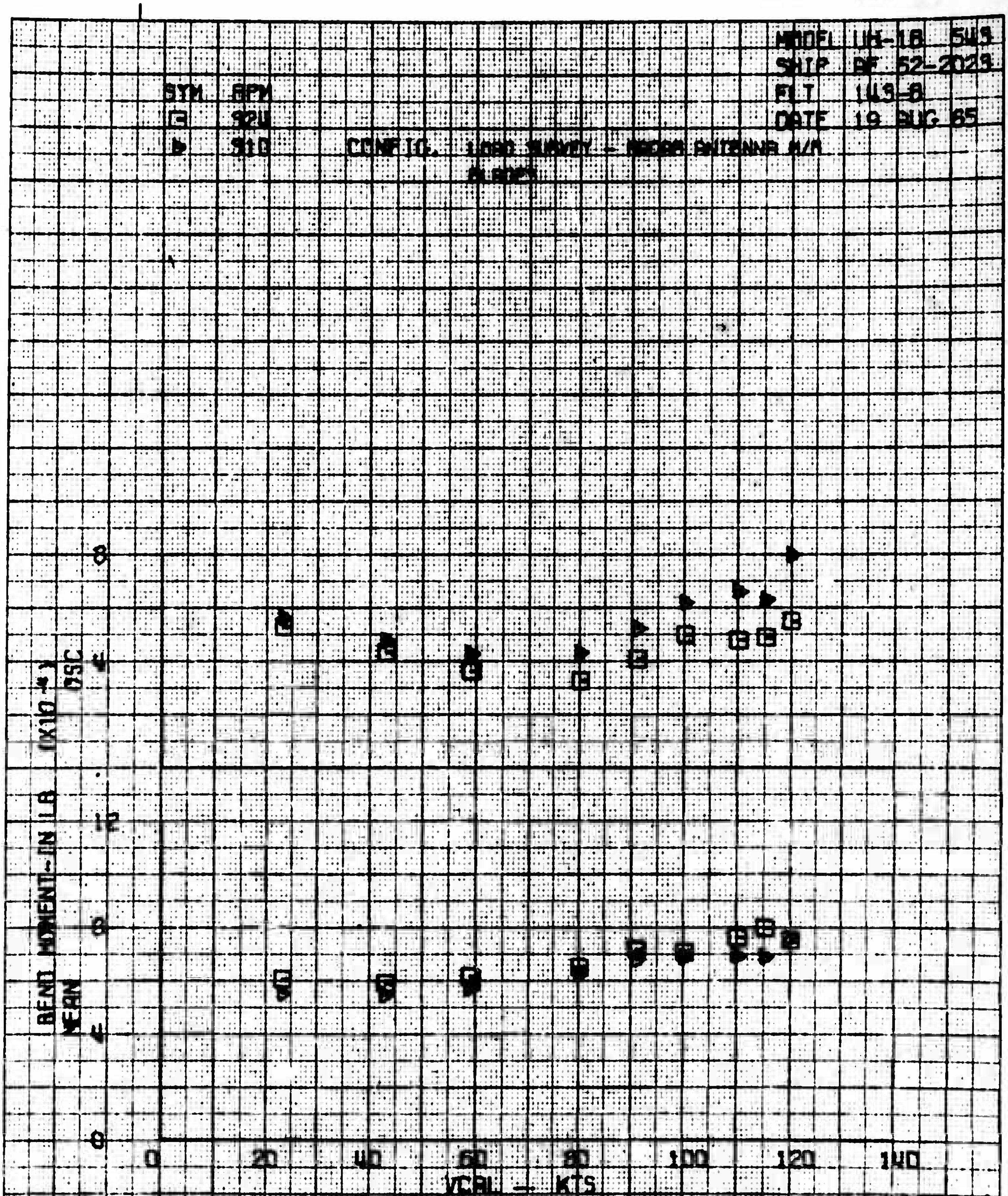


FIG. 13 MR BL CHORD STA 60 VS. AIRSPEED
STABILIZED LEVEL FLIGHT
G.W. 7500 LB. C.G. STA. 133.2
ALTITUDE 9000 FT HD

08/25/65

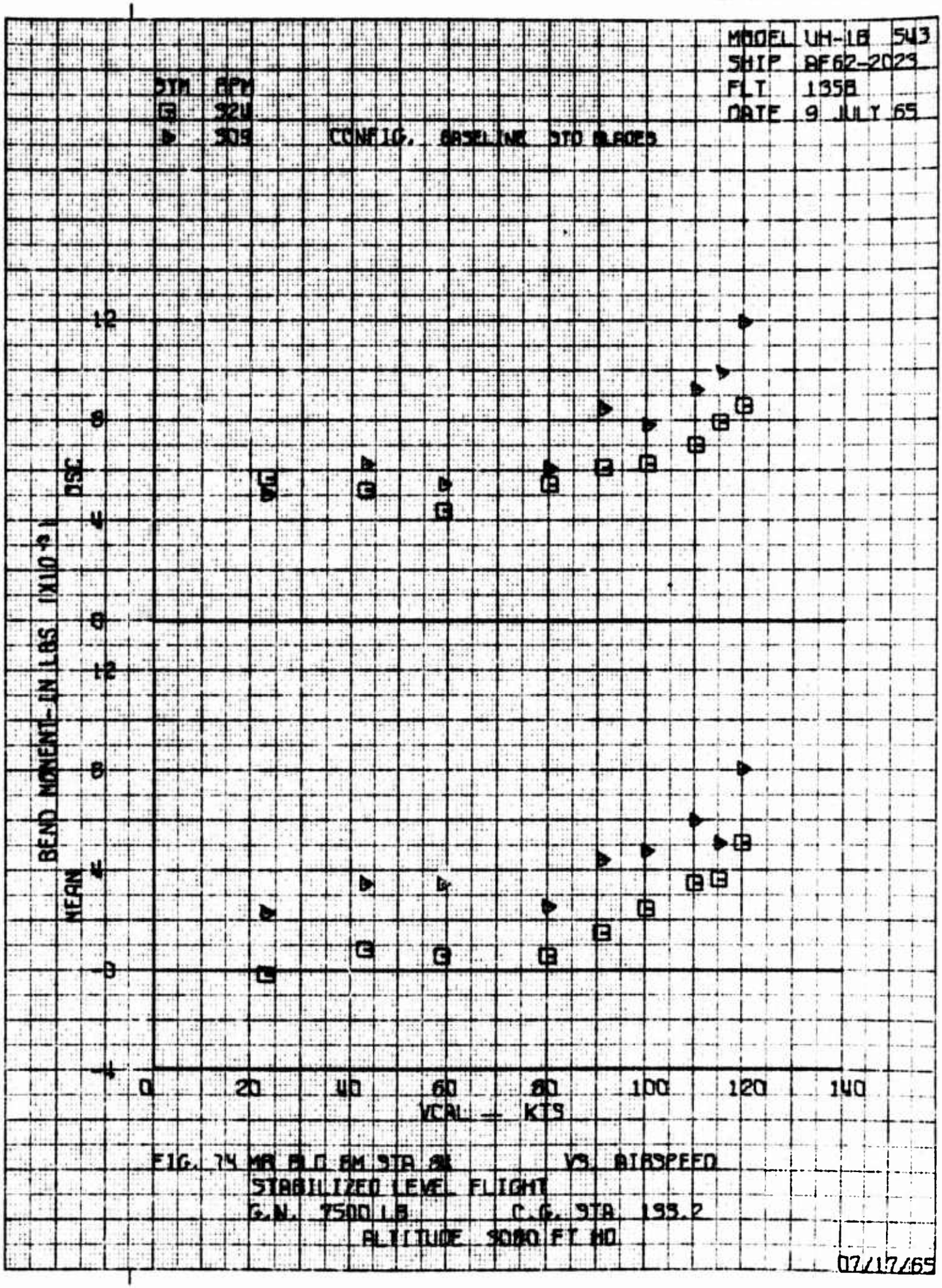


FIG. 74 MR BLD BM STA 86 VS AIRSPEED
STABILIZED LEVEL FLIGHT
G.W. 7500 LB C.G. STA 193.2
ALTITUDE 5080 FT MD

07/17/65

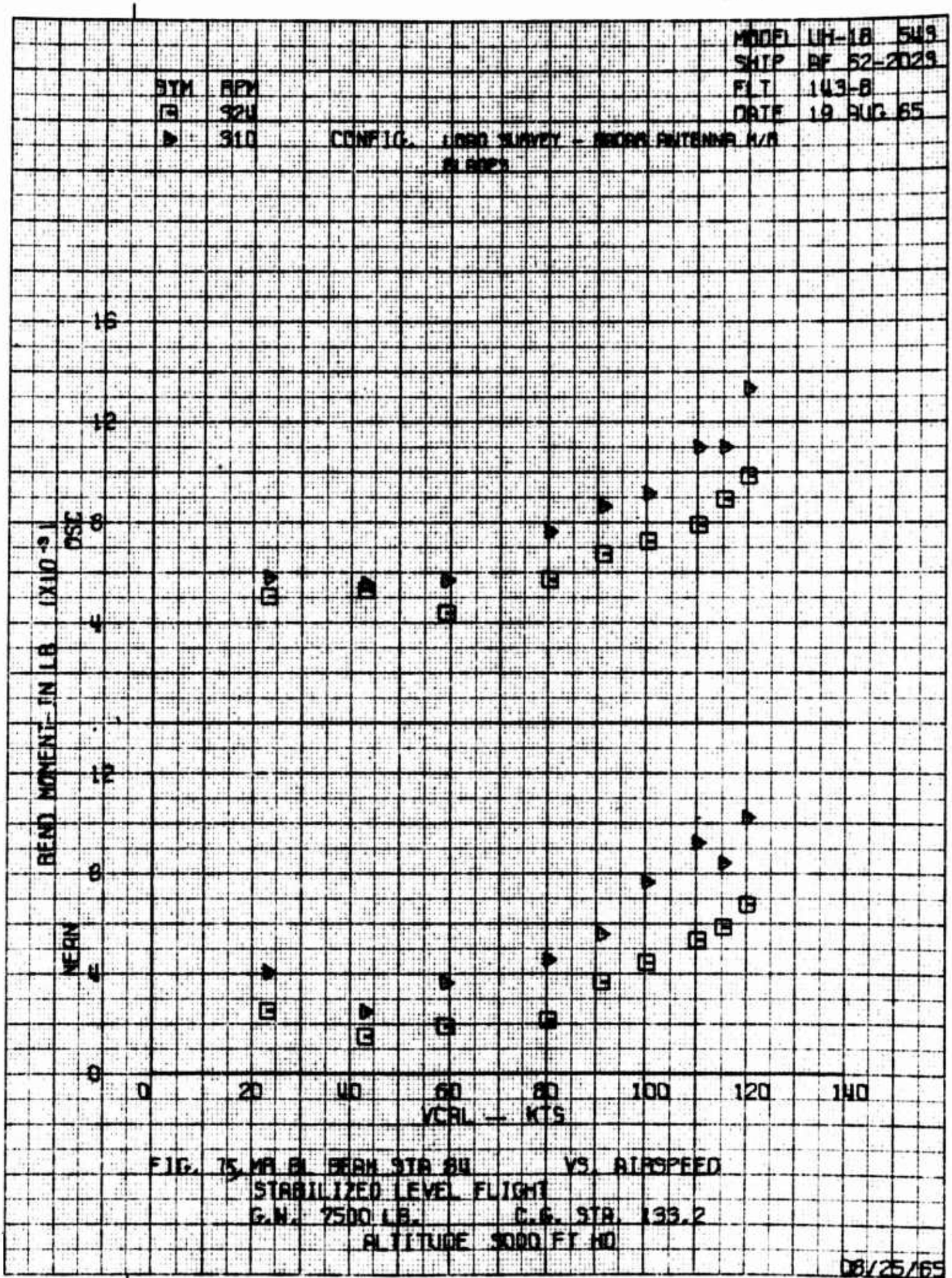


FIG. 75 MA BL BEAM STA 84 VS. AIRSPEED
STABILIZED LEVEL FLIGHT
G.W. 7500 LB. C.G. STA. 133.2
ALTITUDE 5000 FT MD

08/25/65

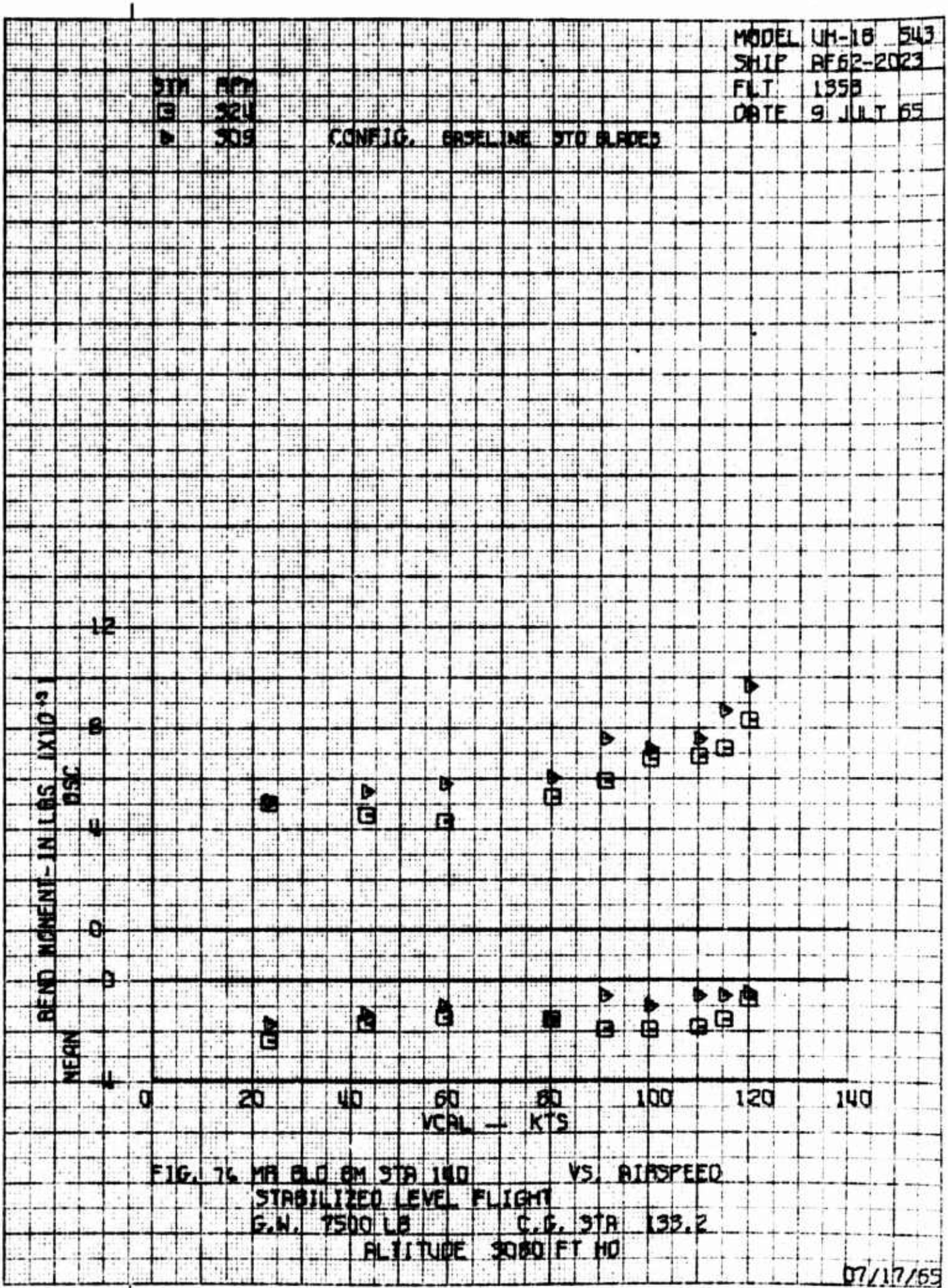


FIG. 76 MR BLD 6M STA 140 VS. AIRSPEED
STABILIZED LEVEL FLIGHT
G.W. 7500 LB C.G. STA 138.2
ALTITUDE 3080 FT HD

07/17/65

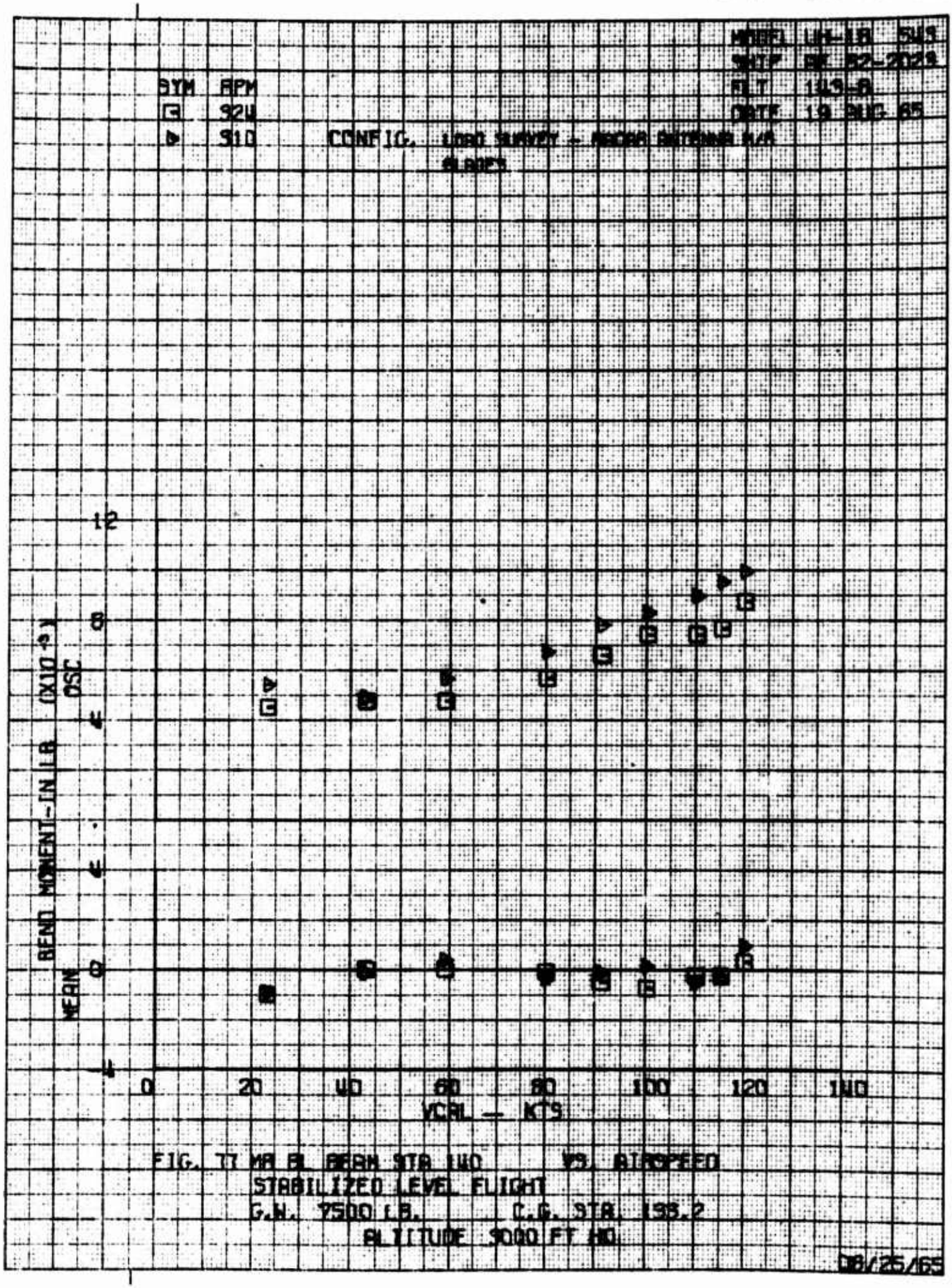


FIG. 77 MR BL BEAM STA 140 VS. AIRSPEED
STABILIZED LEVEL FLIGHT
G.W. 7500 LB. C.G. STA. 138.2
ALTITUDE 5000 FT MSL

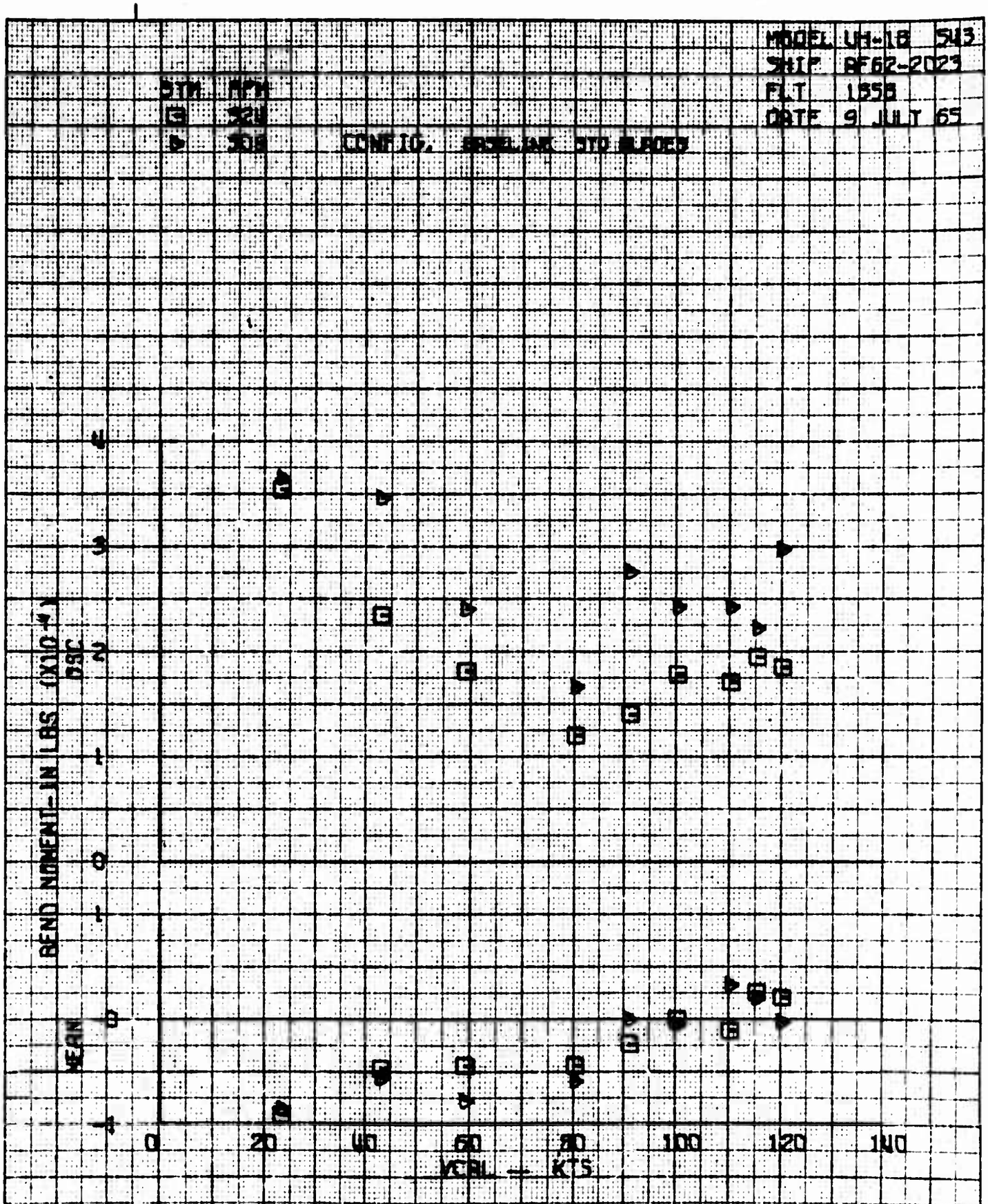


FIG. 76 MR BLD OHD STA 140 VS AIRSPEED
STABILIZED LEVEL FLIGHT
G.W. 7500 LB C.G. STA 139.2
ALTITUDE 5000 FT HD

07/17/65

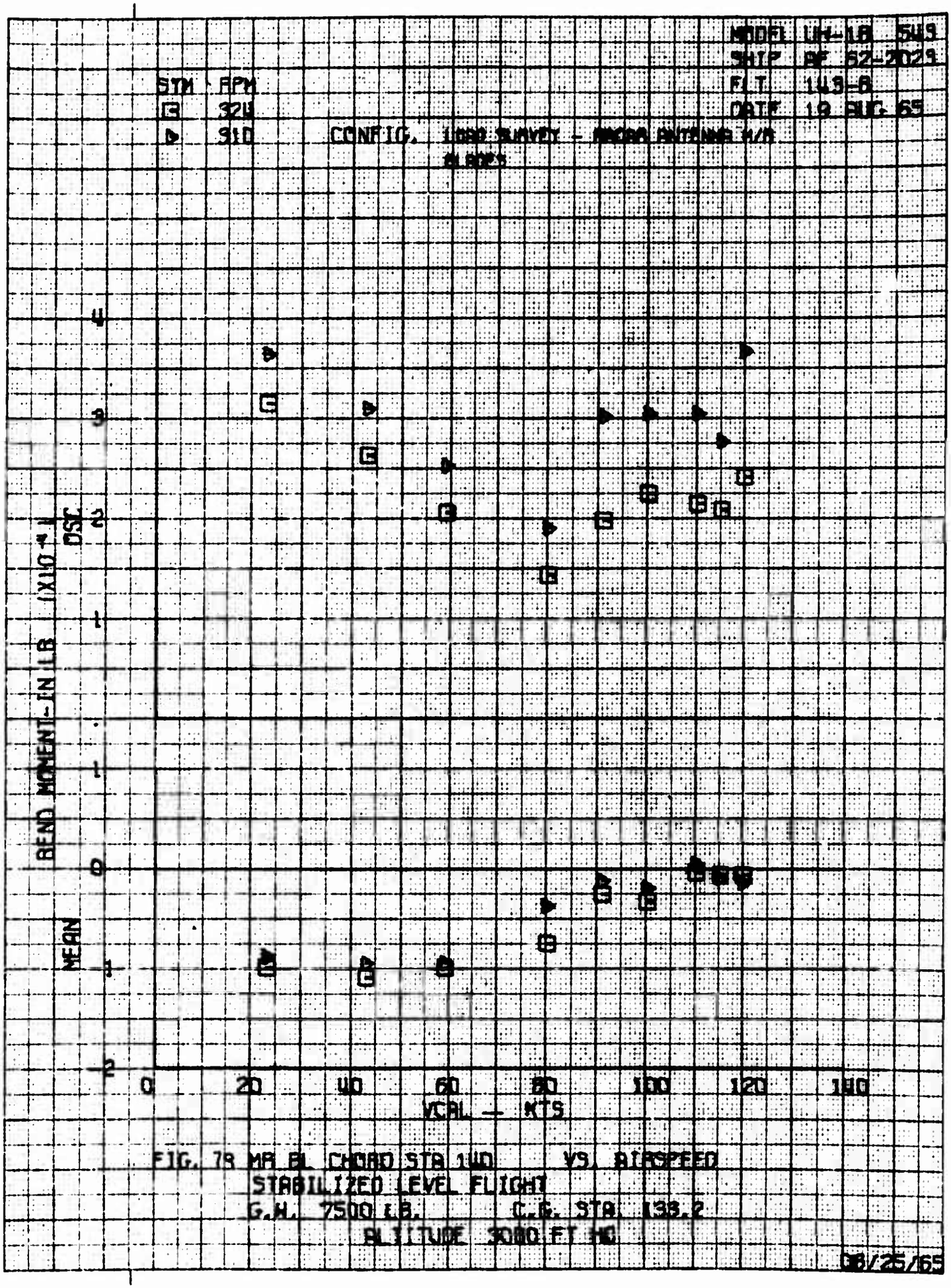


FIG. 78 MR BL CHORD STA 140 VS. AIRSPEED
STABILIZED LEVEL FLIGHT
G.W. 7500 LB. C.G. STA 133.2
ALTITUDE 3000 FT MSL

08/25/65

APPENDIX E

Tabulated Load Level Data

BASELINE STD BLADES

MODEL UH-1B 543 FLT. 135A G.W. 7500 LB ALT. 3000 FT HD
SHIP AF62-2023 DATE 9 JULY 65 C.G. STA 125.4 OSC. NO. 1

CTR NO.	TEST CONDITION	RPM	VCAL KTS	MR BLD BM STA 140 MEAN	OSC
495	STABILIZED LEVEL FLIGHT	309	23.0	-1712.500	6187.500
496	STABILIZED LEVEL FLIGHT	309	43.0	-1162.500	4812.500
497	STABILIZED LEVEL FLIGHT	309	59.0	-1162.500	5362.500
498	STABILIZED LEVEL FLIGHT	309	80.0	-887.500	6462.500
499	STABILIZED LEVEL FLIGHT	309	91.0	-750.000	7425.000
500	STABILIZED LEVEL FLIGHT	309	100.0	-750.000	7425.000
501	STABILIZED LEVEL FLIGHT	309	110.0	-750.000	8525.000
502	STABILIZED LEVEL FLIGHT	309	115.0	-612.500	8387.500
503	STABILIZED LEVEL FLIGHT	309	120.0	-750.000	9900.000
504	STABILIZED LEVEL FLIGHT	324	23.0	-1712.500	4812.500
505	STABILIZED LEVEL FLIGHT	324	43.0	-887.500	4262.500
506	STABILIZED LEVEL FLIGHT	324	59.0	-1437.500	4537.500
507	STABILIZED LEVEL FLIGHT	324	80.0	-887.500	5912.500
508	STABILIZED LEVEL FLIGHT	324	91.0	-1712.500	6737.500
509	STABILIZED LEVEL FLIGHT	324	100.0	-1575.000	7150.000
510	STABILIZED LEVEL FLIGHT	324	110.0	-1712.500	6737.500
511	STABILIZED LEVEL FLIGHT	324	115.0	-1712.500	7562.500
512	STABILIZED LEVEL FLIGHT	324	120.0	-1162.500	8112.500

BASELINE STD BLADES

MODEL UH-1B 543 FLT. 135A G.W. 7500 LB ALT. 3000 FT HD
SHIP AF62-2023 DATE 9 JULY 65 C.G. STA 125.4 OSC. NO. 1

CTR NO.	TEST CONDITION	RPM	VCAL KTS	MR BLD BM STA 84 MEAN	OSC
495	STABILIZED LEVEL FLIGHT	309	23.0	2129.880	7138.040
496	STABILIZED LEVEL FLIGHT	309	43.0	2533.920	5387.200
497	STABILIZED LEVEL FLIGHT	309	59.0	2399.240	5252.520
498	STABILIZED LEVEL FLIGHT	309	80.0	3746.040	6868.680
499	STABILIZED LEVEL FLIGHT	309	91.0	5631.560	8484.840
500	STABILIZED LEVEL FLIGHT	309	100.0	6304.960	8350.160
501	STABILIZED LEVEL FLIGHT	309	110.0	7786.440	9562.280
502	STABILIZED LEVEL FLIGHT	309	115.0	6709.000	9831.640
503	STABILIZED LEVEL FLIGHT	309	120.0	8594.520	12255.880
504	STABILIZED LEVEL FLIGHT	324	23.0	1052.440	5252.520
505	STABILIZED LEVEL FLIGHT	324	43.0	917.760	4309.760
506	STABILIZED LEVEL FLIGHT	324	59.0	-25.000	4713.800
507	STABILIZED LEVEL FLIGHT	324	80.0	2399.240	6329.960
508	STABILIZED LEVEL FLIGHT	324	91.0	3476.680	6599.320
509	STABILIZED LEVEL FLIGHT	324	100.0	4823.480	7676.760
510	STABILIZED LEVEL FLIGHT	324	110.0	2668.600	7407.400
511	STABILIZED LEVEL FLIGHT	324	115.0	4823.480	7946.120
512	STABILIZED LEVEL FLIGHT	324	120.0	6439.640	8754.200

BASELINE STD BLADES

MODEL UH-1B 543 FLT. 135A G.W. 7500 LB ALT. 3000 FT HD
SHIP AF62-2023 DATE 9 JULY 65 C.G. STA 125.4 OSC. NO. 1

CTR NO.	TEST CONDITION	RPM	VCAL KTS	MR BLD BM STA 60 MEAN	OSC
495	STABILIZED LEVEL FLIGHT	309	23.0	1488.400	9567.900
496	STABILIZED LEVEL FLIGHT	309	43.0	159.525	7175.925
497	STABILIZED LEVEL FLIGHT	309	59.0	1754.175	6112.825
498	STABILIZED LEVEL FLIGHT	309	80.0	4411.925	9302.125
499	STABILIZED LEVEL FLIGHT	309	91.0	7069.675	12491.425
500	STABILIZED LEVEL FLIGHT	309	100.0	9727.425	11428.325
501	STABILIZED LEVEL FLIGHT	309	110.0	12650.950	13288.750
502	STABILIZED LEVEL FLIGHT	309	115.0	10258.975	14617.625
503	STABILIZED LEVEL FLIGHT	309	120.0	12916.725	18338.475
504	STABILIZED LEVEL FLIGHT	324	23.0	-4092.875	7175.925
505	STABILIZED LEVEL FLIGHT	324	43.0	-2498.225	5581.275
506	STABILIZED LEVEL FLIGHT	324	59.0	-3827.100	5847.050
507	STABILIZED LEVEL FLIGHT	324	80.0	2551.500	9036.350
508	STABILIZED LEVEL FLIGHT	324	91.0	3614.600	7973.250
509	STABILIZED LEVEL FLIGHT	324	100.0	6538.125	10365.225
510	STABILIZED LEVEL FLIGHT	324	110.0	1754.175	9833.675
511	STABILIZED LEVEL FLIGHT	324	115.0	5740.800	11162.550
512	STABILIZED LEVEL FLIGHT	324	120.0	7601.225	14086.075

BASELINE STD BLADES

MODEL UH-1B 543 FLT. 135A G.W. 7500 LB ALT. 3000 FT HD
SHIP AF62-2023 DATE 9 JULY 65 C.G. STA 125.4 OSC. NO. 1

CTR NO.	TEST CONDITION	RPM	VCAL KTS	MR BLD BM STA 35 MEAN	MR BLD BM STA 35 OSC
495	STABILIZED LEVEL FLIGHT	309	23.0	-5858.600	13908.000
496	STABILIZED LEVEL FLIGHT	309	43.0	-2613.401	10662.800
497	STABILIZED LEVEL FLIGHT	309	59.0	-759.000	9735.600
498	STABILIZED LEVEL FLIGHT	309	80.0	631.800	13908.000
499	STABILIZED LEVEL FLIGHT	309	91.0	8049.400	18544.000
500	STABILIZED LEVEL FLIGHT	309	100.0	10367.400	17153.200
501	STABILIZED LEVEL FLIGHT	309	110.0	18248.599	21325.600
502	STABILIZED LEVEL FLIGHT	309	115.0	10367.399	22716.400
