

1. DATE - TIME GROUP 23 May 53 23/1543Z	2. LOCATION Lackland AFB, Texas
3. SOURCE Military	10. CONCLUSION AIRCRAFT
4. NUMBER OF OBJECTS More than 5	Wire requesting AF Form 112 and Elect Data Sheet sent for more information. Aircraft F-47 (Mexico) engaged in cloud seeding.
5. LENGTH OF OBSERVATION 1 Hour 5 Minutes	11. BRIEF SUMMARY AND ANALYSIS A number of blips appeared on radar screen traveling in a N direction for 40 or 50 miles and then began to orbit. Object appeared to be at an estimated altitude of 35,000 ft.
6. TYPE OF OBSERVATION Ground-Radar	
7. COURSE North	
8. PHOTOS ☐ Yes ☒ No	
9. PHYSICAL EVIDENCE ☐ Yes ☒ No	

UNCLASSIFIED
Class Off
26 Aug 1953

3

COUNTRY Mexico	REPORT NO. IR-324-53	(LEAVE BLANK) AF-579390 6
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AIR INTELLIGENCE INFORMATION REPORT

SUBJECT Unidentified Aerial Objects		
AREA REPORTED ON Mexico	FROM (Agency) Air Attaché, Mexico City, Mexico	
DATE OF REPORT 26 August 1953	DATE OF INFORMATION 25 August 1953	EVALUATION B-2
PREPARED BY (Officer) Major Sigurd L. Jensen, Jr., Asst Air Attaché	SOURCE General A [REDACTED]	
REFERENCES (Control number, directive, previous report, etc., as applicable) SRI - Control No. TIC-5111 dated 4 August 1953		

SUMMARY: (Enter concise summary of report. Give significance in final one-sentence paragraph. List inclosures at lower left. Begin text of report on AF Form 112-Part II.)

1. The following is in response to SRI-TIC-5111 dated 4 August 1953.
2. On 25 August, the writer, on a periodic visit to Mexican Air Force headquarters, engaged in conversation with General [REDACTED] the [REDACTED] of the Mexican Air Force.
3. During the conversation, it was learned the MAF, in cooperation with the Secretariat of Agriculture, sent a number of F-47 type aircraft with MAF pilots to the Monclova area of Mexico to engage in cloud seeding in an effort to promote rainfall there. The aircraft were operating in that region during the time of the reported observation. It is felt, therefore, that objects observed could have been these aircraft operating at altitude in cloud seeding operations.

SIGURD L. JENSEN, Jr.
Major, USAF
Assistant Air Attaché

APPROVED:

William K. Skær
WILLIAM K. SKAER
Colonel, USAF
Air Attaché

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1R
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DOD DIR 5200.10

0 INCLS

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Copies 1 and 2 - Office of Air Attaché, Mexico City, Mexico; Copy 3 - CMDR CAIRC, Albrook AFB, CZ.

0-158/3
60-53
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ATTC 140844
TIC-5111

CLASSIFICATION

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IN REPLY REFER TO:
CONTROL NO. **TTC-5111**

SPECIFIC REQUEST FOR INFORMATION

DATE

SUBJECT **Unidentified Aerial Objects**

SECRET

AUTH: COMDR, ATIC
BY: M.J. Piatnitzka, Lt. Col.
DATE: 16 July 1953

TO: **AA/Mexico UNCLASSIFIED**

FROM: Headquarters USAF
Directorate of Intelligence
Washington 25, D. C.

DEGREE OR NEED FOR THE FOLLOWING SPECIFIC INFORMATION

☐ URGENT - REQUESTED BY _____ OTHERWISE CANNOT BE USED
☐ GREAT - DESIRED BY _____ OR AS SOON THEREAFTER AS POSSIBLE
☒ ROUTINE - DESIRED AS EARLY AS PRACTICABLE

1. Request the intelligence material described below be furnished this Headquarters, ATTN: Director of Intelligence, bearing the Control Number **TTC-5111 UNCLASSIFIED**
2. On any documents requested, this office has indicated whether loan or retention copies are desired by using one of the following remarks: ("Loan"); ("Retention if possible, otherwise loan"); or ("Retention only"). **UNCLASSIFIED**
3. A report has been received from a radar site at San Antonio, Texas concerning a radar observation of five or more targets which appeared to be orbiting over Monclova Mexico (125 miles NNW of Monterrey) from 0843 CST to 0926 CST, 23 May 1953. The number and maneuvers of the targets suggested military flying. They appeared on the radar scope as conventional aircraft and intermittent contact was maintained for 39 minutes. Altitude was estimated to be over 20,000 ft; no speed estimate was possible. Airfields in that vicinity are located at Monclova, Monterrey and Rosita. **SECRET**
UNCLASSIFIED
4. If circumstances permit, and at the discretion of the AA/Mexico, it is requested that information be obtained to determine whether Mexican aircraft were in the area at the time of sighting.

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REMARKS (Including guidance, if appropriate)

OK - Robert M. Olson #LT

UNCLASSIFIED

INCLS:

T53-8309 ⁵

CLASSIFICATION

FOR USE OF THE ORIGINATOR **AE5/RMO/PC1/ELW**

REQUESTED BY	NAME Mr. Weyland/jnw	BRANCH OR SECTION ATIRC-1	ROOM NUMBER B263C	PHONE 51279
SUGGEST CHECK WITH	ALREADY CHECKED WITH	DATE 22 JUL 1953	APPROVED BY	
FOR COLLECTION USE				
CHECKED FOR DUPLICATION		COORDINATED WITH Patrick J. Moss, Major, USAF Chief, Collection Control Branch Technical Requirements Division Air Technical Intelligence Center		

UNCLASSIFIED

SECRET

AUTH: ~~CO~~ ATIC
BY: H.C. Johnston
Lt Col, USAF
DATE 22 June 1953

REQUEST FOR AIR TECHNICAL INTELLIGENCE INFORMATION

THRU: ATIAE
THRU: ATIA
TO: ATIRC-1

FROM: ATIAE-5

DATE: 22 June 1953

UNCLASSIFIED

SUBJECT: (Uncl) Unidentified Aerial Objects

1. PERTINENT BACKGROUND INFORMATION:

(Secret) ATIC has received a report from a radar site at San Antonio, Texas concerning a radar observation of targets over Mexican territory from 0843 CST to 0926 CST, 23 May 1953. Five or more targets appeared to be orbiting over Monclova, Mexico, which is 125 miles NNW of Monterrey. They appeared on the radar scope as conventional aircraft and intermittent contact was maintained for 39 minutes. Altitude was estimated to be over 20,000 ft. No speed estimate was possible.

2. SPECIFIC REQUEST:

(Uncl) It is requested that you determine if Mexican aircraft were in the area at the time of sighting. The number and maneuvers of the targets suggest military flying. There are fields at 1) Monclova, 2) Monterrey, and 3) Rosita, Mexico, which can be checked.

3. REMARKS:

T53-7294

ORIGINATED BY:

APPROVED

APPROVED:

Lt R. M. Olsson

H.C. JOHNSTON, Lt Col, USAF

RAY W. McDUFFEE, Col, USAF

COORDINATED WITH:

Chief, Electronics Branch

Chief, Technical Analysis Div

ATIAA

ATIAE

ATIAS

Chief, ATIAA

Chief, ATIA

ATIAS

Date:

Date:

ATIC Form 317 (19 Nov 51)
(Formerly MCI Form 17)

Auth: ATICOI 200-10.16

(If additional space is required, continue on reverse side.)

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SECURITY INFORMATION

UNCLASSIFIED

SECRET

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SECURITY CLASSIFICATION (If any)

DISPOSITION FORM

SECRET

FILE NO.

SUBJECT
(Uncl)

Transmission of Radar Sighting

TO ATIAE-2

ATTN: Mr. James

FROM

ATIAE-5

DATE

17 June 1953

COMMENT NO. 1

A/1C M.G. Futch/jos
65365/B263A/P A10

1. Inclosed is all the information received by ATIAE-5 concerning a radar sighting on 23 May 1953 in the vicinity of Lackland Air Force Base, Texas. Adiabatic charts have been requested in order to check the possibility of weather conditions having caused such a sighting.

2. Request you comment on what could have caused the unidentified radar targets.

1 Incl

File dated 23 May 1953
Lackland AFB, Texas

Robert M. Olsson
ROBERT M. OLSSON, 1st Lt, USAF
Acting Chief, Aerial Phenomena Section

If inclosure #1 is withdrawn
(or not attached), the classification of this correspondence will
be downgraded to Unclassified in
accordance with paragraph

Note:

Mr. James stated to Lt R.M. Olsson that the inclosed radar information would seem to support the fact that aircraft caused this sighting. He suggested that we check on Mexican airfields in the area. He stated that no calculation of the speed of the objects was possible.

Mr. James stated on 21 July 1953 after reviewing the newly received adiabatic chart that this sighting possibly was caused by wmo. effects on radar.

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DOD DIR 5200.10

22 July 1953
Robert M. Olsson

UNCLASSIFIED

SECURITY INFORMATION

SECRET

ATIAE-5 File

ROUTING

JOINT MESSAGEFORM

COMMUNICATIONS CENTER NO.

UNCLASSIFIED

SPACE ABOVE FOR COMMUNICATIONS CENTER ONLY

FROM: (Originator)

CC ATIC

TO:

CC JAMA KELLY AFB TEX

INFO:

DATE-TIME GROUP

22-3000 53
PRECEDENCE FOR: ACTION INFORMATION

☐ BOOK MESSAGE

☐ ORIGINAL MESSAGE

☐ MULTIPLE ADDRESS

CRYPTOPRECAUTION

☐ YES

☐ NO

REFERS TO MESSAGE:

IDENTIFICATION

CLASSIFICATION

ONLY 204

UNCLASSIFIED

FROM: AFOTN-ATIAE-6-15-E

Reference your message SAIP-284. In regard to observation of white light observed over San Antonio, Texas, on 16 June 53, ATIC agrees with your evaluation. ATIC also emphasizes the importance of attempting an evaluation at reporting level such as you have done. To give you a background of Project Blue Book evaluations, sightings of 19 May at Ellington AFB, Texas, and 23 May at Lackland AFB, Texas, have been evaluated as probably aircraft by ATIC specialists.

No reply is required.

In reply cite Project Blue Book.

COORDINATION:

ATIAE-5 _____ Date _____
Lt Olsson

ATIAE _____ Date _____
Col Johnston

ATIA _____ Date _____
Col McPhee

DRAFTER'S NAME (and signature, when required)

LT R. M. OLSSON/uc

SYMBOL

TELEPHONE

65366

SECURITY CLASSIFICATION

PAGE 1 OF 1 PAGES

RELEASING OFFICER'S SIGNATURE

OFFICIAL TITLE

ROBERT C. BROWN, MAJOR, USAF
AIR FORCE GENERAL

DD FORM 173
1 OCT 49

REPLACES NME FORM 173, 1 MAY 43,
WHICH MAY BE USED.

