FLIGHT FOLDER CHECKLIST

DET CHECK	L CA CHECK	
C		I. FLIGHT FOLDER CHECK LIST: (AFCRL FORM 25)
C		II. FLIGHT REQUIREMENT INFORMATION
✓		A. FLIGHT REQUIREMENTS DOCUMENT (AFCRL FORM 24 OR 24A)
✓		B. SCHEDULE REQUEST (STEWS NR FORM 1)
✓		C. SCIENTIFIC BALLOON USER DOCUMENT (AFCRL FORM 104)
C		III. PRE-LAUNCH AND LAUNCH INFORMATION
✓		A. PRE-FLIGHT BRIEFING (AFCRL FORM 99)
✓		B. CREW CHIEF REPORT (AFCRL FORM 22)
✓		C. HELIUM INFLATION COMPUTATION SHEET (AFCRL FORM 21)
✓		D. BALLOON LAUNCH/LAYOUT DIAGRAM
✓		E. FAA BALLOON FLIGHT NOTIFICATION RECORD (AFCRL FORM 97)
✓		F. BALLOON METEOROLOGICAL FORECAST (AFCRL FORM 96)
✓		G. PIBAL DATA SHEET (AFCRL FORM 95)
✓		H. PRE-FLIGHT COMMAND RECEIVER TEST DATA (AFCRL FORM 101)
✓		I. DATA TRANSMITTER TEST SHEET (AFCRL FORM 102)
✓		J. BALLOON SPECIFICATION/PRODUCTION/REPAIR SHEETS
✓		K. GROSS WEIGHT VS. ALTITUDE GRAPH
C		IV. FLIGHT INFORMATION
✓		A. CONTROL CENTER (OR COMMUNICATIONS) LOG
✓		B. BAROCODER CALIBRATION SHEET (AFCRL FORM 103)
✓		C. BAROCODER CODE SHEET (ALTITUDE VS. TIME DATA) See NOAA 15-503
N/A		D. BALLOON TRACK LOG (AFCRL FORM 98)
✓		E. BALLOON TRAJECTORY MAP
✓		F. HEIGHT VS. TIME GRAPH
✓		G. AIRCRAFT OBSERVER'S REPORT
N/A		H. ON-BOARD CAMERA DATA
✓		I. RADIOSONDE DATA
C		V. POST-FLIGHT INFORMATION
✓		A. BALLOON FLIGHT SUMMARY (AFCRL FORM 20)
✓		B. MEMO(S) FOR RECORD
✓		C. RECOVERY REPORT
C		VI. MISCELLANEOUS
✓		A. MALFUNCTION REPORT(S)
N/A		B. AF BALLOON INFORMATION SHEET (DET 3 ONLY)
✓		C. NOAA FORMS 17-501 THRU 17-505
✓		D. OTHER (Specify) ADVANCE FLIGHT INFO

F 5 MAY
F 5 MAY
5 MAY 1975

AFCRL FORM OCT 73 25 PREVIOUS EDITIONS ARE OBSOLETE. AFSC-L G HANSCOM FLD MA 1973

DET 1, [redacted] FORCE [redacted]
HOLLOMAN AIR FORCE BASE, NEW MEXICO 88330

PERSONNEL SCHEDULE FOR PROJECT NO SAMPLER Date 21 Apr 75

1. The following personnel are assigned to support a scheduled balloon launch at 0330 hours, 24 Apr 75. Personnel will report on dates and times indicated. A Pre-flight Briefing will be conducted in the Conference Room at 1000 hours 23 Apr 75.

Project Officer Lt Greenlee
Test Coordinator N/A
Launch Officer/NCO N/A
Scientific Investigator Mr. Ashenfelter

LAUNCH CREW (REPORT 2400 hrs)

Crew Chief:	MSgt Benton	Asst Crew Chief:	MSgt Maczko
Launch Vehicle Driver	SSgt Dobson	TSgt Fumerola	SSgt Apple
SSgt Rinaldi	A1C Keith		
Instrumentation:	A1C Lemieux	Sgt Alsleben QC	
	A1C Harris		

CONTROL CENTER

Control Center Coordinator

TIME	NAME
0230	Lt Leclaire
1000	Mr. Richards

Meterologist/Flight Controller

TIME	NAME
2300	SSgt Fultz
0600	Mr. Hall
0700	Mr. Gildenberg

Communications Coordinator

TIME	NAME
2400	A1C Shryock
0800	A1C McCoy

Command Technician

TIME	NAME
0130	Sgt Arrington
0030	Sgt Ashbaugh

Tracking Support (Theodolite)

TIME	NAME
0700	A1C Viveiros

Data Reduction/TM Ground Station

TIME	NAME
0030	Sgt Ashbaugh

AIRCRAFT OBSERVERS (REPORT 0530)

Lt Schumacher — A1C Arnett

RECOVERY CREW (REPORT)

Mr. Blankenship — Sgt Diaz de Leon — Sgt DeFoe

BERNARD B. BURNETT, Major, USAF
Commander, Det 1, AFCRL (AFSC)

MEMO FOR RECORD 28 Sept 71
Recovery Report - H71-38

1. On 25 September 1971 at 1220 Mr Blankenship and MSgt Trobaugh departed Holloman AFB, NM with a 5 ton wrecker and a 1 ton pickup to recover flight number H71-38.

2. The NASA people (Dave Grolemund & Jack Bufton) caught up with us at the Apache Summit about 50 miles north east of Holloman AFB.

3. The observers aboard the mission aircraft sighted the ground party 17 miles north of Tinnie, NM. Off of highway 70. From this point on the aircraft observers led the ground crew over ranch roads and trails to the impact site which was about 45 miles north west of Roswell, NM.

4. The balloon fell across a power line two miles west of the payload impact site.

5. We talked to a rancher (Mr Sparks) who was at the impact site requesting he call the power company at Capitan by way of his rancher's radio-telephone system.

6. The R.E.A. Power Company sent two line men out to make sure the power was off the line and to remove the balloon.

7. Arrived at the payload impact site at 1650.

8. All of the equipment was within a quarter of a mile. The reel down package had separated up on impact when the small Tenney release fired. The impact switches for the large gondola did not work. The gondola again flipped bottom side up and was dragged 51 yards. Both ballast hoppers had blown and were empty. Both Tenney releases were still attached to the top of the parachute, The primary had fired and the back up was still armed. The parachute was in excellent condition.

9. Departed the recovery site at 1830 with everything loaded. Arrived at Capitan at 2030.

10. At 2130, a Mr Wayne Langford, Box 431, Capitan, NM contacted us at the Motel stating the balloon had been removed from the power line.

11. We informed him that we would go back out to the site first thing in the morning and burn the balloon.

S

12. On the 26th we departed Capitan at 0730, arrived at the balloon at 0900.

13. The balloon was dragged to a secure area and burnt.

14. Arrived back at Holloman at 1320.

15. Pictures were taken of the equipment at the impact site.

Robt G Blankenship

ROBERT G. BLANKENSHIP
Chief of Recovery
Det 1, AFCRL (AFSC)

SAN ANTONIO

STALLION

90 MILE

OTINGHAM

IZOZO

OSCURA

70 MILE

1750

1745

1735 1740

1730

1725

1720

1715

1710

1705

1700

1735

1248

LAUNCH

1650

1640

1615

1535

1515

1510

1503

1453

1445

1436

1430

1415

1315

1330

1345

1540

20K

30K

40K

50K

1788

50 MILE

PONY SITE

HAFB

ER

1936

IMPACT

SOKANERID

1925

1915

1905

1855

1845

1835

1830

1825

OCAPITAN

RUIDOSO

AC 1918

THREE RIVERS

OFTO

MAYHILL

DUNKEN

FLIGHT FOLDER WORKSHEET

Flight H75-26/H60X Launch Date (L) 4-24 Project Officer LT. GREENLEE

ACTION AREA		SUSPENSE DATE	COMPLETED	REMARKS
Launch	L	4-24	4-24	
Package Recovery Complete	L+2	4-26	4-24	
Post Mission Critique	L+3	4-27	4-25	
Initial Malfunction Reports to LC	L+3	4-27	4-24	
All Forms to T.R.	L+5	4-29		
NOAA Forms Complete	L+7	5-1	4-25	
Flight Folder (Draft) compiled	L+7	5-1		Exceptions
Project Officer Review	L+8	5-2		future Memo from Duke JPG
Commander Review	L+9	5-3	30 Apr 75	Radiosonde Data? Balloon Item Low?
Corrections Accomplished	L+13	5-7	2 May RCL	
Folder Mailed	L+14	5-8		

Malfunction Reports & Memos For Record (Due L+5) 4-29

	SUBJECT	OPR	COMPLETED
(1)	Balloon Failure	P/O	4-25
(2)	Radiosonde	JHall/C+D	4-29
(3)			
(4)			
(5)			
(6)			

DET 1, AIR FORCE CAMBRIDGE RESEARCH LABORATORIES (AFSC)
HOLLOMAN AIR FORCE BASE, NEW MEXICO 88330

REPLY TO ATTN OF: LCD

24 April 75
(Date)

SUBJECT: Flight Folder for Mission # H75-26/H60X

TO: LCA

1. The Flight Folder for Mission H75-26/H60X has been completed and is forwarded for your review and file. All required items are included in the folder except:

	ITEM	REASON NOT INCLUDED
a.	Documentary Photographs.	Distributed separately.
b.	Radiosonde Data	" "
c.	Balloon Failure Analysis (B. Gildenberg)	Awaiting Radar Data
d.		
e.		

2. All times logged in this folder are local time (MDT) at the location of the Balloon Control Center operation (Det 1, HAFB) unless otherwise designated. Specific "Z" time (GMT) blocks are completed as requested. Other standard units of weight and measure when unspecified are:

Weight/Measure	Unit
Temperature	^{o}C
Weight	lbs.
Altitudes	K ft MSL
Frequencies	KHZ
Time	Hours, minutes, seconds

3. Please contact either the Project Officer or LCD for resolution of any questions generated from review of this folder.

BERNARD B. BURNETT, Major, USAF
Commander, Det 1, AFCRL (AFSC)

1 Atch a/s

RESEARCH - The Key to Aerospace Superiority

BALLOON FLIGHT REQUIREMENTS

SCHEDULED LAUNCH DATE: April 75

LAUNCH SITE: Holloman AFB NM

I. GENERAL

1. PROJECT NUMBER & TITLE: Adv Qtz snooper sensor II/Mini snooper

2. PROJECT OFFICER: Lt Greenlee

3. EXPERIMENTER: Yrok Univ/Ridley

4. FLIGHT OBJECTIVES

A. Inter comparison of NO samplers

B.

C.

5. REQUIRED FLIGHT PROFILE: See remarks

6. DESIGN CEILING ALTITUDE: ~~80K~~ 87K

7. FLIGHT DURATION: 8 hrs

8. PAYLOAD RECOVERY: mandatory

9. DOCUMENTARY PHOTOGRAPHY: LAUNCH: STILL X MOTION X RECOVERY: STILL X MOTION ____

10. TELEMETRY: RANGE: MOBILE VAN ____ FIXED STATION ____ AFCRL: MOBILE VAN X FIXED STATION X

II. BALLOON

1. BALLOON NUMBER 3 OF 5, ITEM 2, S/N 13 270. CONTRACT ~~F19650-74-C-0107~~ 0107

2. MANUFACTURER: Winzen

3. VOLUME (S): .859 ~~.859x10^6~~

4. MODEL NUMBER (S): ~~FTB-101~~ LTV 010

5. BUBBLE TO BE ~~UP~~WIND/DOWNWIND OF PAYLOAD

6. PULL OUT LOWER entire FT OF DUCTS

7. CUT OFF LOWER N/A FT OF DUCTS

8. USE POLY DUST XXXXXXXXXXXXXXXXXX ON LAUNCH ARM

9. OTHER

III. WEIGHTS

1. BALLOON (S): ~~400~~ 440

2. TOP MOUNTED PAYLOAD: N/A

3. SUSPENDED PAYLOAD *(Incl. Ballast, Rigging, Chutes)*: 970

4. GROSS WEIGHT: 1410

5. MINIMUM DROPPABLE BALLAST: 50

6. DESIRED DROPPABLE BALLAST: 80

7. DEAD WEIGHT BALLAST: N/A

8. % FREE LIFT: 10

IV. INSTRUMENTATION

1. PACKAGE TYPE (S): Nanco pack II and backup

2. ALTITUDE SENSOR (S): Datasonde/E-60

3. RADIOSONDE: STANDARD ____ EXTENDED X OMEGA ____

4. PRIMARY COMMANDS: IRIG ____ SEQUENCED ____

(1) Recorder on (4) Shut down (7) Valve failsafe

(2) Balcons drop/switch (5) Harnessdor off (8) Ballast

(3) Standby on/off (6) Latch valve open (9) Terminate

5. BACK-UP COMMANDS: SEQUENCED ____ NON-SEQUENCED ____

(1) Terminate (2) Valve failsafe (3) Ballast

6. DROPPABLE BALLAST *(Type, Container, Total Flow Rate)*

steel shot, one hopper, 28 ppm

V. MISCELLANEOUS

1. PARACHUTE (S): QUANTITY 1 TYPE Ring sail DIAMETER (S) 65.1 ft

2. SEPARATION DEVICE: Dual Tenney

3. BURST SWITCH: YES [X] NO [ ]

4. IMPACT SWITCHES: QUANTITY 4 TYPE AFCRL

5. CAMERA (S): UP ____ DOWN N/A OTHER ____

6. FLASHING LIGHT LOCATIONS: Package and RRU

7. RECOVERY BEACON: YES [X] NO [ ]

8. TRANSPONDER: YES [X] NO [ ]

9. REEL DOWN PACKAGE: WEIGHT ____ DISTANCE TO BE LOWERED N/A

10. ATTACHED DOCUMENTS: AFCRL Form 104

REQUIREMENTS INITIATED BY: T. Dencher

DATE: 14 March 75

COORDINATION: LCB: BY J. PAYNE JP DATE 14MAR75

LCC: BY R. LOWIE DATE 14 MAR 75

AFCRL FORM OCT 73 24 PREVIOUS EDITIONS ARE OBSOLETE

AFSC-L G HANSCOM FLD MA 1973

SPECIAL REQUIREMENTS AND REMARKS

1. B-60 will be required using T-14 and new antenna.

2. Dual 30V pack NB-10Ag required.

3. Profile. Climbout 1000 fpm - float to be determined by contractor - open valve to obtain 250-300 fpm descent rate. Close valve until balloon levels off. Repeat to 60K. Terminate.

4. Launch time will be such that the balloon will reach float 30 minutes prior to balloon sunrise.

MEMORANDUM FOR RECORD

29 April 1975
(Date)

SUBJECT: Mission Planning

Reference Balloon Flight Requirements Document, AFCRL Form 24, for this mission, dated 14 March 1975 initiated by LCA/Mr. Danaher. Upon reviewing this document to establish the necessary support required to meet the outlined flight objectives, the items identified below were modified as indicated:

Item No.	Topic	Specified	Utilized	Reason for Change
	Letter from LCA dtd 26 Mar 75	Balloon 3 of 5	Item 3 SN 13 Contract -0107	
			Balloon 1 of 12 Item 1 SN 16 Contract -90080	Balloon 3 of 5 was used on H75-25/H-59 Balloon 1 of 12 was the next available Model LTV-010.
	111.8	10% free lift	11% free lift	To ascend in the dark more closely to 1000 fpm.
	111.6	50 lb	150 lb	To provide more balloon control capability for profile requirements.
	Remark 2	Dual 30v BB-405's	2 ea single 30v BB-405's	Form 24 incorrect.

James R Greenlee
1Lt USAF
Project Officer

Atch 3

ADVANCE FLIGHT INFORMATION

1. On 24 APRIL flight HZS-26/1160X was launched at 1000 Z and terminated at 1125 Z on 24 APRIL 75.

2. The (experimenter) (~~contractor~~) was YORK U./RIDLEY and the study was INTLR COMPARISON OF NO SAMPLR under program title NO SAMPLER project number ~~[redacted]~~ ASH CAN SNOOPER

3. The balloon was:

   a. balloon number 1 of 12.

   b. item number 1.

   c. serial number 16.

   d. (AF) contract number F29651-75-90080.

   e. balloon size (volume) .859 $\times 10^6$ CU FT.

   f. balloon type STRATOFILM 1.5 MIL

   g. balloon manufacturer WINZEN.

4. The balloon reached an altitude of 88.8K and it (~~was~~) (was not) a success.

5. The gross weight was 1518 lbs.

6. The balloon weight was 443 lbs.

7. The payload weight was 1075 lbs.

8. The above information was called to CAPT. MILLER on 25 APRIL 75 by AIC VIVEIROS of BALLOON BRANCH.

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS ELECTRONIC SYSTEMS DIVISION (AFSC)
LAURENCE G. HANSCOM FIELD, BEDFORD, MASSACHUSETTS 01730

OFFICE OF THE COMMANDER

Recd 22 Nov 74

SCIENTIFIC BALLOON USER DOCUMENT

1. GENERAL INFORMATION

a. Agency: U.S.A.E.C. (NOAA-DOT)

b. Flight Title: SNOOPER SENSOR

c. Project Number: RD840310 (DOT-AS-20066/1)

d. Task Scientist: Dr. B. Ridley

e. Responsible Scientific Contact: NOAA - Air Resources Laboratories

(1) Name: T.E. Ashenfelter

(2) Address: 8060 13th St., Silver Spring, Md. 20910

(3) Phone: 301-427-7645

f. How is Program to be Funded: PROJECT ASH CAN (U.S.A.E.C.)

g. Flight Objectives: Measure Atmospheric Nitric Oxide (NO)

2. FLIGHT INFORMATION

a. Desired Dates of Flight(s): [redacted] APR 75

b. Number of Flights: 1

c. Desired Launch Time: [redacted] 0400

d. Duration at Altitude: 3 Hours

e. Balloon Altitude: 83 Kft.

f. Ascent/Descent Rate Requirements: Ascent-1000 FPM - Descent - 300 FPM

g. Geographical Area Desired: WSMR Area

h. Free or Tethered Flight: Free

i. Special Recovery Requirements: None

j. Balloon .803 [redacted] x 10^6 TTV-001 [redacted] Contract No. F19650-74-C-0252 [redacted]

Balloon Number 6 of 6 Item 2

k. Telemetry Requirements (Type & Frequencies): "S" Band FM/FM

~~2223.5 MH or 2258.5 MH B-60 Denisimeter w/I-14~~

l. Commands (Number & Type): 9-Sequenced

AFCRL FORM NOV 71 104

3. CONTRACTOR FLIGHT EQUIPMENT REQUIREMENTS

a. Number of Packages on Load Train: 4

b. Weight of Each Package: (1) 210#; (2) 100#; (3) 60#; (4) 100#

c. Total Weight: 470#

d. Distance Between Packages: 18"

e. Special Rigging Requirements: FLEX OUTLET TUBE WILL RUN UP RIGGING

HORIZ. INLET TUBE TO BE LOWERED INTO VERTICAL AT TERMINATION

f. Checkout Time Required Prior to Launch: 1000 PM

g. Dimensions of Package: (1) 24" x 36" x 24" (2) 20" x 20" x 36" (3) 20" x 20" x 30" (4) 24" x 24" x 36"

h. Critical Equipment Requirements During Launch: AC Power Supply & T.M. Van at Launch Site (Stable power source is required)

i. Description of Payload and Sketch or Drawings Including Overall Dimensions, Weight and Proposed Method of Suspension:

Same as previous missions

4. PROJECT AND TASK REQUIREMENTS

a. Weather Requirements: Clear for Launch & Recovery

b. Tracking Requirements: A/C and Radar

c. Photographic Coverage: B&W Stills; 16 MM Color Motion; 35 MM Color Slides Plus 8" x 10" Prints

d. Facilities Required: T.M. Van; [redacted]

5. OTHER

Add 1 Battery Pack - 25 AH-24V (To support Tele. Only)

" " " " 2 x 80 AH-BB405 (Blower Supply)

Add 1 ozone sensor - 6" x 6" x 10" 2#

DEPARTMENT OF THE AIR FORCE
AIR FORCE CAMBRIDGE RESEARCH LABORATORIES (AFSC)
HANSCOM AIR FORCE BASE, MASSACHUSETTS 01730

REPLY TO ATTN OF: LCA(SMSgt J. Ground/3108) 26 March 1975

SUBJECT: Amended AFCRL Form 24 for NO Experiment

TO: LCD(Lt. Greenlee)

The following changes should be made to the Form 24:

a. Altitude; 87K ft

b. Balloon; 3 of 5, Item (2) S/N 13, Should be Item 3 JGG
Contract F19650-75-C-0107
Volume .859x10^6 cu ft, model LTV-010.

c. Weight; balloon 440, gross 1410.