503	STABILIZED LEVEL FLIGHT	309	120.0	17321.399	27816.000
504	STABILIZED LEVEL FLIGHT	324	23.0	-15130.600	12980.800
505	STABILIZED LEVEL FLIGHT	324	43.0	-10494.600	9272.000
506	STABILIZED LEVEL FLIGHT	324	59.0	-14203.400	10199.200
507	STABILIZED LEVEL FLIGHT	324	80.0	-1686.200	13444.400
508	STABILIZED LEVEL FLIGHT	324	91.0	-2149.800	12053.599
509	STABILIZED LEVEL FLIGHT	324	100.0	5731.400	16226.000
510	STABILIZED LEVEL FLIGHT	324	110.0	-5395.000	16226.000
511	STABILIZED LEVEL FLIGHT	324	115.0	3877.000	19934.800
512	STABILIZED LEVEL FLIGHT	324	120.0	8049.400	21325.600

BASELINE STD BLADES

MODEL UH-1B 543 FLT. 135A G.W. 7500 LB ALT. 3000 FT HD
SHIP AF62-2023 DATE 9 JULY 65 C.G. STA 125.4 OSC. NO. 1

CTR NO.	TEST CONDITION	RPM	VCAL KTS	MR PITCH LINK RED MEAN	OSC
495	STABILIZED LEVEL FLIGHT	309	23.0	117.715	407.475
496	STABILIZED LEVEL FLIGHT	309	43.0	-9.055	316.925
497	STABILIZED LEVEL FLIGHT	309	59.0	-0.000	289.760
498	STABILIZED LEVEL FLIGHT	309	80.0	36.220	325.980
499	STABILIZED LEVEL FLIGHT	309	91.0	181.100	344.090
500	STABILIZED LEVEL FLIGHT	309	100.0	126.770	434.640
501	STABILIZED LEVEL FLIGHT	309	110.0	153.935	534.245
502	STABILIZED LEVEL FLIGHT	309	115.0	108.660	597.630
503	STABILIZED LEVEL FLIGHT	309	120.0	144.880	742.510
504	STABILIZED LEVEL FLIGHT	324	23.0	-9.055	371.255
505	STABILIZED LEVEL FLIGHT	324	43.0	-45.275	298.815
506	STABILIZED LEVEL FLIGHT	324	59.0	-81.495	262.595
507	STABILIZED LEVEL FLIGHT	324	80.0	45.275	353.145
508	STABILIZED LEVEL FLIGHT	324	91.0	81.495	407.475
509	STABILIZED LEVEL FLIGHT	324	100.0	117.715	443.695
510	STABILIZED LEVEL FLIGHT	324	110.0	99.605	479.915
511	STABILIZED LEVEL FLIGHT	324	115.0	144.880	525.190
512	STABILIZED LEVEL FLIGHT	324	120.0	72.440	615.740

BASELINE STD BLADES

MODEL UH-1B 543 FLT. 135A G.W. 7500 LB ALT. 3000 FT HD
SHIP AF62-2023 DATE 9 JULY 65 C.G. STA 125.4 OSC. NO. 1

CTR NO.	TEST CONDITION	RPM	VCAL KTS	MR DRAG BRACE MEAN	MR DRAG BRACE OSC
495	STABILIZED LEVEL FLIGHT	309	23.0	-[illegible]	4609.800
496	STABILIZED LEVEL FLIGHT	309	43.0	-[illegible]	3841.500
497	STABILIZED LEVEL FLIGHT	309	59.0	-[illegible]	2919.540
498	STABILIZED LEVEL FLIGHT	309	80.0	-[illegible]	[illegible].440
499	STABILIZED LEVEL FLIGHT	309	91.0	-[illegible]	4148.820
500	STABILIZED LEVEL FLIGHT	309	100.0	-[illegible]	3841.500
501	STABILIZED LEVEL FLIGHT	309	110.0	-[illegible]	3995.160
502	STABILIZED LEVEL FLIGHT	309	115.0	-[illegible]	4456.140
503	STABILIZED LEVEL FLIGHT	309	120.0	-[illegible]	5224.440
504	STABILIZED LEVEL FLIGHT	324	23.0	-[illegible]	3534.180
505	STABILIZED LEVEL FLIGHT	324	43.0	-[illegible]	3073.200
506	STABILIZED LEVEL FLIGHT	324	59.0	-[illegible]	2612.220
507	STABILIZED LEVEL FLIGHT	324	80.0	-[illegible]	3534.180
508	STABILIZED LEVEL FLIGHT	324	91.0	-[illegible]	3226.860
509	STABILIZED LEVEL FLIGHT	324	100.0	-[illegible]	3687.840
510	STABILIZED LEVEL FLIGHT	324	110.0	-[illegible]	3073.200
511	STABILIZED LEVEL FLIGHT	324	115.0	-[illegible]	3841.500
512	STABILIZED LEVEL FLIGHT	324	120.0	-[illegible]	4148.820

BASELINE STD BLADES

MODEL UH-1B 543 FLT. 135A G.W. 7500 LB ALT. 3000 FT HD
SHIP AF62-2023 DATE 9 JULY 65 C.G. STA 125.4 OSC. NO. 1

CTR NO.	TEST CONDITION	RPM	VCAL KTS	MR YOKE BM STA 6.0 MEAN	OSC
495	STABILIZED LEVEL FLIGHT	309	23.0	-41328.000	27071.999
496	STABILIZED LEVEL FLIGHT	309	43.0	-41327.999	16920.000
497	STABILIZED LEVEL FLIGHT	309	59.0	-44712.000	13536.000
498	STABILIZED LEVEL FLIGHT	309	80.0	-48096.000	10151.999
499	STABILIZED LEVEL FLIGHT	309	91.0	-39636.000	15228.000
500	STABILIZED LEVEL FLIGHT	309	100.0	-44712.000	13536.000
501	STABILIZED LEVEL FLIGHT	309	110.0	-36252.000	21995.999
502	STABILIZED LEVEL FLIGHT	309	115.0	-48096.000	20304.000
503	STABILIZED LEVEL FLIGHT	309	120.0	-43020.000	35532.000
504	STABILIZED LEVEL FLIGHT	324	23.0	-68400.000	20304.001
505	STABILIZED LEVEL FLIGHT	324	43.0	-59940.000	15228.000
506	STABILIZED LEVEL FLIGHT	324	59.0	-71783.999	13536.000
507	STABILIZED LEVEL FLIGHT	324	80.0	-53172.000	15227.999
508	STABILIZED LEVEL FLIGHT	324	91.0	-56556.000	11844.000
509	STABILIZED LEVEL FLIGHT	324	100.0	-44712.000	20304.001
510	STABILIZED LEVEL FLIGHT	324	110.0	-73476.000	15228.000
511	STABILIZED LEVEL FLIGHT	324	115.0	-61632.000	16920.000
512	STABILIZED LEVEL FLIGHT	324	120.0	-59940.000	25380.000

BASELINE STD BLADES

MODEL UH-1B 543 FLT. 135A G.W. 7500 LB ALT. 3000 FT HD
SHIP AF62-2023 DATE 9 JULY 65 C.G. STA 125.4 OSC. NO. 1

CTR NO.	TEST CONDITION	RPM	VCAL KTS	MR BLD CHD STA 140 MEAN	OSC
495	STABILIZED LEVEL FLIGHT	309	23.0	-3740.000	51425.000
496	STABILIZED LEVEL FLIGHT	309	43.0	-5610.001	34595.000
497	STABILIZED LEVEL FLIGHT	309	59.0	-4908.751	25011.250
498	STABILIZED LEVEL FLIGHT	309	80.0	-1402.500	20570.000
499	STABILIZED LEVEL FLIGHT	309	91.0	1402.499	25712.500
500	STABILIZED LEVEL FLIGHT	309	100.0	935.000	26180.000
501	STABILIZED LEVEL FLIGHT	309	110.0	1402.500	24777.500
502	STABILIZED LEVEL FLIGHT	309	115.0	233.750	23608.750
503	STABILIZED LEVEL FLIGHT	309	120.0	467.500	34595.000
504	STABILIZED LEVEL FLIGHT	324	23.0	-6778.750	32491.250
505	STABILIZED LEVEL FLIGHT	324	43.0	-8181.250	24543.750
506	STABILIZED LEVEL FLIGHT	324	59.0	-7947.500	18232.500
507	STABILIZED LEVEL FLIGHT	324	80.0	-5376.251	20803.750
508	STABILIZED LEVEL FLIGHT	324	91.0	-1402.500	20570.000
509	STABILIZED LEVEL FLIGHT	324	100.0	2103.750	24076.250
510	STABILIZED LEVEL FLIGHT	324	110.0	-701.251	17063.750
511	STABILIZED LEVEL FLIGHT	324	115.0	-233.750	21738.749
512	STABILIZED LEVEL FLIGHT	324	120.0	-233.750	22673.750