16-53223-3 U. S. GOVERNMENT PRINTING OFFICE

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SEE CRYPTO-CENTER BEFORE DECLASSIFYING

THIS MESSAGE REQUIRES PARAPHRASE
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~~SECURITY INFORMATION~~

MAY 53

C2 PRIORITY

UNCLASSIFIED

BIT

1-ATIC-ACTION
2-
3-
INFO

FROM 741 AC AND W SO TINKER AFB OKLA

TO CG AMC WPAFB OHIO

HQ USAF WASH DC ATIAA-2C

ADC ENT AFB COLO

UNCLASSIFIED

ACTION COPY

PRIORITY

1. Attn
2. Atty.
3. C. files

CITE 7 K1 J-S IN ACCORD WITH AFL 290-5 (FLYOB RPT) PARA 1 SCOPE

PICTURE FIRST TRACK N-94 INDICATED AT LEAST 5 OR MORE ACFT APPROX

35000 FEET. SPEED APPROX 240 KNOTS FLYING IN A NORTHERLY DIRECTION

FOR 40 OR 50 MILES THEN BEGAN TO ORBIT. FORMATION FADED IN SAME

LOCALITY POSSIBLY DUE TO LOSS OF ALT. PARA 2 TOTAL TIME OBSERVED

WAS 1 HR AND 5 MINS. FIRST SIGHTING 1543Z 23 MAY CURR. PARA 3

ELECOBS SPEED APPROX 240 KNOTS. ALT ESTIMATED 35000 FEET. TYPE OF ACFT,

EITHER LARGE GROUP OF FTRS OR SMALL GROUP OF BOMBERS. ELEC EQUIP

USED: AN/FPS-3 RADAR. PARA 4 LOCATION OF OBSERVER 741 ACW SO LACKLAND

AFB TEXAS. ACFT WAS SIGHTED NEAR MONCLACA MEXICO, 101 DEGS, 102 DEGS,

27 DEGS, 28 DEGS NORTH. PARA 5 TRAINED ACFT CONTRS. PARA 6 WCGHOT,

CLOUD COND 3000 SCTD WINDS 20 KNOTS 200 DEG AT 40000 FEET PARA 7

POSSIBLE TEMP INVERSION (NOT DEFINITE) PARA FIGHT SCOPE FILMS

PARA 9 (DUTO BORDER VIOLATION) PARA 10 NONE KNOWN

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~~SECRET~~

53MC-41826-1

- 1) Was there definitely a ship in the area and if so at what time?
- 2) Another ACFT on the same frequency?
- 3) State ACFT in the area - local flight pattern

UNCLASSIFIED

ROUTING

JOINT MESSAGEFORM

UNCLASSIFIED
COMMUNICATIONS CENTER NO.AUTH: CG ATIC
BY: W.B. Fensler
DATE: 26 May 1953

UNCLASSIFIED

FROM: (Originator) SPACE ABOVE FOR COMMUNICATIONS CENTER ONLY

CG ATIC

TO:

INFO:

DATE-TIME GROUP 251130Z MAY 53		SECURITY CLASSIFICATION SECRET
PRECEDENCE FOR:	ACTION ROUTINE	INFORMATION
☐ BOOK MESSAGE	☐ ORIGINAL MESSAGE	
☐ MULTIPLE ADDRESS	CRYPTOPRECAUTION ☐ YES ☒ NO	
REFERS TO MESSAGE:		
IDENTIFICATION 252100Z May 53		CLASSIFICATION SECRET

UNCLASSIFIED

FROM: AFON-ATLAS-2 FOR 741 ACW Sq

Reference your message dated 252100Z May on unidentified radar targets seen at your station. Request you complete an Air Force Form 112 as per Air Force Letter 200-5 with specific reference to the following points: 1) Was there a temperature inversion and, if so, at what altitude? 2) Was there another ACW Squadron on the same frequency? 3) State aircraft activity in the area. Under separate cover you will receive an Electronics Data Sheet which will complete the information on the radar sighting. Request you forward scope photos with Air Force Form 112.

In reply cite Project Blue Book.

COORDINATION:

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DECLASSIFIED AFTER 12 YEARS.
DOD DIR 5200.10

*note - Form 112 dated 27 May
has been received - 10 June 1953
RWB.
Electronics Data Sheet not
included.*

T53-6366

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SECURITY CLASSIFICATION

SECRET

PAGE 1 OF 1 PAGES

DRAFTER'S NAME (and signature, when required)
1/Lt R.A. Olsson/ Joe

RELEASING OFFICER'S SIGNATURE

BARBARA P. HANAWALT, 1st Lt, USAF
ASST AIR ADJUTANT GENERAL

SYMBOL

ATLAS-5

TELEPHONE

65365

OFFICIAL TITLE

DD FORM 173
1 OCT 49REPLACES NME FORM 173, 1 MAY 48
WHICH MAY BE USED.

UNCLASSIFIED

16-58933-3 ☆ U. S. GOVERNMENT PRINTING OFFICE

DIRECTORATE OF INTELLIGENCE
HEADQUARTERS
33D AIR DIVISION (DEFENSE)
TINKER AIR FORCE BASE, OKLAHOMA

DODI 319.1

3 June 1953

SUBJECT: AF Form 112 - Air Intelligence Information Report

TO: Chief, Air Technical Intelligence Center
ATTN: ATIAA-2c
Wright-Patterson Air Force Base, Ohio

Transmitted in compliance with AFL 200-5, dated 29 April 1952,
one copy for information of Air Intelligence Information Report of
Unidentified Flying Object sighted at Monelova, Mexico, 27 May 1953.

1 Incl

1. AF Form 112-Part I (2 cys)

Harold K. Kord
1ST LT USAF
for **JOSEPH W. CARAWAY**
Major, USAF
Director of Intelligence

COUNTRY United States of America		REPORT NO. 741-53-1	(LEAVE BLANK)
UNCLASSIFIED AIR INTELLIGENCE INFORMATION REPORT			
SUBJECT Unidentified Aircraft			
AREA REPORTED ON Honolulu, Mexico (OP-5547)		FROM (Agency) 741st AC&W Sq, Lackland AFB, Texas	
DATE OF REPORT 27 May 1953	DATE OF INFORMATION 23 May 1953	SOURCE A-3	
PREPARED BY (Official) Ralph S. Hoggatt, Captain, USAF, DO		REFERENCES (Control Number, Directive, Previous Report, etc., as applicable) AF Radar & GAA	

SUMMARY: (Enter concise summary of report. Give significance in final one-sentence paragraph. List inclosures at lower left. Begin text of report on AF Form 112—Part II.)

1. An unidentified track (N94) containing five (5) or more aircraft at an estimated altitude of 35,000 Ft. or over. At 1507Z another unidentified track (N97) was picked up at DN4018 heading North. This target containing three (3) or more aircraft, went into orbit. At 1526Z contact was made with track number N3 at DN3031, and also, at this same time, contact was made at DN1950 with track number N4, and at 1529Z contact was made at DN 1005 with track number N5. None of these targets, though quite large in size, appeared to be making any directional progress, but rather seemed to stay in a definite orbit as if in the process of grouping.
2. First track was sighted at 0843 CST, 23 May 1953. At 0907 CST the second track was sighted. Third track was sighted 0926 CST. Number four track was sighted at same time of number three track. Number five track was sighted at 0929 CST.
3. 741st AC&W Sq, Lackland AFB, Texas.
4. AN/FPS-3 Radar Unit.
5. Trained Air Force Personnel. Controllers, Captain Ralph S. Hoggatt, CWO Edwin R. Robinson, Sr. Radar Operator, Ray E. Duncan, A/2C.
6. Weather at the time: Hot, Cloud Condition 3,000 Ft. Scattered Winds, 20 Knots, 200° at 40,000 Ft. Temperature Inversion (Not Def).
7. None.
8. Photographs were taken with scope cameras. Development of film revealed camera mal-function.
9. None due to possible border violation.
10. San Antonio ARTCC was immediately contacted by commercial telephone for possible identification. ARTCC advised that Del Rio had no aircraft in that area and that Laredo had a flight of aircraft whose mission was to make touch-and-go-landings at Eagle Pass, Texas, however, they should not be in the questioned area.

INCL.

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DOD DIR 5200.10 Intelligence Officer

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3 copies forwarded to CG, Headquarters Air Division (Defense) Tinker AFB, Oklahoma

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SECRET

COORDINATION

INSERT
ORGNL CODE AND
FULL SIGNATURE

UNCLASSIFIED

AUTH: CG ATIC
BY: W.E. FENSLER
DATE: 28 May 1953

In reply refer to
AFCIN-ATIAE-5

RMO/JOS/65365

29 MAY 1953

SUBJECT: (Uncl) Radar Sighting of Unidentified Object

TO: Commanding Officer
Tinker Air Force Base
Attn: 741st AC&W Sq
Oklahoma City, Oklahoma

1. With respect to a sighting made at your radar station on 23 May 1953 1543Z, the Air Technical Intelligence Center is forwarding the inclosed Electronics Data Sheet. In an attempt to uncover a logical explanation for such observations of unidentified objects, ATIC has developed this questionnaire which, when completed accurately by the radar technicians involved, allows ATIC radar specialists to attempt an evaluation of the sighting.

2. This Center would, therefore, appreciate the completion and forwarding of the subject Data Sheet with an Air Force Form 112 at your earliest possible convenience. Your original message states that a radar scope photo was taken and ATIC requests that you forward the same.

FOR THE COMMANDING GENERAL

1 Incl
a/s

BARBARA P. HANAWALT
1st Lt., USAF
Asst. Adjutant

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DESIGNATE AUTHD OFFICE OF RECOI

T53-6400

Joseph A. Calhoun
1st ATIA
29 May 53
C. J. Johnson
ATIAE-5
28 May 53
W. E. Fensler
P. Olson
ATIAE-5
28 May 53

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BY AUTHORITY OF
C6-334 DIV (DEF)

DATE 2 Jun 53 Initials [signature]

741ST AIRCRAFT CONTROL AND WARNING SQUADRON
Lackland Air Force Base
San Antonio, Texas

319.1

UNCLASSIFIED

SUBJECT: (Uncl) Radar Sighting of Unidentified Object

TO: Commanding General
Air Technical Intelligence Center
Wright-Patterson Air Force Base
Dayton, Ohio

1. In compliance with your letter AFOLN-ATLAE-5 dated 29 May 1953, the inclosed form's are submitted.

2. AF form 112 was submitted to your Headquarters through channels on 27 May 1953.

3. When the attached inclosures is withdrawn or not attached, the classification of SECRET on this correspondence will be cancelled in accordance with paragraph 25a, AFR 205-1, 9 October 1950.