Thomas J. Danaher

THOMAS J. DANAHER
Chief, Balloon Flight Requirements Analysis Branch
Aerospace Instrumentation Laboratory

cy: Mr. Richards

NATIONAL RANGE SCHEDULE [illegible] Thursday - [illegible]

INDEX	PRI	TYPE	SVC	O D NUMBER	OPERATIONAL TITLE AND TYPE	MISSILE NO.
				36303A	Atmos Meas/N. O. Sampler	29

TIME REQUESTED	EVENT	TIME SCHEDULED	RESCHEDULED
0001	PTEL		
0330	Launch		
0330	Radar		
1130	Drop		
1200	C Rdr		
1230	CTEL		
1300	Complete		

LAUNCH/INTERCEPT/IMPACT	AIRCRAFT OR TARGET	BEACON
L. HAFB I. Artesia, NM		
ALTITUDE/GE/AZ/RANGE	PATTERN	
90K MSL		

VOICE	TIMING
P-6941.5 P-316.9 P-261.7	

SURVEY		DOC PHOTO	X
TV		MET SUPPORT	X
GEO PHNS		SND RNG	
PAS		CAS	
CHAIN	X		

	SOUTH	MID-RANGE	NORTH	GREEN RIVER	MOBILE
TELEMETRY					
RADAR		16D			
OPTICS					
ACQUISITION					
ELECTRONICS					
COMMAND TRANSMITTER		P-5708.5 KHz P-9730.5 KHz P-6771.5 KHz			

PROJECT	TARGET RADAR
P-2233.5 MHz P-2258.5 MHz P-4875.5 KHz P-9026.5 KHz	

PROJECT RADARS			
AMRAD			
DR			
GLOW			
HAPDAR			
UHF AT RAM			
VHF AT RAM			
MAR			
RAMPART			
RTMS			
TTR			
VHF AT STAL			
LUHF AT STAL			

COMPUTER	RECOVERY	VECTOR	HAZARDS	SILENCES
	Project	Bldg 850	#3 (24 Nov 70)	

REMARKS

1. 30 Min Slide
2. C-Band Transponder
3. Radar plot to Bldg 850-Digs-L. to LOS

16 APR 1975

CHECK LIST

DCD	MFS	A-13
CD	SUR	A-20
FM	ARMY	A-43
MC	NAVY	A-55
MET	COMP	GR
[illegible]	SOC	MDB

12 79 2066 Lt Leclaire

BRIEFING DATE/TIME 23 April 75/1000MDT	FLIGHT NUMBER H75-26/H-60X

I. GENERAL DATA

1. PROJECT NO. & TITLE: ASH CAN Snooper II/Minisnooper Intercomparison		2. PROJECT OFFICER: 1 Lt Greenlee
3. EXPERIMENTER: Dr. York Univ/Ridley	4. FLIGHT OBJECTIVES: A. Intercomparison of Snooper II and Mini-snooper NO sampling systems B. X C.	
5. REQUIRED FLIGHT PROFILE: See XFI		6. TEST COORDINATOR: None
7. LAUNCH CREW CHIEF: MSgt Benton	8. MISSION CODE: AA	9. SCHEDULED LAUNCH: A. SITE Rwy 03 HAFB B. DATE/TIME 24 April 75/~~0330~~0400MDT
10. TERMINATION DATE/TIME: 24 April 75/~~1130~~1200MDT	11. PAYLOAD: 1055 lb	12. FREELIFT: 11 %

II. BALLOON DATA

1. BALLOON NO. 1 OF 12, ITEM 1, S/N 16, CONTRACT F29651-75-90080		
2. MANUFACTURER: Winzen		3. DIAMETER(S): 128.78 ft
4. LENGTH(S): 183.37 ft		5. VOLUME(S): .859 X 10^6 cu ft
6. WEIGHT(S): 443 lb		7. MATERIEL & THICKNESS: 1.5 mil Stratofilm
8. MODEL NO. (S): LTV 010		9. VALVE & VALVE MOTOR S/N: BX 0120 R 0024
10. BALLOON DESTRUCT: Valve & dual ripline		11. REFLECTIVE TAPES: OBGS

III. PARACHUTE DATA

1. SERIAL NO.(S): #2057		
2. QUANTITY/TYPE/DIAMETER(S)/WEIGHT(S): 1 ea Ringsail 63.1 ft 83 lb		
3. LENGTH(S): 90 ft	4. BURST SWITCH XXX YES ☐ NO	5. PLANNED DESCENT LOAD: 905 lb

IV. INSTRUMENTATION DATA

1. PACKAGE TYPE: Range Package II	2. ALTITUDE SENSORS (TYPE, S/N): Barocoder ~~B-34~~ #003	B-60#
3. ANTENNA DEPLOY ANEROID ALT.: 6K ft MSL		4. BURST/IMPACT SWITCH ARM ALT.: 10K ft MSL

5. RADIOSONDE: ☐ STANDARD ☒ EXTENDED ☐ OMEGASONDE

FREQUENCIES: COORDINATION WITH DET 1/DET 3: DATE/TIME: Letter from Maj. Koehly dated 19 Mar 75		
6. COMMAND RECEIVER A. PRIMARY (1) 5708.5 KHz (2) 15039.5 KHz B. BACK-UP 11177.5 KHz		7. TRANSMITTER A. PRIMARY 4875.5 KHz B. BACK-UP 40.35 MHz
8. TRANSMITTER ANTENNA LENGTH A. PRIMARY 144 ft		B. BACK-UP 12 ft

9. PRIMARY COMMANDS ARE: IRIG/SEQUENCED. CHANNELS & FUNCTIONS:

CH 1 Barocoder On	CH 4 Shut down	CH 7 Valve Failsafe
CH 2 Antenna drop/unlatch	CH 5 Barocoder Off	CH 8 Ballast
CH 3 Standby on/off	CH 6 Latch valve open	CH 9 Terminate

10. BACK-UP COMMANDS ARE (NON) SEQUENCED. CHANNELS & FUNCTIONS:

CH 1 Terminate	CH 2 Valve Failsafe	CH 3 Ballast

11. DROPPABLE BALLAST

A. TYPE Steel B. WEIGHT 150 lb C. HOPPERS 2

D. #BLOW 0 E. SLUGS 0 F. TOTAL FLOW RATE 28 LB/MIN G. ORIFICE SIZE 16

12. SAFETY TIMER: 150 MINUTES BELOW 60 KFT

13. TERMINATION TIMERS: A. PRIMARY 8 hours B. SECONDARY 8 ½ hours

14. IMPACT SWITCHES 4 ea AFCRL A. ARM ALTITUDE 10 Kft MSL

15. RADAR REFLECTORS OBGS

16. FLASHING LIGHT LOCATIONS Payload & BTEF

V. VOICE COMMUNICATIONS DATA

1. FREQUENCIES: A. HF (1) 9019.5 KHz (2) 6941.5 KHz (3) B. VHF (1) Motorola

(2) N/A C. UHF (1) N/A (2) N/A D. SPECIAL None

2. CALL SIGNS: A. CONTROL CENTER Fishhead Control B. VAN FH-51

C. RECOVERY FH-13 D. AIRCRAFT FH-60

VI. REPORTING TIMES

1. LAUNCH PERSONNEL AT BLDG 850 AT ~~0004~~ 0030

2. CONTROL CENTER OPEN ~~0001~~ 0030

3. REMOTE RENDEZVOUS: A. TIME N/A B. PLACE N/A

VII. AIRCRAFT SUPPORT

1. A. TYPE Cessna 206 B. TAIL NO. N2693X C. TAKE-OFF TIME 0600

2. A. TYPE N/A B. TAIL NO. N/A C. TAKE-OFF TIME N/A

VIII. LAUNCH SITE SUPPORT

1. METEOROLOGY Pibals

2. DOC PHOTO Std. S & M + 35mm slides

3. OTHER None

IX. RANGE SUPPORT

1. RADAR A. TRACKING 0330 TO 1200 B. TRANSPONDER 0330 TO 1200

C. DIGITAL 0330 TO 1200

2. OPTICS N/A TO N/A

3. OTHER

N/A

X. TRACKING SUPPORT

1. THEODOLITE XX YES | | NO

2. FAA | | YES XX NO

3. GMD XX YES | | NO

4. RADAR XX YES | | NO

5. VOR | | YES XX NO

6. AIRCRAFT XX YES | | NO

7. OTHER

XI. SPECIAL TEST REQUIREMENTS EQUIPMENT

B-60 using T-14 and new antenna 242.0 MHz recovery beacon. Dual 30v pack BB-405's

TM support. AFCRL S band FM/FM 2233.5 MHz

UHF Comm link, van to line 261.7 MHz and 316.9 MHz

XII. REMARKS

Profile: Climbout at 1000 fpm to float, arriving at float at 87 Kft not less than ½ hour before sunrise on balloon. Following float open valve at experimenter's direction to obtain 250-300 fpm descent rate, then allow balloon to level off. Repeat at experimenter's direction to minimum altitude 60K, terminate.

FLIGHT NO. H75-26/H-60X

TM DATA FREQ. 2233.5 MHZ

CHANNEL 1	TIMING	
CHANNEL 2	LOG RATE (SCALE)	PHOTO MULT.
CHANNEL 3	SENSE RATE (SENSITIVITY)	PHOTO MULT.
CHANNEL 4	COMMUTATED DATA (DATA	
CHANNEL 5	TIMING	

PROJECT NO.	BALLOON FLIGHT NO.	BALLOON NO.	ITEM	AF CONTRACT NO.
Ash Can Snooper	H75-76/H-60X	1 OF 12	0001	F29651-75-90080

MANUFACTURER	BALLOON DIA	VOLUME	TAPES (No. & Type)
Winzen SN: 16	128.78'	,859	56 ea Radar

MATERIAL & THICKNESS	BALLOON LENGTH	NO. INFLATION TUBES	NO. DUCTS
Stratofilm 1.5 mil	183.37'	1	2

TORQUE VALUES	RELEASE VEHICLE	LAUNCH PLATFORM
TOP 44" lbs BOTTOM 750" lbs	Crane	Low Boy

ITEM	WEIGHT/LBS
VALVE TYPE & WEIGHT EV-13/Protector	9
BALLOON LAUNCH	
BALLOON MAIN	443
SEPARATION DEVICE 2 Tenny	7.5
CHUTE SIZE 63 ft SER NO. 2057	83
Load Bar/Tri-plate	113
~~Impact Switches~~ 4 ea	6
BALLOON BRANCH INSTRUMENTATION	
Transponder	27
Range Package/Ant.	139
HF Back-up Package	14
Radiosonde	7
CONTRACTOR INSTRUMENTATION RIGGING	
Super Snooper	220
Mini-snooper	162
BB 405 Batteries	110
Ozone Sonde	4.5

ITEM	WEIGHT/LBS
BALLAST	
Hopper 2 ea Cloth	9
Ballast Pourable	150
Package Strobe Light	5
Balloon Strobe Battery	2
T-14	7
GROSS WEIGHT	1518
FREE LIFT 11%	167
GROSS INFLATION	1685
CORRECTION FACTOR .97	-51
CORRECTED GROSS INFLATION	1634

LAUNCH CREW-CHIEF
MSgt J. Benton

AFCRL FORM JAN 69 22 REPLACES AFMDC FORM 0-199, NOV 66, WHICH MAY BE USED TAC • HAFB, NM

Desc w/o Ballast = 923 lbs

188 RDW
331 CNM

1. FLIGHT NUMBER	2. DATE	3. TRAILER NUMBER	4. GROSS LOAD	5. FREE LIFT
1175-76/11	4/24/75	584 2263	1518	11 %

6. NO. TUBES OPEN	7. INITIAL PRESSURE	TEMPERATURE 8. AIR	9. TRAILER	10. USED
22	2300 PSI	°C 50 °F	°C °F	50

COMPUTATIONS

SINGLE OR PARTIAL TRAILER

11. GROSS LOAD	1518 LBS
12. MULTIPLY BY FREE LIFT	11 %
13. FREE LIFT	166.98 LBS
14. ADD GROSS LOAD (11)	1518 LBS
15. GROSS INFLATION	1685.00 LBS
16. MULTIPLY BY CYLINDER FACTOR	.97
17. CORRECTED GROSS & INFLATION	1634.45 LBS
18. LIFT PER TUBE (7, 10) (Handbook)	84.3 LBS
19. MULTIPLY BY NO. TUBES OPEN (6)	22
20. TOTAL LIFT AVAILABLE	1854.6 LBS
21. SUBTRACT CORRECTED GROSS INFLATION (17 or 50)	1634.45 LBS
22. TOTAL LIFT REMAINING IN TRAILER	220.15 LBS
23. LBS/TUBE REMAINING IN TRAILER (19) 22 | 220.15	10.00 LBS/TUBE (22)
24. PSI EQUIVALENT (10, 23) (Handbook)	260
25. VALVING FROM (7)	2300 PSI
TO (24)	260 PSI
RECOVERY GRAPH SAYS SUBTRACT	27 PSI
CUTOFF PRESSURE	233
26. CROSS CHECK (18)	84.3
MINUS (23)	10.0
	74.3
MULTIPLY BY (6)	22
EQUALS (17)	1634.6

MULTI-TRAILER FOR 200 PSI CUTOFF,[1] 220 PSI RECOVERY

REFERENCE INFORMATION			
27. TRAILER NO.			
28. AMBIENT TEMP	°C °F	°C °F	°C °F
29. TRAILER TEMP.	°C °F	°C °F	°C °F
30. USED TEMP.	°C °F	°C °F	°C °F
31. INITIAL PRESSURE			
COMPUTATIONS			
32. LIFT PER TUBE (Handbook) (30, 31)			
33. SUBTRACT 220 PSI LIFT (30)			
34. AVAILABLE LIFT PER TUBE			
35. MULTIPLY BY NO. TUBES OPEN			
36. TOTAL LIFT PER TRAILER			
CROSS CHECK			
37. COPY LINE 32			
38. MULTIPLY BY LINE 35			
39. AVAILABLE LIFT PER TRAILER			
40. COPY LINE 39			
41. MULTIPLY BY LINE 35			
42. TOTAL 220 PSI LIFT			
43. COPY LINE 39			
44. SUBTRACT LINE 42			
45. TOTAL LIFT PER TRAILER			

SUMMATION

46. LIFT IN FULL TRAILERS — NO. _____ NO. _____ NO. _____ NO. _____

47. TOTALS — NO. _____

48. GROSS MANIFOLD INFLATION (Line 17)

49. SUBTRACT TOTAL FULL TRAILERS LIFT

50. PARTIAL TRAILER LIFT REQUIRED (Insert in line 21)

HISTORICAL DATA

INFLATION TIMES		53. GAUGE NO.
51. START	52. COMPLETE	54. MAXIMUM CONTROL VALVE PRESSURE
/		

[1] Inflation stops at 200 PSI. Gage should indicate a recovery to 220 PSI in 2 - 5 minutes

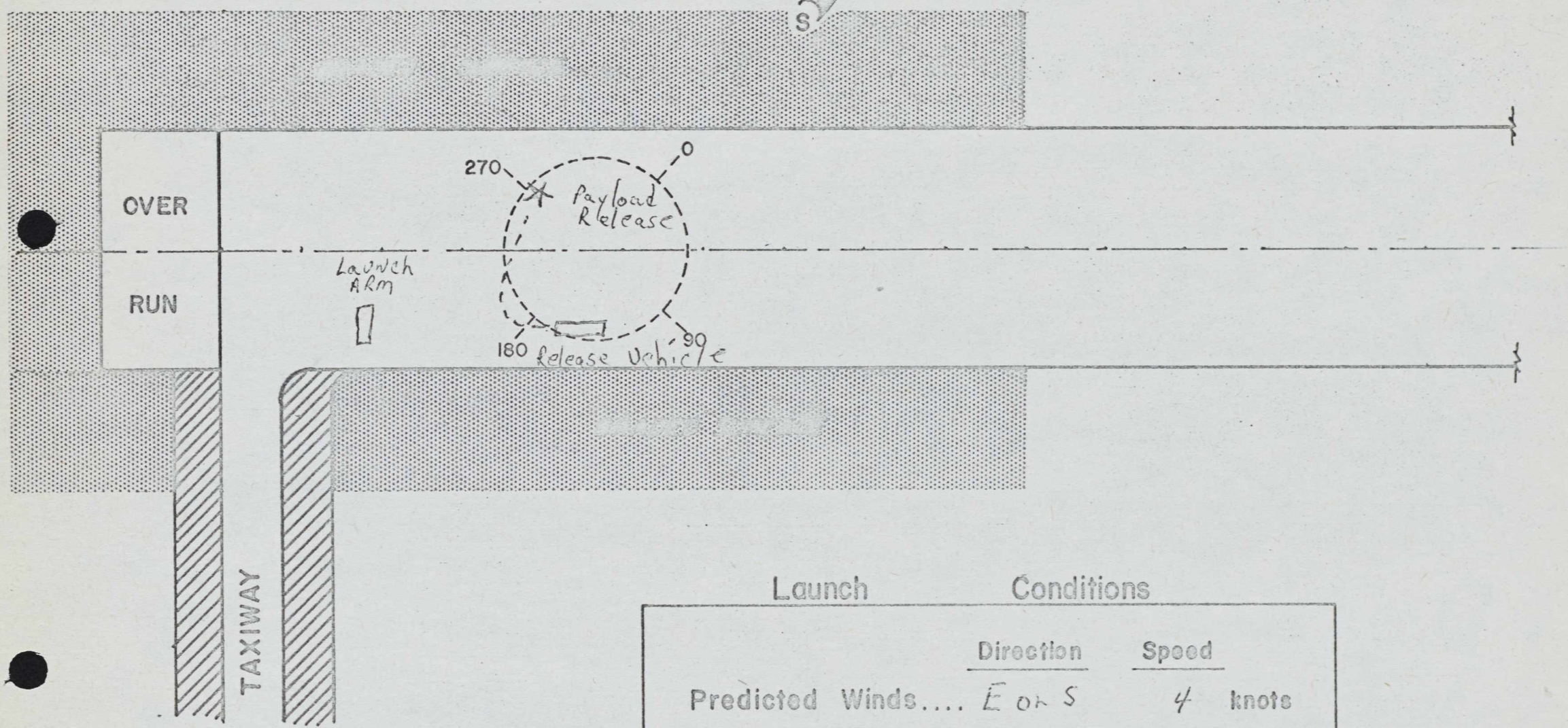
Additional computations can be made on reverse side.

SIGNATURE Robert W. Appleton

BALLOON LAUNCH/LAYOUT DIAGRAM

HOLLOMAN RUNWAY D31

H75-26/H-60X



Launch Conditions

	Direction	Speed	
Predicted Winds....	E or S	4	knots
Actual Winds.....	SE	4	knots
Approx. dist. traveled by launch vehicle.....		125	ft.

0 1 2 3

SCALE: HUNDRED FEET

I. PRE-LAUNCH NOTIFICATION

FLIGHT NUMBER	LAUNCH SITE	EST LAUNCH TIME (Z)	FLOAT ALT RANGE (FT)	BALLOON LENGTH (FT)
H-75-26	HMS	24/1000	85-60K	183

MAX DIAMETER (FT)	LOAD TRAIN LENGTH (FT)	PAY LOAD WEIGHT (LB)	ANTENNA LENGTH (FT)
129	100	1050	1/4

ASCENT THRU 60K				ESTIMATED IMPACT				FLIGHT DURATION		TIME FLD	INITIALS
TIME(Z)	DIST (NM)	DIRECTION	FROM	TIME (Z)	DIST (NM)	DIRECTION	FROM	HOURS	MINUTES		
1100	30	SW	ROW	1830	75	NE	ROW	8	30	2141	KL/AN

II. LAUNCH MINUS TWO HOUR OR UPDATE NOTIFICATION

FLT NO.	EST LCH TIME(Z)	ASCENT THRU 60K				ESTIMATED IMPACT				TIME FLD	INITIALS
		TIME (Z)	DIST (NM)	DIRECTION	FROM	TIME(Z)	DIST (NM)	DIRECTION	FROM		

III. DELAY OR CANCELLATION NOTIFICATION

FLIGHT NUMBER	☐ CANCELLED Z	☐ DELAYED UNTIL Z	TIME FLD	INITIALS

IV. LAUNCH NOTIFICATION

FLIGHT NUMBER	LAUNCH TIME(Z)	TIME FILED	INITIALS
H75-26	1000	1002	RL/XD

V. TWO HOUR POSITIONS

LNCH PLUS	DIST(NM)	DIRECTION	FROM	TIME(Z)	ALT (K)	LNCH PLUS	DIST (NM)	DIRECTION	FROM	TIME (Z)	ALT (K)
~~2 HOURS~~ 1 Intact	22	200°	ROW	0800	60K RL/XD	14 HOURS					
~~4~~ 1 HOURS	34	230°	ROW	1000	67K RL/XD	16 HOURS					
2 Intact 6 HOURS	29	220°	ROW	1200	07K RL/XD	18 HOURS					
8 HOURS						20 HOURS					
10 HOURS						22 HOURS					
12 HOURS						24 HOURS					

VI. TERMINATION MINUS ONE HOUR

FLIGHT NUMBER	LOCATION					PARACHUTE DATA		DESCEND THRU 60K	
	TIME(Z)	DIST (NM)	DIRECTION	FROM	ALTITUDE(K)	DIA(FT)	LOAD(LB)	TIME(Z)	
H75-26	1125	30	SW	ROW	85K	63	900	1202	

TRAJECTORY		ESTIMATED IMPACT				TIME FLD	INITIALS
HEADING(DEG)	DIST TO IMPACT(NM)	TIME(Z)	DIST(NM)	DIRECTION	FROM		
075	27	1158	12	SW	ROW	1131	RL/XD

VII. COMPLETION NOTIFICATION

FLIGHT NUMBER	IMPACT TIME(Z)	DIST(NM)	DIRECTION	FROM	TIME FLD	INITIALS
H 75-26	1203	07	190	ROW	1217	KL/XD

VIII. NOTRAK NOTAM

FLIGHT NUMBER	LAST KNOWN POSITION				EST FLIGHT HEADING	SPEED	ALT(K)
	TIME(Z)	DIST(NM)	DIRECTION	FROM			

DESCEND THRU 60K	ESTIMATED IMPACT				TIME FLD	INITIALS
	TIME(Z)	DIST(NM)	DIRECTION	FROM		

IX. ADDITIONAL NOTAMS

FLIGHT NUMBER

TIME FLD INT: 1

FLIGHT NUMBER

TIME FLD INT 1

X. TETHERED BALLOON PRE-LAUNCH NOTIFICATION

OPERATING AGENCY	ADDRESS	LOCATION	EST LCH – DATE TIME (Z)

BLN LENGTH(FT)	BLN DIAMETER(FT)	TETHER ALT(FT AGL)	FLIGHT DURATION		TIME FLD	INITIALS
			HOURS	MINUTES		

BALLOON METEOROLOGICAL FORECAST

LOCATION	DATE	SCHD. LNCH TIME (Z)	FLIGHT NUMBER
HMN	24 APR 75	1000Z	H75-26/HK-60X

1. LAUNCH SITE FORECAST

DATE/TIME (Z)	CLOUD COVER (amt in tenths – type – height each layer)	VISIBILITY (MILES)	WEATHER	PRECIP PROB %	TEMP (°C)	SURFACE WIND (deg)	SURFACE WIND (Kts)	
1000	CLR	7+	NONE	0	+09	060	04	FCST
	CLR	7+	NONE	0	7	100	4	OBSVD
								FCST
								OBSVD
								FCST
								OBSVD

INVERSIONS height	INVERSIONS temp (°C)	MAXIMUM WINDS	deg	Kts	height	SIGNIFICANT WIND SHEARS Kts/1000 ft	SIGNIFICANT WIND SHEARS height (Kft)	
SFC to 1000 ft AGL	+18	SURFACE	060	07		7	55 to 60	FCST
SFC to 900 ft AGL	+10		140	05		None	to	OBSVD
to Kft		BUBBLE HT	020	09	60 ft AGL		to	FCST
to Kft			140	07			to	OBSVD
to Kft		SFC-60K	260	50	40 Kft		to	FCST
to Kft					Kft		to	OBSVD

TROPOPAUSES height (Kft)	TROPOPAUSES temp (°C)	MINIMUM WINDS	deg	kts	height (Kft)	FLOAT WINDS deg	FLOAT WINDS Kts	FLOAT WINDS height (Kft)	MINIMUM TEMP height (Kft)	MINIMUM TEMP temp (°C)	
70	-59	50–80K	260	06	55	270	07	90	67	-71	FCST
38	-61						N/A				OBSVD
											FCST
											OBSVD

2. TRAJECTORY

	FORECAST time (Z)	FORECAST MILES	FORECAST direction	FORECAST location	OBSERVED time (Z)	OBSERVED miles	OBSERVED direction	OBSERVED location
60K	1110	20	SW	ROW	1057	35	SW	RNM
FLOAT	1140	17	SSW	ROW	1122	31	SW	RNM
TERMINATION	1800	37	NW	HOB		N/A		N/A
IMPACT	1840	30	NNW	HOB		N/A		N/A

PARACHUTE DESCENT	TIME (min)	VECTOR (deg/nm)	TIME (min) N/A	VECTOR (deg/nm) N/A	
ENROUTE WEATHER	None				

3. IMPACT SITE FORECAST

DATE/TIME (Z)	CLOUD COVER (amt in tenths – type – height each layer)	VISIBILITY (miles)	WEATHER	PRECIP PROB %	TEMP (°C)	SURFACE WIND (deg)	SURFACE WIND (Kts)	
1900	4C1250	7+	NONE	0	+21	220	15+22	FCST
								OBSVD
1200		7+	NONE				C	FCST
								OBSVD

4. REMARKS – GENERAL SITUATION, SIGNIFICANT WEATHER AND RECOMMENDATIONS.

METEOROLOGIST(S)	DATE TIME ISSUED	TEST DIRECTOR
M.W. Tech. Sgt	21/0500Z	Lt Greenlee

AFCRL FORM 96 DEC 72 — PREVIOUS EDITIONS OF THIS FORM ARE OBSOLETE

BALLOON METEOROLOGICAL FORECAST

LOCATION	DATE	SCHD. LNCH TIME (Z)	FLIGHT NUMBER
HMN	24 Apr 75	10Z	HJ-26

1. LAUNCH SITE FORECAST

DATE/TIME (Z)	CLOUD COVER (amt in tenths – type – height each layer)	VISIBILITY (MILES)	WEATHER	PRECIP PROB %	TEMP (°C)	SURFACE WIND (deg)	SURFACE WIND (Kts)	
24/1000	FEW CIRRUS	20+		2	52/2	NE-5½	5-8	FCST
	CLEAR	20+			7			OBSVD
								FCST
								OBSVD
								FCST
								OBSVD

INVERSIONS height			INVERSIONS temp (°C)	MAXIMUM WINDS	deg	Kts	height	SIGNIFICANT WIND SHEARS Kts/1000 ft	SIGNIFICANT WIND SHEARS height (Kft)	
SFC	to	ft AGL		SURFACE					to	FCST
SFC	to	ft AGL							to	OBSVD
	to	Kft		BUBBLE HT			ft AGL		to	FCST
	to	Kft							to	OBSVD
	to	Kft		SFC-60K		95	40 Kft		to	FCST
	to	Kft					Kft		to	OBSVD

TROPOPAUSES height (Kft)	TROPOPAUSES temp (°C)	MINIMUM WINDS	deg	kts	height (Kft)	FLOAT WINDS deg	FLOAT WINDS Kts	FLOAT WINDS height (Kft)	MINIMUM TEMP height (Kft)	MINIMUM TEMP temp (°C)	
		50–80K				240	08	87	60	-73	FCST
											OBSVD
											FCST
											OBSVD