BASELINE STD BLADES

MODEL UH-1B 543 FLT. 135A G.W. 7500 LB ALT. 3000 FT HD
SHIP AF62-2023 DATE 9 JULY 65 C.G. STA 125.4 OSC. NO. 1

CTR NO.	TEST CONDITION	RPM	VCAL KTS	MR BLD CHD STA 60 MEAN	OSC
495	STABILIZED LEVEL FLIGHT	309	23.0	48640.900	72645.500
496	STABILIZED LEVEL FLIGHT	309	43.0	46745.800	54326.201
497	STABILIZED LEVEL FLIGHT	309	59.0	49904.301	43587.300
498	STABILIZED LEVEL FLIGHT	309	80.0	53062.801	42955.600
499	STABILIZED LEVEL FLIGHT	309	91.0	59379.799	55589.600
500	STABILIZED LEVEL FLIGHT	309	100.0	61906.601	54326.201
501	STABILIZED LEVEL FLIGHT	309	110.0	60643.200	56853.000
502	STABILIZED LEVEL FLIGHT	309	115.0	65065.101	51167.700
503	STABILIZED LEVEL FLIGHT	309	120.0	65696.801	68223.598
504	STABILIZED LEVEL FLIGHT	324	23.0	53694.501	54957.900
505	STABILIZED LEVEL FLIGHT	324	43.0	49904.301	42323.901
506	STABILIZED LEVEL FLIGHT	324	59.0	53694.501	32216.699
507	STABILIZED LEVEL FLIGHT	324	80.0	52431.103	43587.300
508	STABILIZED LEVEL FLIGHT	324	91.0	58116.400	39165.400
509	STABILIZED LEVEL FLIGHT	324	100.0	61906.601	53062.798
510	STABILIZED LEVEL FLIGHT	324	110.0	65065.102	38533.701
511	STABILIZED LEVEL FLIGHT	324	115.0	64433.400	49272.600
512	STABILIZED LEVEL FLIGHT	324	120.0	68855.300	51167.700

BASELINE STD BLADES

MODEL UH-1B 543 FLT. 135A G.W. 7500 LB ALT. 3000 FT HD
SHIP AF62-2023 DATE 9 JULY 65 C.G. STA 125.4 OSC. NO. 1

CTR NO.	TEST CONDITION	RPM	VCAL KTS	MR YOKE CMD STA 6.0 MEAN	OSC
495	STABILIZED LEVEL FLIGHT	309	23.0	41710.215	66283.675
496	STABILIZED LEVEL FLIGHT	309	43.0	38476.865	54643.615
497	STABILIZED LEVEL FLIGHT	309	59.0	39123.536	44296.895
498	STABILIZED LEVEL FLIGHT	309	80.0	47206.910	57553.630
499	STABILIZED LEVEL FLIGHT	309	91.0	56906.959	71780.369
500	STABILIZED LEVEL FLIGHT	309	100.0	63696.997	71457.035
501	STABILIZED LEVEL FLIGHT	309	110.0	69840.360	82773.759
502	STABILIZED LEVEL FLIGHT	309	115.0	70487.031	76307.059
503	STABILIZED LEVEL FLIGHT	309	120.0	77277.065	111550.575
504	STABILIZED LEVEL FLIGHT	324	23.0	42033.551	64667.000
505	STABILIZED LEVEL FLIGHT	324	43.0	35890.185	44943.564
506	STABILIZED LEVEL FLIGHT	324	59.0	39123.535	37830.194
507	STABILIZED LEVEL FLIGHT	324	80.0	44943.566	53350.276
508	STABILIZED LEVEL FLIGHT	324	91.0	50116.926	57876.964
509	STABILIZED LEVEL FLIGHT	324	100.0	55290.285	70810.363
510	STABILIZED LEVEL FLIGHT	324	110.0	60463.645	57876.963
511	STABILIZED LEVEL FLIGHT	324	115.0	66607.010	68547.020
512	STABILIZED LEVEL FLIGHT	324	120.0	77277.065	78570.404

BASELINE STD BLADES

MODEL UH-1B 543 FLT. 135A G.W. 7500 LB ALT. 3000 FT HD
SHIP AF62-2023 DATE 9 JULY 65 C.G. STA 125.4 OSC. NO. 1

CTR NO.	TEST CONDITION	RPM	VCAL KTS	MR FLAPPING MEAN	OSC
495	STABILIZED LEVEL FLIGHT	309	23.0	0.000	36.360
496	STABILIZED LEVEL FLIGHT	309	43.0	-0.000	44.844
497	STABILIZED LEVEL FLIGHT	309	59.0	0.606	43.026
498	STABILIZED LEVEL FLIGHT	309	80.0	-0.606	41.814
499	STABILIZED LEVEL FLIGHT	309	91.0	-2.424	38.784
500	STABILIZED LEVEL FLIGHT	309	100.0	0.000	35.148
501	STABILIZED LEVEL FLIGHT	309	110.0	0.000	32.724
502	STABILIZED LEVEL FLIGHT	309	115.0	-0.606	33.330
503	STABILIZED LEVEL FLIGHT	309	120.0	0.000	35.148
504	STABILIZED LEVEL FLIGHT	324	23.0	0.606	35.754
505	STABILIZED LEVEL FLIGHT	324	43.0	-0.000	44.844
506	STABILIZED LEVEL FLIGHT	324	59.0	-1.212	42.420
507	STABILIZED LEVEL FLIGHT	324	80.0	-1.212	43.632
508	STABILIZED LEVEL FLIGHT	324	91.0	-0.606	36.966
509	STABILIZED LEVEL FLIGHT	324	100.0	0.000	36.360
510	STABILIZED LEVEL FLIGHT	324	110.0	-0.606	30.906
511	STABILIZED LEVEL FLIGHT	324	115.0	-0.606	30.906
512	STABILIZED LEVEL FLIGHT	324	120.0	-2.424	31.512

BASELINE STD BLADES

MODEL UH-1B 543 FLT. 135A G.W. 7500 LB ALT. 3000 FT HD
SHIP AF62-2023 DATE 9 JULY 65 C.G. STA 125.4 OSC. NO. 1

CTR NO.	TEST CONDITION	RPM	VCAL KTS	PILOT VERT ACCEL MEAN	OSC
495	STABILIZED LEVEL FLIGHT	309	23.0	0.994	0.152
496	STABILIZED LEVEL FLIGHT	309	43.0	0.982	0.140
497	STABILIZED LEVEL FLIGHT	309	59.0	0.976	0.122
498	STABILIZED LEVEL FLIGHT	309	80.0	0.963	0.110
499	STABILIZED LEVEL FLIGHT	309	91.0	1.031	0.128
500	STABILIZED LEVEL FLIGHT	309	100.0	1.000	0.146
501	STABILIZED LEVEL FLIGHT	309	110.0	1.012	0.171
502	STABILIZED LEVEL FLIGHT	309	115.0	0.915	0.159
503	STABILIZED LEVEL FLIGHT	309	120.0	1.006	0.238
504	STABILIZED LEVEL FLIGHT	324	23.0	0.988	0.146
505	STABILIZED LEVEL FLIGHT	324	43.0	1.030	0.079
506	STABILIZED LEVEL FLIGHT	324	59.0	0.909	0.079
507	STABILIZED LEVEL FLIGHT	324	80.0	1.073	0.098
508	STABILIZED LEVEL FLIGHT	324	91.0	1.012	0.085
509	STABILIZED LEVEL FLIGHT	324	100.0	1.116	0.140
510	STABILIZED LEVEL FLIGHT	324	110.0	0.921	0.116
511	STABILIZED LEVEL FLIGHT	324	115.0	1.018	0.152
512	STABILIZED LEVEL FLIGHT	324	120.0	1.012	0.159

BASELINE STD BLADES

MODEL UH-1B 543 FLT. 135A G.W. 7500 LB ALT. 3000 FT HD
SHIP AF62-2023 DATE 9 JULY 65 C.G. STA 125.4 OSC. NO. 1

CTR NO.	TEST CONDITION	RPM	VCAL KTS	CO-PILOT VERT ACCEL MEAN	OSC
495	STABILIZED LEVEL FLIGHT	309	23.0	0.988	0.132
496	STABILIZED LEVEL FLIGHT	309	43.0	0.970	0.090
497	STABILIZED LEVEL FLIGHT	309	59.0	0.964	0.072
498	STABILIZED LEVEL FLIGHT	309	80.0	1.000	0.120
499	STABILIZED LEVEL FLIGHT	309	91.0	1.000	0.180
500	STABILIZED LEVEL FLIGHT	309	100.0	0.988	0.192
501	STABILIZED LEVEL FLIGHT	309	110.0	1.042	0.246
502	STABILIZED LEVEL FLIGHT	309	115.0	0.940	0.288
503	STABILIZED LEVEL FLIGHT	309	120.0	0.982	0.354
504	STABILIZED LEVEL FLIGHT	324	23.0	0.976	0.132
505	STABILIZED LEVEL FLIGHT	324	43.0	1.012	0.096
506	STABILIZED LEVEL FLIGHT	324	59.0	0.928	0.084
507	STABILIZED LEVEL FLIGHT	324	80.0	1.066	0.126
508	STABILIZED LEVEL FLIGHT	324	91.0	1.024	0.132
509	STABILIZED LEVEL FLIGHT	324	100.0	1.060	0.216
510	STABILIZED LEVEL FLIGHT	324	110.0	0.952	0.240
511	STABILIZED LEVEL FLIGHT	324	115.0	1.024	0.276
512	STABILIZED LEVEL FLIGHT	324	120.0	0.982	0.330

BASELINE STD BLADES

MODEL UH-1B 543 FLT. 135A G.W. 7500 LB ALT. 3000 FT HD
SHIP AF62-2023 DATE 9 JULY 65 C.G. STA 125.4 OSC. NO. 1

CTR NO.	TEST CONDITION	RPM	VCAL KTS	C.G. VERT ACCEL MEAN	OSC
495	STABILIZED LEVEL FLIGHT	309	23.0	1.060	0.250
496	STABILIZED LEVEL FLIGHT	309	43.0	1.018	0.137
497	STABILIZED LEVEL FLIGHT	309	59.0	0.994	0.101
498	STABILIZED LEVEL FLIGHT	309	80.0	1.000	0.107
499	STABILIZED LEVEL FLIGHT	309	91.0	1.042	0.113
500	STABILIZED LEVEL FLIGHT	309	100.0	0.994	0.125
501	STABILIZED LEVEL FLIGHT	309	110.0	1.048	0.143
502	STABILIZED LEVEL FLIGHT	309	115.0	0.923	0.173
503	STABILIZED LEVEL FLIGHT	309	120.0	0.988	0.179
504	STABILIZED LEVEL FLIGHT	324	23.0	0.958	0.161
505	STABILIZED LEVEL FLIGHT	324	43.0	1.054	0.149
506	STABILIZED LEVEL FLIGHT	324	59.0	0.958	0.089
507	STABILIZED LEVEL FLIGHT	324	80.0	1.042	0.125
508	STABILIZED LEVEL FLIGHT	324	91.0	0.988	0.131
509	STABILIZED LEVEL FLIGHT	324	100.0	1.083	0.167
510	STABILIZED LEVEL FLIGHT	324	110.0	0.893	0.119
511	STABILIZED LEVEL FLIGHT	324	115.0	0.994	0.149
512	STABILIZED LEVEL FLIGHT	324	120.0	0.970	0.137

BASELINE STD BLADES

MODEL UH-1B 543 FLT. 135A G.W. 7500 LB ALT. 3000 FT HD
SHIP AF62-2023 DATE 9 JULY 65 C.G. STA 125.4 OSC. NO. 1

CTR NO.	TEST CONDITION	RPM	VCAL KTS	R/H CYC BOOST TUBE MEAN	OSC
495	STABILIZED LEVEL FLIGHT	309	23.0	108.405	277.035
496	STABILIZED LEVEL FLIGHT	309	43.0	96.360	216.810
497	STABILIZED LEVEL FLIGHT	309	59.0	108.405	180.675
498	STABILIZED LEVEL FLIGHT	309	80.0	36.135	156.585
499	STABILIZED LEVEL FLIGHT	309	91.0	132.495	204.765
500	STABILIZED LEVEL FLIGHT	309	100.0	120.450	289.060
501	STABILIZED LEVEL FLIGHT	309	110.0	84.315	277.035
502	STABILIZED LEVEL FLIGHT	309	115.0	120.450	313.170
503	STABILIZED LEVEL FLIGHT	309	120.0	144.540	505.890
504	STABILIZED LEVEL FLIGHT	324	23.0	144.540	264.990
505	STABILIZED LEVEL FLIGHT	324	43.0	84.315	156.585
506	STABILIZED LEVEL FLIGHT	324	59.0	96.360	144.540
507	STABILIZED LEVEL FLIGHT	324	80.0	60.225	156.585
508	STABILIZED LEVEL FLIGHT	324	91.0	108.405	180.675
509	STABILIZED LEVEL FLIGHT	324	100.0	144.540	264.990
510	STABILIZED LEVEL FLIGHT	324	110.0	96.360	264.990
511	STABILIZED LEVEL FLIGHT	324	115.0	120.450	337.260
512	STABILIZED LEVEL FLIGHT	324	120.0	108.405	349.305

BASELINE STD BLADES

MODEL UH-1B 543 FLT. 135A G.W. 7500 LB ALT. 3000 FT HD
SHIP AF62-2023 DATE 9 JULY 65 C.G. STA 125.4 OSC. NO. 1

CTR NO.	TEST CONDITION	RPM	VCAL KTS	L/H CYC BOOST MEAN	TUBE OSC
495	STABILIZED LEVEL FLIGHT	309	23.0	-56.100	190.740
496	STABILIZED LEVEL FLIGHT	309	43.0	-22.440	157.080
497	STABILIZED LEVEL FLIGHT	309	59.0	-11.220	145.860
498	STABILIZED LEVEL FLIGHT	309	80.0	-112.200	224.400
499	STABILIZED LEVEL FLIGHT	309	91.0	-145.860	168.300
500	STABILIZED LEVEL FLIGHT	309	100.0	-89.760	157.080
501	STABILIZED LEVEL FLIGHT	309	110.0	-145.860	190.740
502	STABILIZED LEVEL FLIGHT	309	115.0	-168.300	213.180
503	STABILIZED LEVEL FLIGHT	309	120.0	-224.400	314.160
504	STABILIZED LEVEL FLIGHT	324	23.0	-11.220	235.620
505	STABILIZED LEVEL FLIGHT	324	43.0	44.880	134.640
506	STABILIZED LEVEL FLIGHT	324	59.0	33.660	145.860
507	STABILIZED LEVEL FLIGHT	324	80.0	-56.100	168.300
508	STABILIZED LEVEL FLIGHT	324	91.0	-67.320	179.520
509	STABILIZED LEVEL FLIGHT	324	100.0	-100.980	168.300
510	STABILIZED LEVEL FLIGHT	324	110.0	-112.200	179.520
511	STABILIZED LEVEL FLIGHT	324	115.0	-157.080	201.960
512	STABILIZED LEVEL FLIGHT	324	120.0	-179.520	246.840

BASELINE STD BLADES

MODEL UH-1B 543 FLT. 135A G.W. 7500 LB ALT. 3000 FT HD
SHIP AF62-2023 DATE 9 JULY 65 C.G. STA 125.4 OSC. NO. 1

CTR NO.	TEST CONDITION	RPM	VCAL KTS	COLL BOOST TUBE MEAN	OSC
495	STABILIZED LEVEL FLIGHT	309	23.0	-87.400	104.880
496	STABILIZED LEVEL FLIGHT	309	43.0	-52.440	78.660
497	STABILIZED LEVEL FLIGHT	309	59.0	-43.700	78.660
498	STABILIZED LEVEL FLIGHT	309	80.0	-74.290	117.990
499	STABILIZED LEVEL FLIGHT	309	91.0	-56.810	144.210
500	STABILIZED LEVEL FLIGHT	309	100.0	-69.920	201.020
501	STABILIZED LEVEL FLIGHT	309	110.0	-52.440	227.240
502	STABILIZED LEVEL FLIGHT	309	115.0	-30.590	257.830
503	STABILIZED LEVEL FLIGHT	309	120.0	-30.590	310.270
504	STABILIZED LEVEL FLIGHT	324	23.0	-34.960	131.100
505	STABILIZED LEVEL FLIGHT	324	43.0	0.000	87.400
506	STABILIZED LEVEL FLIGHT	324	59.0	0.000	87.400
507	STABILIZED LEVEL FLIGHT	324	80.0	-78.660	174.800
508	STABILIZED LEVEL FLIGHT	324	91.0	-39.330	152.950
509	STABILIZED LEVEL FLIGHT	324	100.0	-26.220	209.760
510	STABILIZED LEVEL FLIGHT	324	110.0	-52.440	244.720
511	STABILIZED LEVEL FLIGHT	324	115.0	-39.330	266.570
512	STABILIZED LEVEL FLIGHT	324	120.0	-56.810	292.790

BASELINE STD BLADES.

MODEL UH-1B 543 FLT. 1358 G.W. 7500 LB ALT. 3080 FT HD
SHIP AF62-2023 DATE 9 JULY 65 C.G. STA 133.2 OSC. NO. 1

CTR NO.	TEST CONDITION	RPM	VCAL KTS	MR BLD BM STA 140 MEAN	OSC
530	STABILIZED LEVEL FLIGHT	309	23.0	-1712.500	5087.500
531	STABILIZED LEVEL FLIGHT	309	43.0	-1300.000	5500.000
532	STABILIZED LEVEL FLIGHT	309	59.0	-1025.000	5775.000
533	STABILIZED LEVEL FLIGHT	309	80.0	-1575.000	6050.000
534	STABILIZED LEVEL FLIGHT	309	91.0	-612.500	7562.500
535	STABILIZED LEVEL FLIGHT	309	100.0	-1025.000	7150.000
536	STABILIZED LEVEL FLIGHT	309	110.0	-612.500	7562.500
537	STABILIZED LEVEL FLIGHT	309	115.0	-612.500	8662.500
538	STABILIZED LEVEL FLIGHT	309	120.0	-475.000	9625.000
539	STABILIZED LEVEL FLIGHT	324	23.0	-2400.000	4950.000
540	STABILIZED LEVEL FLIGHT	324	43.0	-1712.500	4537.500
541	STABILIZED LEVEL FLIGHT	324	59.0	-1437.500	4262.500
542	STABILIZED LEVEL FLIGHT	324	80.0	-1575.000	5225.000
543	STABILIZED LEVEL FLIGHT	324	91.0	-1987.500	5912.500
544	STABILIZED LEVEL FLIGHT	324	100.0	-1987.500	6737.500
545	STABILIZED LEVEL FLIGHT	324	110.0	-1850.000	6875.000
546	STABILIZED LEVEL FLIGHT	324	115.0	-1575.000	7150.000
547	STABILIZED LEVEL FLIGHT	324	120.0	-750.000	8250.000

BASELINE STD BLADES

MODEL UH-1B 543 FLT. 1358 G.W. 7500 LB ALT. 3080 FT HD
SHIP AF62-2023 DATE 9 JULY 65 C.G. STA 133.2 OSC. NO. 1

CTR NO.	TEST CONDITION	RPM	VCAL KTS	MR BLD BM STA 84 MEAN	OSC
530	STABILIZED LEVEL FLIGHT	309	23.0	2299.390	5023.030
531	STABILIZED LEVEL FLIGHT	309	43.0	3489.055	6212.695
532	STABILIZED LEVEL FLIGHT	309	59.0	3489.055	5419.585
533	STABILIZED LEVEL FLIGHT	309	80.0	2563.760	6080.510
534	STABILIZED LEVEL FLIGHT	309	91.0	4414.350	8459.840
535	STABILIZED LEVEL FLIGHT	309	100.0	4810.905	7798.915
536	STABILIZED LEVEL FLIGHT	309	110.0	6000.570	9252.950
537	STABILIZED LEVEL FLIGHT	309	115.0	5075.275	9913.875
538	STABILIZED LEVEL FLIGHT	309	120.0	8115.530	11896.650
539	STABILIZED LEVEL FLIGHT	324	23.0	-212.125	5683.955
540	STABILIZED LEVEL FLIGHT	324	43.0	845.355	5155.215
541	STABILIZED LEVEL FLIGHT	324	59.0	580.985	4362.105
542	STABILIZED LEVEL FLIGHT	324	80.0	580.985	5419.585
543	STABILIZED LEVEL FLIGHT	324	91.0	1506.280	6080.510
544	STABILIZED LEVEL FLIGHT	324	100.0	2431.575	6212.695
545	STABILIZED LEVEL FLIGHT	324	110.0	3489.055	7005.805
546	STABILIZED LEVEL FLIGHT	324	115.0	3621.240	7931.100
547	STABILIZED LEVEL FLIGHT	324	120.0	5075.275	8592.025

BASELINE STD BLADES

MODEL UH-1B 543 FLT. 1358 G.W. 7500 LB ALT. 3080 FT HD
SHIP AF62-2023 DATE 9 JULY 65 C.G. STA 133.2 OSC. NO. 1

CTR NO.	TEST CONDITION	RPM	VCAL KTS	PR BLD BM STA 60 MEAN	OSC
530	STABILIZED LEVEL FLIGHT	309	23.0	691.074	7175.924
531	STABILIZED LEVEL FLIGHT	309	43.0	2817.275	8770.575
532	STABILIZED LEVEL FLIGHT	309	59.0	4146.150	7441.700
533	STABILIZED LEVEL FLIGHT	309	80.0	2019.950	6504.800
534	STABILIZED LEVEL FLIGHT	309	91.0	7069.674	11428.325
535	STABILIZED LEVEL FLIGHT	309	100.0	6538.124	10365.225
536	STABILIZED LEVEL FLIGHT	309	110.0	7866.999	13288.750
537	STABILIZED LEVEL FLIGHT	309	115.0	6538.124	14617.625
538	STABILIZED LEVEL FLIGHT	309	120.0	11853.625	17806.925
539	STABILIZED LEVEL FLIGHT	324	23.0	-5953.301	8504.800
540	STABILIZED LEVEL FLIGHT	324	43.0	-4624.425	6112.826
541	STABILIZED LEVEL FLIGHT	324	59.0	-3827.100	5847.050
542	STABILIZED LEVEL FLIGHT	324	80.0	-3029.775	7175.924
543	STABILIZED LEVEL FLIGHT	324	91.0	-1169.351	9036.349
544	STABILIZED LEVEL FLIGHT	324	100.0	691.074	8770.574
545	STABILIZED LEVEL FLIGHT	324	110.0	2817.274	9302.125
546	STABILIZED LEVEL FLIGHT	324	115.0	4146.149	11162.550
547	STABILIZED LEVEL FLIGHT	324	120.0	6272.349	12225.650