FOR THE COMMANDING OFFICER:

2 Incls

1. AF Form 112 (1 cy)
2. AF Form 322 (1 cy)

Thomas L. Hill
THOMAS L HILL
1st Lt, USAF
Adjutant

10:05
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0049A

153-7189

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BY AUTHORITY OF

CG-3920 ADIV (DEF)

DATE 17 Jun 53 Initials

COUNTRY
United States of America

REPORT NO.

(LEAVE BLANK)

AIR INTELLIGENCE INFORMATION REPORT

SUBJECT
Unidentified objects

AREA REPORTED ON
Monclova, Mexico

FROM (Agency)
741st AC&W Sq. Lackland AFB, Texas

DATE OF REPORT
11 June 1953

DATE OF INFORMATION
23 May 1953

EVALUATION

PREPARED BY (Officer)
Capt. Ralph S. Hoggatt, Intell. Officer

SOURCE
AN/FPS Radar Observation.

REFERENCES (Control number, direction, previous report, etc., as applicable)
None

SUMMARY: (Enter concise summary of report. Give significance in final one-sentence paragraph. List inclosures at lower left. Begin text of report on AF Form 112—Part II.)

1. Appeared to be either a large group of small planes or a small group of four motor planes.
2. 0843 CST.
3. 741st AC&W Sq. Lackland AFB, San Antonio, Texas. (29° 24' N 98° 38' W)
4. AN/FPS-3 Radar.
5. Observers were all qualified Air Force trained technicians.
6. 2 SCTD 15 SSE 9 990
7. None
8. Pictures were taken by scope camera, but due to camera malfunction pictures did not turn out.
9. None, due to possible violation of continental boundaries.
10. All civilian air lines were contacted and had no aircraft in that vicinity.

Ralph S. Hoggatt
RALPH S. HOGGATT
CAPT. USAF
INTELLIGENCE OFFICER

INCL.

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T53-7089A

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~~SECRET~~

UNCLASSIFIED

~~SECURITY INFORMATION~~~~CLASSIFIED SECRET~~BY AUTHORITY OF
CG 33ADIV (DEF)

DATE 10 Jun 53 Initials

ELECTRONICS DATA SHEET
(GROUND RADAR)

The purpose of this questionnaire is to provide technical data for evaluating the report of an unusual radar target or track. It is requested that it be completed as accurately as possible.

When not filled in, the form is Unclassified. The reporting officer will use his own judgement as to what degree of classification is required.

It is preferred that the answers to the questions be typewritten, however, if it will expedite the completion of the form, the answers may be printed in ink. If additional space is needed, use reverse side of form.

1. STATION OBSERVING TARGET:

741 ST. AC & W SQ?

Organization

LACKLAND AFB. SAN ANTONIO, TEXAS

Location

2. DATE OF THIS REPORT:

9 JUNE 1953

Day Month Year

3. DATE TARGET OBSERVED:

23 MAY 1953 Local Time ☐
Day Month Year Z Time ☐

Time-Local 0843 CST Time-Z 1443 Z

4. NAME, RANK AND ORGANIZATION OF
REPORTING OFFICER:CAPT. RALPH S. HOGGATT
741st AC & W SQ.

LACKLAND AFB. SAN ANTONIO, TEXAS

5. EXACT LOCATION OF STATION (COORDINATES):

29° 24' N 98° 38' W

6. OBSERVER DATE (LIST EACH OBSERVER):

Name	Rank	Duty	No. of Years Exp. in Radar
A. HOGGATT, RALPH S.	CAPT.	OPERATIONS OFFICER	2
B. SCHUMACHER, ELMER J.	1st LT.	DUTY CONTROLLER	2
C. ROBINSON, EDWIN R.	CWO	CONTROLLER TRAINEE	2½
D. COLLINS, JAMES J.	S/SGT.	CREW CHIEF	7
E. DUNCAN, RAY E.	A72C	SCOPE OPERATOR	4

7. WAS A VISUAL SIGHTING MADE BY ANY PERSONNEL OF THE STATION? ☐ YES ☒ NO
IF SO, GIVE NAME AND RANK OF ALL PERSONNEL MAKING A VISUAL SIGHTING AND A BRIEF DESCRIPTION OF
WHAT THEY SAW:DOWNGRADED AT 3 YEAR INTERVALS;
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BY AUTHORITY OF
CG-33 BOW/COEF

8. HAVE YOU HEARD OF ANYONE NOT AT THE RADAR STATION MAKING A VISUAL SIGHTING AT APPROXIMATELY THE SAME TIME THE RADAR CONTACT WAS MADE? ☐ YES ☒ NO
IF SO, GIVE NAME AND ADDRESS.

DATE 10 JUN 53

DOWNGRADED AT 8 YEAR INTERVALS
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9. RADAR SCOPE PHOTOS: SEE REMARKS

- IS RADAR EQUIPPED WITH A SCOPE CAMERA? ☒ YES ☐ NO
WAS CAMERA OPERATIONAL? ☒ YES ☐ NO
WERE SCOPE PHOTOS TAKEN? ☒ YES ☐ NO
WERE PRINTS OF THE SCOPE PHOTOS FORWARDED TO THE
AIR TECHNICAL INTELLIGENCE CENTER? ☐ YES ☒ NO

10. TRACK DATA:

- WHAT WAS THE NUMBER OF THE TRACK? N97N N3N N4N N5N N94N N9N
WAS A PERMANENT PLOT MADE OF THE TRACK AT THE TIME OF THE OBSERVATION? ☒ YES ☐ NO

11. WERE AIRCRAFT SCRAMBLED TO INTERCEPT THE TARGET?

☐ YES ☒ NO

IF SO, WERE THE AIRCRAFT BEING OBSERVED ON THE SCOPE AT THE SAME
TIME AS THE TARGET?

☐ YES ☐ NO

12. WERE ANY NEARBY RADAR INSTALLATIONS QUERIED WHETHER THEY HAD OBSERVED
THE SAME TARGET OR TRACK?

☐ YES ☒ NO

IF SO, WHICH STATIONS?

13. WAS THE TARGET OBSERVED ON SEARCH RADAR?

☒ YES ☐ NO

IF SO, WHAT IS THE NOMENCLATURE OF THE EQUIPMENT? AN/EPS 3

14. WAS THE TARGET OBSERVED ON HEIGHT FINDING RADAR?

☐ YES ☒ NO

IF SO, WHAT IS THE NOMENCLATURE OF THE EQUIPMENT?

15. HAVE THERE BEEN ANY RECENT MAINTENANCE DIFFICULTIES?

☐ YES ☒ NO

IF SO, DESCRIBE.

16. WHAT TYPE MODULATOR (I.E., SPARK GAP, HARD TUBE, ETC.) IS USED IN THE RADAR EQUIPMENT?

THYATRON-PULSE MODULATOR

17. WAS THE AFC (AUTOMATIC FREQUENCY CONTROL) CIRCUIT OPERATING PROPERLY?

☐ YES ☒ NO

COMMENTS:

OPERATING MANUALLY

18. HAS INTERFERENCE FROM ANOTHER RADAR SET BEEN OBSERVED RECENTLY?

☐ YES ☒ NO

COMMENTS:

UNCLASSIFIED

~~SECRET~~
~~UNCLASSIFIED SECURITY INFORMATION~~

DOWNGRADED AT 8 YEAR INTERVALS
DECLASSIFIED AFTER 12 YEARS.
DOD DIR 5200.10

SECRET

BY AUTHORITY OF
CG-33 ADIV (DEF)

DATE 10 Jun 53 ☒ YES ☐ NO Initials _____

20. ARE PERSONNEL FAMILIAR WITH THE EFFECTS OF ANOMALOUS PROPAGATION (DUCTING EFFECTS) AS THEY PERTAIN TO THIS TYPE OF RADAR? ☒ YES ☐ NO

22. WAS ANOMALOUS PROPAGATION (DUETING EFFECT) EXTENDING THE RANGE OF THE GROUND CLUTTER AT THE TIME THE TARGET WAS OBSERVED? ☐ YES ☒ NO
- COMMENTS:

23. HOW DID THE TARGET APPEAR IN SIZE AND SHAPE AS COMPARED TO CONVENTIONAL AIRCRAFT TARGETS?

SAME SIZE AND SAME SPEED

- 24. PERFORMANCE OF TARGET:**

- | | | | |
|---|-------------------------------------|---|--------------------------|
| a. REMAINED CONSISTENT IN SIZE | ☒ | CHANGED SIZE RAPIDLY | ☐ |
| b. SPEED WAS CONSTANT | ☒ | SPEED WAS VARIABLE | ☐ |
| c. FOLLOWED CONSISTENT TRACK | ☒ | APPEARED, DISAPPEARED, THEN
REAPPEARED IN NEW LOCATION | ☐ |
| d. FUZZY COMPARED TO AIRCRAFT
TARGET | ☐ | SHARP COMPARED TO KNOWN
AIRCRAFT TARGET | ☐ |
| e. SAME AS AIRCRAFT TARGET | ☒ | | |

25. WERE OTHER TARGETS (KNOWN) OBSERVED IN THE SAME GENERAL AREA, AT APPROXIMATELY THE SAME TIME AND AT THE SAME ALTITUDE AS THE UNUSUAL TARGET? ☐ YES ☒ NO
IF SO, DESCRIBE.

26. WHAT TYPE INDICATORS ("A" SCOPE, "B" SCOPE, ETC.) WERE USED TO FOLLOW THE TARGET?

~~FPI~~

DESCRIBE THE SIGNAL:

27. WHAT WAS THE RADAR SCAN RATE? 3.3 R.P.M.

23. WHAT WAS THE FREQUENCY OF THE TRANSMITTER?

UPPER BEAM 1292 MEG. LOWER BEAM 1259 MEG.

29. DID ANY OF THE OBSERVERS HAVE ANY OPINIONS AS TO THE NATURE OF THE TARGET? ☐ YES ☐ NO
IF YES, GIVE THEIR NAMES AND OPINIONS BELOW.

GENERAL OPINION OF OBSERVERS, DEFINITELY AIRCRAFT. POSSIBLY OF MEXICAN ORIGIN, BUT NOT POSITIVE. ACCORDING TO THE CALIBRATION DATA, UNDER NORMAL CONDITIONS ALTITUDE OF AIRCRAFT WOULD BE BETWEEN 30,000 TO 40,000 FT.