2. TRAJECTORY

	FORECAST time (Z)	FORECAST MILES	FORECAST direction	FORECAST location	OBSERVED time (Z)	OBSERVED miles	OBSERVED direction	OBSERVED location
60K		30	SW	RNM		35	SW	RNM
FLOAT		20	SW	RNM				
TERMINATION		30	NE	RNM				
IMPACT		45	NE	RNM				

PARACHUTE DESCENT	TIME (min)	VECTOR (deg/nm)	TIME (min)	VECTOR (deg/nm)

ENROUTE WEATHER

3. IMPACT SITE FORECAST

DATE/TIME (Z)	CLOUD COVER (amt in tenths – type – height each layer)	VISIBILITY (miles)	WEATHER	PRECIP PROB %	TEMP (°C)	SURFACE WIND (deg)	SURFACE WIND (Kts)	
1830	2-4/10 THIN CIRRUS	20+		3			+25	FCST
								OBSVD
								FCST
								OBSVD

4. REMARKS – GENERAL SITUATION, SIGNIFICANT WEATHER AND RECOMMENDATIONS.

METEOROLOGIST(S)	DATE TIME ISSUED	TEST DIRECTOR
[illegible]	23/1600Z	Lt Crowley

PIBAL DATA SHEET

LAUNCH SITE	FLIGHT NUMBER	DATE
HMN	1175-26/H-60X	24 APR 75

TIME Z	0630		0730		0800		0830		0900		0930		1000			
ALTITUDE	DDD	FF	DDD	FF	DDD	FF	DDD	FF	DDD	FF	DDD	FF	DDD	FF	DDD	FF
SURFACE	080	02	90	02	070	02	000	00	000	00	090	4	100	04		
300	140	03	130	03	135	02	250	01	225	01	140	4	130	5		
600	225	05	180	04	215	02	250	02	225	02	190	4	170	6		
900	265	07	210	05	245	03	240	03	235	03	215	4	170	6		
1200	270	10	230	08	255	04	220	03	245	05	235	3	195	5		
1500	275	13	250	09	265	06	225	04	255	07	250	4	210	5		
1800	275	16	260	10	275	09	240	04	265	07	255	6	230	6		
2100	280	18	275	12	280	10	255	05	270	08	260	7	250	6		
2400	285	16	280	13	285	11	265	07	270	09	260	7	250	8		
2700	290	15	290	14	290	12	275	08	275	10	255	8	250	10		
3000	290	13	285	15	290	12	280	09	275	11	255	8	250	11		
3300	295	12	280	17	290	12	285	10	275	12	255	7	250	12		
3600																
3900																
4200																
4500																
4800																
5100																
5400																
5700																
6000																

REMARKS

TYPE BCR-4A SERIAL NO. 23 MOD. CODE _____ DATE 21 APR 74

TESTED BY Harris SITE Holloman PILOT NO. H75-26/H-60X

TEST SUPPLY VOLTAGE = 12.6 VDC ____ TEST CARRIER FREQUENCY (MEASURED) HI 111775

SWITCHING TIME _____ sec. (4A, B only) LO _____

SIGNAL GENERATOR	MODULATING TONES (NON-SEQUENTIAL)	RF INPUT TO EFFECT CLOSURE (NO DELAY)	TIME DELAY BY T.I. WITH 10 MV INPUT
30% MODULATED HIGH CARRIER FREQUENCY	A & B (CH.1)	.38 uv	7 sec
	A & C (CH.2)	.38 uv	7 sec
	B & C (CH.3)	.36 uv	7 sec
30% MODULATED LOW CARRIER FREQUENCY	A & B (CH.1)	uv	
	A & C (CH.2)	uv	
	B & C (CH.3)	uv	

SIGNAL GENERATOR	MODULATING TONES (NON-SEQUENTIAL)	CURRENT DRAIN MODULATED CARRIER	CURRENT DRAIN UNMODULATED CARR.
30% MODULATED HIGH CARRIER FREQ. 10 MV INPUT	A & C (CH.2)	70 ma	55
30% MODULATED LOW CARRIER FREQ. 10 MV INPUT	A & C (CH2)	ma	

ACC UNIT COMPRESSOR - 400 Hz @ 30% MODULATION

RF INPUT	ACC VOLTAGE HIGH FREQ.	ACC VOLTAGE LOW FREQ.	DETECTOR OUTPUT VOLTAGE HIGH FREQ.	DETECTOR OUTPUT VOLTAGE LOW FREQ.	AUDIO OUTPUT VOLT HIGH FREQ.	AUDIO OUTPUT VOLT
* 0 MV	1.40 V	V	30 MV	MV	.50 V	
1 MV	105 V	V	96 MV	MV	2.45 V	
10 MV	.70 V	V	170 MV	MV	3.00 V	
1000 MV	.45 V	V	200 MV	MV	3.35 V	

* RF INPUT CABLE DISCONNECTED

COPY TO BE PLACED IN FLIGHT FOLDER
JACKEL FORM 0-101, REVISED - 8/73

TYPE BCR-4B SERIAL NO. 1019 MOD. CODE _____ DATE 21 APR 7

TESTED BY _____ SITE _____ FLIGHT NO. H75-26/H-6

TEST SUPPLY VOLTAGE = 12.6 VDC ____ TEST CARRIER FREQUENCY (MEASURED) HI 15039.5

SWITCHING TIME _____ sec. (4A, B only) LO 5708.5

SIGNAL GENERATOR	MODULATING TONES (NON-SEQUENTIAL)	RF INPUT TO EFFECT CLOSURE (NO DELAY)	TIME DELAY PU [illegible] WITH 10 MV [illegible]
30% MODULATED HIGH CARRIER FREQUENCY	A & B (CH.1)	.30 uV	12 sec
	A & C (CH.2)	.30 uV	12 sec
	B & C (CH.3)	.30 uV	12 sec
30% MODULATED LOW CARRIER FREQUENCY	A & B (CH.1)	.36 uV	
	A & C (CH.2)	.36 uV	
	B & C (CH.3)	.35 uV	

SIGNAL GENERATOR	MODULATING TONES (NON-SEQUENTIAL)	CURRENT DRAIN MODULATED CARRIER	CURRENT DRAIN UNMODULATED CARRIER
30% MODULATED HIGH CARRIER FREQ. 10 uV INPUT	A & C (CH.2)	78 ma	50
30% MODULATED LOW CARRIER FREQ. 10 uV INPUT	A & C (CH.2)	75 ma	50

ACC UNIT COMPRESSOR - 400 Hz @ 30% MODULATION

RF INPUT	ACC VOLTAGE		DETECTOR OUTPUT VOLTAGE		AUDIO OUTPUT VOLTAGE	
	HIGH FREQ.	LOW FREQ.	HIGH FREQ.	LOW FREQ.	HIGH FREQ.	LOW FREQ.
* 0 uV	1.40 V	1.35 V	-22 mV	-21 mV	.40 V	.38
1 uV	1.10 V	1.15 V	30 mV	30 mV	1.70 V	1.60
10 uV	.90 V	.80 V	85 mV	80 mV	2.25 V	2.30
1000 uV	.60 V	.55 V	120 mV	120 mV	2.30 V	2.40

* RF INPUT CABLE DISCONNECTED

COPY TO BE PLACED IN FLIGHT FOLDER
AAUEL FORM 0-101, REVISED - 8/73

DATA TRANSMITTER TEST SHEET

TEST DATE 4 FEB 74
Rechecked 4 APR 75 CSL

TRANSMITTER TYPE BCT-2H

DATE OF MANUFACTURE 2 Sept 66

SERIAL NUMBER 11

TESTED BY Honett TEST SITE Bedford

		12.0 V	10.8 V	13.2 V
INPUT CURRENT	DC amps	1.8	1.6	2.1
INPUT VOLTAGE	DC volts	12	10.8	13.2
OSCILLATOR	DC ua	25	25	24
BUFFER	DC ua	19	18	20
DRIVER	DC ua	17	13	20
OUTPUT 1	DC ua	12	11	13
OUTPUT 2	DC ua	11	10	12

FREQUENCY (Khz) 4875.5

*12.0 VDC OUTPUT POWER (WATTS) FWD 8.7 REFL

FREQUENCY (Khz) 4875.5

*10.8 VDC OUTPUT POWER (WATTS) FWD - 7 REFL

FREQUENCY (Khz) 4875.5

*13.2 VDC OUTPUT POWER (WATTS) FWD 10 REFL

* Measured at Transmitter

Test Load Impedance - 10-33 ohms.

Length of transmission line RG-58/u SEVEN (7) ft. to Dummy Load.

AFCRL Form 0-102
Feb 1969

Serial No. 16

BALLOON SPECIFICATIONS

RFQ NO./P.O. No. F29651-75-90080 DATE: January 6,

1. MANUFACTURER: WINZEN RESEARCH INC.	2. PROPOSAL NO.: 12824	3. PROJECT NAME: HOLLOMAN

4. MATERIAL Name: STRATOFILM®	b) Gauge Shell: 1.5 MIL Cap(s):	c) Manufacturer: WINZEN RESEARC
5. BALLOON DESIGN a) Nominal Load: 800 lbs.	b) Nominal Altitude 90,000' MSL at 45° Lat.	c) Rec. Suspended Weights: 400 lbs. Min; 1100 lbs.
d) Volume: .859 MCF	e) Type (tailored, taped, etc.) Natural shape, tailored & taped	f) Sigma v 0.3
g) No. of gores: 56	h) Gore Width: Top: 0 Max: 86.7" Base: 2"	i) Gore length: 183.37'
j) Surface area: 44,562 sq. ft.	k) Inflated Height: 106.41' Dia.: 128.78'	l) Mfg. Model No.: SF 128.78-150-NSR-0

6. WEIGHTS a. Balloon: 443 Lbs.	b) Partial Bubble Weights: 139 lbs. @ 65 Ft	154 lbs. @ 70
170 lbs. @ 75 Ft.	186 lbs. @ 80 Ft.	202 lbs. @ 85 Ft.

7. LOAD TAPES
Type and Ultimate Tensile Strength: Polyester filaments, 200 lb. dead load test (radar)

8. INFLATION TUBE(S) a. No. of Tubes: one	b) Material and Gauge: STRATOFILM® 3 mil	c) Location from top: 20'
d) Diameter: 12.7" ea.	e) Length: 120'	f) Horizontal Location: Gore #1
9. DUCT(S) a. No. of ducts: 2	b) Material & Gauge: STRATOFILM® 1.5 mil	c) Area each duct: 15 sq.ft
d) Distance from bottom end fitting: 78'	e) Type of duct: Tailored & attached.	

10. TOP FITTING a) Type: Plate, hoop & segmented clamp ring	b) Valve: Provision for one.
c) Dimensions: 27" D. plate	d) Weight: 17.3 lbs.
11. BOTTOM FITTING a) Type: Banded collar & wedges	b) Dimensions: 6.0" O.D. collar
c) Weight: 5.9 lbs.	d) Load Attachments: 3/4" eyenut

12. SHIPPING INFORMATION a. Gross Wt. 687 Lbs.	b) Box Dimensions: 69" L x 38" W x 30" H	c) Box Volume 46 cu. ft.

13. OTHER
a. Destruct device (304843) located 10' from the apex on gores 27 & 55.
b. Valve cable assy (304493) consists of four AWG #16 conductors in a StratoFilm® sheath. The sheath is sealed for full gore length to gore seam #56.
c. A 1' x 5' strip of red poly is inserted 4' into each duct. On each strip, the respectiv duct no. and the no. of ducts is noted.

APPROVED BY

Ed Schuler

BALLOON PRODUCTION RECORD SUMMARY

AFCRL Model No. LTV-010

Manufacturer: Winzen Research Inc. Plant Location: Sulphur Springs, Texas

Contract No. F29651-75-90080, Balloon No. 1 of 12, Item No. 0001

Material: 1.5 mil Stratofilm®, Vendor's Order No.: 1-9335

Duct Assembly Drawing No. 304491

Inflation Tube Assembly Drawing No. 940238(Attach)

Destruction Device Drawing No. 304843

Top End Fitting Assembly Drawing No. 303627-2, Torque 70 ± 5 in. lbs.

Base End Fitting Assembly Drawing No. 301307, Torque 750 ± 25 in. lbs.

Number of Gore Reseals: 0

Number of Heat Sealed Patches: 2

Number of Adhesive Patches: 6

Number of Repairs Within Thirty-Five (35) Feet of Apex: 3

Type & Weight of Lubricant: ¼ pounds of Poly Powder

Special Features: See WRI Specification Sheet

ASBUILT

Gore Layup Started: 12-16-74; Balloon Packaged: 1-6-75

Balloon Weight: 443 pounds

Partial Weights:

65	feet	139	pounds
70	feet	154	pounds
75	feet	170	pounds
80	feet	186	pounds
85	feet	202	pounds

Box Dimensions & Gross Weight:

L	69	inches
W	38	inches
H	30	inches
Wt	687	pounds

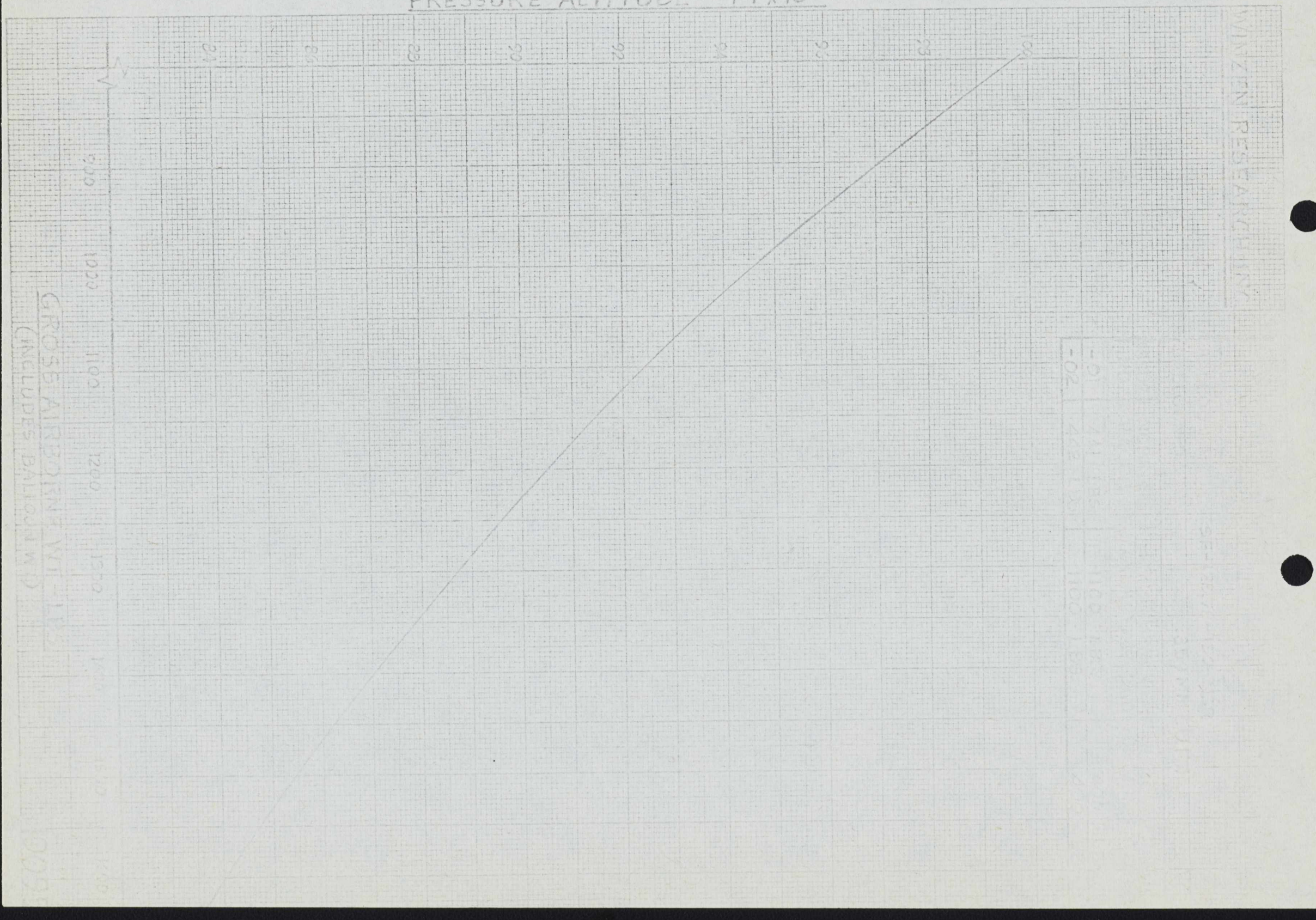
Lee L. Leafer

BRUNING 40-8701

10x10 TO THE CM.

MADE IN U.S.A.

PRESSURE ALTITUDE - FT X 10^{-3}




RUIDOSO
H75-26/H60X
24 April, 75
N.O. Sampler
ROSWELL
HAPB
CLOUDCROFT
MAYHILL
DUNKEN
HOPE
Balloon Payload
Balloon Payload
Balloon Payload

B-60 Calibration Sheet

Serial Number 015 Calibration Date 2/27/75

Alt (Kft)	msec	Alt (Kft)	msec	Alt (Kft)	msec	Alt (Kft)	msec
80.0	347.0	85.0	438.0	90.0	546.9	95.0	680.9
80.1	348.7	85.1	439.9	90.1	548.4	95.1	684.0
80.2	350.5	85.2	441.9	90.2	550.8	95.2	687.0
80.3	352.2	85.3	443.8	90.3	553.2	95.3	690.0
80.4	354.0	85.4	445.8	90.4	555.7	95.4	693.1
80.5	355.7	85.5	447.8	90.5	558.1	95.5	696.1
80.6	357.5	85.6	449.8	90.6	560.6	95.6	699.2
80.7	359.2	85.7	451.7	90.7	563.1	95.7	702.3
80.8	361.0	85.8	453.7	90.8	565.6	95.8	705.4
80.9	362.7	85.9	455.8	90.9	568.1	95.9	708.5
81.0	364.5	86.0	457.8	91.0	570.6	96.0	711.6
81.1	366.3	86.1	459.8	91.1	573.1	96.1	714.7
81.2	368.0	86.2	461.8	91.2	575.7	96.2	717.8
81.3	369.8	86.3	463.9	91.3	578.2	96.3	721.0
81.4	371.6	86.4	465.9	91.4	580.8	96.4	724.2
81.5	373.3	86.5	468.0	91.5	583.3	96.5	727.3
81.6	375.1	86.6	470.0	91.6	585.9	96.6	730.5
81.7	376.9	86.7	472.1	91.7	588.5	96.7	733.7
81.8	378.7	86.8	474.2	91.8	591.1	96.8	737.0
81.9	380.5	86.9	476.3	91.9	593.8	96.9	740.2
82.0	382.2	87.0	478.4	92.0	596.4	97.0	743.4
82.1	384.0	87.1	480.5	92.1	599.0	97.1	746.7
82.2	385.8	87.2	482.6	92.2	601.7	97.2	749.9
82.3	387.6	87.3	484.8	92.3	604.4	97.3	753.2
82.4	389.4	87.4	486.9	92.4	607.0	97.4	756.5
82.5	391.2	87.5	489.0	92.5	609.7	97.5	759.8
82.6	393.0	87.6	491.2	92.6	612.4	97.6	763.1
82.7	394.8	87.7	493.4	92.7	615.1	97.7	766.4
82.8	396.7	87.8	495.5	92.8	617.9	97.8	769.7
82.9	398.5	87.9	497.7	92.9	620.6	97.9	773.1
83.0	400.3	88.0	499.9	93.0	623.4	98.0	776.4
83.1	402.1	88.1	502.1	93.1	626.1	98.1	779.8
83.2	404.0	88.2	504.3	93.2	628.9	98.2	783.2
83.3	405.8	88.3	506.6	93.3	631.7	98.3	786.6
83.4	407.7	88.4	508.8	93.4	634.5	98.4	790.0
83.5	409.5	88.5	511.0	93.5	637.3	98.5	793.4
83.6	411.4	88.6	513.3	93.6	640.1	98.6	796.8
83.7	413.2	88.7	515.6	93.7	643.0	98.7	800.3
83.8	415.1	88.8	517.8	93.8	645.8	98.8	803.7
83.9	417.0	88.9	520.1	93.9	648.7	98.9	807.2
84.0	418.8	89.0	522.4	94.0	651.5	99.0	810.6
84.1	420.7	89.1	524.7	94.1	654.4	99.1	814.1
84.2	422.6	89.2	527.0	94.2	657.3	99.2	817.6
84.3	424.5	89.3	529.4	94.3	660.2	99.3	821.1
84.4	426.4	89.4	531.7	94.4	663.2	99.4	824.6
84.5	428.3	89.5	534.0	94.5	666.1	99.5	828.2
84.6	430.2	89.6	536.4	94.6	669.0	99.6	831.7
84.7	432.1	89.7	538.8	94.7	672.0	99.7	835.2
84.8	434.1	89.8	541.2	94.8	675.0	99.8	838.8
84.9	436.0	89.9	543.5	94.9	678.0	99.9	842.4

B-60 Calibration Sheet

Serial Number 015 | Calibration Date 2/27/75

Alt (Kft)	msec	Alt (Kft)	msec	Alt (Kft)	msec	Alt (Kft)	msec
100.0	846.0	105.0	1049.0	110.0	1288.0	115.0	1566.0
100.1	849.7	105.1	1053.4	110.1	1293.1	115.1	1571.9
100.2	853.4	105.2	1057.8	110.2	1298.3	115.2	1577.9
100.3	857.2	105.3	1062.2	110.3	1303.5	115.3	1583.9
100.4	860.9	105.4	1066.7	110.4	1308.7	115.4	1590.0
100.5	864.7	105.5	1071.2	110.5	1313.9	115.5	1596.0
100.6	868.5	105.6	1075.7	110.6	1319.2	115.6	1602.1
100.7	872.3	105.7	1080.2	110.7	1324.5	115.7	1608.2
100.8	876.1	105.8	1084.7	110.8	1329.7	115.8	1614.2
100.9	880.0	105.9	1089.2	110.9	1335.0	115.9	1620.4
101.0	883.8	106.0	1093.8	111.0	1340.3	116.0	1626.5
101.1	887.7	106.1	1098.3	111.1	1345.7	116.1	1632.6
101.2	891.5	106.2	1102.9	111.2	1351.0	116.2	1638.8
101.3	895.4	106.3	1107.5	111.3	1356.4	116.3	1645.0
101.4	899.3	106.4	1112.1	111.4	1361.7	116.4	1651.2
101.5	903.2	106.5	1116.7	111.5	1367.1	116.5	1657.4
101.6	907.2	106.6	1121.4	111.6	1372.5	116.6	1663.6
101.7	911.1	106.7	1126.0	111.7	1377.9	116.7	1669.9
101.8	915.1	106.8	1130.7	111.8	1383.4	116.8	1676.2
101.9	919.0	106.9	1135.4	111.9	1388.8	116.9	1682.4
102.0	923.0	107.0	1140.1	112.0	1394.3	117.0	1688.7
102.1	927.0	107.1	1144.8	112.1	1399.8	117.1	1695.1
102.2	931.0	107.2	1149.5	112.2	1405.3	117.2	1701.4
102.3	935.1	107.3	1154.2	112.3	1410.8	117.3	1707.8
102.4	939.1	107.4	1159.0	112.4	1416.3	117.4	1714.1
102.5	943.1	107.5	1163.8	112.5	1421.9	117.5	1720.5
102.6	947.2	107.6	1168.5	112.6	1427.5	117.6	1726.9
102.7	951.3	107.7	1173.3	112.7	1433.0	117.7	1733.3
102.8	955.4	107.8	1178.2	112.8	1438.6	117.8	1739.8
102.9	959.5	107.9	1183.0	112.9	1444.2	117.9	1746.2
103.0	963.6	108.0	1187.8	113.0	1449.9	118.0	1752.7
103.1	967.7	108.1	1192.7	113.1	1455.5	118.1	1759.2
103.2	971.9	108.2	1197.6	113.2	1461.2	118.2	1765.7
103.3	976.0	108.3	1202.5	113.3	1466.9	118.3	1772.3
103.4	980.2	108.4	1207.4	113.4	1472.6	118.4	1778.8
103.5	984.4	108.5	1212.3	113.5	1478.3	118.5	1785.4
103.6	988.6	108.6	1217.2	113.6	1484.0	118.6	1791.9
103.7	992.8	108.7	1222.2	113.7	1489.8	118.7	1798.5
103.8	997.1	108.8	1227.1	113.8	1495.5	118.8	1805.2
103.9	1001.3	108.9	1232.1	113.9	1501.3	118.9	1811.8
104.0	1005.6	109.0	1237.1	114.0	1507.1	119.0	1818.4
104.1	1009.8	109.1	1242.1	114.1	1512.9	119.1	1825.1
104.2	1014.1	109.2	1247.2	114.2	1518.7	119.2	1831.8
104.3	1018.4	109.3	1252.2	114.3	1524.6	119.3	1838.5
104.4	1022.7	109.4	1257.3	114.4	1530.4	119.4	1845.2
104.5	1027.1	109.5	1262.3	114.5	1536.3	119.5	1852.0
104.6	1031.4	109.6	1267.4	114.6	1542.2	119.6	1858.7
104.7	1035.8	109.7	1272.5	114.7	1548.1	119.7	1865.5
104.8	1040.2	109.8	1277.7	114.8	1554.0	119.8	1872.3
104.9	1044.5	109.9	1282.8	114.9	1560.0	119.9	1879.1