BASELINE STD BLADES

MODEL UH-1B 543 FLT. 1358 G.W. 7500 LB ALT. 3080 FT HD
SHIP AF62-2023 DATE 9 JULY 65 C.G. STA 133.2 OSC. NO. 1

CTR NO.	TEST CONDITION	RPM	VCAL KTS	MR BLD BM STA 35 MEAN	OSC
530	STABILIZED LEVEL FLIGHT	309	23.0	-5858.601	10199.200
531	STABILIZED LEVEL FLIGHT	309	43.0	-1222.600	12980.800
532	STABILIZED LEVEL FLIGHT	309	59.0	2949.800	11590.000
533	STABILIZED LEVEL FLIGHT	309	80.0	-1686.199	12517.200
534	STABILIZED LEVEL FLIGHT	309	91.0	5267.801	17616.800
535	STABILIZED LEVEL FLIGHT	309	100.0	4804.200	16226.000
536	STABILIZED LEVEL FLIGHT	309	110.0	8976.600	20398.400
537	STABILIZED LEVEL FLIGHT	309	115.0	3413.400	21325.599
538	STABILIZED LEVEL FLIGHT	309	120.0	15466.999	26888.799
539	STABILIZED LEVEL FLIGHT	324	23.0	-23011.801	9735.600
540	STABILIZED LEVEL FLIGHT	324	43.0	-15594.200	9735.600
541	STABILIZED LEVEL FLIGHT	324	59.0	-16057.801	9271.999
542	STABILIZED LEVEL FLIGHT	324	80.0	-14203.401	10199.200
543	STABILIZED LEVEL FLIGHT	324	91.0	-10031.001	11590.000
544	STABILIZED LEVEL FLIGHT	324	100.0	-5858.600	13908.000
545	STABILIZED LEVEL FLIGHT	324	110.0	-2149.800	16689.601
546	STABILIZED LEVEL FLIGHT	324	115.0	-1222.600	19471.199
547	STABILIZED LEVEL FLIGHT	324	120.0	2022.600	20862.001

BASELINE STD BLADES

MODEL UH-1B 543 FLT. 1358 G.W. 7500 LB ALT. 3080 FT HD
SHIP AF62-2023 DATE 9 JULY 65 C.G. STA 133.2 OSC. NO. 1

CTR NO.	TEST CONDITION	RPM	VCAL KTS	MR PITCH LINK RED MEAN	MR PITCH LINK RED OSC
530	STABILIZED LEVEL FLIGHT	309	23.0	99.605	389.365
531	STABILIZED LEVEL FLIGHT	309	43.0	99.605	335.035
532	STABILIZED LEVEL FLIGHT	309	59.0	45.275	280.705
533	STABILIZED LEVEL FLIGHT	309	80.0	45.275	280.705
534	STABILIZED LEVEL FLIGHT	309	91.0	162.990	362.200
535	STABILIZED LEVEL FLIGHT	309	100.0	153.935	389.365
536	STABILIZED LEVEL FLIGHT	309	110.0	208.265	443.695
537	STABILIZED LEVEL FLIGHT	309	115.0	108.660	579.520
538	STABILIZED LEVEL FLIGHT	309	120.0	117.715	679.125
539	STABILIZED LEVEL FLIGHT	324	23.0	-9.055	407.475
540	STABILIZED LEVEL FLIGHT	324	43.0	-9.055	316.925
541	STABILIZED LEVEL FLIGHT	324	59.0	18.110	271.650
542	STABILIZED LEVEL FLIGHT	324	80.0	36.220	307.870
543	STABILIZED LEVEL FLIGHT	324	91.0	63.385	335.035
544	STABILIZED LEVEL FLIGHT	324	100.0	91.495	407.475
545	STABILIZED LEVEL FLIGHT	324	110.0	135.825	425.585
546	STABILIZED LEVEL FLIGHT	324	115.0	144.880	434.640
547	STABILIZED LEVEL FLIGHT	324	120.0	126.770	543.300

BASELINE STD BLADES

MODEL UH-1B 543 FLT. 1358 G.W. 7500 LB ALT. 3080 FT HD
SHIP AF62-2023 DATE 9 JULY 65 C.G. STA 133.2 OSC. NO. 1

CTR NO.	TEST CONDITION	RPM	VCAL KTS	MR DRAG BRACE MEAN	MR DRAG BRACE OSC
530	STABILIZED LEVEL FLIGHT	309	23.0	4302.480	3380.520
531	STABILIZED LEVEL FLIGHT	309	43.0	4456.140	3534.180
532	STABILIZED LEVEL FLIGHT	309	59.0	4456.140	2919.540
533	STABILIZED LEVEL FLIGHT	309	80.0	4148.820	2304.900
534	STABILIZED LEVEL FLIGHT	309	91.0	3687.840	3380.520
535	STABILIZED LEVEL FLIGHT	309	100.0	3687.840	3380.520
536	STABILIZED LEVEL FLIGHT	309	110.0	3380.520	3687.840
537	STABILIZED LEVEL FLIGHT	309	115.0	2919.540	4148.820
538	STABILIZED LEVEL FLIGHT	309	120.0	2765.880	4917.120
539	STABILIZED LEVEL FLIGHT	324	23.0	4609.800	3687.840
540	STABILIZED LEVEL FLIGHT	324	43.0	4609.800	2765.880
541	STABILIZED LEVEL FLIGHT	324	59.0	4456.140	2612.220
542	STABILIZED LEVEL FLIGHT	324	80.0	4302.480	2151.240
543	STABILIZED LEVEL FLIGHT	324	91.0	3841.500	2612.220
544	STABILIZED LEVEL FLIGHT	324	100.0	4456.140	2612.220
545	STABILIZED LEVEL FLIGHT	324	110.0	4456.140	2919.540
546	STABILIZED LEVEL FLIGHT	324	115.0	3841.500	3534.180
547	STABILIZED LEVEL FLIGHT	324	120.0	3687.840	3380.520

BASELINE STD BLADES

MODEL UH-1B 543 FLT. 1358 G.W. 7500 LB ALT. 3080 FT HD
SHIP AF62-2023 DATE 9 JULY 65 C.G. STA 133.2 OSC. NO. 1

CTR NO.	TEST CONDITION	RPM	VCAL KTS	MR YOKE BM STA 6.0 MEAN	OSC
530	STABILIZED LEVEL FLIGHT	309	23.0	-49086.410	18158.030
531	STABILIZED LEVEL FLIGHT	309	43.0	-37531.300	19808.760
532	STABILIZED LEVEL FLIGHT	309	59.0	-39182.031	11555.110
533	STABILIZED LEVEL FLIGHT	309	80.0	-47435.681	13205.841
534	STABILIZED LEVEL FLIGHT	309	91.0	-37531.300	13205.841
535	STABILIZED LEVEL FLIGHT	309	100.0	-44134.220	13205.840
536	STABILIZED LEVEL FLIGHT	309	110.0	-39182.030	18158.030
537	STABILIZED LEVEL FLIGHT	309	115.0	-55689.331	18158.030
538	STABILIZED LEVEL FLIGHT	309	120.0	-34229.839	23110.220
539	STABILIZED LEVEL FLIGHT	324	23.0	-68895.170	28062.410
540	STABILIZED LEVEL FLIGHT	324	43.0	-65593.706	18158.030
541	STABILIZED LEVEL FLIGHT	324	59.0	-72196.628	11555.109
542	STABILIZED LEVEL FLIGHT	324	80.0	-72196.629	8253.649
543	STABILIZED LEVEL FLIGHT	324	91.0	-70545.899	9904.379
544	STABILIZED LEVEL FLIGHT	324	100.0	-62292.250	18158.030
545	STABILIZED LEVEL FLIGHT	324	110.0	-62292.250	18158.030
546	STABILIZED LEVEL FLIGHT	324	115.0	-62292.250	18158.030
547	STABILIZED LEVEL FLIGHT	324	120.0	-58990.791	18158.030

BASELINE STD BLADES

MODEL UH-1B 543 FLT. 1358 G.W. 7500 LB ALT. 3080 FT HD
SHIP AF62-2023 DATE 9 JULY 65 C.G. STA 133.2 OSC. NO. 1

CTR NO.	TEST CONDITION	RPM	VCAL KTS	MR BLD CHD STA 140 MEAN	MR BLD CHD STA 140 OSC
530	STABILIZED LEVEL FLIGHT	309	23.0	-8415.000	36465.000
531	STABILIZED LEVEL FLIGHT	309	43.0	-5610.000	34595.000
532	STABILIZED LEVEL FLIGHT	309	59.0	-7713.750	24076.250
533	STABILIZED LEVEL FLIGHT	309	80.0	-5843.750	16596.249
534	STABILIZED LEVEL FLIGHT	309	91.0	-0.000	27582.500
535	STABILIZED LEVEL FLIGHT	309	100.0	-467.500	24310.000
536	STABILIZED LEVEL FLIGHT	309	110.0	3272.500	24310.000
537	STABILIZED LEVEL FLIGHT	309	115.0	2103.750	22206.250
538	STABILIZED LEVEL FLIGHT	309	120.0	-233.750	29686.250
539	STABILIZED LEVEL FLIGHT	324	23.0	-9116.250	35296.250
540	STABILIZED LEVEL FLIGHT	324	43.0	-4675.000	23375.000
541	STABILIZED LEVEL FLIGHT	324	59.0	-4441.250	17998.750
542	STABILIZED LEVEL FLIGHT	324	80.0	-4441.250	11921.250
543	STABILIZED LEVEL FLIGHT	324	91.0	-2337.500	14025.000
544	STABILIZED LEVEL FLIGHT	324	100.0	-0.000	17765.000
545	STABILIZED LEVEL FLIGHT	324	110.0	-1168.750	17063.750
546	STABILIZED LEVEL FLIGHT	324	115.0	2571.250	19401.250
547	STABILIZED LEVEL FLIGHT	324	120.0	2103.750	18466.250

BASELINE STD BLADES

MODEL UH-1B 543 FLT. 1358 G.W. 7500 LB ALT. 3080 FT HD
SHIP AF62-2023 DATE 9 JULY 65 C.G. STA 133.2 OSC. NO. 1

CTR NO.	TEST CONDITION	RPM	VCAL KTS	MR BLD CHD STA 60 MEAN	OSC
530	STABILIZED LEVEL FLIGHT	309	23.0	46268.500	53771.500
531	STABILIZED LEVEL FLIGHT	309	43.0	46893.750	51895.749
532	STABILIZED LEVEL FLIGHT	309	59.0	43767.500	41266.500
533	STABILIZED LEVEL FLIGHT	309	80.0	48144.249	31887.749
534	STABILIZED LEVEL FLIGHT	309	91.0	48769.500	53771.499
535	STABILIZED LEVEL FLIGHT	309	100.0	58148.250	46893.750
536	STABILIZED LEVEL FLIGHT	309	110.0	61899.750	46893.750
537	STABILIZED LEVEL FLIGHT	309	115.0	60023.999	51270.500
538	STABILIZED LEVEL FLIGHT	309	120.0	58773.500	62525.000
539	STABILIZED LEVEL FLIGHT	324	23.0	50645.250	48144.249
540	STABILIZED LEVEL FLIGHT	324	43.0	53771.499	41266.500
541	STABILIZED LEVEL FLIGHT	324	59.0	58773.500	31262.500
542	STABILIZED LEVEL FLIGHT	324	80.0	58773.500	27511.000
543	STABILIZED LEVEL FLIGHT	324	91.0	42517.000	20008.000
544	STABILIZED LEVEL FLIGHT	324	100.0	61274.499	32513.000
545	STABILIZED LEVEL FLIGHT	324	110.0	63775.500	33763.499
546	STABILIZED LEVEL FLIGHT	324	115.0	67527.000	37515.000
547	STABILIZED LEVEL FLIGHT	324	120.0	70027.999	42517.000

BASELINE STD BLADES

MODEL UH-1B 543 FLT. 1358 G.W. 7500 LB ALT. 3080 FT HD
SHIP AF62-2023 DATE 9 JULY 65 C.G. STA 133.2 OSC. NO. 1

CTR NO.	TEST CONDITION	RPM	VCAL KTS	MR YOKE CMD STA 6.0 MEAN	OSC
530	STABILIZED LEVEL FLIGHT	309	23.0	43057.740	59367.490
531	STABILIZED LEVEL FLIGHT	309	43.0	43383.936	56431.735
532	STABILIZED LEVEL FLIGHT	309	59.0	37838.622	49581.640
533	STABILIZED LEVEL FLIGHT	309	80.0	38491.010	43057.740
534	STABILIZED LEVEL FLIGHT	309	91.0	50886.421	62629.439
535	STABILIZED LEVEL FLIGHT	309	100.0	56431.736	63608.025
536	STABILIZED LEVEL FLIGHT	309	110.0	64260.415	69479.534
537	STABILIZED LEVEL FLIGHT	309	115.0	70458.120	75677.239
538	STABILIZED LEVEL FLIGHT	309	120.0	69805.730	91334.599
539	STABILIZED LEVEL FLIGHT	324	23.0	37838.622	53495.980
540	STABILIZED LEVEL FLIGHT	324	43.0	41426.766	46645.885
541	STABILIZED LEVEL FLIGHT	324	59.0	43710.129	37838.620
542	STABILIZED LEVEL FLIGHT	324	80.0	45341.105	36860.034
543	STABILIZED LEVEL FLIGHT	324	91.0	47950.665	45993.495
544	STABILIZED LEVEL FLIGHT	324	100.0	53495.981	50886.420
545	STABILIZED LEVEL FLIGHT	324	110.0	56757.931	52191.200
546	STABILIZED LEVEL FLIGHT	324	115.0	64912.805	64912.805
547	STABILIZED LEVEL FLIGHT	324	120.0	68174.753	66869.974

BASELINE STD BLADES

MODEL UH-1B 543 FLT. 1358 G.W. 7500 LB ALT. 3080 FT HD
SHIP AF62-2023 DATE 9 JULY 65 C.G. STA 133.2 OSC. NO. 1

CTR NO.	TEST CONDITION	RPM	VCAL KTS	MR FLAPPING MEAN	MR FLAPPING OSC
530	STABILIZED LEVEL FLIGHT	309	23.0	-1.212	12.120
531	STABILIZED LEVEL FLIGHT	309	43.0	-1.818	13.938
532	STABILIZED LEVEL FLIGHT	309	59.0	-1.818	13.938
533	STABILIZED LEVEL FLIGHT	309	80.0	-1.818	10.302
534	STABILIZED LEVEL FLIGHT	309	91.0	-2.424	12.120
535	STABILIZED LEVEL FLIGHT	309	100.0	-2.424	8.484
536	STABILIZED LEVEL FLIGHT	309	110.0	-4.242	9.090
537	STABILIZED LEVEL FLIGHT	309	115.0	-3.030	11.514
538	STABILIZED LEVEL FLIGHT	309	120.0	-1.818	13.938
539	STABILIZED LEVEL FLIGHT	324	23.0	-1.818	13.938
540	STABILIZED LEVEL FLIGHT	324	43.0	-1.818	11.514
541	STABILIZED LEVEL FLIGHT	324	59.0	-1.818	10.302
542	STABILIZED LEVEL FLIGHT	324	80.0	-1.212	6.060
543	STABILIZED LEVEL FLIGHT	324	91.0	-3.636	8.484
544	STABILIZED LEVEL FLIGHT	324	100.0	-0.606	6.666
545	STABILIZED LEVEL FLIGHT	324	110.0	-2.424	4.848
546	STABILIZED LEVEL FLIGHT	324	115.0	-0.606	9.090
547	STABILIZED LEVEL FLIGHT	324	120.0	-3.030	11.514

BASELINE STD BLADES

MODEL UH-1B 543 FLT. 1358 G.W. 7500 LB ALT. 3080 FT HD
SHIP AF62-2023 DATE 9 JULY 65 C.G. STA 133.2 OSC. NO. 1

CTR NO.	TEST CONDITION	RPM	VCAL KTS	PILOT VERT ACCEL MEAN	OSC
530	STABILIZED LEVEL FLIGHT	309	23.0	0.976	0.133
531	STABILIZED LEVEL FLIGHT	309	43.0	1.024	0.121
532	STABILIZED LEVEL FLIGHT	309	59.0	1.030	0.127
533	STABILIZED LEVEL FLIGHT	309	80.0	0.976	0.133
534	STABILIZED LEVEL FLIGHT	309	91.0	1.024	0.230
535	STABILIZED LEVEL FLIGHT	309	100.0	0.982	0.212
536	STABILIZED LEVEL FLIGHT	309	110.0	0.988	0.266
537	STABILIZED LEVEL FLIGHT	309	115.0	0.903	0.242
538	STABILIZED LEVEL FLIGHT	309	120.0	0.976	0.327
539	STABILIZED LEVEL FLIGHT	324	23.0	0.939	0.085
540	STABILIZED LEVEL FLIGHT	324	43.0	0.982	0.091
541	STABILIZED LEVEL FLIGHT	324	59.0	0.958	0.091
542	STABILIZED LEVEL FLIGHT	324	80.0	0.946	0.115
543	STABILIZED LEVEL FLIGHT	324	91.0	0.939	0.133
544	STABILIZED LEVEL FLIGHT	324	100.0	0.994	0.175
545	STABILIZED LEVEL FLIGHT	324	110.0	0.976	0.230
546	STABILIZED LEVEL FLIGHT	324	115.0	1.018	0.272
547	STABILIZED LEVEL FLIGHT	324	120.0	1.006	0.260

BASELINE STD BLADES

MODEL UH-1B 543 FLT. 1358 G.W. 7500 LB ALT. 3080 FT HD
SHIP AF62-2023 DATE 9 JULY 65 C.G. STA 133.2 OSC. NO. 1

CTR NO.	TEST CONDITION	RPM	VCAL KTS	CO-PILOT VERT ACCEL MEAN	OSC
530	STABILIZED LEVEL FLIGHT	309	23.0	0.970	0.162
531	STABILIZED LEVEL FLIGHT	309	43.0	1.042	0.114
532	STABILIZED LEVEL FLIGHT	309	59.0	1.084	0.144
533	STABILIZED LEVEL FLIGHT	309	80.0	1.012	0.168
534	STABILIZED LEVEL FLIGHT	309	91.0	1.066	0.234
535	STABILIZED LEVEL FLIGHT	309	100.0	1.024	0.228
536	STABILIZED LEVEL FLIGHT	309	110.0	1.066	0.330
537	STABILIZED LEVEL FLIGHT	309	115.0	0.970	0.318
538	STABILIZED LEVEL FLIGHT	309	120.0	1.024	0.432
539	STABILIZED LEVEL FLIGHT	324	23.0	1.036	0.228
540	STABILIZED LEVEL FLIGHT	324	43.0	1.042	0.150
541	STABILIZED LEVEL FLIGHT	324	59.0	0.982	0.114
542	STABILIZED LEVEL FLIGHT	324	80.0	0.994	0.126
543	STABILIZED LEVEL FLIGHT	324	91.0	1.000	0.156
544	STABILIZED LEVEL FLIGHT	324	100.0	0.994	0.246
545	STABILIZED LEVEL FLIGHT	324	110.0	1.024	0.252
546	STABILIZED LEVEL FLIGHT	324	115.0	1.012	0.276
547	STABILIZED LEVEL FLIGHT	324	120.0	1.030	0.342

BASELINE STD BLADES

MODEL UH-1B 543 FLT. 1358 G.W. 7500 LB ALT. 3080 FT HD
SHIP AF62-2023 DATE 9 JULY 65 C.G. STA 133.2 OSC. NO. 1

CTR NO.	TEST CONDITION	RPM	VCAL KTS	C.G. VERT ACCEL MEAN	OSC
530	STABILIZED LEVEL FLIGHT	309	23.0	0.964	0.108
531	STABILIZED LEVEL FLIGHT	309	43.0	1.018	0.102
532	STABILIZED LEVEL FLIGHT	309	59.0	1.066	0.090
533	STABILIZED LEVEL FLIGHT	309	80.0	1.012	0.096
534	STABILIZED LEVEL FLIGHT	309	91.0	1.066	0.090
535	STABILIZED LEVEL FLIGHT	309	100.0	1.006	0.102
536	STABILIZED LEVEL FLIGHT	309	110.0	1.030	0.138
537	STABILIZED LEVEL FLIGHT	309	115.0	0.958	0.102
538	STABILIZED LEVEL FLIGHT	309	120.0	1.072	0.120
539	STABILIZED LEVEL FLIGHT	324	23.0	0.922	0.210
540	STABILIZED LEVEL FLIGHT	324	43.0	1.006	0.162
541	STABILIZED LEVEL FLIGHT	324	59.0	0.970	0.102
542	STABILIZED LEVEL FLIGHT	324	80.0	0.970	0.066
543	STABILIZED LEVEL FLIGHT	324	91.0	0.958	0.090
544	STABILIZED LEVEL FLIGHT	324	100.0	1.006	0.114
545	STABILIZED LEVEL FLIGHT	324	110.0	0.988	0.108
546	STABILIZED LEVEL FLIGHT	324	115.0	0.982	0.114
547	STABILIZED LEVEL FLIGHT	324	120.0	1.000	0.120