~~SECURITY INFORMATION~~

~~DOWNGRADED AT 3 YEAR INTERVAL~~
~~DECLASSIFIED AFTER 12 YEARS.~~

DECLASSIFIED AFTER 12 YEARS.

DOD DIR 5200.10

UNCLASSIFIED

SECRET

7-19-68

~~SECRET~~
~~SECURITY INFORMATION~~

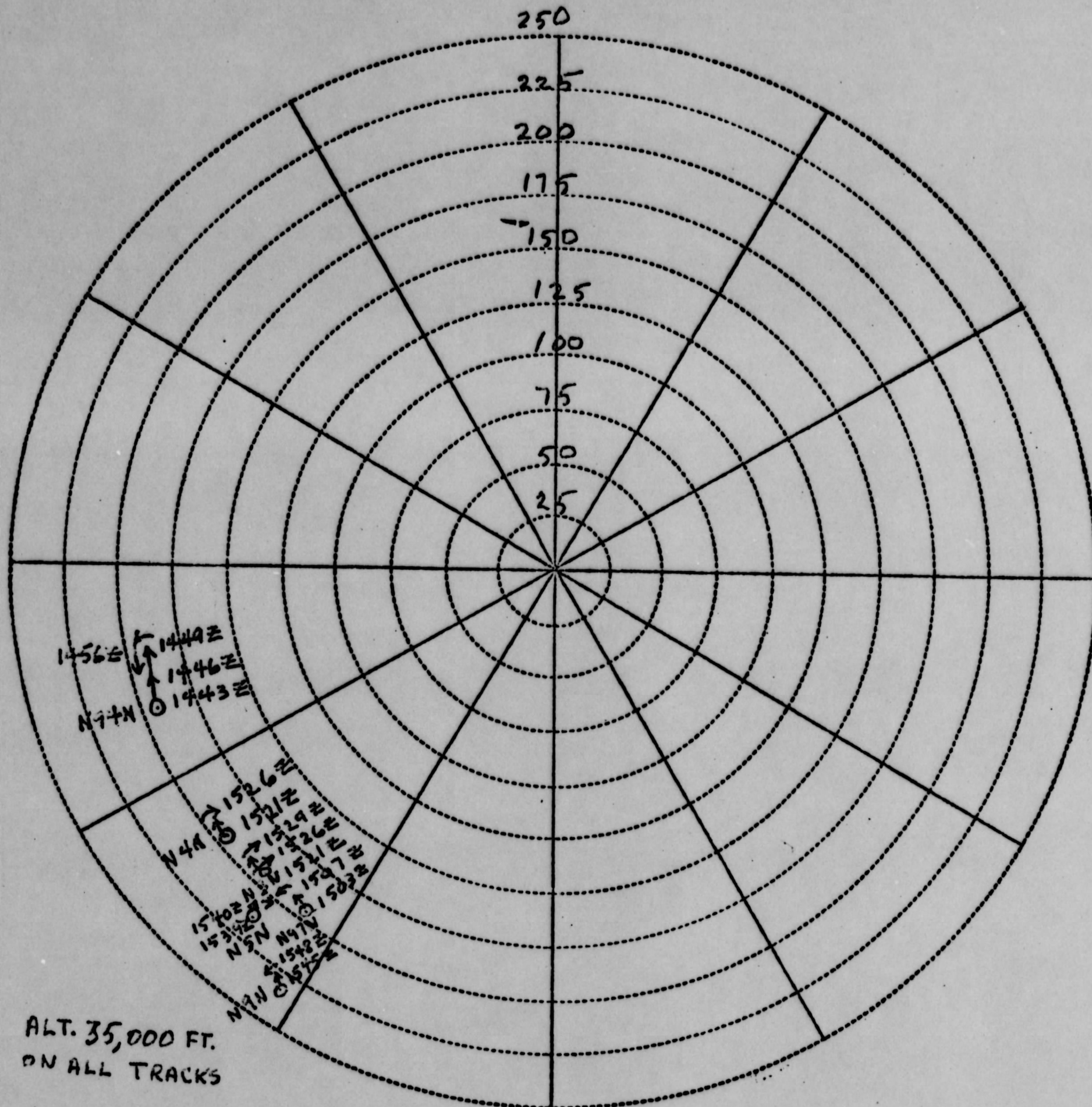
UNCLASSIFIED

~~CLASSIFIED SECRET~~

BY AUTHORITY OF

C6.33ADIV (DZF)

30. IF SCOPE PHOTOS ARE NOT AVAILABLE, PLOT THE TARGET TRACK AS ACCURATELY AS POSSIBLE. GIVE THE TIME AND ALTITUDE (IF MEASURED) FOR EACH POINT PLOTTED. PUT THE NECESSARY RANGE SCALE ON THE DIAGRAM.



DOWNGRADED AT 3 YEAR INTERVALS
DECLASSIFIED AFTER 12 YEARS.
DOD DIR 5200.10

UNCLASSIFIED

~~SECURITY INFORMATION~~

~~SECRET~~

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UNCLASSIFIED

UNCLASSIFIED

~~SECURITY INFORMATION~~

~~CLASSIFIED SECRET~~

BY AUTHORITY OF

DATE 10 Jun 53 Initials

31. USE THIS SHEET FOR ANY COMMENTS, OPINIONS OR ADDITIONAL DATA NOT COVERED BY THE QUESTIONS.

#9. SCOPE PHOTO'S UNREADABLE DUE TO CAMERA MALFUNCTION.

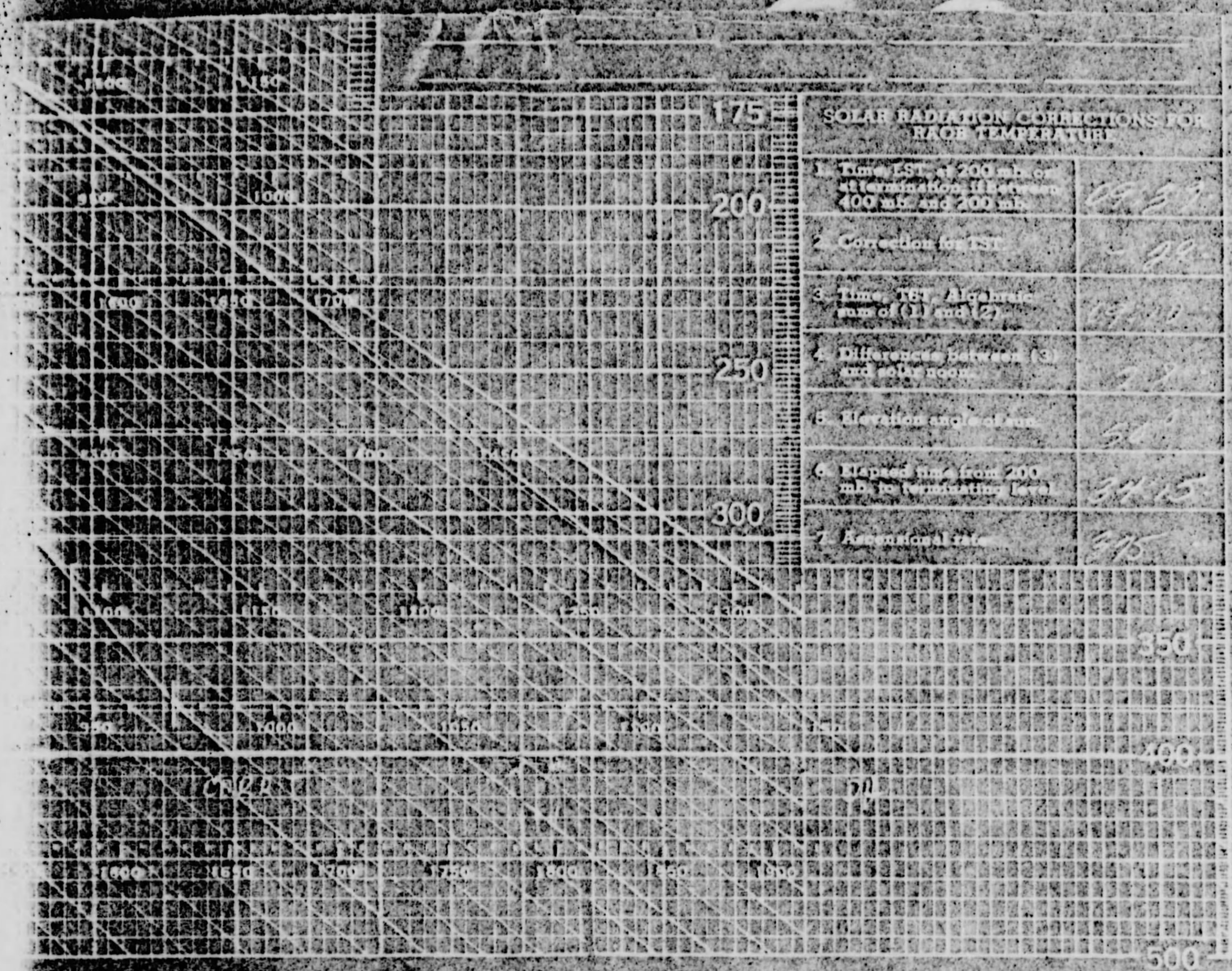
As

DOWNGRADED AT 3 YEAR INTERVALS;
DECLASSIFIED AFTER 12 YEARS.
DOD DIR 5200.10

UNCLASSIFIED

~~SECURITY INFORMATION~~

This case includes two (2) 16" x 16"
photocopied charts and two (2) 15" x 18½"
photocopied charts.