BARACODER CHECKLIST AND CALIBRATION

Serial No: 3	Date: 4/21/75	Initials:
1. Inspect each of the three diaphram assemblies. Leakage (✓), Corrosion (✓), dents (✓), mounting seven perpendicular to diaphram face (✓). Check alignment of the diaphrams to the code drum.		ZPA
2. Apply motor voltage (✓) advance code drum to expose printed contract section (✓). Clean and polish code drum with a new eraser. (✓) Check ground spring for proper seat in drum.		ZPA
3. Check keying relay for proper operation. Check valve and ballast code by grounding contact arms to case (✓) Ballast Code ZMC Valve Code LMC		ZPA
4. Check contact arm pressure on the code drum.		ZPA

ALT	MORSE CODE	ALT	MORSE CODE
SFC	CSE	75K	HNI
5K	CME	80K	BJE
10K	KAE	85K	ZUE
15K	KSI	90K	DII
20K	USI	95K	IEI
25K	VAI	100K	UDE
30K	WME	105K	
40K	PMI	110K	
50K	QSE	115K	
60K	RME	120K	
65K	NAI	125K	
70K	ENE	130K	

5. Recheck ground code upon returning to ground level.	ZPA
6. Prepare code sheet and calibration graph.	ZPA
7. Turn Rinsador power down and power recon hole.	ZPA

BAROCODER SN 3 CODE M CALIBRATED 4/ 21/ 75

CSI	4.1	WAI	28.2	FEI	52.0	NTI	65.5
CNI	4.3	WUI	28.6	FII	52.3	STI	65.7
CNE	4.5	WUE	29.1	FIE	52.7	STE	65.9
CDE	4.6	WME	29.5	FSE	53.0	SAE	66.1
CDI	4.8	WMI	30.0	FSI	53.3	SAI	66.2
CMI	5.0	WDI	30.5	FNI	53.7	SUI	66.4
CME	5.5	WDE	31.0	FNE	54.0	SUE	66.6
CUE	6.0	WNE	31.4	FDE	54.3	SME	66.8
CUI	6.5	WNI	31.9	FDI	54.7	SMI	67.0
CAI	7.0	WSI	32.4	FMI	55.0	SDI	67.1
CAE	7.5	WSE	32.9	FME	55.3	SDE	67.3
CTE	8.0	WIE	33.3	FUE	55.7	SNE	67.5
CTI	8.5	WII	33.8	FUI	56.0	SNI	67.7
KTI	9.0	WEI	34.3	FAI	56.3	SSI	67.9
KTE	9.5	WEE	34.8	FAE	56.7	SSE	68.0
KAE	10.0	PEE	35.2	FTE	57.0	SIE	68.2
KAI	10.5	PEI	35.7	FTI	57.3	SII	68.4
KUI	11.0	PII	36.2	RTI	57.7	SEI	68.6
KUE	11.5	PIE	36.7	RTE	58.0	SEE	68.7
KME	12.0	PSE	37.1	RAE	58.3	IEE	68.9
KMI	12.5	PSI	37.6	RAI	58.7	IEI	69.1
KDI	13.0	PNI	38.1	RUI	59.0	III	69.3
KDE	13.5	PNE	38.6	RUE	59.3	IIE	69.5
KNE	14.0	PDE	39.0	RME	59.7	ISE	69.6
KNI	14.5	PDI	39.5	RMI	60.0	ISI	69.8
KSI	15.0	PMI	40.0	RDI	60.2	INI	70.0
KSE	15.5	PME	40.5	RDE	60.4	INE	70.2
KIE	15.9	PUE	41.0	RNE	60.6	IDE	70.4
KII	16.4	PUI	41.4	RNI	60.8	IDI	70.7
KEI	16.8	PAI	41.9	RSI	61.0	IMI	70.9
KEE	17.3	PAE	42.4	RSE	61.2	IME	71.1
VEE	17.7	PTE	42.9	RIE	61.4	IUE	71.3
VEI	18.2	PTI	43.3	RII	61.6	IUI	71.5
VII	18.6	GTI	43.8	REI	61.8	IAI	71.7
VIE	19.1	GTE	44.3	REE	62.0	IAE	72.0
VSE	19.5	GAE	44.8	NEE	62.2	ITE	72.2
VSI	20.0	GAI	45.2	NEI	62.4	ITI	72.4
VNI	20.6	GUI	45.7	NII	62.6	HTI	72.6
VNE	21.1	GUE	46.2	NIE	62.8	HTE	72.8
VDE	21.7	GME	46.7	NSE	63.0	HAE	73.0
VDI	22.2	GMI	47.1	NSI	63.2	HAI	73.3
VMI	22.8	GDI	47.6	NNI	63.4	HUI	73.5
VME	23.3	GDE	48.1	NNE	63.6	HUE	73.7
VUE	23.9	GNE	48.6	NDE	63.8	HME	73.9
VUI	24.4	GNI	49.0	NDI	64.0	HMI	74.1
VAI	25.0	GSI	49.5	NMI	64.2	HDI	74.3
VAE	25.5	GSE	50.0	NME	64.4	HDE	74.6
VTE	25.9	GIE	50.3	NUE	64.6	HNE	74.8
VTI	26.4	GII	50.7	NUI	64.8	HNI	75.0
WTI	26.8	GEI	51.0	NAI	65.0	HSI	75.2
WTE	27.3	GEE	51.3	NAE	65.2	HSE	75.5
WAE	27.7	FEE	51.7	NTE	65.4	HIE	75.7

Ballast ZMI

Valve LMI

BAROCODER SN 3 CODE M CALIBRATED 4/ 21/ 75

HII	76.0	OUI	84.0	DNI	89.6	ADI	97.0
HEI	76.2	OAI	84.1	DSI	89.7	AMI	97.2
HEE	76.5	OAE	84.2	DSE	89.8	AME	97.3
BEE	76.7	OTE	84.3	DIE	89.9	AUE	97.5
BEI	77.0	OTI	84.4	DII	90.0	AUI	97.7
BII	77.2	ZTI	84.6	DEI	90.1	AAI	97.8
BIE	77.5	ZTE	84.7	DEE	90.3	AAE	98.0
BSE	77.7	ZAE	84.8	EEE	90.4	ATE	98.2
BSI	78.0	ZAI	84.9	EEI	90.6	ATI	98.3
BNI	78.2	ZUI	85.0	EII	90.7	UTI	98.5
BNE	78.5	ZUE	85.1	EIE	90.8	UTE	98.7
BDE	78.7	ZME	85.2	ESE	91.0	UAE	98.8
BDI	79.0	ZMI	85.3	ESI	91.1	UAI	99.0
BMI	79.2	ZDI	85.4	ENI	91.2	UUI	99.2
BME	79.5	ZDE	85.5	ENE	91.4	UUE	99.3
BUE	79.7	ZNE	85.6	EDE	91.5	UME	99.5
BUI	80.0	ZNI	85.7	EDI	91.7	UMI	99.7
BAI	80.1	ZSI	85.9	EMI	91.8	UDI	99.8
BAE	80.2	ZSE	86.0	EME	91.9	UDE	100.0
BTE	80.3	ZIE	86.1	EUE	92.1		
BTI	80.4	ZII	86.2	EUI	92.2		
XTI	80.6	ZEI	86.3	EAI	92.4		
XTE	80.7	ZEE	86.4	EAE	92.5		
XAE	80.8	LEE	86.5	ETE	92.6		
XAI	80.9	LEI	86.6	ETI	92.8		
XUI	81.0	LII	86.7	TTI	92.9		
XUE	81.1	LIE	86.8	TTE	93.1		
XME	81.2	LSE	86.9	TAE	93.2		
XMI	81.3	LSI	87.0	TAI	93.3		
XDI	81.4	LNI	87.1	TUI	93.5		
XDE	81.6	LNE	87.2	TUE	93.6		
XNE	81.7	LDE	87.3	TME	93.7		
XNI	81.8	LDI	87.4	TMI	93.9		
XSI	81.9	LMI	87.6	TDI	94.0		
XSE	82.0	LME	87.7	TDE	94.2		
XIE	82.1	LUE	87.8	TNE	94.3		
XII	82.2	LUI	87.9	TNI	94.4		
XEI	82.3	LAI	88.0	TSI	94.6		
XEE	82.4	LAE	88.1	TSE	94.7		
OEE	82.6	LTE	88.2	TIE	94.9		
OEI	82.7	LTI	88.3	TII	95.0		
OII	82.8	DTI	88.4	TEI	95.2		
OIE	82.9	DTE	88.5	TEE	95.3		
OSE	83.0	DAE	88.6	AEE	95.5		
OSI	83.1	DAI	88.7	AEI	95.7		
ONI	83.2	DUI	88.8	AII	95.8		
ONE	83.3	DUE	88.9	AIE	96.0		
ODE	83.4	DME	89.0	ASE	96.2		
ODI	83.6	DMI	89.1	ASI	96.3		
OMI	83.7	DDI	89.3	ANI	96.5		
OME	83.8	DDE	89.4	ANE	96.7		
OUE	83.9	DNE	89.5	ADE	96.8		

ESSA FORM 17-503
(6-70)

ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION

FLIGHT DATA RECORD

(ASCENT/DESCENT)

H75-26/H-60X | 86 MR | 24 Apr

LOCATION
Holloman AFB, NM

TIME (Z) 10 Min. Int.	CODE ALT (Kft.)	DENS. ALT (Kft.)	REMARKS*
1000			LAUNCH
1001			CMD CH 2
			(ANTENNA DROP)
1003	6.5		
1007	8.5		
1008	10.5		
1009	11.5		
1010	12.5		
1011	13.0		
1013	15.0		
1014	15.0		
1015	16.4		
1016	16.8		
1017	18.6		
1018	20.0		
1020	20.6		
1021	22.2		
1022	22.8		
1023	24.4		
1025			CMD CH 8 33 sec
1026	28.2		(BALLAST)
1027	28.6		
1028	30.0		
1029	30.0		
1030	30.5		
1031	31.9		CMD CH 8 33 sec
1032			(BALLAST)
1033	33.8		
1034	35.2		
1035	37.6		
1036	38.1		
1037			CMD CH 8 33 sec
1038	40.0		(BALLAST)
1039	41.9		
1040	43.3		
1041	45.2		
1042	45.7		
1043	47.1		
1044	47.1		
1045	47.6		
1046	49.5		
1047	50.7		
1048	51.7		
1049	53.3		
1050	53.3		
1051	54.7		
1052	54.7		
1053	55.0		
1054	56.3		
1055	59.0		
1056	61.0		
1057	62.6		
1058	64.0		
1059	64.0		
1101	66.4		
1102	67.1		
1103	67.9		
1105	69.8		
1106	70.7	71.9	
1109			CMD CH 5
1111		77.9	
1112		79.4	
1113		80.7	
1114		82.2	
1116		83.4	
1117		84.7	
1118		85.0	
1120		87.4	
1121		88.7	
1122		88.8	
1123			BALLOON BURST
1124		82.0	
1125			CMD CH 9
1126			CMD CH 1
1127	58.7		
1128	55.0		
1129	53.3		
1130	51.0		
1131	49.0		
1132	47.1		CMD CH 3
1133			CMD CH 4
1134			CMD CH 3
1135			CMD CH 4
1136	37.6		
1137	36.2		
1138	31.9		
1139	30.0		
1141	28.6		
1143	24.4		
1144	22.8		
1145	22.2		
1146	20.0		
1147	16.4		
1148	15.0		
1149	13.0		
1150	12.5		
1152	11.0		
1154			LOST SIGNAL

*Flight release, antenna drop, float, flight termination,

ALTITUDE AT FLOAT

GMD | RADAR

CONTROL CENTER LOG

Date 24 April 75 Flight No H75-26/H-60X Page 1 Of 2

TIME	REMARKS
0030	Control center opened by Sgt. Arrington and A1C Shryock.
0106	Received clearance for launch crew to go on runway.
0115	Launch crew report barrier is up. Command post says they can not lower it.
0120	Convoy went around barrier and are now on runway.
0137	Command check started.
0147	Command check complete except for valve check.
0205	Gas cutoff confirmed.
0239	Balloon layout started.
0246	Balloon layout complete.
0320	Command check complete.
0340	Inflation started.
0354	Inflation complete.
0355	Package is hot.
0359	Received clearance for launch.
0400	Balloon launched.
0401	Antenna dropped.
0405	Unable to record altitude with plotter due to unstable pin. X-Y data on plot board noisy, but adequate for data.
0408	GMD advised lost all signal at launch.(radiosonde failure)
0425	Issued channel 8(Ballast pour) for 33 seconds. Freq. 5708.5
0432	" " " " " " " " " "
0437	" " " " " " " " " "
0442	Snooper II turned on at 45.2K. Indication by telemetry.
0449	Radar turned off to see if it is causing interference with TM.
0451	Radar turned on. Still having problems with TM
0509	Baracoder turned off. Was interfering with TM (Channel 5).
0511	Recovery departing Bldg. 850. Will call from Artesia.
0523	Recovery left gate.
0523	Balloon burst.
0525	Balloon terminated at this time(primary command)
0526	Baracoder turned on.
0527	Aircraft crew left Bldg. 850.
0532	Channel 3 issued, and received. Package on standby.
0533	" 4 " " " Package not shut down, off standby.
0534	Channel 3 issued, and received. Package on standby.
0535	" 4 " " " Package shut down.
0549	Lost radar signal, due to line of sight.
0554	Lost baracoder.
0555	Command site turned off at this time.
0608	Aircraft left Alamogordo Airport.
0700 ✓	Aircraft found payload, 188, 8 miles South Roswell VOR. Package undamaged, no damage to property. Aircraft advised to look for balloon until recovery can get there.

CONTROL CENTER LOG

Date 24 April 75 Flight No H75-26/H-60X Page 2 Of 2

TIME	REMARKS
0818	Recovery contacted control by telephone.
0852	RCA crew corrected problem with radar plot board. Problem was due to, too little gain in one of the arm pins. Plot board was last checked out 17 April 75.
0915	Recovery at payload. Package in excellent condition, except for some damage to inlet tube.
1041	A1C Arnett called by telephone; Balloon position is 223° ROW, 312° CNM.
1202	Mr. Blankenship called from Roswell; said he would send one man back with payload immediately, and would proceed after balloon.
1206	A1C Arnett called in. Control advised him to wait at Roswell Airport for recovery crew. Said they had spoted what looked like a way to get to the balloon.
1326	Lt. Schumacher called from Roswell Airport and said A1C Arnett had already left with the recovery crew, and that the aircraft would take off in a few minutes to asist them in recovering the balloon.
1430	Fishhead 11 called in his position with package as 10 miles East of Tularosa.
1506	Fishhead 11 came through gate.
1516	Package back at Bldg. 850.
1520	Control center notified that recovery crew and aircraft arrived back at balloon at 1505, and that the aircrafts ETA at Alamogordo would be approx. 1700.
1607	Fishhead 60 called on Motorola , and said they'd be on the ground in approx. 15 min.; the recovery crew got the balloon OK, and would be returning to Holloman tonight.
1618	Aircraft landed at Alamogordo.
1620	Notified Lt. Greenlee of aircraft and recovery status.
1630	A1C Arnett will return with recovery crew. Control center closed.

James R. Greenlee
1Lt USAF

B-60 Calibration Sheet

Serial Number 015 Calibration Date 2/27/75

Alt (Kft)	msec	Alt (Kft)	msec	Alt (Kft)	msec	Alt (Kft)	msec
60.0	135.0	65.0	172.0	70.0	218.0	75.0	276.0
60.1	135.6	65.1	172.8	70.1	219.0	75.1	277.2
60.2	136.3	65.2	173.6	70.2	220.0	75.2	278.5
60.3	137.0	65.3	174.4	70.3	221.1	75.3	279.8
60.4	137.7	65.4	175.2	70.4	222.1	75.4	281.2
60.5	138.4	65.5	176.1	70.5	223.2	75.5	282.5
60.6	139.1	65.6	176.9	70.6	224.2	75.6	283.8
60.7	139.8	65.7	177.8	70.7	225.3	75.7	285.1
60.8	140.4	65.8	178.6	70.8	226.4	75.8	286.4
60.9	141.1	65.9	179.5	70.9	227.4	75.9	287.8
61.0	141.8	66.0	180.3	71.0	228.5	76.0	289.1
61.1	142.5	66.1	181.2	71.1	229.6	76.1	290.5
61.2	143.2	66.2	182.0	71.2	230.7	76.2	291.8
61.3	143.9	66.3	182.9	71.3	231.8	76.3	293.2
61.4	144.7	66.4	183.8	71.4	232.9	76.4	294.5
61.5	145.4	66.5	184.6	71.5	234.0	76.5	295.9
61.6	146.1	66.6	185.5	71.6	235.1	76.6	297.3
61.7	146.8	66.7	186.4	71.7	236.2	76.7	298.6
61.8	147.5	66.8	187.3	71.8	237.4	76.8	300.0
61.9	148.2	66.9	188.2	71.9	238.5	76.9	301.4
62.0	148.9	67.0	189.1	72.0	239.6	77.0	302.8
62.1	149.7	67.1	190.0	72.1	240.7	77.1	304.2
62.2	150.4	67.2	190.9	72.2	241.9	77.2	305.6
62.3	151.1	67.3	191.8	72.3	243.0	77.3	307.0
62.4	151.9	67.4	192.7	72.4	244.2	77.4	308.4
62.5	152.6	67.5	193.6	72.5	245.3	77.5	309.8
62.6	153.3	67.6	194.5	72.6	246.5	77.6	311.3
62.7	154.1	67.7	195.4	72.7	247.7	77.7	312.7
62.8	154.8	67.8	196.4	72.8	248.8	77.8	314.1
62.9	155.6	67.9	197.3	72.9	250.0	77.9	315.6
63.0	156.3	68.0	198.2	73.0	251.2	78.0	317.0
63.1	157.1	68.1	199.2	73.1	252.4	78.1	318.5
63.2	157.8	68.2	200.1	73.2	253.6	78.2	319.9
63.3	158.6	68.3	201.1	73.3	254.8	78.3	321.4
63.4	159.3	68.4	202.0	73.4	256.0	78.4	322.8
63.5	160.1	68.5	203.0	73.5	257.2	78.5	324.3
63.6	160.9	68.6	204.0	73.6	258.4	78.6	325.8
63.7	161.6	68.7	204.9	73.7	259.6	78.7	327.3
63.8	162.4	68.8	205.9	73.8	260.8	78.8	328.7
63.9	163.2	68.9	206.9	73.9	262.1	78.9	330.2
64.0	164.0	69.0	207.9	74.0	263.3	79.0	331.7
64.1	164.7	69.1	208.8	74.1	264.6	79.1	333.2
64.2	165.5	69.2	209.8	74.2	265.8	79.2	334.7
64.3	166.3	69.3	210.8	74.3	267.0	79.3	336.2
64.4	167.1	69.4	211.8	74.4	268.3	79.4	337.8
64.5	167.9	69.5	212.8	74.5	269.6	79.5	339.3
64.6	168.7	69.6	213.9	74.6	270.8	79.6	340.8
64.7	169.5	69.7	214.9	74.7	272.1	79.7	342.3
64.8	170.3	69.8	215.9	74.8	273.4	79.8	343.9
64.9	171.1	69.9	216.9	74.9	274.7	79.9	345.4

H75-26/H 60X
NO SAMPLER
24 APR 75

ROW

★ PAYLOAD IMPACT

0450
0455
0500
0505
0510
0515
BURST 0523
0530
0535
0440
0445
0430
0435
0420
0425
0410
0415
0400
0405
LAUNCH 0400

NW

OLD P10

ASCENT RATE FEET PER MINUTE

Z Time	K Ft.	Overall	Last Interval	Last Three	Str	atosphere	Min. to Float	Elapsed Minutes
1001.2	5.5	1166	1166	1166			75.1(1116.4Z)	1.2
1002.3	6.5	1043	909	1043			83.9(1126.2Z)	2.3
1005.8	7.0	500	142	326			236.4(1402.3Z)	5.8
1007.4	9.0	662	1250	490			155.4(1242.9Z)	7.4
1008.2	10.5	780	1875	1458			90.4(1138.7Z)	8.2
1009.2	11.5	804	1000	1388			88.4(1137.7Z)	9.2
1010.6	12.5	792	714	833			104.4(1155.1Z)	10.6
1013.3	15.0	819	925	853			97.9(1151.3Z)	13.3
1015.0	16.4	820	823	886			95.0(1150.1Z)	15.0
1016.6	16.8	765	250	545			119.9(1216.6Z)	16.6
1017.4	18.6	833	2250	916			90.3(1147.8Z)	17.4
1020.2	20.6	816	714	1055			86.2(1146.5Z)	20.2
1020.7	2.2	-91	.368000000000ex 05		-4	969	-183.1(757.5Z)	0
1020.7	22.2	874	ASCENT RATE .200000000000ex 06 MINUTE		3	100	65.3(1126.1Z)	2

Z Time	K Ft.	Overall	Last Interval	Last Three	Str	atosphere	Min. to Float	Elapsed Minutes
1020.7	22.2	874	874	874			84.1(1144.9Z)	20.7
1023.6	24.4	860	758	860			83.1(1146.8Z)	23.6
1024.9	25.0	839	461	666			90.9(1155.9Z)	24.9
1026.1	26.4	854	1166	800			82.9(1149.1Z)	26.1
1027.6	28.6	887	1466	1333			69.3(1137.0Z)	27.6
1028.7	30.0	902	1272	1384			66.7(1135.6Z)	28.7
1030.6	30.5	862	263	633			81.7(1152.5Z)	30.6
1031.4	31.9	885	1750	703			75.7(1147.2Z)	31.4
1032.3	32.4	876	555	1117			69.2(1141.6Z)	32.3
1033.4	33.8	889	1272	950			68.6(1142.2Z)	33.4
1034.0	35.2	914	2333	1647			61.0(1135.1Z)	34.0
1034.6	36.2	927	1666	2000			58.5(1133.2Z)	34.6
1035.3	37.1	934	1285	1461			59.0(1134.4Z)	35.3
1036.2	38.1	939	1111	1187			59.1(1135.4Z)	36.2
1036.9	39.0	945	1285	1187			57.9(1134.9Z)	36.9
1040.9	44.8	995	1450	1425			49.9(1130.9Z)	40.9
1043.3	46.2	972	583	1125		583	36.2(1119.6Z)	43.3
1046.5	49.0	986	1800	1277		913	29.7(1115.3Z)	45.5
1046.0	49.5	986	1000	1400		921	26.7(1112.9Z)	46.0
1047.0	50.3	982	800	866		901	42.3(1129.4Z)	47.0
1048.2	51.3	979	833	818		890	43.6(1131.9Z)	48.2
1049.0	52.3	983	1250	1000		925	34.7(1123.8Z)	49.0
1049.9	53.0	979	777	1000		911	34.0(1124.0Z)	49.9
1051.5	54.7	984	1133	1000		942	32.3(1123.8Z)	51.4
1052.6	56.0	988	1181	1153		965	26.8(1119.5Z)	52.5
1054.6	57.3	976	650	838		919	35.4(1130.0Z)	54.5
1057.8	62.0	1003	1468	1153		1023	21.6(1119.5Z)	57.7
1057.8	63.2	1024	.120000000000ex 05			1843	1095	12.9(1110.7Z) 7
1059.6	64.4	1013	666	1333		1053	16.9(1116.6Z)	59.5
1100.1	65.0	1013	1000	750		1052	29.3(1129.4Z)	60.1
1102.0	67.0	1014	1052	1040		1052	19.2(1121.2Z)	62.0
1102.7	67.5	1011	714	961		1041	20.2(1123.0Z)	62.7
1104.0	69.3	1018	1384	1150		1060	15.3(1119.4Z)	64.0
1110.7	77.9	1043	1283	1300		1110	7.0(1117.7Z)	70.7
1112.1	79.4	1044	1071	1246		1108	6.0(1118.2Z)	72.1
1030.4	80.7	2519	-31	-69		-3419	-90.6(899.7Z)	30.4
1114.6	82.2	1046	33	1120		1109	4.2(1118.9Z)	74.6
1116.0	83.4	1043	857	59		1099	60.8(1216.8Z)	76.0
1117.3	84.7	1042	1000	925		1096	2.4(1119.8Z)	77.3
1118.3	85.1	1034	400	739		1077	2.5(1120.9Z)	78.3
1119.7	87.4	1045	1642	1125		1097	-.3(1119.4Z)	79.7
1007.0	80.0	.108428571428ex 05		101		71	-1038	97.8(1144.9Z) 7
1122.1	88.8	1031	117	583		1067	-3.0(1119.0Z)	82.1

Continuous Interleaved ® Moore Business Forms, Inc.