BASELINE STD BLADES

MODEL UH-1B 543 FLT. 1358 G.W. 7500 LB ALT. 3080 FT HD
SHIP AF62-2023 DATE 9 JULY 65 C.G. STA 133.2 OSC. NO. 1

CTR NO.	TEST CONDITION	RPM	VCAL KTS	R/H CYC BOOST TUBE MEAN	OSC
530	STABILIZED LEVEL FLIGHT	309	23.0	119.350	262.570
531	STABILIZED LEVEL FLIGHT	309	43.0	143.220	238.700
532	STABILIZED LEVEL FLIGHT	309	59.0	83.545	179.025
533	STABILIZED LEVEL FLIGHT	309	80.0	83.545	131.285
534	STABILIZED LEVEL FLIGHT	309	91.0	179.025	226.765
535	STABILIZED LEVEL FLIGHT	309	100.0	167.090	214.830
536	STABILIZED LEVEL FLIGHT	309	110.0	155.155	274.505
537	STABILIZED LEVEL FLIGHT	309	115.0	131.285	298.375
538	STABILIZED LEVEL FLIGHT	309	120.0	179.025	393.855
539	STABILIZED LEVEL FLIGHT	324	23.0	131.285	322.245
540	STABILIZED LEVEL FLIGHT	324	43.0	71.610	190.960
541	STABILIZED LEVEL FLIGHT	324	59.0	83.545	131.285
542	STABILIZED LEVEL FLIGHT	324	80.0	59.675	131.285
543	STABILIZED LEVEL FLIGHT	324	91.0	107.415	155.155
544	STABILIZED LEVEL FLIGHT	324	100.0	107.415	202.895
545	STABILIZED LEVEL FLIGHT	324	110.0	143.220	238.700
546	STABILIZED LEVEL FLIGHT	324	115.0	143.220	286.440
547	STABILIZED LEVEL FLIGHT	324	120.0	119.350	334.180

BASELINE STD BLADES

MODEL UH-1B 543 FLT. 1358 G.W. 7500 LB ALT. 3080 FT HD
SHIP AF62-2023 DATE 9 JULY 65 C.G. STA 133.2 OSC. NO. 1

CTR NO.	TEST CONDITION	RPM	VCAL KTS	L/H CYC BOOST TUBE MEAN	OSC
530	STABILIZED LEVEL FLIGHT	309	23.0	-56.100	190.740
531	STABILIZED LEVEL FLIGHT	309	43.0	-67.320	157.080
532	STABILIZED LEVEL FLIGHT	309	59.0	-78.540	168.300
533	STABILIZED LEVEL FLIGHT	309	80.0	-100.980	190.740
534	STABILIZED LEVEL FLIGHT	309	91.0	-157.080	201.960
535	STABILIZED LEVEL FLIGHT	309	100.0	-100.980	168.300
536	STABILIZED LEVEL FLIGHT	309	110.0	-112.200	179.520
537	STABILIZED LEVEL FLIGHT	309	115.0	-168.300	213.180
538	STABILIZED LEVEL FLIGHT	309	120.0	-213.180	258.060
539	STABILIZED LEVEL FLIGHT	324	23.0	-89.760	269.280
540	STABILIZED LEVEL FLIGHT	324	43.0	-44.880	157.080
541	STABILIZED LEVEL FLIGHT	324	59.0	-22.440	157.080
542	STABILIZED LEVEL FLIGHT	324	80.0	-44.880	157.080
543	STABILIZED LEVEL FLIGHT	324	91.0	-100.980	145.860
544	STABILIZED LEVEL FLIGHT	324	100.0	-33.660	123.420
545	STABILIZED LEVEL FLIGHT	324	110.0	-78.540	213.180
546	STABILIZED LEVEL FLIGHT	324	115.0	-89.760	179.520
547	STABILIZED LEVEL FLIGHT	324	120.0	-145.860	258.060

BASELINE STD BLADES

MODEL UH-1B 543 FLT. 1358 G.W. 7500 LB ALT. 3080 FT HD
SHIP AF62-2023 DATE 9 JULY 65 C.G. STA 133.2 OSC. NO. 1

CTR NO.	TEST CONDITION	RPM	VCAL KTS	COLL BOOST TUBE MEAN	COLL BOOST TUBE OSC
530	STABILIZED LEVEL FLIGHT	309	23.0	-87.100	104.520
531	STABILIZED LEVEL FLIGHT	309	43.0	-91.455	91.455
532	STABILIZED LEVEL FLIGHT	309	59.0	-69.680	78.390
533	STABILIZED LEVEL FLIGHT	309	80.0	-56.615	82.745
534	STABILIZED LEVEL FLIGHT	309	91.0	-56.615	126.295
535	STABILIZED LEVEL FLIGHT	309	100.0	-60.970	165.490
536	STABILIZED LEVEL FLIGHT	309	110.0	-91.455	195.975
537	STABILIZED LEVEL FLIGHT	309	115.0	-43.550	252.590
538	STABILIZED LEVEL FLIGHT	309	120.0	-82.745	326.625
539	STABILIZED LEVEL FLIGHT	324	23.0	-39.195	108.875
540	STABILIZED LEVEL FLIGHT	324	43.0	-56.615	91.455
541	STABILIZED LEVEL FLIGHT	324	59.0	-21.775	74.035
542	STABILIZED LEVEL FLIGHT	324	80.0	-39.195	117.585
543	STABILIZED LEVEL FLIGHT	324	91.0	-60.970	148.070
544	STABILIZED LEVEL FLIGHT	324	100.0	-56.615	178.555
545	STABILIZED LEVEL FLIGHT	324	110.0	-60.970	209.040
546	STABILIZED LEVEL FLIGHT	324	115.0	-74.035	239.525
547	STABILIZED LEVEL FLIGHT	324	120.0	-74.035	291.785

LOAD SURVEY - RADAR ANTENNA M/R BLADES

MODEL UH-1B 543 FLT. 143-A G.W. 7500 LBS. ALT. 3000 FT HD
SHIP AF 62-2023 DATE 19 AUG 69 C.G. STA. 125.4 OSC. NO. 1

CTR NO.	TEST CONDITION	RPM	VCAL KTS	MR BL BEAM STA 140 MEAN	OSC
799	STABILIZED LEVEL FLIGHT	310	23.0	-891.145	6502.545
800	STABILIZED LEVEL FLIGHT	310	43.0	-360.325	4510.085
801	STABILIZED LEVEL FLIGHT	310	59.0	170.495	5440.905
802	STABILIZED LEVEL FLIGHT	310	80.0	-493.030	6900.660
803	STABILIZED LEVEL FLIGHT	310	91.0	-493.030	7166.070
804	STABILIZED LEVEL FLIGHT	310	100.0	-758.440	7962.300
805	STABILIZED LEVEL FLIGHT	310	115.0	170.495	8851.235
806	STABILIZED LEVEL FLIGHT	310	120.0	435.905	9687.465
807	STABILIZED LEVEL FLIGHT	324	23.0	-1023.850	4777.380
808	STABILIZED LEVEL FLIGHT	324	43.0	-625.735	4644.675
809	STABILIZED LEVEL FLIGHT	324	59.0	-360.325	4379.265
810	STABILIZED LEVEL FLIGHT	324	80.0	-758.440	6104.430
811	STABILIZED LEVEL FLIGHT	324	91.0	-758.440	6635.250
812	STABILIZED LEVEL FLIGHT	324	100.0	-493.030	6900.660
813	STABILIZED LEVEL FLIGHT	324	110.0	-493.030	7431.480
814	STABILIZED LEVEL FLIGHT	324	115.0	-227.620	7696.890
815	STABILIZED LEVEL FLIGHT	324	120.0	37.790	8493.120

LOAD SURVEY - RADAR ANTENNA M/R BLADES

MODEL UH-1B 543 FLT. 143-A G.W. 7500 LB. ALT. 3000 FT HC
SHIP AF 62-2023 DATE 19 AUG 65 C.G. STA. 129.4 OSC. NO. 1

CTR NO.	TEST CONDITION	RPM	VCAL KTS	PR BL BEAM STA 84 MEAN	OSC
799	STABILIZED LEVEL FLIGHT	310	23.0	1773.475	6477.255
800	STABILIZED LEVEL FLIGHT	310	43.0	1773.475	4953.195
801	STABILIZED LEVEL FLIGHT	310	59.0	2535.505	4953.195
802	STABILIZED LEVEL FLIGHT	310	80.0	3551.545	7239.285
803	STABILIZED LEVEL FLIGHT	310	91.0	3551.545	7493.295
804	STABILIZED LEVEL FLIGHT	310	100.0	4821.559	8001.315
805	STABILIZED LEVEL FLIGHT	310	115.0	7107.685	10033.355
806	STABILIZED LEVEL FLIGHT	310	120.0	8865.755	12573.495
807	STABILIZED LEVEL FLIGHT	324	23.0	122.410	5588.220
808	STABILIZED LEVEL FLIGHT	324	43.0	-4.559	4191.169
809	STABILIZED LEVEL FLIGHT	324	59.0	-131.600	4826.190
810	STABILIZED LEVEL FLIGHT	324	80.0	1392.460	6350.250
811	STABILIZED LEVEL FLIGHT	324	91.0	2154.490	6350.250
812	STABILIZED LEVEL FLIGHT	324	100.0	3424.540	6858.270
813	STABILIZED LEVEL FLIGHT	324	110.0	4186.570	7620.300
814	STABILIZED LEVEL FLIGHT	324	115.0	4313.575	8509.335
815	STABILIZED LEVEL FLIGHT	324	120.0	6091.645	10033.395

LOAD SURVEY - RADAR ANTENNA M/R BLADES

MODEL UH-1B 943 FLT. 143-A G.W. 7500 LBS ALT. 3000 FT HD
SHIP AF 62-2023 DATE 19 AUG 65 C.G. STA. 125.4 OSC. NO. 1

CTR NO.	TEST CONDITION	RPM	VCAL KTS	MR BL BEAM STA 60 MEAN	MR BL BEAM STA 60 OSC
799	STABILIZED LEVEL FLIGHT	310	23.0	-647.880	9640.221
800	STABILIZED LEVEL FLIGHT	310	43.0	-140.900	6088.560
801	STABILIZED LEVEL FLIGHT	310	59.0	2396.400	6088.559
802	STABILIZED LEVEL FLIGHT	310	80.0	4425.919	10654.980
803	STABILIZED LEVEL FLIGHT	310	91.0	4425.919	10147.600
804	STABILIZED LEVEL FLIGHT	310	100.0	6455.440	11162.360
805	STABILIZED LEVEL FLIGHT	310	115.0	11529.239	14206.640
806	STABILIZED LEVEL FLIGHT	310	120.0	14573.520	18265.680
807	STABILIZED LEVEL FLIGHT	324	23.0	-5214.300	7610.700
808	STABILIZED LEVEL FLIGHT	324	43.0	-3945.891	6342.250
809	STABILIZED LEVEL FLIGHT	324	59.0	-3692.160	6088.559
810	STABILIZED LEVEL FLIGHT	324	80.0	-647.880	8118.081
811	STABILIZED LEVEL FLIGHT	324	91.0	366.879	8118.080
812	STABILIZED LEVEL FLIGHT	324	100.0	3918.540	9132.840
813	STABILIZED LEVEL FLIGHT	324	110.0	5186.950	10401.290
814	STABILIZED LEVEL FLIGHT	324	115.0	5694.370	11416.050
815	STABILIZED LEVEL FLIGHT	324	120.0	10007.059	14206.640

LEAD SURVEY - RADAR ANTENNA M/R BLADES

MODEL UH-1B S43 FLT. 143-A G.W. 7560 LBS ALT. 3000 FT HD
SHIP AF 62-2023 DATE 19 AUG 65 C.G. STA 125.4 OSC. NO. 1

CTR NO.	TEST CONDITION	RPM	VCAL KTS	MR BL BEAM STA 35 MEAN	OSC
799	STABILIZED LEVEL FLIGHT	310	23.0	-4286.585	15378.494
800	STABILIZED LEVEL FLIGHT	310	43.0	-5117.855	9556.604
801	STABILIZED LEVEL FLIGHT	310	59.0	-549.870	10806.910
802	STABILIZED LEVEL FLIGHT	310	80.0	2363.574	14547.226
803	STABILIZED LEVEL FLIGHT	310	91.0	1547.540	13300.320
804	STABILIZED LEVEL FLIGHT	310	100.0	6519.824	16269.766
805	STABILIZED LEVEL FLIGHT	310	119.0	13585.719	20781.750
806	STABILIZED LEVEL FLIGHT	310	120.0	18157.704	26185.005
807	STABILIZED LEVEL FLIGHT	324	23.0	-13430.555	7897.065
808	STABILIZED LEVEL FLIGHT	324	43.0	-10936.745	9556.606
809	STABILIZED LEVEL FLIGHT	324	59.0	-12599.285	8728.335
810	STABILIZED LEVEL FLIGHT	324	80.0	-8858.571	11637.780
811	STABILIZED LEVEL FLIGHT	324	91.0	-7196.030	11637.780
812	STABILIZED LEVEL FLIGHT	324	100.0	-961.906	14547.225
813	STABILIZED LEVEL FLIGHT	324	110.0	1532.305	16269.764
814	STABILIZED LEVEL FLIGHT	324	115.0	701.035	18703.576
815	STABILIZED LEVEL FLIGHT	324	120.0	11091.910	22444.290

LOAD SURVEY - RADAR ANTENNA M/R BLADES

MODEL UH-1B 543 FLT. 143-A G.W. 7500 LB. ALT. 3000 FT HD
SHIP AF 62-2023 DATE 19 AUG 65 C.G. STA. 125.4 CSC. NO. 1

CTR NO.	TEST CONDITION	RPM	VCAL KTS	MR PITCH LINK RED MEAN	CSC
799	STABILIZED LEVEL FLIGHT	310	23.0	-17.060	324.140
800	STABILIZED LEVEL FLIGHT	310	43.0	-51.180	272.960
801	STABILIZED LEVEL FLIGHT	310	59.0	-25.590	264.430
802	STABILIZED LEVEL FLIGHT	310	80.0	34.120	307.080
803	STABILIZED LEVEL FLIGHT	310	91.0	119.420	375.320
804	STABILIZED LEVEL FLIGHT	310	100.0	93.630	383.850
805	STABILIZED LEVEL FLIGHT	310	115.0	59.710	537.390
806	STABILIZED LEVEL FLIGHT	310	120.0	34.120	648.280
807	STABILIZED LEVEL FLIGHT	324	23.0	-42.650	281.490
808	STABILIZED LEVEL FLIGHT	324	43.0	-102.360	272.960
809	STABILIZED LEVEL FLIGHT	324	59.0	-34.120	259.900
810	STABILIZED LEVEL FLIGHT	324	80.0	-25.590	315.610
811	STABILIZED LEVEL FLIGHT	324	91.0	68.240	358.200
812	STABILIZED LEVEL FLIGHT	324	100.0	99.710	400.910
813	STABILIZED LEVEL FLIGHT	324	110.0	85.300	460.620
814	STABILIZED LEVEL FLIGHT	324	115.0	-0.000	528.860
815	STABILIZED LEVEL FLIGHT	324	120.0	42.650	605.630

LOAD SURVEY - RADAR ANTENNA M/R BLADES

MODEL UH-1B 543 FLT. 143-A G.W. 7500 LB. ALT. 3000 FT HD
SHIP AF 62-2023 DATE 19 AUG 65 C.G. STA. 125.4 OSC. NO. 1

CTR NO.	TEST CONDITION	RPM	VCAL KTS	MR BL CHORD STA 140 MEAN	MR BL CHORD STA 140 OSC
799	STABILIZED LEVEL FLIGHT	310	23.0	-5139.750	45323.250
800	STABILIZED LEVEL FLIGHT	310	43.0	-8410.500	31773.000
801	STABILIZED LEVEL FLIGHT	310	59.0	-7242.375	21727.125
802	STABILIZED LEVEL FLIGHT	310	80.0	-700.875	22194.375
803	STABILIZED LEVEL FLIGHT	310	91.0	-467.250	22895.250
804	STABILIZED LEVEL FLIGHT	310	100.0	0.001	29504.000
805	STABILIZED LEVEL FLIGHT	310	115.0	1168.125	26355.625
806	STABILIZED LEVEL FLIGHT	310	120.0	0.000	33174.750
807	STABILIZED LEVEL FLIGHT	324	23.0	-10980.375	32473.875
808	STABILIZED LEVEL FLIGHT	324	43.0	-11081.250	24257.000
809	STABILIZED LEVEL FLIGHT	324	59.0	-6644.124	17585.125
810	STABILIZED LEVEL FLIGHT	324	80.0	-4672.500	19157.250
811	STABILIZED LEVEL FLIGHT	324	91.0	-3504.374	17585.125
812	STABILIZED LEVEL FLIGHT	324	100.0	-2102.624	20325.375
813	STABILIZED LEVEL FLIGHT	324	110.0	-2569.875	20325.374
814	STABILIZED LEVEL FLIGHT	324	115.0	-1401.749	19624.500
815	STABILIZED LEVEL FLIGHT	324	120.0	-700.874	25932.375

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LOAD SURVEY - RADAR ANTENNA M/R BLADES

MODEL UH-1B 543 FLT. 143-A G.W. 7500 LBS ALT. 3000 FT HD
SHIP AF 62-2023 DATE 19 AUG 65 C.G. STA. 125.4 DSC. NO. 1

CTR NO.	TEST CONDITION	RPM	VCAL KTS	MR DRAG BRACE MEAN	DSC
799	STABILIZED LEVEL FLIGHT	310	23.0	4868.120	4255.400
800	STABILIZED LEVEL FLIGHT	310	43.0	5011.300	3293.140
801	STABILIZED LEVEL FLIGHT	310	59.0	4868.120	2863.600
802	STABILIZED LEVEL FLIGHT	310	80.0	4152.220	3579.500
803	STABILIZED LEVEL FLIGHT	310	91.0	3865.860	3865.800
804	STABILIZED LEVEL FLIGHT	310	100.0	3149.560	4009.040
805	STABILIZED LEVEL FLIGHT	310	119.0	3006.780	4724.940
806	STABILIZED LEVEL FLIGHT	310	120.0	3006.780	5584.020
807	STABILIZED LEVEL FLIGHT	324	23.0	4868.120	3722.680
808	STABILIZED LEVEL FLIGHT	324	43.0	5154.480	3149.960
809	STABILIZED LEVEL FLIGHT	324	59.0	4438.580	2720.420
810	STABILIZED LEVEL FLIGHT	324	80.0	4581.760	3149.960
811	STABILIZED LEVEL FLIGHT	324	91.0	4581.760	3436.320
812	STABILIZED LEVEL FLIGHT	324	100.0	4152.220	3579.500
813	STABILIZED LEVEL FLIGHT	324	110.0	3722.680	4009.040
814	STABILIZED LEVEL FLIGHT	324	119.0	3436.321	4009.040
815	STABILIZED LEVEL FLIGHT	324	120.0	3579.500	5011.300

LOAD SURVEY - RADAR ANTENNA M/R BLADES

MODEL UH-1B 543 FLT. 143-A G.W. 7500 LBS ALT. 3000 FT HC
SHIP AF 62-2023 DATE 19 AUG 65 C.G. STA. 125.4 OSC. NO. 1

CTR NO.	TEST CONDITION	RPM	VCAL KTS	PR YOKE BEAM STA 6 MEAN	OSC
799	STABILIZED LEVEL FLIGHT	310	23.0	-41020.330	23072.700
800	STABILIZED LEVEL FLIGHT	310	43.0	-39482.159	15381.800
801	STABILIZED LEVEL FLIGHT	310	59.0	-39482.159	15381.800
802	STABILIZED LEVEL FLIGHT	310	80.0	-39482.159	15381.800
803	STABILIZED LEVEL FLIGHT	310	91.0	-39482.159	15381.800
804	STABILIZED LEVEL FLIGHT	310	100.0	-42558.919	18458.159
805	STABILIZED LEVEL FLIGHT	310	115.0	-37943.979	19996.340
806	STABILIZED LEVEL FLIGHT	310	120.0	-36405.758	27687.240
807	STABILIZED LEVEL FLIGHT	324	23.0	-64093.039	18458.159
808	STABILIZED LEVEL FLIGHT	324	43.0	-53325.779	13843.620
809	STABILIZED LEVEL FLIGHT	324	59.0	-61016.678	12305.440
810	STABILIZED LEVEL FLIGHT	324	80.0	-53325.779	13843.620
811	STABILIZED LEVEL FLIGHT	324	91.0	-51787.559	15381.800
812	STABILIZED LEVEL FLIGHT	324	100.0	-51787.959	18458.159
813	STABILIZED LEVEL FLIGHT	324	110.0	-51787.599	18458.159
814	STABILIZED LEVEL FLIGHT	324	115.0	-57940.319	18458.161
815	STABILIZED LEVEL FLIGHT	324	120.0	-44096.700	23072.700

LOAD SURVEY - RADAR ANTENNA M/R BLADES

MODEL UH-1B 543 FLT. 143-A G.W. 7500 LBS. ALT. 3000 FT PD
SHIP AF 62-2023 DATE 19 AUG 65 C.G. STA. 125.4 QSC. NO. 1

CTR NO.	TEST CONDITION	RPM	VCAL KTS	MR BL CHORD STA 60 MEAN	QSC
799	STABILIZED LEVEL FLIGHT	310	23.0	56716.424	67462.694
800	STABILIZED LEVEL FLIGHT	310	43.0	52537.319	56119.410
801	STABILIZED LEVEL FLIGHT	310	59.0	59104.493	38805.975
802	STABILIZED LEVEL FLIGHT	310	80.0	65671.647	46567.168
803	STABILIZED LEVEL FLIGHT	310	91.0	65671.648	50149.260
804	STABILIZED LEVEL FLIGHT	310	100.0	66865.676	58507.469
805	STABILIZED LEVEL FLIGHT	310	110.0	71044.782	61452.545
806	STABILIZED LEVEL FLIGHT	310	120.0	75223.888	78805.579
807	STABILIZED LEVEL FLIGHT	324	23.0	61492.542	95522.395
808	STABILIZED LEVEL FLIGHT	324	43.0	57313.437	42985.080
809	STABILIZED LEVEL FLIGHT	324	59.0	65671.647	34626.869
810	STABILIZED LEVEL FLIGHT	324	80.0	65671.646	40597.020
811	STABILIZED LEVEL FLIGHT	324	91.0	70447.765	41751.049
812	STABILIZED LEVEL FLIGHT	324	100.0	73820.903	47164.186
813	STABILIZED LEVEL FLIGHT	324	110.0	77014.931	50746.272
814	STABILIZED LEVEL FLIGHT	324	115.0	78805.578	51343.291
815	STABILIZED LEVEL FLIGHT	324	120.0	77611.940	62089.559