SOLAR RADIATION CORRECTIONS FOR RANGE TEMPERATURE	
1. Range (km) 200 to 500	19.50
2. Correction for distance	0.00
3. Range (km) Actual range of (1) and (2)	19.50
4. Difference between (3) and (2)	0.00
5. Correction for distance	0.00
6. Range (km) from 200 to 500	19.50
7. Correction for distance	0.00

19.50	0.00	19.50
19.50	0.00	19.50
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19.50	0.00	19.50
19.50	0.00	19.50
19.50	0.00	19.50

-30° -20° -10° 0° 10° (°C)
13 Km 12 Km 11 Km 10 Km 9 Km 8 Km 7 Km 6 Km 5 Km

Drawn by L. W. Abbott
Verified by E. C. Kruske
Inspected by _____

DATE AND RELEASE TIME				
Year	Month	Day	Time	
1953	MAY	23	10:10	
1953	MAY	23	10:10	
338996 309				

DATA BLOCK 1

Code	Order	PRESSURE		TEMPERATURE				RELATIVE HUMIDITY		DEW POINT	REMARKS
		Actual	Wt.	Surface	Air (°C)	Surface	Actual	Including Correction			
SIGNIFICANT LEVELS											
	9	950	31.2	41.0	20.1	20.1	15	15	15		
	10	1060	30.9	34.0	20.1	20.1	15	15	15		
	11	1170	29.7	27.5	21.3	21.3					
	12	1280	28.4	20.1	21.5	21.5					
	13	1390	27.6	16.5	20.0	20.0				12.100	
	14	1500	26.9	10.5	21.4	21.4				11.100	
	15	1610	26.1	3.9	21.9	21.9				10.100	
	16	1720	25.8	15.0	21.0	21.0					
	17	1830	25.5	18.1	20.5	20.5				10.150	
	18	1940	25.2	25.6	20.0	20.0				10.175	

CODED MESSAGE FOR TRANSMISSION

10000 10000 10000 10000 10000
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 10000 10000 09000 09000 09000
 09000 09000 09000

SOLAR RADIATION CORRECTIONS FOR
HATCH TEMPERATURE

1. Time 1500, 200 m. in at temperature 1500 m. 200 m. and 200 m.	09.27
2. Correction for 1500	1.19
3. Time 1500, 200 m. in at temperature 1500 m. and 200 m.	09.16
4. Difference between (3) and (2)	0.08
5. Elevation angle of sun	31.00
6. Daylight time from 200 m. to 200 m. (1500 m.)	24.10
7. Elevation angle	31.00

CONSTANT PRESSURE DATA

10.175	10.175
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UNCLASSIFIED

UNCLASSIFIED

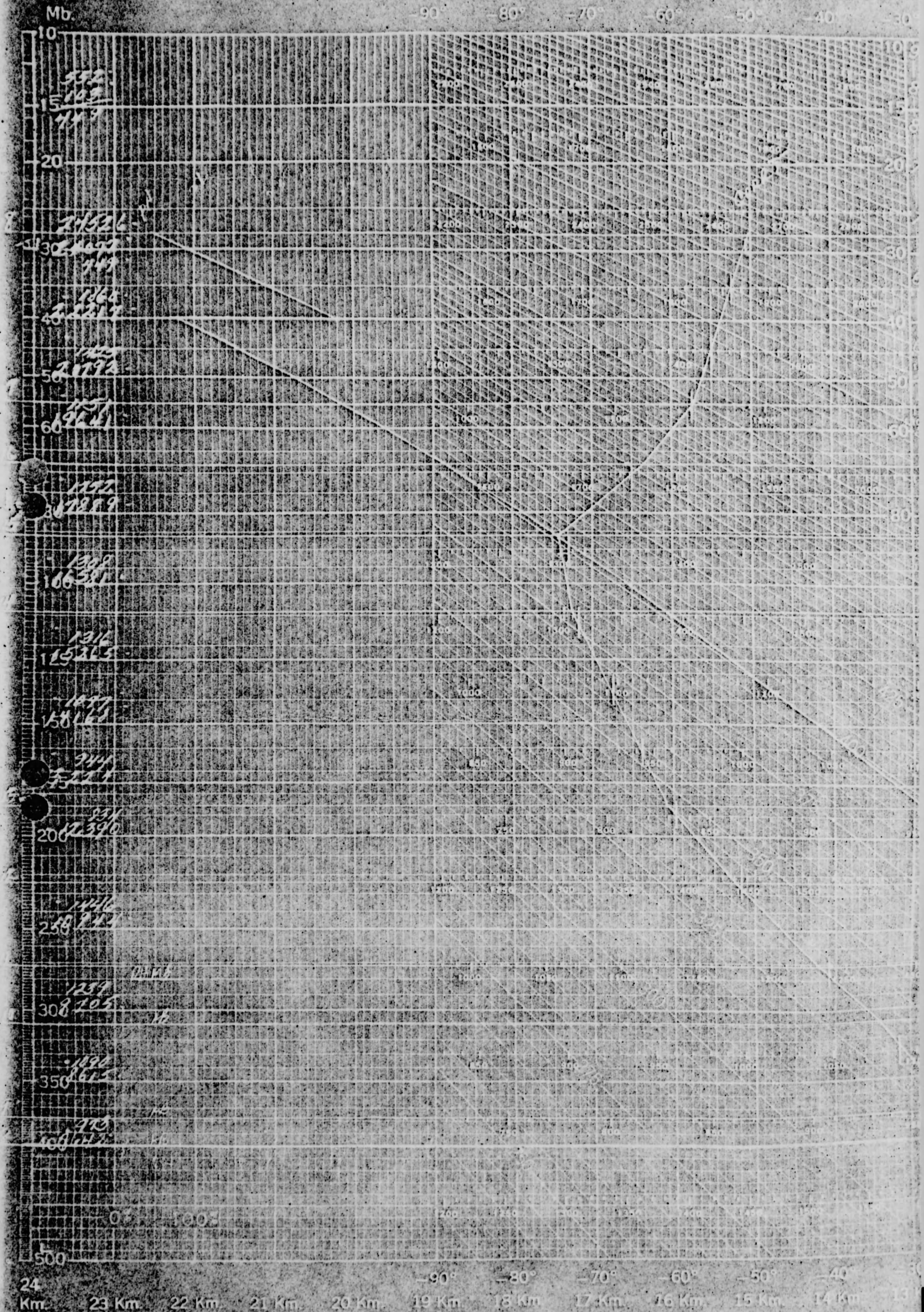
UNCLASSIFIED

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ADIABATIC CHART

WEAN 318

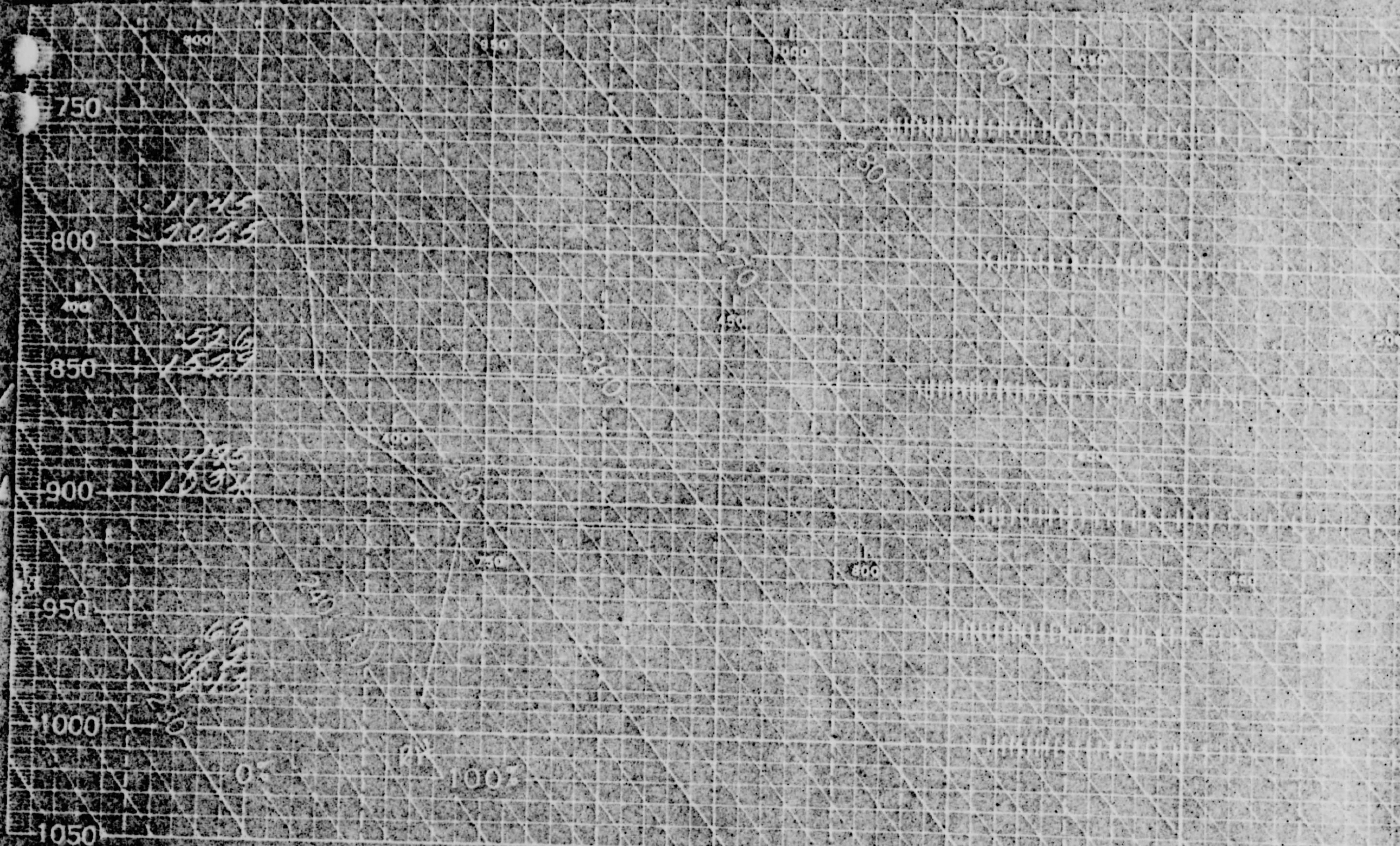


[illegible][illegible]

1. Name of the Institution	2001-2002
2. Name of the Faculty	2001-2002
3. Name of the Department	2001-2002
4. Name of the Course	2001-2002
5. Name of the Teacher	2001-2002
6. Name of the Student	2001-2002
7. Name of the Institution	2001-2002
8. Name of the Faculty	2001-2002
9. Name of the Department	2001-2002
10. Name of the Course	2001-2002
11. Name of the Teacher	2001-2002
12. Name of the Student	2001-2002