DEPARTMENT OF THE AIR FORCE
DET 1, AIR FORCE CAMBRIDGE RESEARCH LABORATORIES (OAR)
HOLLOMAN AIR FORCE BASE, NEW MEXICO 88330

MEMO FOR RECORD: Aircraft Observers Report

1. Mission Identification:

Date 24 APRIL 75 Flt No H75-26/H-60X Mission Code AA Project No ASHCAN

Aircraft Type C-206 No N2693X Pilot McSwain Co-Pilot _____

Observers SCHUMACHER 2. ARNETT 3. _____ 4. _____

2. Observers Report:

Time						
0606	Aircraft Take-off					
_____	Radio Comm on _____ - _____	Communications Freq	_____			
_____	Radio Comm on _____ - _____	Communications Freq	_____			
_____	Radio Comm on _____ - _____	Command Freq	_____			
_____	Balloon Position - Direction _____	@	_____	nm from	_____	
_____	Balloon Position - Direction _____	@	_____	nm from	_____	
_____	Balloon Position - Direction _____	@	_____	nm from	_____	
_____	Balloon Position - Direction _____	@	_____	nm from	_____	
_____	Balloon Position - Direction _____	@	_____	nm from	_____	
0622	Recovery Radio Contact					
Not Obs	Observed Cut					
* Not Obs	OBSERVED PARACHUTE DEPLOYED - (Parachute oscillations)					_____
* Not Obs	BALLOON DESTRUCT					
** 1004	Balloon Impact - Direction	223°	@	22	nm from	ROSWELL VOR
** 0700	Payload Impact - Direction	188°	@	7	nm from	ROSWELL VOR
Not Obs	Parachute Collapse - Parachute Drag					_____
0915	Recovery Arrival at Payload					
0925	Recovery - PAYLOAD CONDITION ESTIMATE	Excellent, some on mini-snopar bent				
1500	Recovery Arrival at Balloon					
1618	Aircraft Landing					

REMARKS: Balloon burst during climb-out. Aircraft did not observe balloon or package impact, times given are Times the aircraft boarded the balloon and package. A1C Arnett went with recovery to assist in balloon recovery.

Robert L Schumacher
(Signature)

25 April 75
(Date)

*Advise Balloon Control Immediately **If not in direct contact with Balloon Control Center Advise nearest FAA ARTCC immediately.

SIGNIFICANT LEVEL DATA
1140010242
HOLLOMAN

STATION ALTITUDE 4090.15 FEET MSL
24 APR. 75 0001 HRS MST
ASCENSION NO. 242

WSTM SITE COORDINATES
573176.79 FEET E
350771.53 FEET N

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT
872.6	4090.1	13.0	-8.2	22.0
863.0	4399.3	20.8	-2.3	21.0
850.0	4828.3	19.5	-4.0	20.0
822.0	5771.2	18.4	-4.3	21.0
700.0	10190.9	6.4	-13.2	23.0
633.0	12876.4	1.5	-16.3	25.0
584.0	14986.7	-4.0	-22.0	23.0
556.0	16252.9	-7.2	-25.7	21.0
500.0	18951.4	-11.3	-28.2	23.0
400.0	24430.9	-25.2	-37.3	31.0
317.0	29842.2	-38.2	-48.9	31.0
300.0	31084.6	-40.5		
250.0	35090.8	-50.0		
200.0	39779.5	-60.6		
184.0	41475.5	-64.1		
161.0	44156.1	-66.2		
158.0	44533.8	-64.1		
152.0	45313.2	-65.1		
150.0	45580.1	-63.8		
130.0	48479.4	-62.8		
106.0	52599.9	-65.4		
100.0	53770.9	-64.9		
93.0	55250.8	-59.3		
87.0	56628.4	-59.5		
76.0	59382.4	-65.2		
70.0	61030.5	-66.5		
59.0	64439.1	-67.4		
55.0	65854.2	-62.1		
50.0	67802.8	-61.5		
39.0	72966.5	-55.2		

HYPSOMETER

SIGNIFICANT LEVEL DATA

STATION ALTITUDE 4090.15 FEET MSL
24 APR. 75 0001 HRS MST
ASCENSION NO. 242

1140010242
HOLLOMAN

WSTM SITE COORDINATES
573176.79 FEET E
350771.53 FEET N

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT DEGREES CENTIGRADE	REL.HUM. PERCENT
30.0	78513.2	-54.3		
20.0	87176.2	-50.8		
18.0	89437.4	-52.7		
10.0	102253.9	-43.8		
7.0	110308.9	-37.2		
5.3	116714.2	-35.1		

STATION ALTITUDE 4090.15 FEET MSL
24 APR. 75 0001 HRS MST
ASCENSION NO. 242

UPPER AIR DATA
1140010242
HOLLOMAN

WSTM SITE COORDINATES
573176.79 FEET E
350771.53 FEET N

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
4090.1	872.6	13.0	-8.2	22.0	1060.8	659.5	70.0	1.9	1.000252
4200.0	869.2	15.8	-6.1	21.6	1046.2	662.8	65.5	1.7	1.000251
4400.0	863.0	20.8	-2.3	21.0	1020.4	668.7	51.8	1.2	1.000250
4600.0	856.9	20.2	-3.1	20.5	1015.4	668.0	23.3	.8	1.000248
4800.0	850.9	19.6	-3.9	20.1	1010.5	667.2	341.5	.8	1.000245
5000.0	844.8	19.3	-4.1	20.2	1004.3	666.9	314.0	1.2	1.000244
5200.0	838.9	19.1	-4.1	20.4	998.0	666.6	300.8	1.7	1.000242
5400.0	832.9	18.8	-4.2	20.6	991.7	666.4	293.7	2.2	1.000241
5600.0	827.0	18.6	-4.2	20.8	985.5	666.1	289.5	2.8	1.000239
5800.0	821.1	18.3	-4.3	21.0	979.4	665.8	286.7	3.3	1.000238
6000.0	815.2	17.8	-4.7	21.1	974.2	665.2	284.7	3.9	1.000236
6200.0	809.3	17.2	-5.1	21.2	969.0	664.5	282.4	4.6	1.000235
6400.0	803.4	16.7	-5.5	21.3	963.8	663.9	277.4	6.1	1.000233
6600.0	797.6	16.1	-5.9	21.4	958.7	663.2	274.3	7.6	1.000231
6800.0	791.8	15.6	-6.3	21.5	953.6	662.6	272.2	9.1	1.000230
7000.0	786.1	15.1	-6.7	21.6	948.5	662.0	270.8	10.6	1.000228
7200.0	780.4	14.5	-7.1	21.6	943.4	661.3	269.6	11.6	1.000227
7400.0	774.7	14.0	-7.5	21.7	938.4	660.7	268.3	11.4	1.000225
7600.0	769.1	13.4	-7.9	21.8	933.4	660.1	266.9	11.2	1.000223
7800.0	763.6	12.9	-8.3	21.9	928.4	659.4	265.5	11.0	1.000222
8000.0	758.0	12.3	-8.7	22.0	923.5	658.8	264.0	10.8	1.000220
8200.0	752.5	11.8	-9.1	22.1	918.6	658.1	264.8	12.1	1.000219
8400.0	747.1	11.3	-9.5	22.2	913.7	657.5	266.5	14.5	1.000217
8600.0	741.7	10.7	-9.9	22.3	908.9	656.9	267.8	16.8	1.000216
8800.0	736.3	10.2	-10.3	22.4	904.0	656.2	268.7	19.2	1.000215
9000.0	731.0	9.6	-10.8	22.5	899.2	655.6	269.4	21.5	1.000213
9200.0	725.7	9.1	-11.2	22.6	894.5	654.9	269.1	22.8	1.000212
9400.0	720.4	8.5	-11.6	22.6	889.7	654.3	268.8	24.1	1.000210
9600.0	715.2	8.0	-12.0	22.7	885.0	653.7	268.5	25.3	1.000209
9800.0	710.0	7.5	-12.4	22.8	880.3	653.0	268.3	26.6	1.000207

UPPER AIR DATA
1140010242
HOLLOMAN

STATION ALTITUDE 4090.15 FEET MSL
24 APR. 75 0001 HRS MST
ASCENSION NO. 242

WSTM SITE COORDINATES
573176.79 FEET E
350771.53 FEET N

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
10000.0	704.9	6.9	-12.8	22.9	875.7	652.4	267.5	27.6	1.000206
10200.0	699.8	6.4	-13.2	23.0	871.0	651.7	266.5	28.5	1.000205
10400.0	694.5	6.0	-13.4	23.2	865.7	651.3	265.5	29.4	1.000203
10600.0	689.4	5.7	-13.7	23.3	860.3	650.9	264.6	30.3	1.000202
10800.0	684.2	5.3	-13.9	23.5	855.1	650.4	263.8	31.1	1.000201
11000.0	679.1	4.9	-14.1	23.6	849.8	650.0	262.9	31.7	1.000199
11200.0	674.0	4.6	-14.4	23.8	844.6	649.6	262.1	32.4	1.000198
11400.0	669.0	4.2	-14.6	23.9	839.4	649.2	261.3	33.0	1.000197
11600.0	664.0	3.8	-14.8	24.0	834.2	648.7	260.5	33.4	1.000195
11800.0	659.0	3.5	-15.1	24.2	829.1	648.3	259.3	33.3	1.000194
12000.0	654.1	3.1	-15.3	24.3	824.0	647.9	258.1	33.1	1.000193
12200.0	649.2	2.7	-15.5	24.5	819.0	647.4	256.9	33.0	1.000192
12400.0	644.4	2.4	-15.8	24.6	813.9	647.0	255.7	32.7	1.000190
12600.0	639.6	2.0	-16.0	24.8	808.9	646.6	254.2	31.9	1.000189
12800.0	634.8	1.6	-16.3	24.9	804.0	646.1	252.7	31.1	1.000188
13000.0	630.0	1.2	-16.7	24.9	799.3	645.6	251.2	30.4	1.000186
13200.0	625.2	.7	-17.2	24.7	794.7	644.9	249.6	29.7	1.000185
13400.0	620.5	.1	-17.8	24.5	790.2	644.3	248.3	29.0	1.000184
13600.0	615.8	-.4	-18.3	24.3	785.7	643.7	246.9	28.3	1.000182
13800.0	611.1	-.9	-18.8	24.1	781.3	643.1	245.5	27.6	1.000181
14000.0	606.4	-1.4	-19.4	23.9	776.8	642.4	244.1	27.0	1.000180
14200.0	601.8	-1.9	-19.9	23.7	772.4	641.8	243.3	26.5	1.000179
14400.0	597.2	-2.5	-20.4	23.6	768.1	641.2	242.4	26.0	1.000177
14600.0	592.7	-3.0	-21.0	23.4	763.7	640.6	241.6	25.5	1.000176
14800.0	588.2	-3.5	-21.5	23.2	759.4	639.9	240.6	25.0	1.000175
15000.0	583.7	-4.0	-22.1	23.0	755.1	639.3	240.7	25.4	1.000174
15200.0	579.2	-4.5	-22.6	22.7	750.7	638.7	241.0	25.8	1.000172
15400.0	574.7	-5.0	-23.2	22.3	746.3	638.1	241.2	26.2	1.000171
15600.0	570.3	-5.6	-23.8	22.0	741.9	637.5	241.4	26.7	1.000170
15800.0	565.9	-6.1	-24.4	21.7	737.6	636.9	241.8	27.1	1.000169

UPPER AIR DATA
1140010242
HOLLOMAN

STATION ALTITUDE 4090.15 FEET MSL
24 APR. 75 0001 HRS MST
ASCENSION NO. 242

WSTM SITE COORDINATES
573176.79 FEET E
350771.53 FEET N

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
16000.0	561.5	-6.6	-25.0	21.4	733.3	636.3	242.3	27.7	1.000168
16200.0	557.1	-7.1	-25.6	21.1	729.1	635.6	242.8	28.2	1.000166
16400.0	552.8	-7.4	-25.9	21.1	724.3	635.2	243.3	28.8	1.000165
16600.0	548.5	-7.7	-26.1	21.3	719.5	634.9	243.8	29.3	1.000164
16800.0	544.2	-8.0	-26.2	21.4	714.7	634.5	244.5	30.1	1.000163
17000.0	539.9	-8.3	-26.4	21.6	709.9	634.1	245.3	31.0	1.000162
17200.0	535.7	-8.6	-26.6	21.7	705.1	633.8	246.0	31.8	1.000161
17400.0	531.5	-8.9	-26.8	21.9	700.4	633.4	246.7	32.7	1.000160
17600.0	527.3	-9.2	-27.0	22.0	695.7	633.0	247.3	33.5	1.000159
17800.0	523.2	-9.6	-27.2	22.1	691.1	632.7	247.9	34.0	1.000158
18000.0	519.1	-9.9	-27.3	22.3	686.5	632.3	248.5	34.5	1.000156
18200.0	515.0	-10.2	-27.5	22.4	681.9	631.9	249.0	35.0	1.000155
18400.0	511.0	-10.5	-27.7	22.6	677.3	631.6	249.6	35.5	1.000154
18600.0	507.0	-10.8	-27.9	22.7	672.8	631.2	250.0	36.1	1.000153
18800.0	503.0	-11.1	-28.1	22.9	668.3	630.8	250.4	36.7	1.000152
19000.0	499.0	-11.4	-28.3	23.1	663.9	630.4	250.6	37.4	1.000151
19200.0	495.0	-11.9	-28.6	23.4	659.8	629.8	250.9	38.1	1.000150
19400.0	490.9	-12.4	-28.9	23.7	655.7	629.2	251.2	38.8	1.000149
19600.0	487.0	-12.9	-29.2	23.9	651.7	628.6	251.2	39.4	1.000148
19800.0	483.0	-13.5	-29.5	24.2	647.7	627.9	251.0	39.9	1.000147
20000.0	479.1	-14.0	-29.8	24.5	643.7	627.3	250.8	40.5	1.000146
20200.0	475.2	-14.5	-30.2	24.8	639.7	626.7	250.6	41.0	1.000145
20400.0	471.4	-15.0	-30.5	25.1	635.8	626.1	250.4	41.6	1.000144
20600.0	467.5	-15.5	-30.8	25.4	631.9	625.5	250.0	42.1	1.000143
20800.0	463.7	-16.0	-31.1	25.7	628.0	624.9	249.5	42.7	1.000142
21000.0	460.0	-16.5	-31.4	26.0	624.1	624.2	249.1	43.3	1.000142
21200.0	456.2	-17.0	-31.8	26.3	620.3	623.6	248.7	43.9	1.000141
21400.0	452.5	-17.5	-32.1	26.6	616.5	623.0	248.3	44.4	1.000140
21600.0	448.9	-18.0	-32.4	26.9	612.7	622.4	247.9	44.8	1.000139
21800.0	445.2	-18.5	-32.8	27.2	609.0	621.7	247.6	45.2	1.000138

STATION ALTITUDE 4090.15 FEET MSL
24 APR. 75 0001 HRS MST
ASCENSION NO. 242

UPPER AIR DATA
1140010242
HOLLOMAN

WSTM SITE COORDINATES
573176.79 FEET E
350771.53 FEET N

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
22000.0	441.6	-19.0	-33.1	27.5	605.2	621.1	247.3	45.7	1.000137
22200.0	438.0	-19.5	-33.4	27.7	601.5	620.5	247.0	46.1	1.000136
22400.0	434.5	-20.0	-33.8	28.0	597.8	619.9	246.8	46.5	1.000135
22600.0	431.0	-20.6	-34.1	28.3	594.2	619.3	246.8	46.8	1.000134
22800.0	427.5	-21.1	-34.5	28.6	590.6	618.6	246.7	47.2	1.000133
23000.0	424.0	-21.6	-34.8	28.9	587.0	618.0	246.7	47.6	1.000133
23200.0	420.6	-22.1	-35.1	29.2	583.4	617.4	246.6	47.9	1.000132
23400.0	417.2	-22.6	-35.5	29.5	579.8	616.8	246.7	48.2	1.000131
23600.0	413.8	-23.1	-35.8	29.8	576.3	616.1	246.9	48.4	1.000130
23800.0	410.4	-23.6	-36.2	30.1	572.8	615.5	247.0	48.7	1.000129
24000.0	407.1	-24.1	-36.6	30.4	569.3	614.9	247.2	48.9	1.000128
24200.0	403.8	-24.6	-36.9	30.7	565.8	614.2	247.3	49.1	1.000128
24400.0	400.5	-25.1	-37.3	31.0	562.4	613.6	247.6	49.3	1.000127
24600.0	397.1	-25.6	-37.7	31.0	558.7	613.0	247.8	49.4	1.000126
24800.0	393.7	-26.1	-38.1	31.0	555.0	612.4	248.0	49.6	1.000125
25000.0	390.3	-26.6	-38.5	31.0	551.3	611.8	248.2	49.8	1.000124
25200.0	387.0	-27.0	-39.0	31.0	547.7	611.2	248.6	49.9	1.000123
25400.0	383.7	-27.5	-39.4	31.0	544.1	610.6	248.9	50.0	1.000122
25600.0	380.4	-28.0	-39.8	31.0	540.5	610.0	249.2	50.1	1.000122
25800.0	377.1	-28.5	-40.2	31.0	536.9	609.4	249.5	50.1	1.000121
26000.0	373.9	-29.0	-40.7	31.0	533.4	608.8	249.8	49.9	1.000120
26200.0	370.7	-29.4	-41.1	31.0	529.8	608.2	250.1	49.7	1.000119
26400.0	367.5	-29.9	-41.5	31.0	526.3	607.6	250.3	49.5	1.000118
26600.0	364.4	-30.4	-42.0	31.0	522.9	607.0	250.6	49.1	1.000117
26800.0	361.3	-30.9	-42.4	31.0	519.4	606.4	250.8	48.7	1.000117
27000.0	358.2	-31.4	-42.8	31.0	516.0	605.8	251.0	48.3	1.000116
27200.0	355.1	-31.9	-43.2	31.0	512.6	605.2	251.3	47.8	1.000115
27400.0	352.1	-32.3	-43.7	31.0	509.3	604.6	251.6	47.2	1.000114
27600.0	349.1	-32.8	-44.1	31.0	505.9	604.0	252.0	46.6	1.000113
27800.0	346.1	-33.3	-44.5	31.0	502.6	603.4	252.4	46.1	1.000113

UPPER AIR DATA
1140010242
HOLLOMAN

STATION ALTITUDE 4090.15 FEET MSL
24 APR. 75 0001 HRS MST
ASCENSION NO. 242

WSTM SITE COORDINATES
573176.79 FEET E
350771.53 FEET N

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
28000.0	343.1	-33.8	-45.0	31.0	499.3	602.8	253.0	45.6	1.000112
28200.0	340.2	-34.3	-45.4	31.0	496.0	602.2	253.6	45.1	1.000111
28400.0	337.3	-34.7	-45.8	31.0	492.8	601.6	254.2	44.6	1.000110
28600.0	334.4	-35.2	-46.2	31.0	489.5	601.0	254.9	44.3	1.000110
28800.0	331.5	-35.7	-46.7	31.0	486.3	600.4	255.6	44.3	1.000109
29000.0	328.7	-36.2	-47.1	31.0	483.1	599.7	256.2	44.3	1.000108
29200.0	325.9	-36.7	-47.5	31.0	480.0	599.1	256.9	44.3	1.000107
29400.0	323.1	-37.1	-48.0	31.0	476.8	598.5	257.1	44.3	1.000107
29600.0	320.3	-37.6	-48.4	31.0	473.7	597.9	257.3	44.3	1.000106
29800.0	317.6	-38.1	-48.8	31.0	470.6	597.3	257.6	44.3	1.000105
30000.0	314.8	-38.5	-50.3	27.1**	467.3	596.8	257.7	44.3	1.000104
30200.0	312.0	-38.9	-52.4	22.1**	463.9	596.3	257.6	44.4	1.000104
30400.0	309.3	-39.2	-54.8	17.1**	460.5	595.8	257.5	44.5	1.000103
30600.0	306.5	-39.6	-57.9	12.1**	457.2	595.4	257.3	44.6	1.000102
30800.0	303.8	-40.0	-62.3	7.1**	453.9	594.9	257.2	44.6	1.000101
31000.0	301.1	-40.3	-71.1	2.1**	450.6	594.4	257.0	44.6	1.000100
31200.0	298.4	-40.8			447.4	593.9	256.8	44.6	1.000100
31400.0	295.7	-41.2			444.2	593.3	256.6	44.7	1.000099
31600.0	293.0	-41.7			441.1	592.7	256.4	44.7	1.000098
31800.0	290.4	-42.2			438.0	592.0	256.3	45.0	1.000098
32000.0	287.8	-42.7			434.9	591.4	256.2	45.3	1.000097
32200.0	285.2	-43.1			431.9	590.8	256.1	45.6	1.000096
32400.0	282.6	-43.6			428.9	590.2	256.1	45.9	1.000096
32600.0	280.0	-44.1			425.9	589.6	256.1	46.0	1.000095
32800.0	277.5	-44.6			422.9	589.0	256.1	46.0	1.000094
33000.0	275.0	-45.0			419.9	588.4	256.1	46.0	1.000094
33200.0	272.5	-45.5			417.0	587.8	256.1	46.0	1.000093
33400.0	270.0	-46.0			414.1	587.2	256.1	46.0	1.000092
33600.0	267.6	-46.5			411.2	586.6	256.1	46.1	1.000092
33800.0	265.1	-46.9			408.3	585.9	256.2	46.2	1.000091