LOAD SURVEY - RADAR ANTENNA M/R BLADES

MODEL UH-1B 543 FLT. 143-A G.W. 7500 LBS ALT. 3000 FT HD
SHIP AF 62-2029 DATE 19 AUG 65 C.G. STA. 125.4 OSC. NO. 1

CTR NO.	TEST CONDITION	RPM	VCAL KTS	MR YOKE CHORD STA 6 MEAN	OSC
799	STABILIZED LEVEL FLIGHT	310	23.0	42556.430	61321.470
800	STABILIZED LEVEL FLIGHT	310	43.0	38200.255	51603.058
801	STABILIZED LEVEL FLIGHT	310	59.0	41886.250	42556.429
802	STABILIZED LEVEL FLIGHT	310	80.0	46912.600	57635.479
803	STABILIZED LEVEL FLIGHT	310	91.0	52274.039	62326.739
804	STABILIZED LEVEL FLIGHT	310	100.0	59981.109	70703.989
805	STABILIZED LEVEL FLIGHT	310	115.0	72044.349	83437.409
806	STABILIZED LEVEL FLIGHT	310	120.0	83772.499	109239.338
807	STABILIZED LEVEL FLIGHT	324	23.0	39875.711	58640.751
808	STABILIZED LEVEL FLIGHT	324	43.0	35184.450	48588.049
809	STABILIZED LEVEL FLIGHT	324	59.0	43896.790	43226.610
810	STABILIZED LEVEL FLIGHT	324	80.0	47247.650	51260.771
811	STABILIZED LEVEL FLIGHT	324	91.0	52274.041	54954.760
812	STABILIZED LEVEL FLIGHT	324	100.0	64672.370	64672.370
813	STABILIZED LEVEL FLIGHT	324	110.0	67353.089	70033.809
814	STABILIZED LEVEL FLIGHT	324	115.0	72044.347	71374.168
815	STABILIZED LEVEL FLIGHT	324	120.0	78411.059	89804.119

LOAD SURVEY - RADAR ANTENNA M/R BLADES

MODEL UH-1B 543 FLT. 143-A G.W. 7500 LB. ALT. 3000 FT HD
SHIP AF 62-2023 DATE 19 AUG 65 C.G. STA. 125.4 OSC. NO. 1

CTR NO.	TEST CONDITION	RPM	VCAL KTS	MR FLAPPING MEAN	OSC
799	STABILIZED LEVEL FLIGHT	310	23.0	0.294	20.286
800	STABILIZED LEVEL FLIGHT	310	43.0	0.294	23.814
801	STABILIZED LEVEL FLIGHT	310	59.0	0.882	22.050
802	STABILIZED LEVEL FLIGHT	310	80.0	0.588	22.344
803	STABILIZED LEVEL FLIGHT	310	91.0	0.588	21.168
804	STABILIZED LEVEL FLIGHT	310	100.0	0.588	18.816
805	STABILIZED LEVEL FLIGHT	310	115.0	0.294	17.346
806	STABILIZED LEVEL FLIGHT	310	120.0	1.470	16.522
807	STABILIZED LEVEL FLIGHT	324	23.0	0.294	22.638
808	STABILIZED LEVEL FLIGHT	324	43.0	0.588	23.520
809	STABILIZED LEVEL FLIGHT	324	59.0	0.882	23.226
810	STABILIZED LEVEL FLIGHT	324	80.0	0.294	20.874
811	STABILIZED LEVEL FLIGHT	324	91.0	0.588	20.580
812	STABILIZED LEVEL FLIGHT	324	100.0	0.882	17.934
813	STABILIZED LEVEL FLIGHT	324	110.0	1.176	17.640
814	STABILIZED LEVEL FLIGHT	324	115.0	0.882	17.346
815	STABILIZED LEVEL FLIGHT	324	120.0	2.058	15.582

LOAD SURVEY - BACAR ANTENNA M/R BLADES

MODEL UH-1B 543 FLT. 143-A G.W. 7500 LB. ALT. 3000 FT HD
SHIP AF 62-2023 DATE 19 AUG 65 C.G. STA. 125.4 OSC. NO. 1

CTR NO.	TEST CONDITION	RPM	VCAL KTS	PILOT VERT VIBRATION MEAN	OSC
799	STABILIZED LEVEL FLIGHT	310	23.0	1.000	0.130
800	STABILIZED LEVEL FLIGHT	310	43.0	1.006	0.086
801	STABILIZED LEVEL FLIGHT	310	59.0	1.006	0.098
802	STABILIZED LEVEL FLIGHT	310	80.0	0.994	0.144
803	STABILIZED LEVEL FLIGHT	310	91.0	0.988	0.126
804	STABILIZED LEVEL FLIGHT	310	100.0	0.980	0.167
805	STABILIZED LEVEL FLIGHT	310	115.0	0.954	0.184
806	STABILIZED LEVEL FLIGHT	310	120.0	0.868	0.270
807	STABILIZED LEVEL FLIGHT	324	23.0	1.011	0.080
808	STABILIZED LEVEL FLIGHT	324	43.0	1.034	0.065
809	STABILIZED LEVEL FLIGHT	324	59.0	0.977	0.080
810	STABILIZED LEVEL FLIGHT	324	80.0	1.012	0.092
811	STABILIZED LEVEL FLIGHT	324	91.0	0.977	0.104
812	STABILIZED LEVEL FLIGHT	324	100.0	1.006	0.144
813	STABILIZED LEVEL FLIGHT	324	110.0	0.965	0.172
814	STABILIZED LEVEL FLIGHT	324	115.0	0.948	0.190
815	STABILIZED LEVEL FLIGHT	324	120.0	1.006	0.224

LEAD SURVEY - RADAR ANTENNA M/R BLADES

MODEL UH-1B 543 FLT. 143-A G.W. 7500 LB. ALT. 3000 FT MD
SHIP AF 62-2023 DATE 19 AUG 65 C.G. STA 125.4 OSC. NO. 1

CTR NO.	TEST CONDITION	RPM	VCAL KTS	CO-PILOT VERT VIBR MEAN	OSC
799	STABILIZED LEVEL FLIGHT	310	23.0	1.027	0.105
800	STABILIZED LEVEL FLIGHT	310	43.0	1.027	0.092
801	STABILIZED LEVEL FLIGHT	310	59.0	1.016	0.082
802	STABILIZED LEVEL FLIGHT	310	80.0	1.000	0.121
803	STABILIZED LEVEL FLIGHT	310	91.0	0.976	0.154
804	STABILIZED LEVEL FLIGHT	310	100.0	0.956	0.209
805	STABILIZED LEVEL FLIGHT	310	115.0	0.945	0.319
806	STABILIZED LEVEL FLIGHT	310	120.0	0.950	0.346
807	STABILIZED LEVEL FLIGHT	324	23.0	0.978	0.143
808	STABILIZED LEVEL FLIGHT	324	43.0	1.022	0.098
809	STABILIZED LEVEL FLIGHT	324	59.0	0.972	0.082
810	STABILIZED LEVEL FLIGHT	324	80.0	1.022	0.110
811	STABILIZED LEVEL FLIGHT	324	91.0	0.983	0.149
812	STABILIZED LEVEL FLIGHT	324	100.0	0.954	0.215
813	STABILIZED LEVEL FLIGHT	324	110.0	0.954	0.292
814	STABILIZED LEVEL FLIGHT	324	115.0	0.917	0.303
815	STABILIZED LEVEL FLIGHT	324	120.0	1.000	0.319

LOAD SURVEY - RADAR ANTENNA M/R BLADES

MODEL UH-1B 543 FLT. 143-A G.W. 7500 LB. ALT. 3000 FT HC
SHIP AF 62-2023 DATE 19 AUG 65 C.G. STA. 125.4 OSC. NO. 1

CTR NO.	TEST CONDITION	RPM	VCAL KTS	CG VERT VIBRATION MEAN	OSC
799	STABILIZED LEVEL FLIGHT	310	23.0	1.020	0.131
800	STABILIZED LEVEL FLIGHT	310	42.0	1.031	0.095
801	STABILIZED LEVEL FLIGHT	310	59.0	1.032	0.073
802	STABILIZED LEVEL FLIGHT	310	80.0	1.011	0.095
803	STABILIZED LEVEL FLIGHT	310	91.0	0.990	0.073
804	STABILIZED LEVEL FLIGHT	310	100.0	0.958	0.116
805	STABILIZED LEVEL FLIGHT	310	115.0	0.969	0.116
806	STABILIZED LEVEL FLIGHT	310	120.0	0.995	0.142
807	STABILIZED LEVEL FLIGHT	324	23.0	0.979	0.147
808	STABILIZED LEVEL FLIGHT	324	43.0	1.042	0.126
809	STABILIZED LEVEL FLIGHT	324	59.0	0.963	0.079
810	STABILIZED LEVEL FLIGHT	324	80.0	1.011	0.115
811	STABILIZED LEVEL FLIGHT	324	91.0	0.990	0.126
812	STABILIZED LEVEL FLIGHT	324	100.0	0.990	0.147
813	STABILIZED LEVEL FLIGHT	324	110.0	1.000	0.126
814	STABILIZED LEVEL FLIGHT	324	115.0	0.942	0.131
815	STABILIZED LEVEL FLIGHT	324	120.0	1.063	0.136

LOAD SURVEY - RADAR ANTENNA M/R BLADES

MODEL UH-1B 543 FLT. 143-A G.W. 7500 LB. ALT. 3000 FT HD
SHIP AF 62-2023 DATE 19 AUG 65 C.G. STA. 125.4 OSC. NO. 1

CTR NO.	TEST CONDITION	RPM	VCAL KTS	R/H CYC BOOST TUBE MEAN	R/H CYC BOOST TUBE OSC
799	STABILIZED LEVEL FLIGHT	310	23.0	151.125	220.875
800	STABILIZED LEVEL FLIGHT	310	43.0	116.250	139.500
801	STABILIZED LEVEL FLIGHT	310	59.0	139.500	139.500
802	STABILIZED LEVEL FLIGHT	310	80.0	139.500	162.750
803	STABILIZED LEVEL FLIGHT	310	91.0	197.625	197.625
804	STABILIZED LEVEL FLIGHT	310	100.0	151.125	267.375
805	STABILIZED LEVEL FLIGHT	310	115.0	151.125	313.875
806	STABILIZED LEVEL FLIGHT	310	126.0	209.250	441.750
807	STABILIZED LEVEL FLIGHT	324	23.0	139.500	279.000
808	STABILIZED LEVEL FLIGHT	324	43.0	127.875	174.375
809	STABILIZED LEVEL FLIGHT	324	59.0	116.250	139.500
810	STABILIZED LEVEL FLIGHT	324	80.0	127.875	174.375
811	STABILIZED LEVEL FLIGHT	324	91.0	209.250	209.250
812	STABILIZED LEVEL FLIGHT	324	100.0	174.375	290.625
813	STABILIZED LEVEL FLIGHT	324	110.0	151.125	360.375
814	STABILIZED LEVEL FLIGHT	324	115.0	139.500	325.500
815	STABILIZED LEVEL FLIGHT	324	126.0	197.625	383.625

LOAD SURVEY - RADAR ANTENNA M/R BLADES

MODEL UH-1B S43 FLT. 143-A G.W. 7500 LBS. ALT. 3000 FT HD
SHIP AF 62-2023 DATE 19 AUG 65 C.G. STA. 125.4 OSC. NO. 1

CTR NO.	TEST CONDITION	RPM	VCAL KTS	L/H CYC BOOST TUBE MEAN	CSC
799	STABILIZED LEVEL FLIGHT	310	23.0	11.125	166.875
800	STABILIZED LEVEL FLIGHT	310	43.0	66.750	111.250
801	STABILIZED LEVEL FLIGHT	310	59.0	55.625	144.625
802	STABILIZED LEVEL FLIGHT	310	80.0	-11.125	144.625
803	STABILIZED LEVEL FLIGHT	310	91.0	-33.375	166.875
804	STABILIZED LEVEL FLIGHT	310	100.0	-77.875	189.125
805	STABILIZED LEVEL FLIGHT	310	115.0	-89.000	222.500
806	STABILIZED LEVEL FLIGHT	310	120.0	-166.875	211.375
807	STABILIZED LEVEL FLIGHT	324	23.0	-11.125	166.875
808	STABILIZED LEVEL FLIGHT	324	43.0	33.375	122.375
809	STABILIZED LEVEL FLIGHT	324	59.0	22.250	133.500
810	STABILIZED LEVEL FLIGHT	324	80.0	-0.000	155.750
811	STABILIZED LEVEL FLIGHT	324	91.0	-33.375	166.875
812	STABILIZED LEVEL FLIGHT	324	100.0	-44.500	155.750
813	STABILIZED LEVEL FLIGHT	324	110.0	-89.000	222.500
814	STABILIZED LEVEL FLIGHT	324	115.0	-111.250	244.750
815	STABILIZED LEVEL FLIGHT	324	120.0	-122.375	233.625

LOAD SURVEY - RADAR ANTENNA H/R BLADES

MODEL UH-1B 543 FLT. 143-A G.W. 7500 LBS ALT. 3000 FT HD
SHIP AF 62-2023 DATE 19 AUG 65 C.G. STA. 125.4 OSC. NO. 1

CTR NO.	TEST CONDITION	RPM	VCAL KTS	COLL. BOOST TUBE MEAN	COLL. BOOST TUBE OSC
799	STABILIZED LEVEL FLIGHT	310	23.0	4.065	77.615
800	STABILIZED LEVEL FLIGHT	310	43.0	32.680	65.870
801	STABILIZED LEVEL FLIGHT	310	59.0	20.595	93.955
802	STABILIZED LEVEL FLIGHT	310	80.0	0.000	122.550
803	STABILIZED LEVEL FLIGHT	310	91.0	53.105	151.145
804	STABILIZED LEVEL FLIGHT	310	100.0	36.765	224.675
805	STABILIZED LEVEL FLIGHT	310	115.0	61.275	249.185
806	STABILIZED LEVEL FLIGHT	310	120.0	49.020	334.970
807	STABILIZED LEVEL FLIGHT	324	23.0	44.935	102.125
808	STABILIZED LEVEL FLIGHT	324	43.0	77.615	77.615
809	STABILIZED LEVEL FLIGHT	324	59.0	61.275	102.125
810	STABILIZED LEVEL FLIGHT	324	80.0	61.275	142.975
811	STABILIZED LEVEL FLIGHT	324	91.0	77.615	175.655
812	STABILIZED LEVEL FLIGHT	324	100.0	53.105	216.505
813	STABILIZED LEVEL FLIGHT	324	110.0	65.360	253.270
814	STABILIZED LEVEL FLIGHT	324	115.0	61.275	265.525
815	STABILIZED LEVEL FLIGHT	324	120.0	106.210	285.950

LOAD SURVEY - RADAR ANTENNA H/R BLADES

MODEL UH-1B S43 FLT. 143-B G.W. 7500 LBS. ALT. 3000 FT HC
SHIP AF 62-2023 DATE 19 AUG 65 C.G. STA. 133.2 OSC. NO. 1

CTR NO.	TEST CONDITION	RPM	VCAL KTS	MR BL BEAM STA 140 MEAN	CSC
833	STABILIZED LEVEL FLIGHT	310	23.0	-891.300	5440.700
834	STABILIZED LEVEL FLIGHT	310	43.0	-95.100	4909.900
835	STABILIZED LEVEL FLIGHT	310	59.0	439.700	5706.100
836	STABILIZED LEVEL FLIGHT	310	80.0	-360.500	6767.700
837	STABILIZED LEVFL FLIGHT	310	91.0	-95.100	7829.300
838	STABILIZED LEVEL FLIGHT	310	100.0	170.300	8360.100
839	STABILIZED LEVEL FLIGHT	310	110.0	-493.200	9023.600
840	STABILIZED LEVEL FLIGHT	310	119.0	-227.800	9954.400
841	STABILIZED LEVEL FLIGHT	310	120.0	966.500	9952.500
842	STABILIZED LEVEL FLIGHT	324	23.0	-1024.000	4511.800
843	STABILIZED LEVEL FLIGHT	324	43.0	37.600	4777.200
844	STABILIZED LEVEL FLIGHT	324	55.0	37.600	4777.200
845	STABILIZED LEVEL FLIGHT	324	80.0	-95.100	5706.100
846	STABILIZED LEVEL FLIGHT	324	91.0	-493.200	6635.000
847	STABILIZED LEVEL FLIGHT	324	100.0	-758.600	7431.200
848	STABILIZED LEVEL FLIGHT	324	110.0	-227.800	7431.200
849	STABILIZED LEVEL FLIGHT	324	115.0	-227.800	7696.600
850	STABILIZED LEVEL FLIGHT	324	120.0	303.000	8758.200

LOAD SURVEY - RADAR ANTENNA M/R BLADES

MODEL UH-1B 543 FLT. 143-B G.W. 7500 LBS ALT. 3000 FT MD
SHIP AF 62-2023 DATE 19 AUG 65 C.G. STA. 133.2 OSC. NO. 1

CTR NO.	TEST CONDITION	RPM	VCAL KTS	MR BL BEAM STA 84 MEAN	OSC
833	STABILIZED LEVEL FLIGHT	310	23.C	4054.75C	5816.25C
834	STABILIZED LEVEL FLIGHT	310	43.C	2503.75C	5557.75C
835	STABILIZED LEVEL FLIGHT	310	59.C	3667.CCC	5687.CCC
836	STABILIZED LEVEL FLIGHT	310	8C.C	4571.75C	7629.75C
837	STABILIZED LEVEL FLIGHT	310	91.C	5605.75C	8659.75C
838	STABILIZED LEVEL FLIGHT	310	10C.C	7673.75C	9176.75C
839	STABILIZED LEVEL FLIGHT	310	110.C	9224.75C	10986.25C
840	STABILIZED LEVEL FLIGHT	310	115.C	8449.25C	10986.25C
841	STABILIZED LEVEL FLIGHT	310	120.C	10258.75C	13312.75C
842	STABILIZED LEVEL FLIGHT	324	23.C	2503.75C	5040.75C
843	STABILIZED LEVEL FLIGHT	324	43.C	1469.75C	5259.25C
844	STABILIZED LEVEL FLIGHT	324	59.C	1857.5CC	4394.5CC
845	STABILIZED LEVEL FLIGHT	324	8C.C	2116.CCC	5687.CCC
846	STABILIZED LEVEL FLIGHT	324	91.C	3667.CCC	6721.CCC
847	STABILIZED LEVEL FLIGHT	324	100.C	4442.5CC	7238.CCC
848	STABILIZED LEVEL FLIGHT	324	11C.C	5347.25C	7884.25C
849	STABILIZED LEVEL FLIGHT	324	115.C	5864.25C	8518.25C
850	STABILIZED LEVEL FLIGHT	324	12C.C	6769.CCC	9823.CCC

LOAD SURVEY - RADAR ANTENNA M/R BLADES

MODEL UH-1B 543 FLT. 143-E G.W. 7500 LB. ALT. 3000 FT HD
SHIP AF 62-2023 DATE 19 AUG 65 C.G. STA. 133.2 DSC. NO. 1

CTR NO.	TEST CONDITION	RPM	VCAL KTS	MR BL BEAM STA 60 MEAN	DSC
833	STABILIZED LEVEL FLIGHT	310	23.0	2904.399	8118.401
834	STABILIZED LEVEL FLIGHT	310	43.0	367.359	6596.200
835	STABILIZED LEVEL FLIGHT	310	59.0	3665.499	6849.899
836	STABILIZED LEVEL FLIGHT	310	80.0	6709.899	10401.700
837	STABILIZED LEVEL FLIGHT	310	91.0	7217.300	11923.900
838	STABILIZED LEVEL FLIGHT	310	100.0	11022.799	13192.400
839	STABILIZED LEVEL FLIGHT	310	110.0	14828.299	15983.100
840	STABILIZED LEVEL FLIGHT	310	115.0	13813.499	15983.100
841	STABILIZED LEVEL FLIGHT	310	120.0	14320.899	20042.300
842	STABILIZED LEVEL FLIGHT	324	23.0	-901.101	6342.500
843	STABILIZED LEVEL FLIGHT	324	43.0	-3164.401	6088.799
844	STABILIZED LEVEL FLIGHT	324	59.0	-1662.201	5581.400
845	STABILIZED LEVEL FLIGHT	324	80.0	-901.101	7357.301
846	STABILIZED LEVEL FLIGHT	324	91.0	1889.599	9133.200
847	STABILIZED LEVEL FLIGHT	324	100.0	5441.399	9133.200
848	STABILIZED LEVEL FLIGHT	324	110.0	7471.000	10655.400
849	STABILIZED LEVEL FLIGHT	324	115.0	7470.999	12177.600
850	STABILIZED LEVEL FLIGHT	324	120.0	10515.400	13655.800

LOAD SURVEY - RADAR ANTENNA M/R BLADES

MODEL UH-1B S43 FLT. 143-B G.W. 7500 LB. ALT. 3000 FT HP
SHIP AF 62-2023 DATE 19 AUG 65 C.G. STA. 133.2 DSC. NO. 1

CTR NO.	TEST CONDITION	RPM	VCAL KTS	MR BL BEAM STA 35 MEAN	DSC
833	STABILIZED LEVEL FLIGHT	310	23.0	-1020.201	11915.400
834	STABILIZED LEVEL FLIGHT	310	43.0	-5701.250	10638.750
835	STABILIZED LEVEL FLIGHT	310	55.0	1533.099	11915.400
836	STABILIZED LEVEL FLIGHT	310	80.0	4511.950	16556.449
837	STABILIZED LEVEL FLIGHT	310	91.0	7490.800	16170.900
838	STABILIZED LEVEL FLIGHT	310	100.0	13448.501	19575.300
839	STABILIZED LEVEL FLIGHT	310	110.0	18555.100	23830.800
840	STABILIZED LEVEL FLIGHT	310	115.0	15150.700	23830.800
841	STABILIZED LEVEL FLIGHT	310	120.0	17704.000	29788.499
842	STABILIZED LEVEL FLIGHT	324	23.0	-6661.098	11915.400
843	STABILIZED LEVEL FLIGHT	324	43.0	-12935.599	10213.199
844	STABILIZED LEVEL FLIGHT	324	55.0	-8680.100	8510.999
845	STABILIZED LEVEL FLIGHT	324	80.0	-7826.999	11064.301
846	STABILIZED LEVEL FLIGHT	324	91.0	-5275.699	11915.400
847	STABILIZED LEVEL FLIGHT	324	100.0	682.000	13617.601
848	STABILIZED LEVEL FLIGHT	324	110.0	4511.950	14894.251
849	STABILIZED LEVEL FLIGHT	324	115.0	4937.501	19575.300
850	STABILIZED LEVEL FLIGHT	324	120.0	8341.899	21277.500