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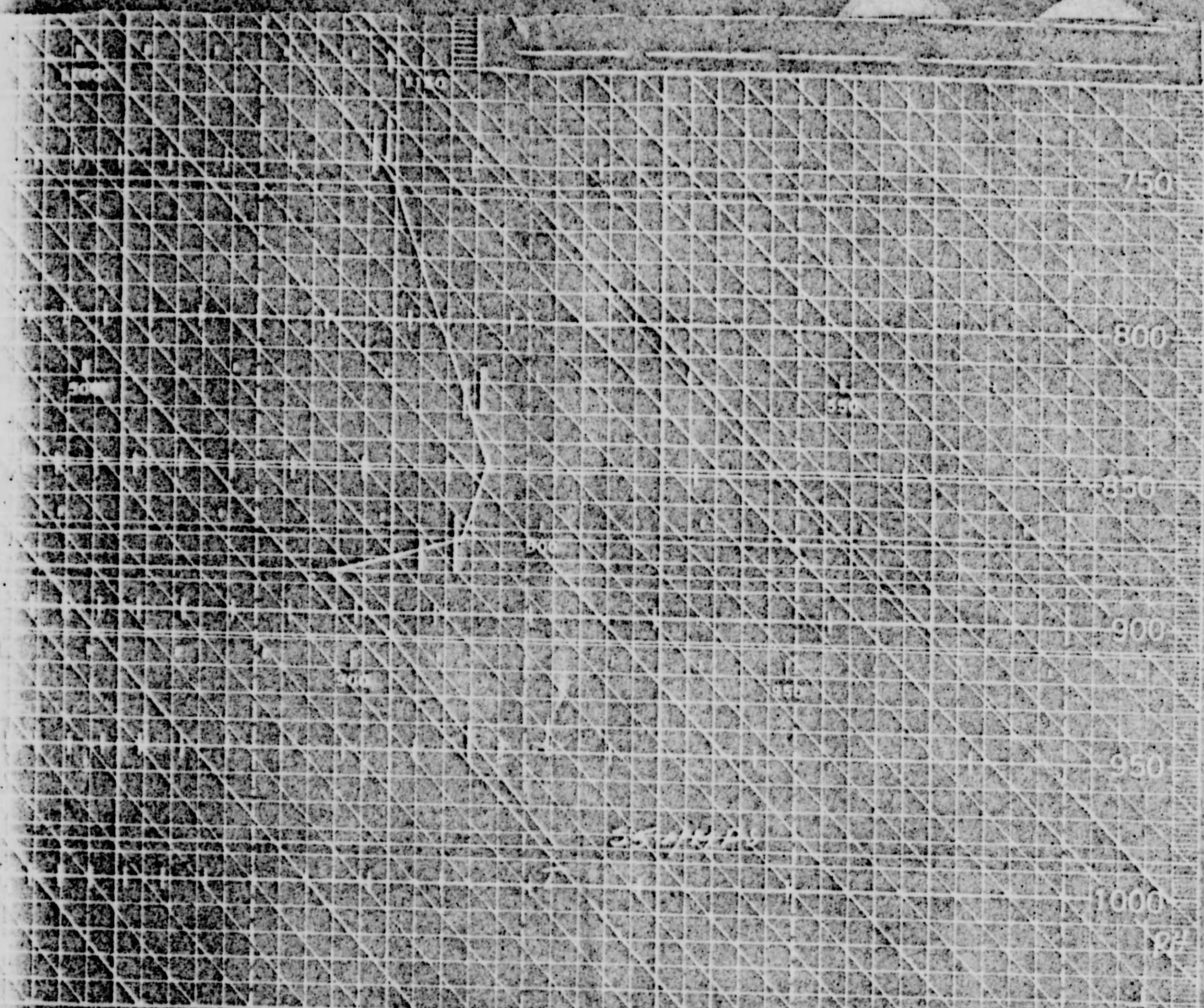
1



SAN ANTONIO TEXAS	
Station	
280-321 N	

DATA AS TRANSMITTED		DATA TO BE ENTERED ON WHEN ON PUNCH CARD	
DATE	K (km)		
TIME	U		
CODE	0 (10 km)		0 (10 km)

(H) - Pressure (hPa)
 (T) - Temperature (°C)
 (W) - Relative Humidity (%)
 (U) - Wind Speed (km/h)



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298	299	300

PLUMBING DESIGN

PLUMBING DESIGN

Name: L. DENNEY
 Address: 6 E. DENNEY
 City: ...

DATE AND RELEASE TIME				
Year	Month	Day	Hour	Minute
1957	05	23	00	00
1957	05	23	00	00
333936				

ONE INCH READINGS

U.S. DEPARTMENT OF COMMERCE WEATHER BUREAU

ADIABATIC CHART

WBAN-31A

Time G.C.T.	TEMPERATURE			RELATIVE HUMIDITY			WIND Direction Force
	Dry	Wet	Wet-Bulb	Dry	Wet	Wet-Bulb	
1458	7.6	2.6	4.6	81	69	43	7.2

Mb
488

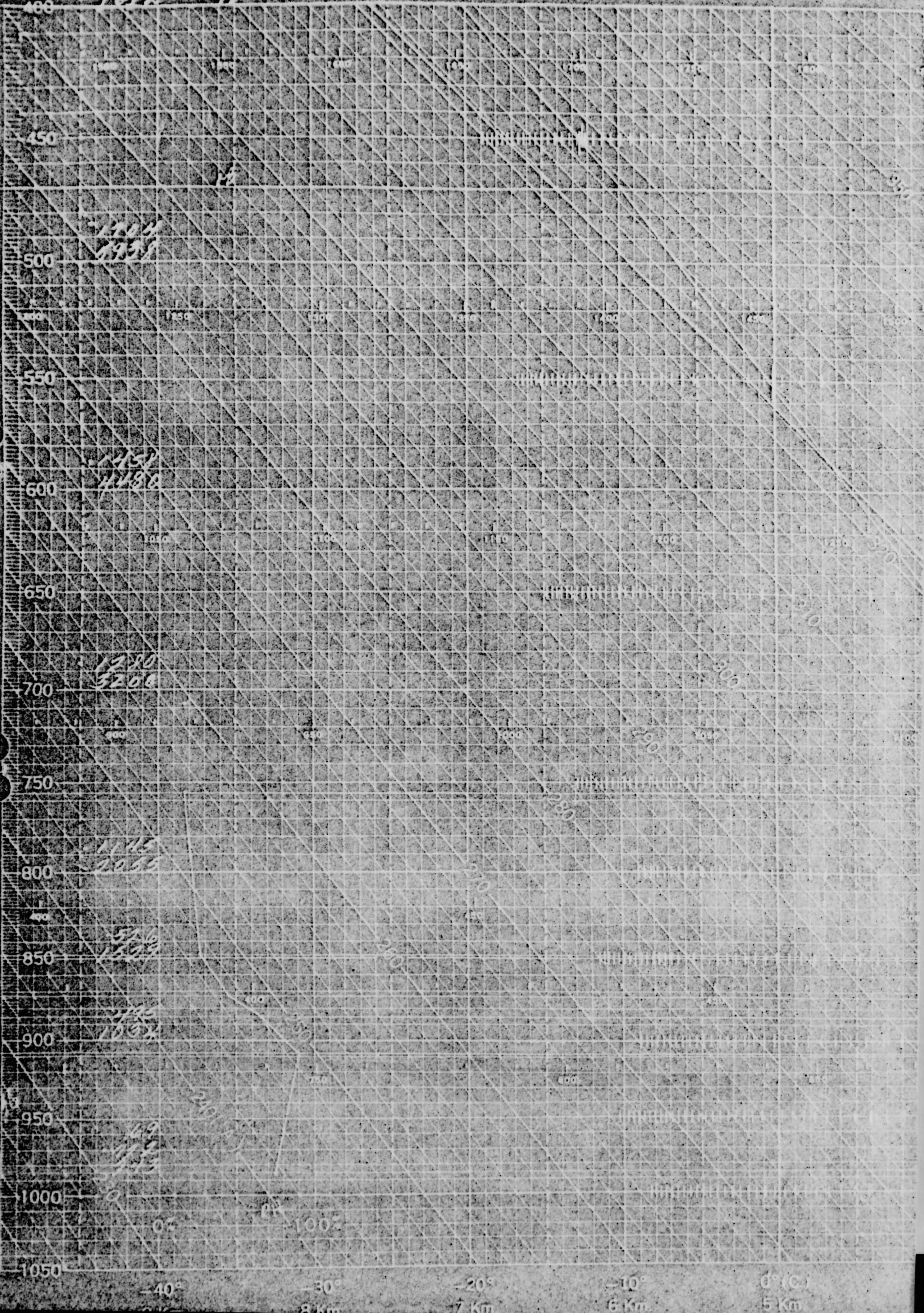
9 Km
-40°

8 Km
-30°

7 Km
-20°

6 Km
-10°

5 Km
0° (C)



4 Km
10°

DATA BLOCK A

[illegible]

SIGNIFICANT LEVELS

01		985		261		74	211	213
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02	13	815	68	118	103	10	14	110
35	0	813	70	785	110	41	98	1390
25	10	818	702	135	151	101	35	139
44	0	310	751	619	100	56	11	50
		800	470	515	91	13	13	13
		913	410	440	204	16	13	13
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CODED MESSAGE FOR TRANSMISSION

1930	1930	1930	1930	1930
1931	1931	1931	1931	1931
1932	1932	1932	1932	1932
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CONSTANT PRESSURE DATA