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

UPPER AIR DATA

STATION ALTITUDE 4090.15 FEET MSL
24 APR. 75 0001 HRS MST
ASCENSION NO. 242

1140010242
HOLLOMAN

WSTM SITE COORDINATES
573176.79 FEET E
350771.53 FEET N

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
34000.0	262.7	-47.4			405.4	585.3	256.2	46.4	1.000090
34200.0	260.3	-47.9			402.6	584.7	256.3	46.5	1.000090
34400.0	258.0	-48.4			399.8	584.1	256.3	46.7	1.000089
34600.0	255.6	-48.8			397.0	583.5	256.4	46.7	1.000088
34800.0	253.3	-49.3			394.3	582.9	256.5	46.7	1.000088
35000.0	251.0	-49.8			391.5	582.2	256.6	46.7	1.000087
35200.0	248.7	-50.2			388.7	581.6	256.7	46.7	1.000087
35400.0	246.3	-50.7			385.8	581.0	256.8	46.7	1.000086
35600.0	244.0	-51.2			382.9	580.5	256.9	46.7	1.000085
35800.0	241.7	-51.6			380.1	579.9	256.9	47.1	1.000085
36000.0	239.4	-52.1			377.2	579.3	257.0	47.9	1.000084
36200.0	237.1	-52.5			374.4	578.7	257.0	48.6	1.000083
36400.0	234.9	-53.0			371.6	578.1	257.0	49.3	1.000083
36600.0	232.7	-53.4			368.9	577.5	257.1	50.0	1.000082
36800.0	230.5	-53.9			366.1	576.9	257.1	50.8	1.000082
37000.0	228.3	-54.3			363.4	576.3	257.2	51.5	1.000081
37200.0	226.1	-54.8			360.7	575.7	257.3	52.1	1.000080
37400.0	224.0	-55.2			358.0	575.1	257.4	52.7	1.000080
37600.0	221.9	-55.7			355.4	574.5	257.5	53.2	1.000079
37800.0	219.8	-56.1			352.7	573.9	257.5	53.8	1.000079
38000.0	217.7	-56.6			350.1	573.3	257.6	54.4	1.000078
38200.0	215.6	-57.0			347.5	572.7	257.7	55.0	1.000077
38400.0	213.6	-57.5			345.0	572.1	257.8	55.6	1.000077
38600.0	211.5	-57.9			342.4	571.5	257.8	56.5	1.000076
38800.0	209.5	-58.4			339.9	570.9	257.8	57.4	1.000076
39000.0	207.6	-58.8			337.4	570.3	257.8	58.2	1.000075
39200.0	205.6	-59.3			334.9	569.7	257.8	59.1	1.000075
39400.0	203.6	-59.7			332.4	569.1	257.8	59.9	1.000074
39600.0	201.7	-60.2			330.0	568.5	257.9	60.8	1.000073
39800.0	199.8	-60.6			327.5	567.9	258.1	61.8	1.000073

UPPER AIR DATA

STATION ALTITUDE 4090.15 FEET MSL
24 APR. 75 0001 HRS MST
ASCENSION NO. 242

1140010242
HOLLOMAN

WSTM SITE COORDINATES
573176.79 FEET E
350771.53 FEET N

GEOMETRIC ALTITUDE NSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
40000.0	197.8	-61.1			325.0	567.4	258.2	62.8	1.000072
40200.0	195.9	-61.5			322.4	566.8	258.4	63.9	1.000072
40400.0	194.0	-61.9			319.9	566.3	258.6	64.9	1.000071
40600.0	192.1	-62.3			317.4	565.7	258.7	65.9	1.000071
40800.0	190.2	-62.7			314.9	565.2	258.9	67.0	1.000070
41000.0	188.4	-63.1			312.4	564.6	259.2	68.1	1.000070
41200.0	186.5	-63.5			310.0	564.0	259.4	69.2	1.000069
41400.0	184.7	-63.9			307.5	563.5	259.6	70.3	1.000069
41600.0	182.9	-64.2			304.9	563.1	259.8	71.4	1.000068
41800.0	181.0	-64.4			302.1	562.9	260.1	72.3	1.000067
42000.0	179.3	-64.5			299.3	562.7	260.6	72.6	1.000067
42200.0	177.5	-64.7			296.6	562.5	261.1	72.8	1.000066
42400.0	175.7	-64.8			293.8	562.3	261.7	73.1	1.000065
42600.0	174.0	-65.0			291.1	562.1	262.2	73.3	1.000065
42800.0	172.3	-65.1			288.5	561.9	262.7	73.3	1.000064
43000.0	170.5	-65.3			285.8	561.7	263.4	72.7	1.000064
43200.0	168.9	-65.5			283.2	561.5	264.0	72.2	1.000063
43400.0	167.2	-65.6			280.6	561.2	264.6	71.7	1.000062
43600.0	165.5	-65.8			278.0	561.0	265.3	71.1	1.000062
43800.0	163.9	-65.9			275.5	560.8	265.9	70.4	1.000061
44000.0	162.3	-66.1			273.0	560.6	266.5	69.6	1.000061
44200.0	160.6	-66.0			270.1	560.8	267.1	68.9	1.000060
44400.0	159.1	-64.8			266.0	562.3	267.8	68.1	1.000059
44600.0	157.5	-64.2			262.5	563.2	268.0	67.5	1.000058
44800.0	155.9	-64.4			260.3	562.8	267.8	67.2	1.000058
45000.0	154.4	-64.7			258.0	562.5	267.5	66.9	1.000057
45200.0	152.9	-65.0			255.8	562.1	267.2	66.5	1.000057
45400.0	151.3	-64.7			252.9	562.5	267.0	66.2	1.000056
45600.0	149.9	-63.8			249.4	563.7	266.2	65.8	1.000056
45800.0	148.4	-63.7			246.8	563.8	265.3	65.5	1.000055

UPPER AIR DATA
1140010242
HOLLOMAN

STATION ALTITUDE 4090.15 FEET MSL
24 APR. 75 0001 HRS MST
ASCENSION NO. 242

WSTM SITE COORDINATES
573176.79 FEET E
350771.53 FEET N

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
[illegible]00.0	146.9	-63.7			244.3	563.9	264.3	65.2	1.000054
[illegible]00.0	145.5	-63.6			241.8	564.0	263.3	65.0	1.000054
46400.0	144.1	-63.5			239.4	564.1	262.3	64.7	1.000053
46600.0	142.6	-63.4			237.0	564.2	261.1	64.8	1.000053
46800.0	141.2	-63.4			234.5	564.2	259.7	65.3	1.000052
47000.0	139.8	-63.3			232.2	564.3	258.3	65.9	1.000052
47200.0	138.5	-63.2			229.8	564.4	256.9	66.4	1.000051
47400.0	137.1	-63.2			227.5	564.5	255.5	67.1	1.000051
47600.0	135.8	-63.1			225.2	564.6	254.2	67.7	1.000050
47800.0	134.4	-63.0			222.9	564.7	253.2	68.2	1.000050
48000.0	133.1	-63.0			220.6	564.8	252.3	68.7	1.000049
48200.0	131.8	-62.9			218.4	564.9	251.3	69.2	1.000049
48400.0	130.5	-62.8			216.2	565.0	250.4	69.7	1.000048
48600.0	129.2	-62.9			214.1	564.9	249.4	70.3	1.000048
48800.0	128.0	-63.0			212.1	564.8	248.7	70.5	1.000047
49000.0	126.7	-63.1			210.1	564.6	248.3	70.3	1.000047
49200.0	125.4	-63.3			208.2	564.4	247.9	70.1	1.000046
4[illegible]00.0	124.2	-63.4			206.3	564.2	247.5	69.9	1.000046
49600.0	123.0	-63.5			204.4	564.1	247.1	69.7	1.000046
49800.0	121.8	-63.6			202.5	563.9	246.7	69.5	1.000045
50000.0	120.6	-63.8			200.6	563.7	246.7	68.7	1.000045
50200.0	119.4	-63.9			198.7	563.6	246.9	67.8	1.000044
50400.0	118.2	-64.0			196.9	563.4	247.2	66.8	1.000044
50600.0	117.0	-64.1			195.1	563.2	247.5	65.8	1.000043
50800.0	115.9	-64.3			193.3	563.1	247.7	64.8	1.000043
51000.0	114.7	-64.4			191.5	562.9	248.0	63.8	1.000043
51200.0	113.6	-64.5			189.7	562.7	248.5	63.0	1.000042
51400.0	112.5	-64.6			187.9	562.5	249.0	62.2	1.000042
51600.0	111.4	-64.8			186.2	562.4	249.6	61.5	1.000041
51800.0	110.3	-64.9			184.5	562.2	250.2	60.7	1.000041

STATION ALTITUDE 4090.15 FEET MSL
24 APR. 75 0001 HRS MST
ASCENSION NO. 242

UPPER AIR DATA
1140010242
HOLLOMAN

WSTM SITE COORDINATES
573176.79 FEET E
350771.53 FEET N

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
52000.0	109.2	-65.0			182.8	562.0	250.8	60.0	1.000041
52200.0	108.1	-65.1			181.1	561.9	251.4	59.2	1.000040
52400.0	107.1	-65.3			179.4	561.7	251.6	58.6	1.000040
52600.0	106.0	-65.4			177.7	561.5	251.8	58.0	1.000040
52800.0	104.9	-65.3			175.9	561.6	252.1	57.4	1.000039
53000.0	103.9	-65.2			174.1	561.8	252.3	56.8	1.000039
53200.0	102.9	-65.1			172.3	561.9	252.5	56.2	1.000038
53400.0	101.9	-65.1			170.5	562.0	252.7	55.6	1.000038
53600.0	100.9	-65.0			168.8	562.1	252.2	53.8	1.000038
53800.0	99.9	-64.8			167.0	562.3	251.7	51.9	1.000037
54000.0	98.9	-64.0			164.7	563.4	251.1	50.1	1.000037
54200.0	97.9	-63.3			162.5	564.4	250.4	48.3	1.000036
54400.0	97.0	-62.5			160.4	565.4	249.7	46.5	1.000036
54600.0	96.0	-61.8			158.2	566.4	249.0	44.7	1.000035
54800.0	95.1	-61.0			156.1	567.4	248.4	42.4	1.000035
55000.0	94.2	-60.2			154.1	568.4	247.8	40.0	1.000034
55200.0	93.2	-59.5			152.0	569.4	247.2	37.7	1.000034
55400.0	92.3	-59.3			150.4	569.7	246.4	35.3	1.000033
55600.0	91.4	-59.4			149.0	569.6	245.6	33.0	1.000033
55800.0	90.6	-59.4			147.6	569.6	244.6	30.6	1.000033
56000.0	89.7	-59.4			146.2	569.6	243.8	28.7	1.000033
56200.0	88.8	-59.4			144.8	569.5	243.2	27.1	1.000032
56400.0	88.0	-59.5			143.4	569.5	242.6	25.5	1.000032
56600.0	87.1	-59.5			142.0	569.4	241.8	23.9	1.000032
56800.0	86.3	-59.9			140.9	569.0	240.9	22.2	1.000031
57000.0	85.4	-60.3			139.8	568.4	239.9	20.6	1.000031
57200.0	84.6	-60.7			138.7	567.9	238.7	19.0	1.000031
57400.0	83.8	-61.1			137.6	567.3	238.3	18.9	1.000031
57600.0	82.9	-61.5			136.5	566.8	238.0	18.8	1.000030
57800.0	82.1	-61.9			135.5	566.2	237.7	18.8	1.000030

UPPER AIR DATA

STATION ALTITUDE 4090.15 FEET MSL
24 APR. 75 0001 HRS MST
ASCENSION NO. 242

1140010242
HOLLOMAN

WSTM SITE COORDINATES
573176.79 FEET E
350771.53 FEET N

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
58000.0	81.3	-62.3			134.4	565.6	237.4	18.7	1.000030
58200.0	80.5	-62.8			133.4	565.1	237.0	18.7	1.000030
58400.0	79.8	-63.2			132.3	564.5	236.7	18.6	1.000029
58600.0	79.0	-63.6			131.3	564.0	236.3	18.6	1.000029
58800.0	78.2	-64.0			130.3	563.4	235.3	18.9	1.000029
59000.0	77.4	-64.4			129.2	562.9	234.4	19.1	1.000029
59200.0	76.7	-64.8			128.2	562.3	233.6	19.4	1.000029
59400.0	75.9	-65.2			127.2	561.8	232.7	19.6	1.000028
59600.0	75.2	-65.4			126.0	561.6	231.9	19.9	1.000028
59800.0	74.4	-65.5			124.9	561.3	231.0	20.2	1.000028
60000.0	73.7	-65.7			123.7	561.1	230.8	20.5	1.000028
60200.0	73.0	-65.8			122.6	560.9	231.1	20.9	1.000027
60400.0	72.2	-66.0			121.5	560.7	231.4	21.3	1.000027
60600.0	71.5	-66.2			120.4	560.5	231.7	21.7	1.000027
60800.0	70.8	-66.3			119.3	560.3	231.9	22.1	1.000027
61000.0	70.1	-66.5			118.2	560.1	232.2	22.5	1.000026
61200.0	69.4	-66.5			117.0	560.0	232.5	22.9	1.000026
61400.0	68.7	-66.6			115.9	559.9	233.5	22.6	1.000026
61600.0	68.0	-66.7			114.8	559.8	234.5	22.3	1.000026
61800.0	67.3	-66.7			113.6	559.8	235.6	22.0	1.000025
62000.0	66.7	-66.8			112.5	559.7	236.7	21.8	1.000025
62200.0	66.0	-66.8			111.4	559.6	237.8	21.5	1.000025
62400.0	65.4	-66.9			110.4	559.5	238.9	21.3	1.000025
62600.0	64.7	-66.9			109.3	559.5	240.0	20.9	1.000024
62800.0	64.1	-67.0			108.2	559.4	241.2	20.5	1.000024
63000.0	63.4	-67.0			107.2	559.3	242.3	20.0	1.000024
63200.0	62.8	-67.1			106.1	559.3	243.5	19.6	1.000024
63400.0	62.2	-67.1			105.1	559.2	244.8	19.2	1.000023
63600.0	61.5	-67.2			104.1	559.1	246.1	18.8	1.000023
63800.0	60.9	-67.2			103.1	559.0	247.0	18.2	1.000023

UPPER AIR DATA
1140810242
HOLLOMAN

STATION ALTITUDE 4090.15 FEET MSL
24 APR. 75 0001 HRS MST
ASCENSION NO. 242

WSTM SITE COORDINATES
573176.79 FEET E
350771.53 FEET N

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
64000.0	60.3	-67.3			102.1	559.0	247.4	17.4	1.000023
64200.0	59.7	-67.3			101.1	558.9	247.8	16.6	1.000023
64400.0	59.1	-67.4			100.1	558.8	248.2	15.8	1.000022
64600.0	58.5	-66.8			98.8	559.6	248.7	15.0	1.000022
64800.0	58.0	-66.0			97.5	560.6	249.2	14.2	1.000022
65000.0	57.4	-65.3			96.2	561.7	249.7	13.4	1.000021
65200.0	56.8	-64.6			94.9	562.7	249.1	13.1	1.000021
65400.0	56.3	-63.8			93.6	563.7	248.4	12.8	1.000021
65600.0	55.7	-63.1			92.4	564.7	247.7	12.6	1.000021
65800.0	55.1	-62.3			91.1	565.7	247.0	12.3	1.000020
66000.0	54.6	-62.1			90.1	566.0	246.2	12.0	1.000020
66200.0	54.1	-62.0			89.2	566.1	245.4	11.8	1.000020
66400.0	53.6	-61.9			88.3	566.2	244.7	11.6	1.000020
66600.0	53.0	-61.9			87.4	566.3	244.7	12.1	1.000019
66800.0	52.5	-61.8			86.6	566.4	244.8	12.6	1.000019
67000.0	52.0	-61.7			85.7	566.4	244.8	13.0	1.000019
67200.0	51.5	-61.7			84.8	566.5	244.8	13.5	1.000019
67400.0	51.0	-61.6			84.0	566.6	244.8	14.0	1.000019
67600.0	50.5	-61.6			83.1	566.7	244.9	14.4	1.000019
67800.0	50.0	-61.5			82.3	566.8	244.9	14.9	1.000018
68000.0	49.5	-61.3			81.4	567.1	244.6	15.5	1.000018
68200.0	49.1	-61.0			80.6	567.4	244.2	16.1	1.000018
68400.0	48.6	-60.8			79.7	567.7	243.9	16.8	1.000018
68600.0	48.1	-60.5			78.8	568.1	243.6	17.4	1.000018
68800.0	47.7	-60.3			78.0	568.4	243.3	18.1	1.000017
69000.0	47.2	-60.0			77.2	568.7	243.0	18.7	1.000017
69200.0	46.7	-59.8			76.3	569.0	242.8	19.4	1.000017
69400.0	46.3	-59.6			75.5	569.4	242.5	20.0	1.000017
69600.0	45.9	-59.3			74.7	569.7	242.1	20.4	1.000017
69800.0	45.4	-59.1			73.9	570.0	241.7	20.9	1.000016

UPPER AIR DATA

STATION ALTITUDE 4090.15 FEET MSL
24 APR. 75 0001 HRS MST
ASCENSION NO. 242

1140010242
HOLLOMAN

WSTM SITE COORDINATES
573176.79 FEET E
350771.53 FEET N

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
70000.0	45.0	-58.8			73.1	570.3	241.4	21.4	1.000016
70200.0	44.6	-58.6			72.3	570.7	241.0	21.8	1.000016
70400.0	44.1	-58.3			71.6	571.0	240.7	22.3	1.000016
70600.0	43.7	-58.1			70.8	571.3	240.3	22.7	1.000016
70800.0	43.3	-57.8			70.0	571.6	240.0	23.2	1.000016
71000.0	42.9	-57.6			69.3	572.0	239.9	23.4	1.000015
71200.0	42.5	-57.4			68.5	572.3	239.9	23.5	1.000015
71400.0	42.1	-57.1			67.8	572.6	239.8	23.6	1.000015
71600.0	41.7	-56.9			67.1	572.9	239.8	23.7	1.000015
71800.0	41.3	-56.6			66.4	573.3	239.7	23.8	1.000015
72000.0	40.9	-56.4			65.7	573.6	239.7	23.8	1.000015
72200.0	40.5	-56.1			65.0	573.9	239.6	23.9	1.000014
72400.0	40.1	-55.9			64.3	574.2	239.7	24.0	1.000014
72600.0	39.7	-55.6			63.6	574.6	240.5	23.8	1.000014
72800.0	39.3	-55.4			62.9	574.9	241.4	23.7	1.000014
73000.0	38.9	-55.2			62.2	575.1	242.3	23.5	1.000014
73200.0	38.6	-55.2			61.6	575.2	243.1	23.4	1.000014
73400.0	38.2	-55.1			61.1	575.2	244.0	23.2	1.000014
73600.0	37.8	-55.1			60.5	575.3	244.9	23.1	1.000013
73800.0	37.5	-55.1			59.9	575.3	245.8	23.0	1.000013
74000.0	37.1	-55.0			59.3	575.4	246.6	22.8	1.000013
74200.0	36.8	-55.0			58.7	575.4	247.0	22.4	1.000013
74400.0	36.4	-55.0			58.2	575.4	247.3	22.1	1.000013
74600.0	36.1	-54.9			57.6	575.5	247.7	21.8	1.000013
74800.0	35.8	-54.9			57.1	575.5	248.1	21.4	1.000013
75000.0	35.4	-54.9			56.5	575.6	248.5	21.1	1.000013
75200.0	35.1	-54.8			56.0	575.6	248.9	20.7	1.000012
75400.0	34.8	-54.8			55.5	575.7	249.3	20.4	1.000012
75600.0	34.4	-54.8			54.9	575.7	249.7	20.1	1.000012
75800.0	34.1	-54.7			54.4	575.7	249.3	19.9	1.000012

UPPER AIR DATA
1140010242
HOLLOMAN

STATION ALTITUDE 4090.15 FEET MSL
24 APR. 75 0001 HRS MST
ASCENSION NO. 242

WSTM SITE COORDINATES
573176.79 FEET E
350771.53 FEET N

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
76000.0	33.8	-54.7			53.9	575.8	249.0	19.7	1.000012
76200.0	33.5	-54.7			53.4	575.8	248.6	19.5	1.000012
76400.0	33.2	-54.6			52.9	575.9	248.2	19.3	1.000012
76600.0	32.8	-54.6			52.4	575.9	247.8	19.1	1.000012
76800.0	32.5	-54.6			51.9	576.0	247.4	18.9	1.000012
77000.0	32.2	-54.5			51.4	576.0	247.0	18.7	1.000011
77200.0	31.9	-54.5			50.9	576.0	246.6	18.6	1.000011
77400.0	31.6	-54.5			50.4	576.1	246.0	18.3	1.000011
77600.0	31.3	-54.4			49.9	576.1	245.5	18.1	1.000011
77800.0	31.0	-54.4			49.4	576.2	244.9	17.9	1.000011
78000.0	30.7	-54.4			48.9	576.2	244.3	17.7	1.000011
78200.0	30.4	-54.4			48.5	576.3	243.8	17.5	1.000011
78400.0	30.2	-54.3			48.0	576.3	243.2	17.3	1.000011
78600.0	29.9	-54.3			47.6	576.4	242.5	17.1	1.000011
78800.0	29.6	-54.2			47.1	576.5	241.9	16.9	1.000010
79000.0	29.3	-54.1			46.6	576.6	242.5	16.7	1.000010
79200.0	29.1	-54.0			46.2	576.7	243.6	16.6	1.000010
79400.0	28.8	-53.9			45.7	576.8	244.6	16.5	1.000010
79600.0	28.5	-53.9			45.3	576.9	245.8	16.4	1.000010
79800.0	28.2	-53.8			44.9	577.0	246.9	16.3	1.000010
80000.0	28.0	-53.7			44.4	577.1	248.0	16.2	1.000010
80200.0	27.7	-53.6			44.0	577.2	249.2	16.1	1.000010
80400.0	27.5	-53.5			43.6	577.3	250.3	16.0	1.000010
80600.0	27.2	-53.5			43.1	577.4	251.4	15.9	1.000010
80800.0	27.0	-53.4			42.7	577.5	252.2	15.6	1.000010
81000.0	26.7	-53.3			42.3	577.6	253.1	15.4	1.000009
81200.0	26.5	-53.2			41.9	577.8	254.0	15.2	1.000009
81400.0	26.2	-53.1			41.5	577.9	254.9	14.9	1.000009
81600.0	26.0	-53.1			41.1	578.0	255.8	14.7	1.000009
81800.0	25.7	-53.0			40.7	578.1	256.8	14.5	1.000009

STATION ALTITUDE 4090.15 FEET MSL
24 APR. 75 0001 HRS NST
ASCENSION NO. 242

UPPER AIR DATA
1140010242
HOLLOMAN

WSTM SITE COORDINATES
573176.79 FEET E
350771.53 FEET N

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
82[illegible]00.0	25.5	-52.9			40.3	578.2	257.8	14.3	1.000009
8[illegible]00.0	25.2	-52.8			39.9	578.3	258.9	14.1	1.000009
82400.0	25.0	-52.7			39.5	578.4	260.2	13.8	1.000009
82600.0	24.8	-52.6			39.1	578.5	261.5	13.5	1.000009
82800.0	24.5	-52.6			38.8	578.6	262.8	13.2	1.000009
83000.0	24.3	-52.5			38.4	578.7	264.3	13.0	1.000009
83200.0	24.1	-52.4			38.0	578.8	265.8	12.7	1.000008
83400.0	23.9	-52.3			37.7	578.9	267.3	12.5	1.000008
83600.0	23.6	-52.2			37.3	579.0	268.9	12.2	1.000008
83800.0	23.4	-52.2			36.9	579.1	270.6	12.0	1.000008
84000.0	23.2	-52.1			36.6	579.2	272.5	11.4	1.000008
84200.0	23.0	-52.0			36.2	579.3	274.8	10.7	1.000008
84400.0	22.8	-51.9			35.9	579.4	277.3	10.1	1.000008
84600.0	22.6	-51.8			35.5	579.6	280.1	9.5	1.000008
84800.0	22.4	-51.8			35.2	579.7	283.4	8.9	1.000008
85000.0	22.1	-51.7			34.8	579.8	287.0	8.4	1.000008
85200.0	21.9	-51.6			34.5	579.9	291.2	7.9	1.000008
8[illegible]00.0	21.7	-51.5			34.2	580.0	295.9	7.4	1.000008
85600.0	21.5	-51.4			33.8	580.1	300.1	7.2	1.000008
85800.0	21.3	-51.4			33.5	580.2	303.8	7.2	1.000007
86000.0	21.1	-51.3			33.2	580.3	307.5	7.1	1.000007
86200.0	20.9	-51.2			32.9	580.4	311.2	7.2	1.000007
86400.0	20.7	-51.1			32.5	580.5	314.9	7.2	1.000007
86600.0	20.5	-51.0			32.2	580.6	318.6	7.3	1.000007
86800.0	20.4	-51.0			31.9	580.7	322.1	7.4	1.000007
87000.0	20.2	-50.9			31.6	580.8	325.5	7.5	1.000007
87200.0	20.0	-50.8			31.3	580.9	327.5	7.5	1.000007
87400.0	19.8	-51.0			31.0	580.7	327.4	7.3	1.000007
87600.0	19.6	-51.2			30.8	580.5	327.4	7.0	1.000007
87800.0	19.4	-51.3			30.5	580.2	327.3	6.7	1.000007