LOAD SURVEY - RACAR ANTENNA M/R BLADES

MODEL UH-1B 543 FLT. 143-B G.W. 7500 LB. ALT. 3000 FT HD
SHIP AF 62-2023 DATE 19 AUG 65 C.G. STA 133.2 OSC. NO. 1

CTR NO.	TEST CONDITION	RPM	VCAL KTS	MR PITCH LINK RED MEAN	MR PITCH LINK RED OSC
833	STABILIZED LEVEL FLIGHT	310	23.0	-77.400	215.000
834	STABILIZED LEVEL FLIGHT	310	43.0	34.400	326.800
835	STABILIZED LEVEL FLIGHT	310	59.0	29.800	301.000
836	STABILIZED LEVEL FLIGHT	310	80.0	66.800	309.600
837	STABILIZED LEVEL FLIGHT	310	91.0	129.000	369.800
838	STABILIZED LEVEL FLIGHT	310	100.0	137.800	395.600
839	STABILIZED LEVEL FLIGHT	310	110.0	137.600	916.000
840	STABILIZED LEVEL FLIGHT	310	119.0	172.000	498.800
841	STABILIZED LEVEL FLIGHT	310	120.0	60.200	645.000
842	STABILIZED LEVEL FLIGHT	324	23.0	8.600	318.200
843	STABILIZED LEVEL FLIGHT	324	43.0	-0.000	309.600
844	STABILIZED LEVEL FLIGHT	324	59.0	-43.000	283.800
845	STABILIZED LEVEL FLIGHT	324	80.0	29.800	318.200
846	STABILIZED LEVEL FLIGHT	324	91.0	86.000	378.400
847	STABILIZED LEVEL FLIGHT	324	100.0	111.800	421.400
848	STABILIZED LEVEL FLIGHT	324	110.0	111.800	421.400
849	STABILIZED LEVEL FLIGHT	324	115.0	129.000	438.600
850	STABILIZED LEVEL FLIGHT	324	120.0	94.600	576.200

LOAD SURVEY - RADAR ANTENNA M/R BLADES

MODEL UH-1B 543 FLT. 143-B G.W. 7500 LB. ALT. 3000 FT HD
SHIP AF 62-2023 DATE 19 AUG 65 C.G. STA. 133.2 OSC. NO. 1

CTR NO.	TEST CONDITION	RPM	VCAL KTS	MR DRAG BRACE MEAN	OSC
833	STABILIZED LEVEL FLIGHT	310	23.0	4009.600	3723.200
834	STABILIZED LEVEL FLIGHT	310	43.0	5012.000	3007.200
835	STABILIZED LEVEL FLIGHT	310	59.0	4868.800	2864.000
836	STABILIZED LEVEL FLIGHT	310	80.0	4582.400	3150.400
837	STABILIZED LEVEL FLIGHT	310	91.0	4439.200	3866.400
838	STABILIZED LEVEL FLIGHT	310	100.0	2580.000	4439.200
839	STABILIZED LEVEL FLIGHT	310	110.0	3150.400	4868.800
840	STABILIZED LEVEL FLIGHT	310	115.0	3293.600	4725.600
841	STABILIZED LEVEL FLIGHT	310	120.0	3293.600	5871.200
842	STABILIZED LEVEL FLIGHT	324	23.0	5012.000	3580.000
843	STABILIZED LEVEL FLIGHT	324	43.0	5155.200	3150.400
844	STABILIZED LEVEL FLIGHT	324	59.0	5155.200	2577.600
845	STABILIZED LEVEL FLIGHT	324	80.0	4868.800	2291.200
846	STABILIZED LEVEL FLIGHT	324	91.0	4582.400	3150.400
847	STABILIZED LEVEL FLIGHT	324	100.0	4009.600	3150.400
848	STABILIZED LEVEL FLIGHT	324	110.0	3580.000	3580.000
849	STABILIZED LEVEL FLIGHT	324	115.0	3723.200	4009.600
850	STABILIZED LEVEL FLIGHT	324	120.0	3150.400	4582.400

LOAD SURVEY - RADAR ANTENNA M/A BLADES

MODEL UH-1B 543 FLT. 143-B G.W. 7500 LBS ALT. 3000 FT HD
SHIP AF 62-2023 DATE 19 AUG 65 C.G. STA. 133.2 CSC. NO. 1

CTR NO.	TEST CONDITION	RPM	VCAL KTS	MR YOKE BEAM STA 6 MEAN	CSC
833	STABILIZED LEVEL FLIGHT	310	23.0	-37944.200	16920.200
834	STABILIZED LEVEL FLIGHT	310	43.0	-37944.200	16920.200
835	STABILIZED LEVEL FLIGHT	310	59.0	-30253.199	15382.000
836	STABILIZED LEVEL FLIGHT	310	80.0	-36405.999	12305.600
837	STABILIZED LEVEL FLIGHT	310	91.0	-24100.398	15382.000
838	STABILIZED LEVEL FLIGHT	310	100.0	-27176.799	18458.401
839	STABILIZED LEVEL FLIGHT	310	110.0	-25638.599	23073.000
840	STABILIZED LEVEL FLIGHT	310	115.0	-33329.598	24611.200
841	STABILIZED LEVEL FLIGHT	310	120.0	-34867.798	26149.400
842	STABILIZED LEVEL FLIGHT	324	23.0	-51787.999	18458.399
843	STABILIZED LEVEL FLIGHT	324	43.0	-53940.798	18458.401
844	STABILIZED LEVEL FLIGHT	324	59.0	-50249.796	13843.799
845	STABILIZED LEVEL FLIGHT	324	80.0	-54864.398	9225.199
846	STABILIZED LEVEL FLIGHT	324	91.0	-47173.398	16920.200
847	STABILIZED LEVEL FLIGHT	324	100.0	-45635.198	18458.399
848	STABILIZED LEVEL FLIGHT	324	110.0	-45635.198	18458.399
849	STABILIZED LEVEL FLIGHT	324	115.0	-54864.398	15382.000
850	STABILIZED LEVEL FLIGHT	324	120.0	-41020.599	19996.599

LOAD SURVEY - RADAR ANTENNA M/R BLADES

MODEL UH-1B 543 FLT. 143-B G.W. 7500 LB. ALT. 3000 FT HD
SHIP AF 62-2023 DATE 19 AUG 65 C.G. STA. 133.2 OSC. NO. 1

CTR NO.	TEST CONDITION	RPM	VCAL KTS	MR BL CHORD STA 140 MEAN	MR BL CHORD STA 140 OSC
833	STABILIZED LEVEL FLIGHT	310	23.0	-8800.450	36391.050
834	STABILIZED LEVEL FLIGHT	310	43.0	-9514.000	30920.500
835	STABILIZED LEVEL FLIGHT	310	59.0	-9514.000	25212.100
836	STABILIZED LEVEL FLIGHT	310	80.0	-3805.600	19028.000
837	STABILIZED LEVEL FLIGHT	310	91.0	-1189.250	30206.950
838	STABILIZED LEVEL FLIGHT	310	100.0	-1902.800	30444.800
839	STABILIZED LEVEL FLIGHT	310	110.0	475.700	30444.800
840	STABILIZED LEVEL FLIGHT	310	115.0	-951.400	27590.600
841	STABILIZED LEVEL FLIGHT	310	120.0	-1427.100	36628.900
842	STABILIZED LEVEL FLIGHT	324	23.0	-9989.700	31396.200
843	STABILIZED LEVEL FLIGHT	324	43.0	-10941.100	26163.500
844	STABILIZED LEVEL FLIGHT	324	59.0	-9989.700	20455.100
845	STABILIZED LEVEL FLIGHT	324	80.0	-7611.200	14271.000
846	STABILIZED LEVEL FLIGHT	324	91.0	-2616.350	19741.550
847	STABILIZED LEVEL FLIGHT	324	100.0	-3329.900	22357.900
848	STABILIZED LEVEL FLIGHT	324	110.0	-475.700	21406.500
849	STABILIZED LEVEL FLIGHT	324	115.0	-713.550	20692.949
850	STABILIZED LEVEL FLIGHT	324	120.0	-713.550	24022.850

00153

LOAD SURVEY - RADAR ANTENNA M/R BLADES

MODEL UH-1B 543 FLT. 143-8 G.W. 7500 LB. ALT. 3000 FT HD
SHIP AF 62-2023 DATE 19 AUG 65 C.G. STA. 133.2 OSC. NO. 1

CTR NO.	TEST CONDITION	RPM	VCAL KTS	MR BL CHORD STA 60 MEAN	OSC
833	STABILIZED LEVEL FLIGHT	310	23.0	55521.000	56714.999
834	STABILIZED LEVEL FLIGHT	310	43.0	54923.999	47755.992
835	STABILIZED LEVEL FLIGHT	310	59.0	57312.000	42984.000
836	STABILIZED LEVEL FLIGHT	310	80.0	62684.999	43580.999
837	STABILIZED LEVEL FLIGHT	310	91.0	66057.998	52536.000
838	STABILIZED LEVEL FLIGHT	310	100.0	69252.000	62088.001
839	STABILIZED LEVEL FLIGHT	310	110.0	69848.999	66266.999
840	STABILIZED LEVEL FLIGHT	310	115.0	69252.000	63282.000
841	STABILIZED LEVEL FLIGHT	310	120.0	76415.999	79998.000
842	STABILIZED LEVEL FLIGHT	324	23.0	60296.999	53132.999
843	STABILIZED LEVEL FLIGHT	324	43.0	59102.998	43580.999
844	STABILIZED LEVEL FLIGHT	324	59.0	61491.000	36416.999
845	STABILIZED LEVEL FLIGHT	324	80.0	65073.000	32834.999
846	STABILIZED LEVEL FLIGHT	324	91.0	71639.998	40596.000
847	STABILIZED LEVEL FLIGHT	324	100.0	70445.998	50148.000
848	STABILIZED LEVEL FLIGHT	324	110.0	76416.000	47760.000
849	STABILIZED LEVEL FLIGHT	324	115.0	79997.998	48954.000
850	STABILIZED LEVEL FLIGHT	324	120.0	75221.997	54923.999

00154

LOAD SURVEY - RALAN ANTENNA M/R BLADES

MODEL UH-1B 543 FLT. 143-B G.W. 7500 LBS ALT. 3000 FT HD
SHIP AF 62-2023 DATE 19 AUG 65 C.G. STA 133.2 DSC. AC. 1

CTR NO.	TEST CONDITION	RPM	VCAL KTS	MR YOKE CHORD STA 6 MEAN	DSC
833	STABILIZED LEVEL FLIGHT	310	23.0	49238.500	58642.500
834	STABILIZED LEVEL FLIGHT	310	43.0	38201.400	48254.401
835	STABILIZED LEVEL FLIGHT	310	59.0	42892.799	45573.599
836	STABILIZED LEVEL FLIGHT	310	80.0	43562.599	53816.000
837	STABILIZED LEVEL FLIGHT	310	91.0	49929.900	59312.699
838	STABILIZED LEVEL FLIGHT	310	100.0	61323.300	80088.900
839	STABILIZED LEVEL FLIGHT	310	110.0	68360.398	92487.599
840	STABILIZED LEVEL FLIGHT	310	115.0	67020.000	90477.000
841	STABILIZED LEVEL FLIGHT	310	120.0	82434.598	111253.199
842	STABILIZED LEVEL FLIGHT	324	23.0	47919.299	61593.500
843	STABILIZED LEVEL FLIGHT	324	43.0	39541.800	48254.400
844	STABILIZED LEVEL FLIGHT	324	59.0	40862.199	39541.799
845	STABILIZED LEVEL FLIGHT	324	80.0	45508.700	41217.300
846	STABILIZED LEVEL FLIGHT	324	91.0	51270.300	51940.500
847	STABILIZED LEVEL FLIGHT	324	100.0	53951.099	64074.299
848	STABILIZED LEVEL FLIGHT	324	110.0	66014.699	68025.299
849	STABILIZED LEVEL FLIGHT	324	115.0	70371.000	70371.000
850	STABILIZED LEVEL FLIGHT	324	120.0	74392.199	86459.798

LOAD SURVEY - RADAR ANTENNA M/R BLADES

MODEL UH-1B 543 FLT. 143-B G.W. 7500 LB. ALT. 3000 FT HD
SHIP AF 62-2023 DATE 19 AUG 65 C.G. STA. 133.2 OSC. NO. 1

CTR NO.	TEST CONDITION	RPM	VCAL KTS	MR FLAPPING MEAN	OSC
833	STABILIZED LEVEL FLIGHT	310	23.0	0.294	6.762
834	STABILIZED LEVEL FLIGHT	310	43.0	0.882	5.596
835	STABILIZED LEVEL FLIGHT	310	59.0	1.176	5.890
836	STABILIZED LEVEL FLIGHT	310	80.0	2.058	5.586
837	STABILIZED LEVEL FLIGHT	310	91.0	0.882	4.410
838	STABILIZED LEVEL FLIGHT	310	100.0	0.588	4.116
839	STABILIZED LEVEL FLIGHT	310	110.0	-0.294	7.350
840	STABILIZED LEVEL FLIGHT	310	115.0	0.588	4.704
841	STABILIZED LEVEL FLIGHT	310	120.0	1.176	7.056
842	STABILIZED LEVEL FLIGHT	324	23.0	0.882	7.350
843	STABILIZED LEVEL FLIGHT	324	43.0	-0.294	6.174
844	STABILIZED LEVEL FLIGHT	324	59.0	0.882	4.998
845	STABILIZED LEVEL FLIGHT	324	80.0	1.470	4.998
846	STABILIZED LEVEL FLIGHT	324	91.0	0.882	4.410
847	STABILIZED LEVEL FLIGHT	324	100.0	1.176	4.116
848	STABILIZED LEVEL FLIGHT	324	110.0	1.176	2.940
849	STABILIZED LEVEL FLIGHT	324	115.0	0.882	2.646
850	STABILIZED LEVEL FLIGHT	324	120.0	0.588	4.116

LOAD SURVEY - RADAR ANTENNA M/R BLADES

MODEL UH-1B 543 FLT. 143-B G.W. 7500 LB. ALT. 3000 FT HD
SHIP AF 62-2023 DATE 19 AUG 65 C.G. STA. 133.2 DSC. NO. 1

CTR NO.	TEST CONDITION	RPM	VCAL KTS	PILOT VERT VIBRATION MEAN	DSC
833	STABILIZED LEVEL FLIGHT	310	23.0	0.965	0.104
834	STABILIZED LEVEL FLIGHT	310	43.0	0.977	0.092
835	STABILIZED LEVEL FLIGHT	310	59.0	1.017	0.121
836	STABILIZED LEVEL FLIGHT	310	80.0	1.035	0.150
837	STABILIZED LEVEL FLIGHT	310	91.0	1.052	0.213
838	STABILIZED LEVEL FLIGHT	310	100.0	1.058	0.242
839	STABILIZED LEVEL FLIGHT	310	110.0	1.046	0.288
840	STABILIZED LEVEL FLIGHT	310	115.0	1.029	0.306
841	STABILIZED LEVEL FLIGHT	310	120.0	0.988	0.357
842	STABILIZED LEVEL FLIGHT	324	23.0	0.963	0.121
843	STABILIZED LEVEL FLIGHT	324	43.0	0.994	0.086
844	STABILIZED LEVEL FLIGHT	324	59.0	1.023	0.092
845	STABILIZED LEVEL FLIGHT	324	80.0	1.058	0.115
846	STABILIZED LEVEL FLIGHT	324	91.0	1.023	0.219
847	STABILIZED LEVEL FLIGHT	324	100.0	1.058	0.242
848	STABILIZED LEVEL FLIGHT	324	110.0	1.058	0.219
849	STABILIZED LEVEL FLIGHT	324	115.0	0.977	0.277
850	STABILIZED LEVEL FLIGHT	324	120.0	1.046	0.288

LOAD SURVEY - RADAR ANTENNA M/R BLADES

MODEL UH-1B 543 FLT. 143-B G.W. 7500 LB. ALT. 3000 FT MSL
SHIP AF 62-2023 DATE 19 AUG 65 C.G. STA 133.2 QSC. NO. 1

CTR NO.	TEST CONDITION	RPM	VCAL KTS	CO-PILOT VERT VIBR MEAN	QSC
833	STABILIZED LEVEL FLIGHT	310	23.0	1.011	0.144
834	STABILIZED LEVEL FLIGHT	310	43.0	1.011	0.122
835	STABILIZED LEVEL FLIGHT	310	59.0	1.044	0.133
836	STABILIZED LEVEL FLIGHT	310	80.0	1.039	0.183
837	STABILIZED LEVEL FLIGHT	310	91.0	1.067	0.211
838	STABILIZED LEVEL FLIGHT	310	100.0	1.116	0.316
839	STABILIZED LEVEL FLIGHT	310	110.0	1.061	0.334
840	STABILIZED LEVEL FLIGHT	310	115.0	1.044	0.399
841	STABILIZED LEVEL FLIGHT	310	120.0	0.945	0.489
842	STABILIZED LEVEL FLIGHT	324	22.0	1.067	0.200
843	STABILIZED LEVEL FLIGHT	324	41.0	1.061	0.150
844	STABILIZED LEVEL FLIGHT	324	59.0	1.039	0.128
845	STABILIZED LEVEL FLIGHT	324	80.0	1.072	0.150
846	STABILIZED LEVEL FLIGHT	324	91.0	1.039	0.205
847	STABILIZED LEVEL FLIGHT	324	100.0	1.133	0.266
848	STABILIZED LEVEL FLIGHT	324	110.0	1.083	0.327
849	STABILIZED LEVEL FLIGHT	324	115.0	1.055	0.366
850	STABILIZED LEVEL FLIGHT	324	120.0	1.111	0.410

LOAD SURVEY - RADAR ANTENNA M/R BLADES

MODEL UH-1B 543 FLT. 143-8 G.W. 7500 LB. ALT. 3000 FT HD
SHIP AF 62-2023 DATE 19 AUG 65 C.G. STA. 133.2 OSC. NO. 1

CTR NO.	TEST CONDITION	RPM	VCAL KTS	CG VERT VIBRATION MEAN	CG VERT VIBRATION OSC
833	STABILIZED LEVEL FLIGHT	310	23.0	1.000	0.085
834	STABILIZED LEVEL FLIGHT	310	43.0	0.979	0.085
835	STABILIZED LEVEL FLIGHT	310	59.0	1.027	0.080
836	STABILIZED LEVEL FLIGHT	310	80.0	1.043	0.107
837	STABILIZED LEVEL FLIGHT	310	91.0	1.059	0.091
838	STABILIZED LEVEL FLIGHT	310	100.0	1.085	0.117
839	STABILIZED LEVEL FLIGHT	310	110.0	1.107	0.117
840	STABILIZED LEVEL FLIGHT	310	115.0	1.069	0.133
841	STABILIZED LEVEL FLIGHT	310	120.0	1.021	0.160
842	STABILIZED LEVEL FLIGHT	324	23.0	0.995	0.133
843	STABILIZED LEVEL FLIGHT	324	43.0	0.995	0.154
844	STABILIZED LEVEL FLIGHT	324	59.0	1.032	0.096
845	STABILIZED LEVEL FLIGHT	324	80.0	1.064	0.085
846	STABILIZED LEVEL FLIGHT	324	91.0	1.043	0.117
847	STABILIZED LEVEL FLIGHT	324	100.0	1.069	0.154
848	STABILIZED LEVEL FLIGHT	324	110.0	1.053	0.106
849	STABILIZED LEVEL FLIGHT	324	115.0	1.000	0.106
850	STABILIZED LEVEL FLIGHT	324	120.0	1.064	0.117

LOAD SURVEY - RADAR ANTENNA M/R BLADES

MODEL UH-1B S43 FLT. 143-8 G.W. 7500 LBS. ALT. 3000 FT HD
SHIP AF 62-2023 DATE 19 AUG 65 C.G. STA. 133.2 OSC. NO. 1

CTR NO.	TEST CONDITION	RPM	VCAL KTS	R/H CYC BOOST MEAN	TUBE OSC
833	STABILIZED LEVEL FLIGHT	310	23.0	164.150	234.500
834	STABILIZED LEVEL FLIGHT	310	43.0	140.700	140.700
835	STABILIZED LEVEL FLIGHT	310	59.0	164.150	140.700
836	STABILIZED LEVEL FLIGHT	310	80.0	164.150	164.150
837	STABILIZED LEVEL FLIGHT	310	91.0	257.950	211.050
838	STABILIZED LEVEL FLIGHT	310	100.0	211.050	281.400
839	STABILIZED LEVEL FLIGHT	310	110.0	293.125	340.025
840	STABILIZED LEVEL FLIGHT	310	115.0	246.225	363.475
841	STABILIZED LEVEL FLIGHT	310	120.0	304.850	469.000
842	STABILIZED LEVEL FLIGHT	324	23.0	199.325	269.675
843	STABILIZED LEVEL FLIGHT	324	43.0	128.975	175.875
844	STABILIZED LEVEL FLIGHT	324	59.0	152.425	152.425
845	STABILIZED LEVEL FLIGHT	324	80.0	152.425	152.425
846	STABILIZED LEVEL FLIGHT	324	91.0	234.500	234.500
847	STABILIZED LEVEL FLIGHT	324	100.0	257.950	281.400
848	STABILIZED LEVEL FLIGHT	324	110.0	187.600	304.850
849	STABILIZED LEVEL FLIGHT	324	115.0	222.775	293.125
850	STABILIZED LEVEL FLIGHT	324	120.0	234.500	351.750