57	1044	105
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1044	105	105

610	157
110	X
0	101

5011	5012	5013
5014	5015	5016
5017	5018	5019

5710	0015
1010	X
00	00

4440	0019
03	X
00	00

3810	01010
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01	01

2015	01/11
2016	02/11
2017	03/11

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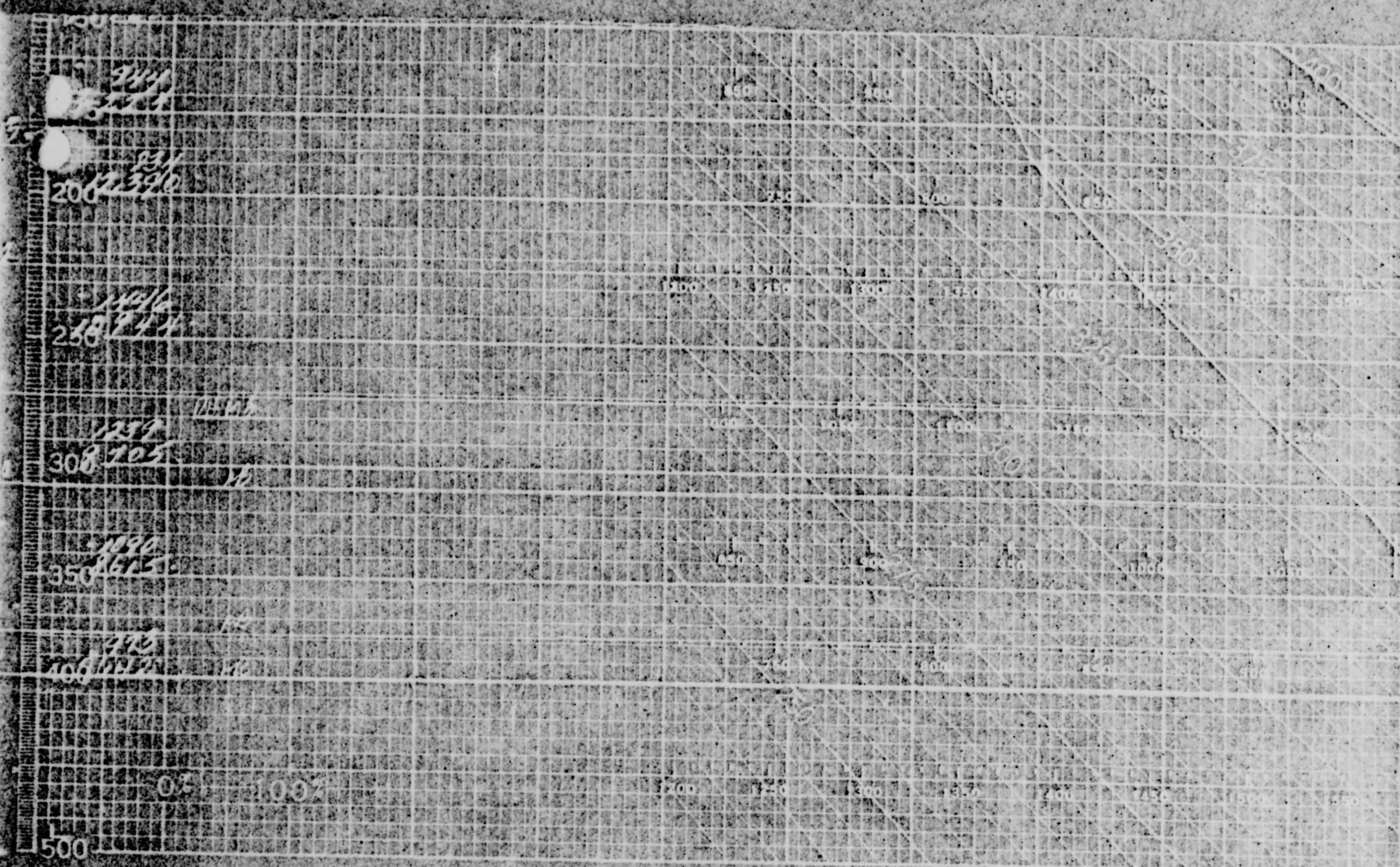
10-4	091
47	X
2	268



2000

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24 Km 23 Km 22 Km 21 Km 20 Km 19 Km 18 Km 17 Km 16 Km 15 Km 14 Km 13 Km

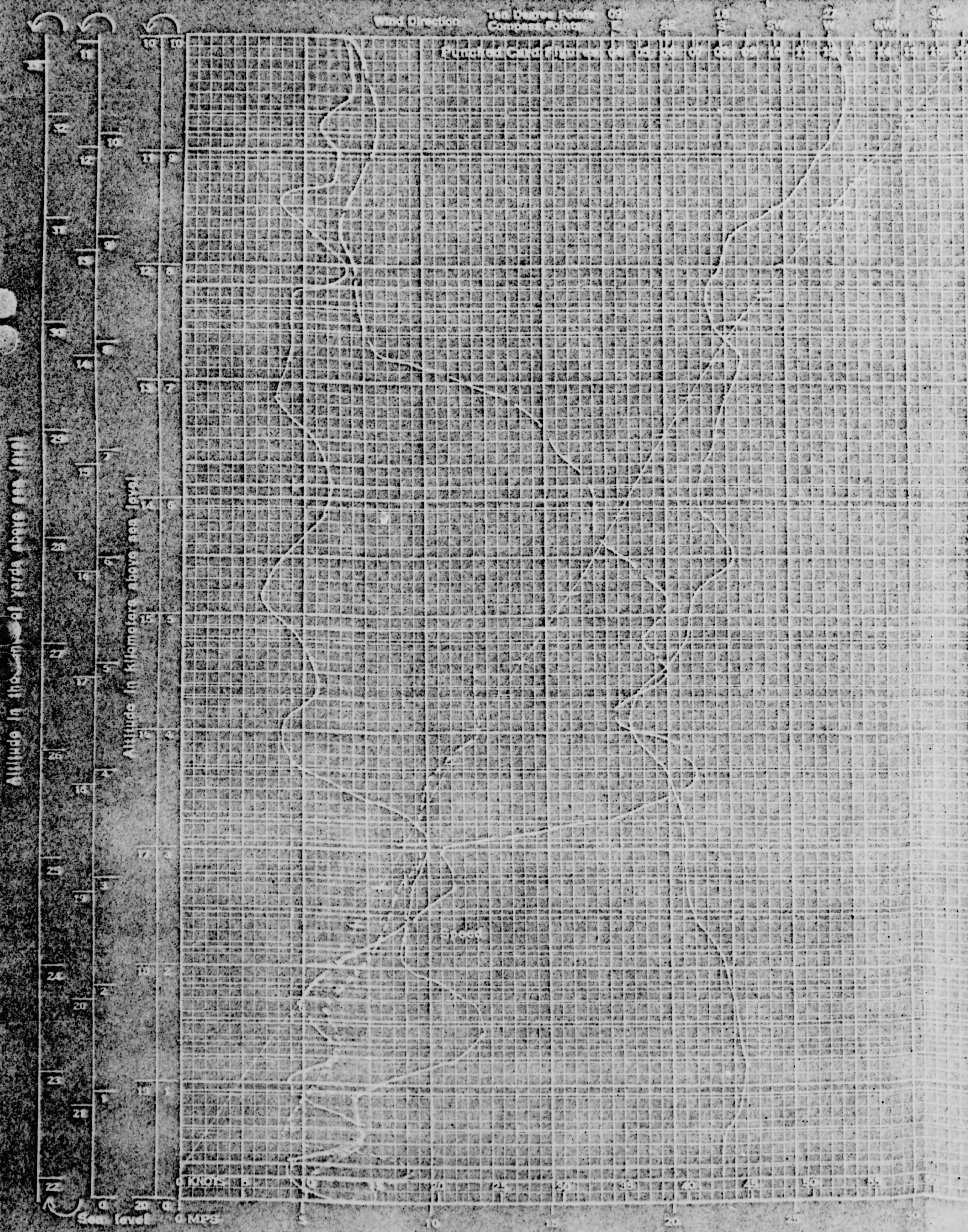
SAN ANTONIO, TEXAS
 (Municipality)
 29° 32' N 98° 24' W

DATA AS TRANSMITTED	IF 100 SEC OTHER DATA ENTERED ON WEAP-3E OR PUNCH CARD	
COORD	H (GMS)	W (GMS)
TIME	DATE	TIME
MODE	DATA	DATA

WEAP-3E
 WEAP-3E
 WEAP-3E
 WEAP-3E

Station	SAN ANTONIO, TEXAS		U.S. DEPARTMENT OF COMMERCE WINDS ALOFT WBAN-20A Accension No. 57
Lat	28° 15' N	Long	

STANDARD TEST DATA FOR TRANSCRIPTION TO FILE																																																												
Altitude (Kms)	Std	0.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0	7.5	8.0	8.5	9.0	9.5	10.0	10.5	11.0	11.5	12.0	12.5	13.0	13.5	14.0	14.5	15.0	15.5	16.0	16.5	17.0	17.5	18.0	18.5	19.0	19.5	20.0	20.5	21.0	21.5	22.0	22.5	23.0	23.5	24.0	24.5	25.0	25.5	26.0							
Direction (16 Pts.)	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
Speed (M. P. S.)	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60



Nov 5 1954

Time

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Prepared by

Verified by

6.2	33	78	22 185	14 130	14296	11166	822	1210	78
7.6	34	79	22 470	14 310					79
8.1	35	80	22 750	14 490					80
7.8	36	81	23 040	14 670					81
7.1	37	82	23 320	14 850					82
6.5	38	83	23 600	15 030					83
7.2	39	84	23 880	15 210					84
7.3	40	85	24 160	15 390					85
7.9	41	86	24 440	15 570					86
11.8	42	87	24 730	15 750					87
14.9	43	88	25 010	15 930					88
15.8	44	89	25 300	16 110					89
17.0	45	90	25 580	16 290					90

NOTES

dd	ff	dd	ff	dd	ff	dd	ff	dd	ff	dd	ff	dd	ff
17	14	19	14	19	22	18	24	18	20	17	17		
10	11	6	15	8	18	0	16	17	09	27	12		
28	33	002	10	5	13	0	08	5	07	09	23		
dd	ff	dd	ff	dd	ff	dd	ff	dd	ff	dd	ff	dd	ff

dd - Wind direction in tens of degrees

ff - Wind speed in knots

SON TIME ALTITUDE DATA

40	45	50	55	60	65	70	75	80	85	90	95	100
742		668		600		532		460		400		347
2700		2000		1400		800		300				
0810		1040		1350		1700		2000				
105	110	115	120	125	130	135	140	145	150	155	160	165
40	37											
2000	2000	2000										
25	6400	7000										