UPPER AIR DATA
1140010242
HOLLOMAN

STATION ALTITUDE 4090.15 FEET MSL
24 APR. 75 0001 HRS MST
ASCENSION NO. 242

WSTM SITE COORDINATES
573176.79 FEET E
350771.53 FEET N

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
88000.0	19.2	-51.5			30.2	580.0	327.2	6.5	1.000007
88200.0	19.1	-51.7			30.0	579.8	327.1	6.2	1.000007
88400.0	18.9	-51.8			29.7	579.6	326.9	5.9	1.000007
88600.0	18.7	-52.0			29.5	579.4	326.8	5.7	1.000007
88800.0	18.5	-52.2			29.2	579.1	325.8	5.4	1.000006
89000.0	18.4	-52.3			29.0	578.9	317.7	5.1	1.000006
89200.0	18.2	-52.5			28.7	578.7	308.8	4.9	1.000006
89400.0	18.0	-52.7			28.5	578.5	299.3	4.8	1.000006
89600.0	17.9	-52.6			28.2	578.6	289.7	4.8	1.000006
89800.0	17.7	-52.4			27.9	578.8	280.5	5.0	1.000006
90000.0	17.5	-52.3			27.7	578.9	272.2	5.3	1.000006
90200.0	17.4	-52.2			27.4	579.1	264.9	5.7	1.000006
90400.0	17.2	-52.0			27.1	579.3	258.6	6.2	1.000006
90600.0	17.1	-51.9			26.9	579.5	253.3	6.5	1.000006
90800.0	16.9	-51.8			26.6	579.7	248.5	6.8	1.000006
91000.0	16.8	-51.6			26.3	579.9	244.1	7.1	1.000006
91200.0	16.6	-51.5			26.1	580.0	240.1	7.5	1.000006
91400.0	16.5	-51.3			25.8	580.2	236.6	7.9	1.000006
91600.0	16.3	-51.2			25.6	580.4	233.4	8.4	1.000006
91800.0	16.2	-51.1			25.3	580.6	230.6	8.9	1.000006
92000.0	16.0	-50.9			25.1	580.8	228.0	9.3	1.000006
92200.0	15.9	-50.8			24.8	580.9	226.7	9.8	1.000006
92400.0	15.7	-50.6			24.6	581.1	227.3	10.1	1.000005
92600.0	15.6	-50.5			24.4	581.3	227.8	10.5	1.000005
92800.0	15.4	-50.4			24.1	581.5	228.4	10.9	1.000005
93000.0	15.3	-50.2			23.9	581.7	228.8	11.2	1.000005
93200.0	15.1	-50.1			23.7	581.8	229.3	11.6	1.000005
93400.0	15.0	-49.9			23.4	582.0	229.7	11.9	1.000005
93600.0	14.9	-49.8			23.2	582.2	230.1	12.3	1.000005
93800.0	14.7	-49.7			23.0	582.4	230.5	12.6	1.000005

UPPER AIR DATA

STATION ALTITUDE 4090.15 FEET MSL
24 APR. 75 0001 HRS MST
ASCENSION NO. 242

1140010242
HOLLOMAN

WSTM SITE COORDINATES
573176.79 FEET E
350771.53 FEET N

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
94000.0	14.6	-49.5			22.7	582.6	232.0	12.3	1.000005
94200.0	14.5	-49.4			22.5	582.8	233.7	11.9	1.000005
94400.0	14.3	-49.3			22.3	582.9	235.5	11.6	1.000005
94600.0	14.2	-49.1			22.1	583.1	237.3	11.2	1.000005
94800.0	14.1	-49.0			21.9	583.3	239.4	10.9	1.000005
95000.0	13.9	-48.8			21.7	583.5	241.5	10.6	1.000005
95200.0	13.8	-48.7			21.4	583.7	243.8	10.2	1.000005
95400.0	13.7	-48.6			21.2	583.8	246.2	10.0	1.000005
95600.0	13.6	-48.4			21.0	584.0	249.3	9.6	1.000005
95800.0	13.4	-48.3			20.8	584.2	253.2	9.1	1.000005
96000.0	13.3	-48.1			20.6	584.4	257.5	8.7	1.000005
96200.0	13.2	-48.0			20.4	584.6	262.2	8.3	1.000005
96400.0	13.1	-47.9			20.2	584.7	267.3	8.1	1.000005
96600.0	13.0	-47.7			20.0	584.9	272.7	7.8	1.000004
96800.0	12.8	-47.6			19.8	585.1	278.4	7.7	1.000004
97000.0	12.7	-47.4			19.6	585.3	284.3	7.6	1.000004
97200.0	12.6	-47.3			19.4	585.5	290.2	7.6	1.000004
97400.0	12.5	-47.2			19.3	585.6	295.8	7.3	1.000004
97600.0	12.4	-47.0			19.1	585.8	301.8	7.1	1.000004
97800.0	12.3	-46.9			18.9	586.0	308.1	7.0	1.000004
98000.0	12.2	-46.8			18.7	586.2	314.5	6.9	1.000004
98200.0	12.0	-46.6			18.5	586.4	320.9	7.0	1.000004
98400.0	11.9	-46.5			18.3	586.5	327.2	7.1	1.000004
98600.0	11.8	-46.3			18.2	586.7	333.1	7.3	1.000004
98800.0	11.7	-46.2			18.0	586.9	338.6	7.6	1.000004
99000.0	11.6	-46.1			17.8	587.1	340.7	7.7	1.000004
99200.0	11.5	-45.9			17.6	587.3	341.3	7.6	1.000004
99400.0	11.4	-45.8			17.5	587.4	342.1	7.5	1.000004
99600.0	11.3	-45.6			17.3	587.6	342.8	7.4	1.000004
99800.0	11.2	-45.5			17.1	587.8	343.5	7.3	1.000004

UPPER AIR DATA
1140010242
HOLLOMAN

STATION ALTITUDE 4090.15 FEET MSL
24 APR. 75 0001 HRS MST
ASCENSION NO. 242

WSTM SITE COORDINATES
573176.79 FEET E
350771.53 FEET N

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
100000.0	11.1	-45.4			17.0	588.0	344.3	7.2	1.000004
100200.0	11.0	-45.2			16.8	588.2	345.1	7.1	1.000004
100400.0	10.9	-45.1			16.6	588.3	345.9	7.0	1.000004
100600.0	10.8	-44.9			16.5	588.5	346.0	6.8	1.000004
100800.0	10.7	-44.8			16.3	588.7	344.4	6.2	1.000004
101000.0	10.6	-44.7			16.1	588.9	342.4	5.7	1.000004
101200.0	10.5	-44.5			16.0	589.0	340.0	5.2	1.000004
101400.0	10.4	-44.4			15.8	589.2	337.2	4.7	1.000004
101600.0	10.3	-44.3			15.7	589.4	333.6	4.2	1.000003
101800.0	10.2	-44.1			15.5	589.6	329.1	3.7	1.000003
102000.0	10.1	-44.0			15.4	589.8	323.4	3.3	1.000003
102200.0	10.0	-43.8			15.2	589.9	316.0	2.9	1.000003
102400.0	9.9	-43.7			15.1	590.1	302.7	2.7	1.000003
102600.0	9.8	-43.5			14.9	590.4	287.3	2.6	1.000003
102800.0	9.8	-43.4			14.8	590.6	272.6	2.8	1.000003
103000.0	9.7	-43.2			14.7	590.8	260.3	3.1	1.000003
103200.0	9.6	-43.0			14.5	591.0	250.6	3.5	1.000003
103400.0	9.5	-42.9			14.4	591.2	243.2	4.1	1.000003
103600.0	9.4	-42.7			14.2	591.4	237.6	4.6	1.000003
103800.0	9.3	-42.5			14.1	591.6	233.2	5.2	1.000003
104000.0	9.3	-42.4			14.0	591.8	229.9	5.8	1.000003
104200.0	9.2	-42.2			13.8	592.0	228.4	6.4	1.000003
104400.0	9.1	-42.0			13.7	592.2	227.1	6.9	1.000003
104600.0	9.0	-41.9			13.6	592.5	225.9	7.5	1.000003
104800.0	8.9	-41.7			13.4	592.7	225.0	8.0	1.000003
105000.0	8.9	-41.5			13.3	592.9	224.1	8.6	1.000003
105200.0	8.8	-41.4			13.2	593.1	223.4	9.1	1.000003
105400.0	8.7	-41.2			13.1	593.3	222.7	9.7	1.000003
105600.0	8.6	-41.1			12.9	593.5	222.1	10.2	1.000003
105800.0	8.5	-40.9			12.8	593.7	222.9	10.7	1.000003

UPPER AIR DATA

STATION ALTITUDE 4090.15 FEET MSL
24 APR. 75 0001 HRS MST
ASCENSION NO. 242

1140010242
HOLLOMAN

WSTM SITE COORDINATES
573176.79 FEET E
350771.53 FEET N

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
106600.0	8.5	-40.7			12.7	593.9	225.1	11.0	1.000003
106800.0	8.4	-40.6			12.6	594.1	227.3	11.3	1.000003
106400.0	8.3	-40.4			12.5	594.3	229.3	11.6	1.000003
106600.0	8.2	-40.2			12.3	594.6	231.1	11.9	1.000003
106800.0	8.2	-40.1			12.2	594.8	232.9	12.3	1.000003
107000.0	8.1	-39.9			12.1	595.0	234.6	12.7	1.000003
107200.0	8.0	-39.7			12.0	595.2	236.2	13.1	1.000003
107400.0	8.0	-39.6			11.9	595.4	237.7	13.4	1.000003
107600.0	7.9	-39.4			11.8	595.6	239.8	13.5	1.000003
107800.0	7.8	-39.3			11.7	595.8	242.2	13.4	1.000003
108000.0	7.8	-39.1			11.5	596.0	244.6	13.4	1.000003
108200.0	7.7	-38.9			11.4	596.2	247.1	13.3	1.000003
108400.0	7.6	-38.8			11.3	596.4	249.5	13.3	1.000003
108600.0	7.6	-38.6			11.2	596.6	251.9	13.4	1.000002
108800.0	7.5	-38.4			11.1	596.8	254.4	13.4	1.000002
109000.0	7.4	-38.3			11.0	597.1	256.8	13.5	1.000002
109200.0	7.4	-38.1			10.9	597.3	259.1	13.6	1.000002
109400.0	7.3	-37.9			10.8	597.5	260.8	13.9	1.000002
109600.0	7.2	-37.8			10.7	597.7	262.5	14.1	1.000002
109800.0	7.2	-37.6			10.6	597.9	264.1	14.5	1.000002
110000.0	7.1	-37.5			10.5	598.1	265.6	14.8	1.000002
110200.0	7.0	-37.3			10.4	598.3	267.1	15.1	1.000002
110400.0	7.0	-37.2			10.3	598.5	268.5	15.4	1.000002
110600.0	6.9	-37.1			10.2	598.5	269.8	15.8	1.000002
110800.0	6.9	-37.0			10.1	598.6	271.1	16.1	1.000002
111000.0	6.8	-37.0			10.0	598.7	272.1	16.4	1.000002
111200.0	6.7	-36.9			9.9	598.8	272.5	16.4	1.000002
111400.0	6.7	-36.8			9.8	598.9	272.8	16.4	1.000002
111600.0	6.6	-36.8			9.8	599.0	273.2	16.4	1.000002
111800.0	6.6	-36.7			9.7	599.0	273.6	16.4	1.000002

UPPER AIR DATA

STATION ALTITUDE 4090.15 FEET MSL
24 APR. 75 0001 HRS MST
ASCENSION NO. 242

1140010242
HOLLOMAN

WSTM SITE COORDINATES
573176.79 FEET E
350771.53 FEET N

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
112000.0	6.5	-36.6			9.6	599.1	274.0	16.4	1.000002
112200.0	6.4	-36.6			9.5	599.2	274.3	16.4	1.000002
112400.0	6.4	-36.5			9.4	599.3	274.7	16.4	1.000002
112600.0	6.3	-36.4			9.3	599.4	275.1	16.4	1.000002
112800.0	6.3	-36.4			9.2	599.5	275.5	16.4	1.000002
113000.0	6.2	-36.3			9.2	599.5			1.000002
113200.0	6.2	-36.3			9.1	599.6			1.000002
113400.0	6.1	-36.2			9.0	599.7			1.000002
113600.0	6.1	-36.1			8.9	599.8			1.000002
113800.0	6.0	-36.1			8.8	599.9			1.000002
114000.0	6.0	-36.0			8.8	600.0			1.000002
114200.0	5.9	-35.9			8.7	600.0			1.000002
114400.0	5.9	-35.9			8.6	600.1			1.000002
114600.0	5.8	-35.8			8.5	600.2			1.000002
114800.0	5.8	-35.7			8.5	600.3			1.000002
115000.0	5.7	-35.7			8.4	600.4			1.000002
115200.0	5.7	-35.6			8.3	600.4			1.000002
115400.0	5.6	-35.5			8.2	600.5			1.000002
115600.0	5.6	-35.5			8.2	600.6			1.000002
115800.0	5.5	-35.4			8.1	600.7			1.000002
116000.0	5.5	-35.3			8.0	600.8			1.000002
116200.0	5.4	-35.3			7.9	600.9			1.000002
116400.0	5.4	-35.2			7.9	600.9			1.000002
116600.0	5.3	-35.1			7.8	601.0			1.000002

MRN SIGNIFICANT LEVEL DATA

STATION ALTITUDE 4090.15 FEET MSL
24 APR. 75 0001 HRS MST
ASCENSION NO. 242

1140010242
HOLLOMAN

WSTM SITE COORDINATES
573176.79 FEET E
350771.53 FEET N

GEOPOTENTIAL ALTITUDE DECAMETERS	WIND DATA DIRECTION DEG (TN)	SPEED MPS	N-S MPS	E-W MPS	TEMPERATURE DEGREES CENTIGRADE	PRESSURE MILLIBARS
3538.	9999.**	9999.**	-9999.**	-9999.**	-35.1	5.300+0
3344.	268.	8.	0.	8.	-37.2	7.000+0
3101.	313.	1.	-1.	1.	-43.8	1.000+1
2714.	297.	2.	-1.	2.	-52.7	1.800+1
2646.	328.	4.	-3.	2.	-50.8	2.000+1
2384.	243.	9.	4.	8.	-54.3	3.000+1
2216.	242.	12.	6.	11.	-55.2	3.900+1
2060.	245.	8.	3.	7.	-61.5	5.000+1
2001.	247.	6.	2.	6.	-62.1	5.500+1
1958.	248.	8.	3.	7.	-67.4	5.900+1
1855.	232.	12.	7.	9.	-66.5	7.000+1
1805.	233.	10.	6.	8.	-65.2	7.600+1
1721.	242.	12.	6.	11.	-59.5	8.700+1
1679.	247.	19.	7.	18.	-59.3	9.300+1
1635.	252.	27.	8.	26.	-64.9	1.000+2

** WIND DATA NOT COMPUTED DUE TO MISSING RAW AZIMUTH AND ELEVATION ANGLES.

STATION ALTITUDE 4090.15 FEET MSL
24 APR. 75 0001 HRS MST
ASCENSION NO. 242

MANDATORY LEVELS
1140010242
HOLLOMAN

WSTM SITE COORDINATES
573176.79 FEET E
350771.53 FEET N

PRESSURE	GEOPOTENTIAL	TEMPERATURE		REL.HUM.	WIND DATA	
		AIR	DEWPOINT	PERCENT	DIRECTION	SPEED
MILLIBARS	FEET	DEGREES CENTIGRADE			DEGREES(TN)	KNOTS
850.0	4827.	19.5	-4.0	20.	336.4	.9
800.0	6528.	16.4	-5.8	21.	275.2	7.1
750.0	8312.	11.6	-9.3	22.	265.9	13.5
700.0	10185.	6.4	-13.2	23.	266.5	28.5
650.0	12165.	2.8	-15.5	24.	257.1	33.0
600.0	14272.	-2.2	-20.1	24.	242.9	26.3
550.0	16515.	-7.6	-26.0	21.	243.6	29.1
500.0	18932.	-11.3	-28.2	23.	250.6	37.2
450.0	21551.	-17.9	-32.3	27.	248.0	44.8
400.0	24400.	-25.2	-37.3	31.	247.6	49.3
350.0	27534.	-32.7	-44.0	31.	251.9	46.7
300.0	31035.	-40.5			256.9	44.6
250.0	35028.	-50.0			256.6	46.7
200.0	39700.	-60.6			258.0	61.7
175.0	42394.	-64.9			261.9	73.2
150.0	45475.	-63.8			266.4	65.9
125.0	49153.	-63.3			247.8	70.0
100.0	53626.	-64.9			251.8	52.3
80.0	58176.	-63.0			236.8	18.6
70.0	60844.	-66.5			232.2	22.5
60.0	63900.	-67.3			247.6	17.0
50.0	67574.	-61.5			244.9	14.9
40.0	72173.	-55.8			239.8	24.0
30.0	78209.	-54.3			242.8	17.2
25.0	82057.	-52.7			260.0	13.8
20.0	86805.	-50.8			327.5	7.6
15.0	92933.	-49.9			229.6	11.8
10.0	101750.	-43.8			313.7	2.8
7.0	109724.	-37.2			267.8	15.3

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 4090.15 FEET MSL
24 APR. 75 0001 HRS MST
ASCENSION NO. 242

MRN MANDATORY LEVELS
1140010242
HOLLOMAN

WSTN SITE COORDINATES
573176.79 FEET E
350771.53 FEET N

GEOPOTENTIAL ALTITUDE DECAMETERS	WIND DATA DIRECTION DEG (TN)	SPEED MPS	N-S MPS	E-W MPS	TEMPERATURE DEGREES CENTIGRADE	PRESSURE MILLIBARS
3344.	268.	8.	0.	8.	-37.2	7.000+0
3101.	314.	1.	-1.	1.	-43.8	1.000+1
2833.	230.	6.	4.	5.	-49.9	1.500+1
2646.	328.	4.	-3.	2.	-50.8	2.000+1
2501.	260.	7.	1.	7.	-52.7	2.500+1
2384.	243.	9.	4.	8.	-54.3	3.000+1
2200.	240.	12.	6.	11.	-55.8	4.000+1
2060.	245.	8.	3.	7.	-61.5	5.000+1
1948.	248.	9.	3.	8.	-67.3	6.000+1
1855.	232.	12.	7.	9.	-66.5	7.000+1
1773.	237.	10.	5.	8.	-63.0	8.000+1
1635.	252.	27.	8.	26.	-64.9	1.000+2
1498.	248.	36.	14.	33.	-63.3	1.250+2
1386.	266.	34.	2.	34.	-63.8	1.500+2
1292.	262.	38.	5.	37.	-64.9	1.750+2
1210.	258.	32.	7.	31.	-60.6	2.000+2
1068.	257.	24.	6.	23.	-50.0	2.500+2
946.	257.	23.	5.	22.	-40.5	3.000+2
839.	252.	24.	7.	23.	-32.7	3.500+2
744.	248.	25.	10.	23.	-25.2	4.000+2
657.	248.	23.	9.	21.	-17.9	4.500+2
577.	251.	19.	6.	18.	-11.3	5.000+2
503.	244.	15.	7.	13.	-7.6	5.500+2
435.	243.	14.	6.	12.	-2.2	6.000+2
371.	257.	17.	4.	17.	2.8	6.500+2
310.	267.	15.	1.	15.	6.4	7.000+2
253.	266.	7.	0.	7.	11.6	7.500+2
199.	275.	4.	-0.	4.	16.4	8.000+2
147.	336.	0.	-0.	0.	19.5	8.500+2

BALLOON FLIGHT SUMMARY

DATE LAUNCHED: 24 April 75

FLIGHT NUMBER: H75-26/H60X

I. GENERAL DATA

1. PROJECT NUMBER & TITLE: ASH CAN Snooper II/Minisnooper Inter-comparison
2. PROJECT OFFICER: 1 Lt. Greenlee
3. EXPERIMENTER: York Univ./Dr. Ridley
4. FLIGHT OBJECTIVES
   A. Intercomparison of Snooper II and Minisnooper NO Sampling Systems
   B. N/A
   C. N/A
5. REQUIRED FLIGHT PROFILE: See block VI . 9.
6. TEST COORDINATOR: None
7. LAUNCH CREW CHIEF: MSgt. Benton
8. METEOROLOGIST(S): Mr. Gildenberg and Mr. Hall
9. MALFUNCTION REPORTS: BLN 1 INSTR 1 OTHER

II. BALLOON DATA

1. BALLOON NUMBER 1 OF 12, ITEM 1, S/N 16 CONTRACT F29651-75-90080
2. MANUFACTURER: Winzen
3. DIAMETER(S): 128.78 ft.
4. LENGTH(S): 183.37 ft.
5. VOLUME(S): $.859 \times 10^6$ Cu. Ft.
6. WEIGHT(S): 443 lbs + 9 lbs GV and protector + 2 lbs SL
7. MATERIAL & THICKNESS: 1.5 mil Stratofilm
8. MODEL NUMBER(S): LTV 010
9. VALVE & VALVE MOTOR SERIAL NUMBERS: BX 0120 and R 0024
10. REMARKS (*Caps, Defects, Twists, Duct Cuts, etc.*): Ducts Pulled

III. PAYLOAD DATA

1. WEIGHT: 1064 lbs.
2. PARACHUTE(S) – (*Number, Type, Diameter, Weight*): 1 ea. Ringsail 63.1 ft. 83 lbs.
3. DROPPABLE BALLAST (*Type, Weight, Rate*): Steel/150 lbs/28 fpm
4. PRIMARY CONTROL PKG (*Type*): Range Pkg. II
5. TRANSMITTER(S) 2A: MFGR. Zenith MODEL BCT S/N 11
   4B: MFGR. N/A MODEL S/N
6. RECEIVER(S) 4A: MFGR. Zenith MODEL BCR- S/N 23
   4B: MFGR. Zenith MODEL BCR- S/N 1019
7. ALTITUDE SENSOR(S): Baracoder and B60
8. SEPARATION DEVICE: Dual Tenny
9. SPECIAL ITEMS (*Description & Weight*): Transponder 27 lbs Ozone Sonde 4.5 lbs. T14 7 lbs.

IV. LAUNCH DATA

1. SITE: Rnwy 03 HAFB
2. SURFACE WIND: 100 4 Knts.
3. TEMPERATURE: 45F=7C.
4. CLOUDS: Clear
5. GROSS WEIGHT: 1518 lbs.
6. FREE LIFT: 167 LB 11 %
7. GROSS INFLATION: 1685 lbs.
8. LAUNCH ARM & RELEASE VEHICLE: LowBoy and Crane
9. LAUNCH METHOD: Dynamic
10. LAUNCH RUN LENGTH; CHARACTER OF LAUNCH: Smooth 125 ft
11. LAUNCH TIME: SCHEDULED 1000Z ACTUAL 1000Z

V. FLIGHT DATA

1. ASCENT RATES: TO TROPOPAUSE 940 fpm, TROPOPAUSE TO FLOAT 1107 fpm, OVERALL AVERAGE 1030 fpm
2. TROPOPAUSE: TEMP. -61.3 ALTITUDE 38.3K PRESSURE 204MB
3. MINIMUM TEMPERATURE: ALT PRESS.
4. GROSS WEIGHT AT CEILING ALT.: 1473
5. DESIGN CEILING ALT: 85.8K ft
6. ACTUAL FLOATING ALTITUDE(S): 88.8K ft
7. FLIGHT DURATION TIMER SETTINGS: PRIMARY 9 hrs SECONDARY 91/2 hrs
8. COMMAND FREQUENCIES: 5708.5 KHz 15039.5 KHz 11177.5 KHz
9. TELEMETRY FREQUENCIES: 4875.5 KHz 40.35 KHz
10. TELEMETRY DATA CYCLE(S): Continuous
11. VOICE COMMUNICATIONS FREQUENCIES: 9019.5 KHz 6941.5 KHz Motorola
12. TRACKING METHODS: Radar
13. TERMINATION (*Altitude, Method, Initiated By, Date/Time*): 88.8 K ft, Burst, 24 Apr 75/1123z
14. FLIGHT DURATION: 1 hr 23 min
15. DESCENT LOAD: 1019 lbs.
16. PAYLOAD IMPACT (*Position, Date/Time*): 7 Mi 188° Row 24/1203z
17. DESCENT TIME: 38 min
18. BALLOON IMPACT (*Position, Date/Time*): 22 Mi 223° Row UNK
19. BLN DESCENT TIME: UNK

AFSC-L G HANSCOM FLD MA 1973

AFCRL FORM 20 OCT 73 PREVIOUS EDITIONS ARE OBSOLETE.