LOAD SURVEY - RADAR ANTENNA M/R BLADES

MODEL UH-1B 543 FLT. 143-E G.W. 7500 LBS. ALT. 3000 FT HD
SHIP AF 62-2023 DATE 19 AUG 65 C.G. STA. 133.2 DSC. NO. 1

CTR NO.	TEST CONDITION	RPM	VCAL KTS	L/H CYC BOOST TUBE MEAN	DSC
833	STABILIZED LEVEL FLIGHT	310	23.0	-11.225	145.925
834	STABILIZED LEVEL FLIGHT	310	43.0	44.900	134.700
835	STABILIZED LEVEL FLIGHT	310	59.0	22.450	157.150
836	STABILIZED LEVEL FLIGHT	310	80.0	44.900	202.050
837	STABILIZED LEVEL FLIGHT	310	91.0	-56.125	235.725
838	STABILIZED LEVEL FLIGHT	310	100.0	-145.925	213.275
839	STABILIZED LEVEL FLIGHT	310	110.0	-202.050	336.750
840	STABILIZED LEVEL FLIGHT	310	115.0	-179.600	336.750
841	STABILIZED LEVEL FLIGHT	310	120.0	-157.150	291.850
842	STABILIZED LEVEL FLIGHT	324	23.0	33.675	168.375
843	STABILIZED LEVEL FLIGHT	324	43.0	33.675	145.925
844	STABILIZED LEVEL FLIGHT	324	59.0	44.900	134.700
845	STABILIZED LEVEL FLIGHT	324	80.0	-0.000	134.700
846	STABILIZED LEVEL FLIGHT	324	91.0	-33.675	168.375
847	STABILIZED LEVEL FLIGHT	324	100.0	-44.900	179.600
848	STABILIZED LEVEL FLIGHT	324	110.0	-44.900	179.600
849	STABILIZED LEVEL FLIGHT	324	115.0	-22.450	202.050
850	STABILIZED LEVEL FLIGHT	324	120.0	-89.800	224.500

[redacted] PT CG RQ 1 F 01 08 /65 ROT 12 F 17

LOAD SURVEY - RADAR ANTENNA M/R BLADES

MODEL UH-1B 543 FLT. 143-B G.W. 7500 LB. ALT. 3000 FT HD
SHIP AF 62-2023 DATE 19 AUG 65 C.G. STA. 133.2 OSC. NO. 1

CTR NO.	TEST CONDITION	RPM	VCAL KTS	COLL. BOOST TUBE MEAN	COLL. BOOST TUBE OSC
833	STABILIZED LEVEL FLIGHT	310	23.0	-24.660	82.200
834	STABILIZED LEVEL FLIGHT	310	43.0	16.440	73.900
835	STABILIZED LEVEL FLIGHT	310	55.0	16.440	82.200
836	STABILIZED LEVEL FLIGHT	310	80.0	32.880	106.860
837	STABILIZED LEVEL FLIGHT	310	91.0	32.880	115.080
838	STABILIZED LEVEL FLIGHT	310	100.0	0.000	189.060
839	STABILIZED LEVEL FLIGHT	310	110.0	4.110	234.270
840	STABILIZED LEVEL FLIGHT	310	115.0	0.000	271.260
841	STABILIZED LEVEL FLIGHT	310	120.0	41.100	361.680
842	STABILIZED LEVEL FLIGHT	324	23.0	16.440	58.640
843	STABILIZED LEVEL FLIGHT	324	43.0	36.990	78.090
844	STABILIZED LEVEL FLIGHT	324	55.0	49.320	73.980
845	STABILIZED LEVEL FLIGHT	324	80.0	61.650	110.970
846	STABILIZED LEVEL FLIGHT	324	91.0	49.320	156.180
847	STABILIZED LEVEL FLIGHT	324	100.0	61.650	184.950
848	STABILIZED LEVEL FLIGHT	324	110.0	45.210	205.610
849	STABILIZED LEVEL FLIGHT	324	115.0	45.210	258.930
850	STABILIZED LEVEL FLIGHT	324	120.0	28.770	242.490

00162

APPENDIX F

Flight Log of Equipment

7072 88425

TABLE I

MAIN ROTOR RADAR BLADE FLIGHT LOG

Flight Number	Flight Time	Date	Changes In Configuration	Purpose of Flight & Remarks
GR37	.3	8-18-65	Radar Blades Installed No Wave Guides to Cabin	Shakedown; Tracking & Balance Check
142	.2	8-18-65	None	Flight Shakedown
143A	.4	8-19-65	Ballasted to C.G. of 125.40 inches	Load Level Survey
143B	.4	8-19-65	Ballasted to C.G. of 133.2 inches	Load Level Survey
144	.3	8-26-65	Wave Guides to Cabin Installed.Transmitter Installed. Ballasted to 131.59 inches.	Electromagnetic Radiation Tests
145	2.2	8-27-65	None	Electromagnetic Radiation Tests
146	1.1	8-30-65	None	Electromagnetic Radiation Tests Tape faled on white blade leading edge after 4.9 hours
147	2.9	8-31-65	White Blade Retaped	Electromagnetic Radiation Tests Tape failed on white blade after 2.9 hours.
148	1.9	9-1-65	White Blade Retaped	Electromagnetic Radiation Tests Tape bulged but not replaced. Masking tape used to patch bulges.
149	3.6	9-2-65	None	Electromagnetic Radiation Tests Tape failed but patched on both blades.
150	2.4	9-3-65	None	Electromagnetic Radiation Tests Tape failed but patched on both blades.

BY J.A. Mangum
CHECKED R.H.Wheelock

BELL HELICOPTER COMPANY

MODEL UH-1B PAGE 164
BPT 204-100-113

TABLE I - (Cont)

MAIN ROTOR RADAR BLADE FLIGHT LOG- (cont)

Flight Number	Flight Time	Date	Changes In Configuration	Purpose of Flight & Remarks
GR38	.4	9-8-65	None (Bladewise)	Shakedown of Heater Mixing Valve
151	1.3	9-9-65	None (Bladewise)	Shakedown of Instrumentation; Heater Valve Tests. Flex Wave Guides (on Hub) Failed Both Sides. No more deterioration on Blade Tape.
	17.4 Hours Total Time			

BY J. Mangum
CHECKED R.H.Wheelock

BELL HELICOPTER COMPANY

MODEL UH-1B PAGE 165
RPT 204-100-113

APPENDIX G

Pilot Reports

Report No. 204-100-113

BY 8-24-65 DATE	BELL HELICOPTER COMPANY	MODEL	PAGE
L.Hartwig		UH-1B	1
CHECKED DATE		HELICOPTER NUMBER	
		543 (62-2023)	
PILOT	PILOT REPORT	PLACE	
Hartwig		Southwest	
CREW		FLIGHT NO. 142 8-18-65	GROUND RUN NO.
WEATHER	PRESSURE ALT.	O. A. T.	WIND

PURPOSE

Radar Blade Shakedown

ENG. REPORT NO.	TIME TAKE OFF	TIME LANDING	DURATION
			.2

C.G. FROM STA. O.	G.W.	TOTAL FLIGHT TIME TO DATE	TOTAL ENGINE TIME TO DATE
133.05	6505 Lbs.	192.1	

CHANGES SINCE LAST FLIGHT

1. Removed tiedown assembly.
2. Removed two washers from each main rotor balance weight.
3. Safetied main rotor pitch link assembly.

The purpose of this flight was to shakedown the rotor installation.

Track and balance was very good at all times. Oscillograph records were secrured at 80, 100 and 120 Knots to check the instrumentation. Post flight inspection of the leading edge covering indicated that it was still bonded to the blade very securely.

86:LWH:bt-2509

7071 5416 REV. 1163

BY 8-24-65 DATE L. Hartwig	BELL HELICOPTER COMPANY	MODEL UH-1B	PAGE 1
CHECKED DATE		HELICOPTER NUMBER 543 (62-2023)	
PILOT Hartwig	PILOT REPORT	PLACE Southwest	
CREW		FLIGHT NO. 143 8-19-65	GROUND RUN NO.
WEATHER	PRESSURE ALT.	O. A. T.	WIND

PURPOSE: Radar Blade Load Level

ENG. REPORT NO.	TIME TAKE OFF	TIME LANDING	DURATION
			A: .4 - B: .4

C.G. FROM STA. O.	G.W.	TOTAL FLIGHT TIME TO DATE	TOTAL ENGINE TIME TO DATE
125.4(B) 133.29	7550 LBS.	192.0	

CHANGES SINCE LAST FLIGHT

A: 1. Installed 1050# ballast at Sta. 78.
2. Daily inspection completed.

B: 1. Ballast as follows: 275# at 185 and 775# at 117.
2. Fueled to capacity.

The purpose of these flights was to secure a load level survey on the radar antenna blades.

Flights were made at 7500 pounds and at both C.G. extremes. Standard load level maneuvers were flown and the loads recorded. The light weight rubber covering on the leading edge appears to be holding up real good.

Refer to the engineering flight test report for the results of the records.

86:LWH:bt-2517

7871 9840 REV. 1168

BY L. Hartwig DATE 8-24-65	BELL HELICOPTER COMPANY	MODEL UH-1B	PAGE 1
CHECKED DATE		HELICOPTER NUMBER	
PILOT Hartwig	PILOT REPORT	PLACE Southwest	
CREW		FLIGHT NO.	GROUND RUN NO. 37 8-18-65
WEATHER	PRESSURE ALT.	O. A. T.	WIND

PURPOSE
Radar Blade Checks Ground Run

ENG. REPORT NO.	TIME TAKE OFF	TIME LANDING	DURATION .3
C.G. FROM STA. 0.	G.W. LBS.	TOTAL FLIGHT TIME TO DATE	TOTAL ENG HE TIME TO DATE 111.4

CHANGES SINCE LAST FLIGHT

A: 1. Daily inspection completed.
2. Removed main rotor and removed blades.
3. Installed main rotor blades S/N A2-247 and A2-836 (radar blades).
4. Aligned and balanced main rotor assembly and installed to B/P.
5. Installed main rotor standpipe and slip ring.
6. Reinstalled stabilizer bar assembly to B/P same.
7. Replaced starter-generator with S/N 1332 Lear Siegler.
8. Removed ballast from Sta. 116.
9. Installed tiedown link.
10. Reweighed ship with 1150# fuel aboard.
11. Repaired leading edge of radar blade S/N A2-836 per Jan Powell.

B: 1. Rolled white blade 3/4 flat.

The purpose of this ground run was to shakedown the rotor installation. The thick rubber covering on the leading edge was removed and a thin light weight material was bonded on. On the previous flight, the thick covering peeled off, resulting in a very heavy one per rev.

An RPM and power sweep was run and there appeared to be no problem. Boost off check revealed the collective forces were excessive on the positive side so two washers were removed from the chinese weights. This balanced the force out to an acceptable level.

Oscillograph records were secured of the RPM and power sweep. Refer to the Engineering Flight Test Report for the results of the data recorded on this run.

A post run inspection of the leading edge covering revealed no evidence of the tape becoming loosened.

86:LWH:bt-2510

BY 8-31-65 DATE L. Hartwig	BELL HELICOPTER COMPANY FORT WORTH, TEXAS	MODEL UH-1B	PAGE 1
CHECKED DATE		HELICOPTER NUMBER 543 (62-2023)	
PILOT Hartwig	PILOT REPORT	PLACE Southwest	
CREW		FLIGHT NO. 144 8-26-65	GROUND RUN NO.
WEATHER	PRESSURE ALT.	O. A. T.	WIND

PURPOSE
Radar Blade Installation Shakedown

ENG. REPORT NO.	TIME TAKE OFF	TIME LANDING	DURATION
C.G. FROM STA. O. 131.57	G.W. 6597 LBS.	TOTAL FLIGHT TIME TO DATE 193.2	TOTAL ENGINE TIME TO DATE

CHANGES SINCE LAST FLIGHT

A. 1. Daily inspection completed
2. Ballast 200# at Sta. 83 (observer seat).
3. Removed all ballast from Sta. 117 and 185.
4. Installed radar-antenna blade system, Ref. 299-760-003 and Engineering Instructions.

The purpose of this flight was to shakedown the radar antenna rotor blades after all the electrical connections were completed.

A run up on the ground with high rotor RPM and a lot of flapping by stirring the cyclic was made. An inspection revealed no evidence of the hardware shifting from centrifugal force or from flapping and feather motions. A flight was made up to 125 Knots. Post flight inspection revealed no evidence of hardware shift. The installation appears to be airworthy.

86:LWH:bt-2530

7071 8816 REV. 1103

BY 9-2-65 DATE L. Hartwig	BELL HELICOPTER COMPANY	MODEL UH-1B	PAGE 1
CHECKED DATE		HELICOPTER NUMBER 543 (62-2023)	
PILOT Hartwig	PILOT REPORT	PLACE Southwest	
CREW		FLIGHT NO. 145 8-27-65	GROUND RUN NO.
WEATHER	PRESSURE ALT.	O.A.T.	WIND

PURPOSE
Radar Blade Radiation

ENG. REPORT NO.	TIME TAKE OFF	TIME LANDING	DURATION 2.2
C.G. FROM STA. O. 131.59	G.W. 6597 LBS.	TOTAL FLIGHT TIME TO DATE 195.4	TOTAL ENGINE TIME TO DATE

CHANGES SINCE LAST FLIGHT

1. Daily inspection completed. (No changes).

The purpose of this flight was to ferry to Globe and to fly at and over a target 5000' north of Globe 800' high to measure antenna pattern and signal strength from the signal generating from the blades.

David Young, the consulting engineer, was very pleased with the results of the data recorded on this flight.

Refer to the Engineering Flight Test Report for the results of the data recorded on this flight.

LWH:bt-2546

7871 5M10 REV. 1163

BY 9-2-65 DATE L. Hartwig	BELL HELICOPTER COMPANY POST OFFICE BOX 482 • FORT WORTH, TEXAS	MODEL UH-1B	PAGE 1
CHECKED DATE		HELICOPTER NUMBER 543(62-2023)	
PILOT Hartwig	PILOT REPORT	PLACE Southwest	
CREW		FLIGHT NO. 146 8-30-65	GROUND RUN NO.
WEATHER	PRESSURE ALT.	O. A. T.	WIND

PURPOSE
Radar Blade Transmission Flight

ENG. REPORT NO.	TIME TAKE OFF	TIME LANDING	DURATION
			1.1

C.G. FROM STA. O.	G.W.	TOTAL FLIGHT TIME TO DATE	TOTAL ENGINE TIME TO DATE
131.59	6597 LBS.	196.5	

CHANGES SINCE LAST FLIGHT

1. Daily inspection completed.

The purpose of this flight was to secure data on the radar antenna blades.

A number of test points were secured using a marker 5000' horizonitally from Globe and 800' above the ground. A signal was transmitted from the blades to a ground recorder that measured the signal on an oscilloscope. A photograph was made for a permanent record.

The plastic tape material used to cover the antenna area in the nose section of the blades started to come off so the data flights were terminated.

Refer to the Engineering Report for the data recorded on this flight. The Engineers were pleased with the results of the raw data obtained to date.

86:LWH:bt-2547

7871 5416 REV. 1163

BY 9-2-65 DATE
L. Hartwig

CHECKED DATE

BELL HELICOPTER COMPANY
POST OFFICE BOX 482 • FORT WORTH 1, TEXAS

PILOT REPORT

MODEL UH-1B | PAGE 1

HELICOPTER NUMBER 543 (62-2023)

PILOT Hartwig

PLACE

CREW Magnum

FLIGHT NO. 147 8-31-65

GROUND RUN NO.

WEATHER

PRESSURE ALT.

O. A. T.

WIND

PURPOSE
Radar Blade Transmissions

ENG. REPORT NO.	TIME TAKE OFF	TIME LANDING	DURATION
			2.9

C.G. FROM STA. O.	G.W.	TOTAL FLIGHT TIME TO DATE	TOTAL ENGINE TIME TO DATE
131.95	6597 LBS.	199.4	

CHANGES SINCE LAST FLIGHT
1. Recovered leading edge of main rotor blade.
2. Daily inspection completed.

The purpose of these flights was to ferry the helicopter to and from Globe and to secure radar antenna blade signal data.

A number of data points were recorded using the same location north of Globe as on previous flights. The surface winds were 15 to 20 Knots preventing any hover flight dat . The Engineering people running the recording equipment appear to be happy with the data recorded. The plastic covering over the antenna blade that is being used came loose in about one hour. The other blade still looks good.

Refer to the Engineering Flight Test Report for the results of the data recorded on these flights.

86:LWH:bt-2550

7871 8416 REV. 1163

BY 9-2-65 DATE	BELL HELICOPTER COMPANY	MODEL	PAGE
L. Hartwig		UH-1B	1
CHECKED DATE		HELICOPTER NUMBER	
		Southwest	
PILOT	PILOT REPORT	PLACE	
Hartwig			

CREW	FLIGHT NO.	GROUND RUN NO.
	148 9-1-65	

WEATHER	PRESSURE ALT.	O. A. T.	WIND

PURPOSE
Radar Blade Transmissions

ENG. REPORT NO.	TIME TAKE OFF	TIME LANDING	DURATION
			1.9

C.G. FROM STA. O.	G.W.	TOTAL FLIGHT TIME TO DATE	TOTAL ENGINE TIME TO DATE
131.59	6597 LBS.	101.3	

CHANGES SINCE LAST FLIGHT

1. Replaced tape on white main rotor blade leading edge.
2. Reworked wave guide at top of mast.
3. Daily inspection completed.
4. Topped off fuel.

The purpose of this flight was to ferry the helicopter to and from Globe and to secure data on the signal strength being transmitted from the radar antenna installed in the blades. The wave guides were changed over so the antenna on the other blade was tested. Only one blade at a time is used as an antenna on these tests.

The plastic tape on the leading edge of the blades held up much better than the previous flights. On this flight the tape wrinkled up over the antenna but it did not come loose.

Data was recorded over the same target as on the previous flights. Refer to the Engineering Flight Test Report for the results of the data recorded on this flight.

86:LWH:bt-2553

BY	DATE		MODEL	PAGE
L. Hartwig	9-7-65	BELL HELICOPTER COMPANY	UH-1B	1
CHECKED	DATE		HELICOPTER NUMBER	
			543(42-2023)	
PILOT		PILOT REPORT	PLACE	
Hartwig			Southwest	
CREW			FLIGHT NO.	GROUND RUN NO.
			149 9-2-65	
WEATHER		PRESSURE ALT.	O. A. T.	WIND

PURPOSE
Radar Blade Transmissions

ENG. REPORT NO.	TIME TAKE OFF	TIME LANDING	DURATION
			3.6

C.G. FROM STA. O.	G.W.	TOTAL FLIGHT TIME TO DATE	TOTAL ENGINE TIME TO DATE
131.59	6597 LBS.	104.9	

CHANGES SINCE LAST FLIGHT

1. Daily inspection completed.
2. Added one wrap of 2" masking tape to each main rotor blade 13⅓" from tips.
3. Swapped pilot and co-pilot's altimeters.

The purpose of this flight was to ferry to and from the Globe plant and to secure data on the signal strength being transmitted from the radar antenna installed in the blade.

Data was recorded by the Engineering people at the ground station.

Refer to the Engineering Flight Test Report for the results of the data recorded on this flight.

86:LWH:bt-2560

7871 95416 REV. 1163

BY L. Hartwig DATE 9-8-65	BELL HELICOPTER COMPANY	MODEL UH-1B	PAGE 1
CHECKED DATE		HELICOPTER NUMBER 543 (62-2023)	
PILOT Hartwig	PILOT REPORT	PLACE Southwest	
CREW		FLIGHT NO. 150 9-3-65	GROUND RUN NO.
WEATHER	PRESSURE ALT.	O. A. T.	WIND

PURPOSE: Radar Blade Transmission

ENG. REPOR. NO.	TIME TAKE OFF	TIME LANDING	DURATION
			2.4

C.G. FROM STA. O.	G.W.	TOTAL FLIGHT TIME TO DATE	TOTAL ENGINE TIME TO DATE
131.59	6597 LBS.	107.3	

CHANGES SINCE LAST FLIGHT

1. Daily inspection completed.
2. Refueled to full capacity.
3. Reinforced radar antenna leading edge cover on main rotor blades with masking tape per Engineering Instructions.

The purpose of this flight was to ferry to and from Globe and to record data of the signal strength being transmitted from the radar antenna blades.

The plastic tape covering the antenna on the leading edge of the blades came loose in several places. Masking tape was put over the loose areas to prevent further peeling. All data points were completed on this flight completing the current program.

Refer to the Engineering Flight Test Report for the results of the data recorded on this flight.

86:LWH:bt-2568

7871 9811 6 REV. 1163

BY 9-14-65 DATE A. Averill	BELL HELICOPTER COMPANY POST OFFICE BOX 482 • FORT WORTH, TEXAS	MODEL UH-1B	PAGE 1
CHECKED DATE		HELICOPTER NUMBER 543 (62-2023)	
PILOT Averill	PILOT REPORT	PLACE	
CREW		FLIGHT NO. 151 9-9-65	GROUND RUN NO.
WEATHER	PRESSURE ALT.	O. A. T.	WIND

PURPOSE
Instrumentation Shakedown

ENG. REPORT NO.	TIME TAKE OFF	TIME LANDING	DURATION 1.3
C.G. FROM STA. O. 131.25	G.W. 6910 Lbs.	TOTAL FLIGHT TIME TO DATE 208.6	TOTAL ENGINE TIME TO DATE

CHANGES SINCE LAST FLIGHT

1. Daily inspection completed.
2. Topped off fuel.

The purpose of this flight was threefold: to check out instrumentation, to accumulate flight time on the "radar" main rotor blades and to checkout bleed air heater mixing valve.

The instrumentation checked out O.K. The upper flexible wave guides (radar blade installation) failed during this flight. They did not fail completely in that the outer rubber tubing kept the metal part in place. The inner metal structure did fail, however. The bleed air heater mixing valve functioned in a satisfactory manner and the desired heat rise was attained.

See Flight Test Engineering for additional data.

86:AA:bt-2587

7071 9816 REV. 1168

LIST OF REFERENCES

1 Helicopter Rotor Blade Antenna Radiation Pattern - Phase I Flight Plan and Procedures; prepared by: David W. Young & Associates April 23, 1965

DISTRIBUTION LIST

1 - Kelley/Mackenzie/Library

1 - UH-1 Project

1 - Structures Group

2 - Electronics Group

2 - Flight Test Group

1 - Development Group

1 - Preliminary Design

1 - David W. Young & Associates