Recorder

STATION SAN ANTONIO, TEXAS
LAT 29 05 LONG 98 28 W

Form 1110

UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU
WINDS ALOFT COMPUTATION SHEET
(LAND STATION FORM)
WBAN-20

Ascention No. 513

Method of observation

Minutes	100 gram balloon (meters)	50 gram balloon (meters)	Other (meters)	Elevation angle	Azimuth angle	Distance from observer (meters)	Stem (meters)	Wind dir. (300-N 090-E)	Wind speed (m.p.h.)	Minutes	Minutes	100 gram balloon (meters)	50 gram balloon (meters)	Other (meters)
Sta.										50				
1	350	216	570	35.7	171.7	410		171	7.1	1	40	13 075	8 570	14010
2	670	414	630	37.5	171.7	330		171	7.3	2	47	13 375	8 600	14300
3	980	612	1130	35.7	171.4	1570		170	6.7	3	48	13 675	8 720	14610
4	1 285	801	1500	37.5	168.2	2100		169	6.1	4	49	13 975	8 810	14910
5	1 585	980	1800	37.5	168.2	2400		168	11.2	5	50	14 275	8 890	15210
6	1 880	1 170	1700	37.5	168.2	3500		171	9.2	6	51	14 570	8 970	15510
7	2 170	1 350	2100	37.5	168.2	3900		168	8.7	7	52	14 860	9 050	15810
8	2 465	1 530	2500	37.5	168.2	4300		168	4.5	8	53	15 145	9 130	16110
9	2 740	1 710	2600	36.0	168.9	4500		164	10.0	9	54	15 425	9 210	16410
10	3 020	1 890	3100	36.0	167.7	5340		166	7.7	10	55	15 705	9 290	16710
11	3 300	2 070	3400	36.7	168.7	5600		163	4.1	11	56	15 985	9 370	17010
12	3 580	2 250	3600	36.5	168.5	5700		160	10.2	12	57	16 265	9 450	17310
13	3 855	2 430	4000	34.7	168.1	3700		161	9.2	13	58	16 545	9 530	17610
14	4 130	2 610	4500	35.4	168.2	6170		165	8.5	14	59	16 825	9 610	17910
15	4 405	2 790	4400	35.0	168.6	6510		164	9.3	15	60	17 105	9 690	18210
16	4 675	2 970	4900	36.4	167.8	6700		162	3.9	16	61	17 385	9 770	18510
17	4 945	3 150	5200	37.9	167.4	6700		160	1.7	17	62	17 670	9 850	18810
18	5 215	3 330	5600	37.0	169.7	7100		162	5.1	18	63	17 955	9 930	19110
19	5 485	3 510	5700	38.1	169.0	7025		161	6.0	19	64	18 245	10 010	19410
20	5 755	3 690	6000	36.7	167.8	7770		161	5.5	20	65	18 535	10 090	19710
21	6 025	3 870	6100	37.8	166.0	8200		160	4.2	21	66	18 825	10 170	20010
22	6 295	4 050	6300	37.7	166.8	8300		163	12.1	22	67	19 105	10 250	20310
23	6 565	4 230	6800	36.7	167.0	8600		170	9.5	23	68	19 390	10 330	20610
24	6 835	4 410	7500	37.2	167.0	8870		167	4.6	24	69	19 675	10 410	20910
25	7 105	4 590	7700	38.2	166.0	9100		173	8.4	25	70	19 965	10 490	21210
26	7 375	4 770	8000	37.8	162.1	9000		166	5.7	26	71	20 250	10 570	21510
27	7 645	4 950	8200	38.1	162.8	10000		161	4.5	27	72	20 540	10 650	21810
28	7 915	5 130	8510	38.0	162.5	9900		162	6.5	28	73	20 835	10 730	22110
29	8 185	5 310	8700	41.5	160.2	9970		160	7.0	29	74	21 125	10 810	22410
30	8 455	5 490	9000	43.5	161.7	9900		161	5.7	30	75	21 420	10 890	22710
31	8 730	5 670	9100	43.4	171.9	9700		160	7.0	31	76	21 720	10 970	23010
32	9 005	5 850	9510	44.9	173.2	9300		165	7.0	32	77	22 020	11 050	23310
33	9 285	6 030	9700	45.7	174.2	9300		165	6.2	33	78	22 325	11 130	23610
34	9 565	6 210	10000	46.7	170.1	9500		165	7.6	34	79	22 630	11 210	23910
35	9 850	6 390	10000	47.2	169.9	9700		165	7.1	35	80	22 940	11 290	24210
36	10 135	6 570	10700	47.9	164.8	9700		164	7.8	36	81	23 250	11 370	24510
37	10 420	6 750	11000	48.2	167.4	9700		162	7.1	37	82	23 560	11 450	24810
38	10 710	6 930	11070	49.1	167.2	9870		163	6.2	38	83	23 870	11 530	25110
39	11 005	7 110	11700	50.3	167.7	9300		165	7.2	39	84	24 185	11 610	25410
40	11 300	7 290	12000	50.7	167.8	9300		165	7.3	40	85	24 500	11 690	25710
41	11 595	7 470	12000	51.1	165.0	9700		164	5.7	41	86	24 820	11 770	26010
42	11 890	7 650	12700	50.8	166.1	9600		160	7.4	42	87	25 140	11 850	26310
43	12 185	7 830	13000	52.5	165.2	9500		164	7.9	43	88	25 460	11 930	26610
44	12 480	8 010	13400	54.6	161.0	9500		160	16.8	44	89	25 780	12 010	26910
45	12 775	8 190	13700	54.0	166.3	9500		168	17.0	45	90	26 100	12 090	27210

Termination owing to

Weight of balloon 500 grams
Weight of lifting device 100 grams
Weight of target or transmitter 100 grams
Free lift 1000 grams
Total weight 800 grams

Color of balloon
Type of target or transmitter

NOTES

CODED DATA			11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	
1	01	15	02	17	10	01	17	12	02	17	14	01	19	14	04	16																						
2	01	15	18	14	18	01	17	19	01	13	10	04	10	11	01	15	09																					
3	01	20	16	01	28	14	01	29	31	01	30	37	05	28	33	00	02	10	01	13																		
4	01	08	23																																			

UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU
WINDS ALOFT COMPUTATION SHEET
(LAND STATION FORM)
WBAN-20

Date and time of observation			
Year	Month	Day	Time
1917	12	17	1700
G.C.T.			

Kind of observation Radar Elevation of observation point above M.S.L. 100 (feet) (meters)

Wind dir. (360°-N 090°-E etc.)	Wind speed m.p.h.	Minute	Minute	Altitude			Elevation angle	Azimuth angle	Distance from observ- ation point (meters)	Wind dir. (360°-N 090°-E etc.)	Wind speed m.p.h.	Minute
				100 gram balloon (meters)	50 gram balloon (meters)	Other (feet) (meters)						
170	5.4	SE										
171	7.1	1	46	13 075	8 370	14040	5.1		10300	280	17.0	46
184	7.0	2	47	13 375	8 550	14350	5.2		10500	285	17.1	47
190	10.9	3	48	13 675	8 730	14640	5.3		10700	290	17.2	48
187	13.1	4	49	13 975	8 910	14940	5.4		10900	297	17.3	49
182	11.3	5	50	14 275	9 090	15240	5.5		11100	300	17.4	50
171	9.0	6	51	14 570	9 270	15570	5.6		11300	300	17.5	51
162	9.1	7	52	14 860	9 450	15880	5.7		11500	295	17.6	52
143	9.3	8	53	15 145	9 630	16180	5.8		11700	290	17.7	53
141	10.0	9	54	15 425	9 810	16470	5.9		11900	284	17.8	54
150	8.0	10	55	15 705	9 990	16800	6.0		12100	280	17.9	55
123	4.0	11	56	15 985	10 170	17100	6.1		12300	275	18.0	56
100	4.2	12	57	16 265	10 350	17420	6.2		12500	271	18.1	57
107	5.6	13	58	16 545	10 530	17740	6.3		12700	267	18.2	58
135	5.3	14	59	16 825	10 710	18040	6.4		12900	265	18.3	59
149	4.5	15	60	17 105	10 890	18410	6.5		13100	260	18.4	60
153	3.3	16	61	17 385	11 070	18770	6.6		13300	250	18.5	61
184	4.2	17	62	17 670	11 250	19170	6.7		13500	240	18.6	62
162	5.9	18	63	17 950	11 430	19490	6.8		13700	235	18.7	63
159	16.0	19	64	18 235	11 610	19760	6.9		13900	227	18.8	64
171	5.5	20	65	18 515	11 790	20040	7.0		14100	225	18.9	65
160	4.0	21	66	18 795	11 970	20380	7.1		14300	219	19.0	66
193	4.4	22	67	19 080	12 150	20700	7.2		14500	210	19.1	67
172	4.5	23	68	19 360	12 330	21050	7.3		14700	200	19.2	68
167	4.6	24	69	19 645	12 510	21350	7.4		14900	194	19.3	69
178	6.5	25	70	19 925	12 690	21680	7.5		15100	185	19.4	70
186	5.4	26	71	20 210	12 870	22020	7.6		15300	175	19.5	71
221	4.0	27	72	20 490	13 050	22380	7.7		15500	167	19.6	72
246	6.3	28	73	20 775	13 230	22740	7.8		15700	158	19.7	73
260	1.5	29	74	21 055	13 410	23100	7.9		15900	150	19.8	74
279	5.7	30	75	21 340	13 590	23480	8.0		16100	140	19.9	75
284	7.0	31	76	21 620	13 770	23840	8.1		16300	130	20.0	76
282	7.0	32	77	21 905	13 950	24220	8.2		16500	120	20.1	77
273	6.8	33	78	22 185	14 130	24590	8.3		16700	110	20.2	78
255	7.6	34	79	22 470	14 310		8.4					79
262	8.1	35	80	22 750	14 490		8.5					80
274	7.8	36	81	23 040	14 670		8.6					81
282	7.1	37	82	23 320	14 850		8.7					82
277	6.5	38	83	23 600	15 030		8.8					83
275	7.2	39	84	23 880	15 210		8.9					84
283	7.2	40	85	24 160	15 390		9.0					85
294	7.8	41	86	24 440	15 570		9.1					86
300	11.2	42	87	24 730	15 750		9.2					87
299	14.9	43	88	25 010	15 930		9.3					88
290	15.8	44	89	25 300	16 110		9.4					89
288	17.0	45	90	25 580	16 290		9.5					90

NOTES

7	12	14	17	14	19	14	4	19	22	18	24	6	18	20	17	17
13	10	4	10	11	6	15	09	5	18	08	2	16	12	5	17	09
31	37	5	28	33	00	2	10	5	13	09	0	08	13	5	09	18
00	0	14	01	0	14	00	0	14	00	0	14	00	0	14	00	0

33	9,285	6,030	9,750	47.7	17.5	75.00		212	1.2	33	78	22,100	14,280
34	9,565	6,210	10,035	47.7	17.1	75.00		213	7.0	34	79	22,370	14,310
35	9,850	6,390	10,320	47.8	16.9	75.00		214	8.1	35	80	22,640	14,340
36	10,135	6,570	10,605	47.9	16.8	75.00		215	7.2	36	81	22,910	14,370
37	10,420	6,750	10,890	48.0	16.7	75.00		216	7.1	37	82	23,180	14,400
38	10,710	6,930	11,175	48.1	16.6	75.00		217	6.9	38	83	23,450	14,430
39	11,005	7,110	11,460	48.2	16.5	75.00		218	6.7	39	84	23,720	14,460
40	11,300	7,290	11,745	48.3	16.4	75.00		219	6.5	40	85	23,990	14,490
41	11,595	7,470	12,030	48.4	16.3	75.00		220	6.3	41	86	24,260	14,520
42	11,890	7,650	12,315	48.5	16.2	75.00		221	6.1	42	87	24,530	14,550
43	12,185	7,830	12,600	48.6	16.1	75.00		222	5.9	43	88	24,800	14,580
44	12,480	8,010	12,885	48.7	16.0	75.00		223	5.7	44	89	25,070	14,610
45	12,775	8,190	13,170	48.8	15.9	75.00		224	5.5	45	90	25,340	14,640

[illegible]

REASON TIME ATTITUDE DATA

Channel	5	6	10	15	20	25	30	35	40	45	50	55	60
Frequency					71		81		111		121		131
Altitude (ft) (A.P.)					1676		1580		170		560		
Time					01:35		05:27		09:10		12:00		16:00

Channel	10	110	115	120	125	130	135	140	145-9	150	155	160	165
Frequency		202		214		101		96		97			
Altitude (ft) (A.P.)		1220		1100		1500		1180		910			
Time		02:00		03:00		04:00		05:00		06:00			

1991

0:00