VI. FLIGHT RESULTS

1. PAYLOAD RECOVERY (Date/Time, By Whom, Equipment Condition)	2. BALLOON RECOVERY (Date/Time, By Whom, Disposal)
24/1515-1700z Det 1 Good	24/2100-2200z Det 1 HAFB Dump

3. VALVE CONDITION	4. BALLOON PERFORMANCE	5. COMMAND CONTROL PERFORMANCE
Good	Failure	Success

4. VOICE COMMUNICATIONS QUALITY	7. TELEMETRY DATA QUALITY	8. FLIGHT OBJECTIVES ACCOMPLISHED?
Good	Good	A. No B. N/A C. N/A

9. ADDITIONAL RESULTS, PROBLEMS & INFORMATION

Flight Profile -- Climbout at 1000 fpm to float, arriving at float at 87K ft. not less than 1/2 hour before sunrise on balloon. Following float open valve at experimenter's direction to obtain 250-300 fpm descent rate, then allow balloon to level off. Repeat at experimenter's direction to minimum altitude 60K, terminate.

SEE POST MISSION CRITIQUE

10. SIGNATURE OF PROJECT OFFICER	11. SIGNATURE OF SITE DETACHMENT COMMANDER
for J.R. Greenlee	

MEMO FOR RECORD 30 April 1975

SUBJECT: Post Mission Evaluation and Critique for Flight H75-26/H-60X

1. The Post Mission Evaluation and Critique for flight H75-26/H-60X was conducted on 25 April 1975. Attendees included Major Burnett, 1Lt Leclaire, 1Lt Greenlee, 1Lt Schumacher, Mr. Ashenfelter, Dr. Ridley, Dr. MacFarland, Mr. Slavonic, Mr. Gildenberg, Mr. Hall Mr. Richards, Mr. Blankenship, Mr. Gutierrez, MSgt Benton, TSgt Fumerola, TSgt Van Vors, SSgt Zitek, Sgt Dumont, Sgt Arrington, Sgt Ashbaugh and A1C McCoy. Items discussed are outlined below for information and necessary action.

2. Results of Mission Objectives: Mission results were unsatisfactory due to failure of the balloon platform. The balloon ascended at an average rate of 1030 ft/min to a peak altitude of 88.8K ft (B-60 data) then began an immediate fast descent. The burst tone was received in the Control Center at this time. Although radar tracking of the balloon system was being utilized real time radar altitude data was not available due to a plot board malfunction described below. Primary termination was commanded shortly after the burst tone was received. Both payload and balloon were recovered later in the day. The payload sustained only minor damage from ground impact.

3. Specific Problems and Actions:

a. Balloon Failure. Plans for a reflight attempt of the NO sampling mission have been intimately connected to an analysis of the balloon malfunction. Although originally scheduled to be reflown 29 April, the reflight has now been postponed until May due to a temporary non-availability of ozone, an essential experimental control constituent. Mr. Ashenfelter has indicated that the ozone should be available early in the month, so a tentative flight date of 12 May has been proposed. The discussions which have been held concerning the balloon malfunction have been oriented toward generating guidelines to be used in the reflight effort. Following a discussion between myself, Maj Burnett, 1Lt Leclaire, Mr. Ashenfelter and Mr. Gildenber of a list of recommendations received from LCB (J. Payne) (Atch 1), the following procedures are proposed:

(1) The experimental objective of a 1000 ft/min ascent rate will be discarded in the interest of decreasing probability of a balloon failure. An overall ascent rate of 750 ft/min is currently planned.

(2) Launch time will be calculated to allow for the slower ascent rate and no ballasting on ascent is planned.

(3) A maximum of 50 lbs ballast will be flown, which will yield a total payload weight under 950 lbs.

(4) If necessary, the valve will be opened 10K below float to lower the ascent rate to no more than 700 ft/min.

(5) The primary balloon will be Number 9 of 12, Item 1, SN. 24, Contract F29651-75-90080. The backup balloon will be Number 10 of 12, SN

25 from the same Contract. This selection was determined by LCA/LCB.

(6) As was done on the first flight, ducts will be fully pulled and inspected.

(7) All altitude determining systems will be used from launch and will if possible remain in use until the balloon is stabilized at float altitude. However, interference from the barocoder (see below) similar to that experienced on the first flight is unacceptable to experimental results and if encountered, will require that the barocoder will be commanded off above 45K ft. However, if either radar or B-60 altitude is unavailable above 45K ft, the scientific data will be sacrificed and the barocoder left on. The B-60 will be calibrated down to 30K ft.

(8) Two additional possibilities were discussed in the meeting. Mr. Ashenfelter has indicated that a float altitude of 82K ft would be acceptable. Therefore the possibility of cutting ducts for this altitude is considered, the intent being to provide sufficient response time to open the valve if the balloon continues to ascend to the natural float altitude of 87K ft (indicating malfunctioning. Alternatively, the possibility of launching without cutting ducts and opening the valve about 2K below float if a decrease in ascent rate is not noted is considered. These possibilities were generated from the observation that the list of recommendations received from Mr. Payne seem oriented toward failure caused by the combination of high ascent rate/high payload. The possibility of duct malfunctioning is not addressed; yet in a telecon from 1Lt Leclaire, Gene Nelson of Winzen Research indicated that he does not feel that "high" ascent rate (i.e. 1000 ft/min) combined with maximum payload should cause balloon failure but comments that duct entrapment in relatively high payload systems has been known to be a problem. The excess material present near the bottom of the balloon in such configurations can apparently trap even pulled ducts, as Mr. Nelson observed in the case of a 46 million cubic foot balloon (3 of 7 ducts were trapped). Either of the procedures proposed above should prevent failure if the ducts are trapped. The first recommendation includes valve exercise only if definite evidence of a ducting problem is seen, while the second requires valving with limited evidence of a problem. Further review and recommendations are encouraged. See also the Balloon Malfunction Report in the flight folder and Memo for Record from Mr. Gildenberg.

b. Radar Data: Real time radar data was only partially available due to a plot board malfunction. Position data was available although less precise than usual, but altitude data was not available. The plot board had been checked out by RCA personnel in accordance with standard procedures several days before the mission and was found to function properly. The malfunction was reported and RCA personnel repaired the plot board the morning of the mission. Since the malfunction was in the plot board rather than the radar itself, DIGS data was not compromised and will be forwarded when available.

c. Radiosonde Failure: The GMD radiosonde failed shortly after launch, although the malfunction appears to be unrelated to the continuing radiosonde/battery problem. Weather personnel at the launch had considerable difficulty with the instrument and only succeeded in making it operational after inflation was complete. De-spiked batteries were used. See Malfunction Report from Flight Analysis.

4. General Items of Interest:

a. Upon its return to Holloman the balloon was laid out and inspected carefully. Following discussions with LCB Mr. Payne, certain section were cut out and shipped to LCB for analysis, and the remainder of the balloon was distroyed on 29 April 1975. Findings of the inspection are found in the Balloom Malfunction Report.

b. As mentioned above the barocoder caused interference with the telemetry data. A similar problem, althogh not as severe, occurred on the last NO attempt (H75-3/H-56X) and latest analysis indicates that no equipment malfunctions are involved. Because of this interference the barocoder was turned off on ascent to prevent possible loss of scientific data. LCC analysis of the problem and recommendations for possible action before the next mission are encouraged.

c. Impact damage was sustained near the top of the Minisnooper frame, caused by the load bar itself. In the future an impact pad will be placed between the load bar and frame to prevent recurrence.

d. The URC-54 communication radios were used during instrumentation checkout between the TM room, TM van, and launch site and worked satisfactorily. It was noted that communications to and from the TM room would be improved by installation of a high-gain antenna on the roof of Bldg 850. This possibility is being investigated.

e. Due to a procedural error during package buildup, the ballast pour rate was inadvertently set at approximately 52 lb/min rather than the expected 28 lb/min. The error was not discovered until the package was returned and the ballast bags emptied. Due to this error a total of 85 lbs of ballast was poured on ascent rather than the intended 46 lbs. Appropriate personnel have been briefed on the problem and on the correct buildup procedures to follow in the future.

f. Initial maximum balloon altitude appeared to be approximately 3K feet higher than the theoretical altitude expected. The additional ballast dropped (Ref 4.e.) explains part of the discrepancy. Further analysis will be conducted upon receipt of radar/GMD data.

g. The instrumentation checkout was conducted with practically no problems whatsoever. MSgt Benton and the launch crew conducted the launch operation with particular competence and professionalism. MSgt Benton and SSgt Dobson are commended for an exceptionally smooth launch run and release.

for JAMES R. GREENLEE, 1st LT, USAF
Project Ash Can Officer

1 Atch
LCB Recommendation

1. Select a balloon with a high serial number such as 9 or 10.

2. Reduce the payload to the bare minimum. The goal should be 950 lbs or less.

3. Reduce free lift to no more than 10%.

4. Launch the balloon early. Do not rely on ballasting during ascent to maintain a high ascent rate so that the balloon will reach float altitude at some specified time.

5. As the balloon ascends to within 10K feet of the designed float altitude, reduce ascent rate to about 700 feet per minute by opening gas valve.

6. Pull the ducts out the entire length. Examine carefully, with minimum handling for any blockage.

7. If the balloon looks suspect for any reason upon laying it out replace it with one that has no apparent defects.

8. If the balloon can be seen from the ground as it approaches float altitude have an observer man the theodolite to look for proper inflation and opening of the ducts.

9. Use all altitude determining systems until the balloon has safely reached float altitude and stabilized.

10. Observe the destruct lines as the balloon is being inflated.

11. Altitude should be monitored during sampling so that samplers can be turned off to save a good sample that would be contaminated by a balloon descending below minimum sampling altitude. If this should occur, after the samplers have been turned off ballast should be pulled to determine if the descent can be arrested. This will give an indication of whether the balloon is leaking or was descending due to thermal loss.

12. Attempt to launch over low surface wind conditions.

13. Remind all balloon handlers that they are working with a delicate vehicle. Handle with care.

14. If the EV-13 valve does not look good, replace it.

15. Use good common sense, don't take any chances.

MEMORANDUM FOR RECORD 10 July 1975

SUBJECT: H75-26 Balloon Failure (LTV 010)

1. Digital C-band data was available on this mission which provided a detailed blowup of the profile during failure. On the attached graph, we note that the vehicle had been cruising at approximately 800 fpm. Very close to the area where theoretically, ducting should commence, the rate accelerated to 1100 fpm with 7 intervals in excess of 1300 fpm. There was no significant deceleration until within 500 feet of float altitude.

2. The total altitude regime covered by this graph had a homogeneous ambient temperature lapse rate, and the entire ascent took place prior to sunrise, thus there was no overt thermodynamic mechanism for the ascent rate variations. The event took place over the eastern foothills of the Sacramento Mountains, so there is a small possibility that the vehicle was beginning to sense increased IR from the oncoming plains. However, the increase was probably too close to theoretical ducting altitude to be a coincidence.

3. This graph was discussed with both Mr. Dwyer and Mr. Nelson of Winzen Inc. One possible explanation is that the balloon pressurized, increasing the volume sufficiently for an increase in ascent rate. By the time it arrived at or just above the computed float altitude, enough small holes had been blown, to relieve the superpressure. After about 30 seconds float, helium loss was sufficient to commence a descent which was rapid rnough to activate the burst switch.

4. Although another scenario might be envisioned, the basic fact remains that no other flight with radar data had shown this kind of an increase during the ducting period. Thus it appears most likely that the mechanism was a ducting failure rather than damage to the envelope prior to ducting.

5. The same configuration, but with reduced payload flew successfully on H75-29. With the heavier payload, an identical Raven balloon had failed without leveling off. Although these heavier payloads were within theoretical limits, LTV 010 may require a redefining of limits, or design.

6. Obviously the radar data provides outstanding detail, but the geometric profile alone is difficult to analyze. There should be at least some calibration radar flights for ducting analysis, supplemented by onboard camera and internal pressure telemetry.

B D Gildenberg

BERNARD D. GILDENBERG
Meteorologist
Det 1, AFCRL (AFSC)

MEMORANDUM FOR RECORD 10 July 1975

SUBJECT: H75-26 Balloon Failure (LTV 010)

1. Digital C-band data was available on this mission which provided a detailed blowup of the profile during failure. On the attached graph, we note that the vehicle had been cruising at approximately 800 fpm. Very close to the area where theoretically, ducting should commence, the rate accelerated to 1100 fpm with 7 intervals in excess of 1300 fpm. There was no significant deceleration until within 500 feet of float altitude.

2. The total altitude regime covered by this graph had a homogeneous ambient temperature lapse rate, and the entire ascent took place prior to sunrise, thus there was no overt thermodynamic mechanism for the ascent rate variations. The event took place over the eastern foothills of the Sacramento Mountains, so there is a small possibility that the vehicle was beginning to sense increased IR from the oncoming plains. However, the increase was probably too close to theoretical ducting altitude to be a coincidence.

3. This graph was discussed with both Mr. Dwyer and Mr. Nelson of Winzen Inc. One possible explanation is that the balloon pressurized, increasing the volume sufficiently for an increase in ascent rate. By the time it arrived at or just above the computed float altitude, enough small holes had been blown, to relieve the superpressure. After about 30 seconds float, helium loss was sufficient to commence a descent which was rapid rnough to activate the burst switch.

4. Although another scenario might be envisioned, the basic fact remains that no other flight with radar data had shown this kind of an increase during the ducting period. Thus it appears most likely that the mechanism was a ducting failure rather than damage to the envelope prior to ducting.

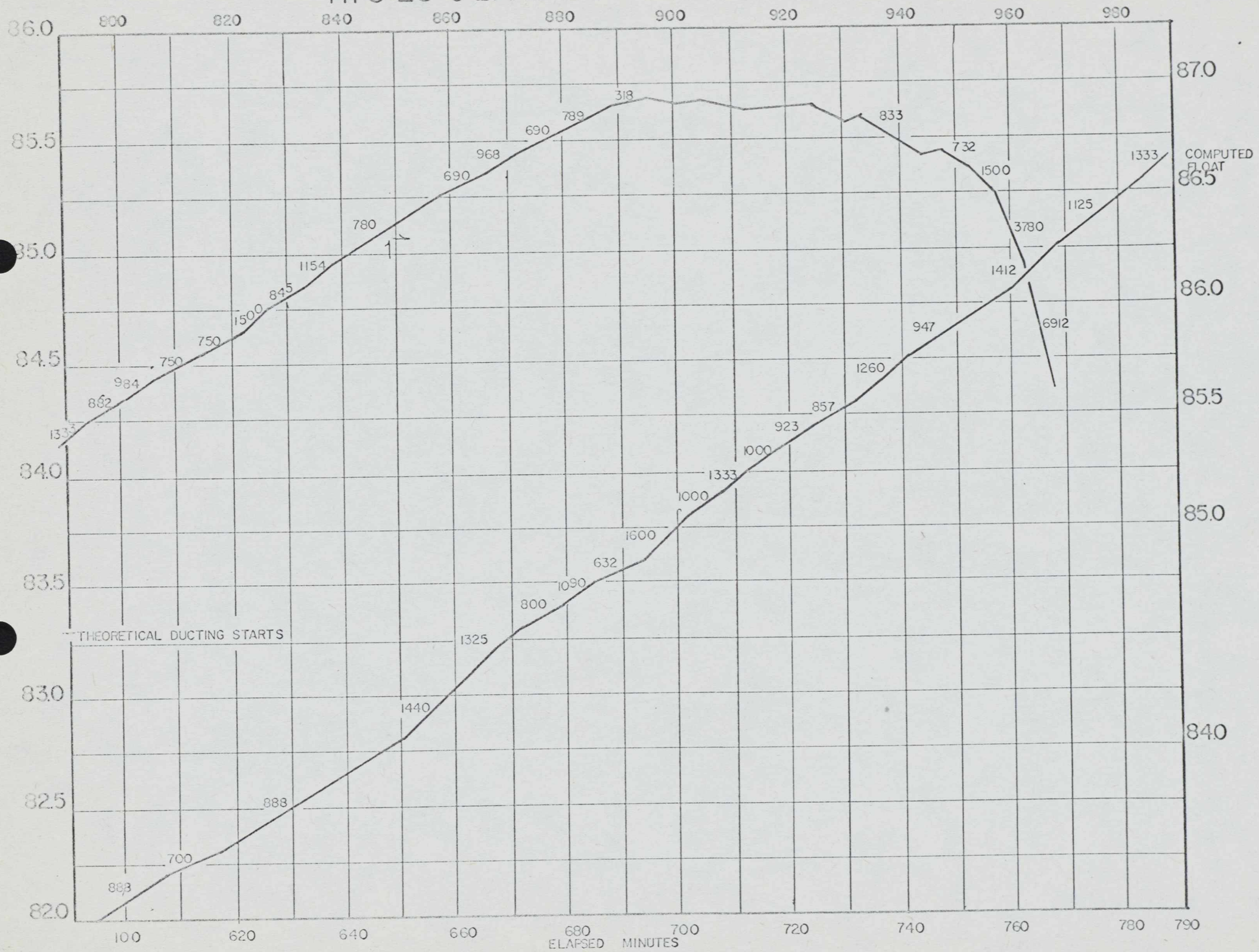
5. The same configuration, but with reduced payload flew successfully on H75-29. With the heavier payload, an identical Raven balloon had failed without leveling off. Although these heavier payloads were within theoretical limits, LTV 010 may require a redefining of limits, or design.

6. Obviously the radar data provides outstanding detail, but the geometric profile alone is difficult to analyze. There should be at least some calibration radar flights for ducting analysis, supplemented by onboard camera and internal pressure telemetry.

BERNARD D. GILDENBERG
Meteorologist
Det 1, AFCRL (AFSC)

READING FILE

H75-26 C-BAND TRANSPONDER RADAR DATA



MEMORANDUM FOR RECORD 10 July 1975

SUBJECT: H75-26 Balloon Failure (LTV 010)

1. Digital C-band data was available on this mission which provided a detailed blowup of the profile during failure. On the attached graph, we note that the vehicle had been cruising at approximately 800 fpm. Very close to the area where theoretically, ducting should commence, the rate accelerated to 1100 fpm with 7 intervals in excess of 1300 fpm. There was no significant deceleration until within 500 feet of float altitude.

2. The total altitude regime covered by this graph had a homogeneous ambient temperature lapse rate, and the entire ascent took place prior to sunrise, thus there was no overt thermodynamic mechanism for the ascent rate variations. The event took place over the eastern foothills of the Sacramento Mountains, so there is a small possibility that the vehicle was beginning to sense increased IR from the oncoming plains. However, the increase was probably too close to theoretical ducting altitude to be a coincidence.

3. This graph was discussed with both Mr. Dwyer and Mr. Nelson of Winzen Inc. One possible explanation is that the balloon pressurized, increasing the volume sufficiently for an increase in ascent rate. By the time it arrived at or just above the computed float altitude, enough small holes had been blown, to relieve the superpressure. After about 30 seconds float, helium loss was sufficient to commence a descent which was rapid rnough to activate the burst switch.

4. Although another scenario might be envisioned, the basic fact remains that no other flight with radar data had shown this kind of an increase during the ducting period. Thus it appears most likely that the mechanism was a ducting failure rather than damage to the envelope prior to ducting.

5. The same configuration, but with reduced payload flew successfully on H75-29. With the heavier payload, an identical Raven balloon had failed without leveling off. Although these heavier payloads were within theoretical limits, LTV 010 may require a redefining of limits, or design.

6. Obviously the radar data provides outstanding detail, but the geometric profile alone is difficult to analyze. There should be at least some calibration radar flights for ducting analysis, supplemented by onboard camera and internal pressure telemetry.

BERNARD D. GILDENBERG
Meteorologist
Det 1, AFCRL (AFSC)

FILE COPY

RECOVERY REPORT

Flight Number H75-26/H-60X Date: 24 April 1975

BALLOON

Time arrived at balloon: 1500 Was valve closed or ~~open~~? Closed
Was a Tenney Release still attached to the bottom of the balloon? No
Did balloon destruct upon termination? Yes How was the balloon disposed of? Brought back to Holloman
Location of balloon impact: 22 miles WSW Roswell, NM
How far from nearest road? Two miles The nearest town? Roswell

PACKAGE

Time arrived at package: 0915 Was Contractor package running? No
Was AFCRL instrumentation package running? Yes If so, how was it turned off? External Plugs Were any cameras running? No
What other equipment was running? None Did impact switches fire? Yes What was the condition of the switches? Good
Was Contractor's package damaged? Yes Was AFCRL instrumentation package damaged? No How far was equipment dragged? None
Did let-down reel work? N/A If not, how many feet reeled out? —
Did any batteries or motors short out? No If so, which ones? —
— Were they located on the gondola or package? —
Did antenna deploy? Yes Did the hoppers blow? No Were any seals broken on samplers? N/A Which ones? — How much ballast remained in the hoppers? 55 lbs & 24 lbs Which hopper? Both
Mark level of remaining ballast: — What was the condition of the parachutes? Good Did any parachute fail to operate properly? No
How many releases were still attached to the top of the parachute? Two
Which ones fired? Primary Were all hot squibs shorted out? Yes
Was there any property damage? No If so, what type damage? —

Time departed recovery site: 1100
Remarks: —

List name and address of others that assisted in recovery.

NAME ADDRESS

RECOVERY CREW

R.G. BLANKENSHIP
Crew Chief Signature

Others: SGT DEFOE
SGT DIAZ DE LEON

MEMO FOR RECORD

19 October 1971

SUBJECT: Recovery Report - Flight H71-48

1. Upon orders from the Control Center Coordinator the Recovery party departed Bldg 850 for Alamogordo NM at 1250 hrs, 14 Oct 71. At 1309 hrs recovery personnel observed termination and balloon destruct. Shortly after termination, Control Center advised payload WOULD impact in the Sacramento Mountains south of Cloudcroft. Aircraft advised to proceed to High Rolls, NM and proceed south on West Side Rd approximately 10 miles. At approximately 1415 hours recovery personnel arrived at the payload which had impacted approximately 1000' down a steep ridge. A cursory evaluation indicated no major damage to the system. Due to the nature of the terrain and distance from the road it was possible to recover only the cameras, instrumentation packages, TM package, and parachute. The balloon and remainder of the payload have yet to be recovered.

2. The recovery party departed the impact site at approximately 1800 hrs and arrived at Bldg 850 at 1900 hrs.

3. Based upon my personal (on-site) observations I highly recommend Mr Robert Blankenship and Sgt Emuel Glenn for successfully recovering highly valuable government equipment in extremely treacherous mountaineous terrain under less than ideal conditions. Together subject personnel made five (5) trips carrying 365 pounds of equipment 1000' up an approximately 60° wooded and rocky incline to the recovery vehicle. Much of their effort had to be done on their hands and knees, and resulted in a successful recovery with no damage done to either vehicle or personnel and minimal damage to equipment.

WILLIAM M. CURRAN, Capt, USAF

Sys Dev & Recovery

DEPARTMENT OF THE AIR FORCE
DET 1, AIR FORCE CAMBRIDGE RESEARCH LABORATORIES
HOLLOMAN AIR FORCE BASE, NEW MEXICO 88330

Launch Crew and Support
Personnel for Project BLNS

Date 13 October 1971

1. The following personnel are assigned as Launch and Support Crew(s) and will report to Bldg 850 at ~~0300~~ 0200 hrs 14 Oct 71, and be prepared to deaprt for ~~Pony Site~~ at ~~0315~~ 0215 hrs, 14 Oct 71, for a period of --- days TDY. Runway 03

Project Officer _____

Launch Officer Capt Curran

Launch Crew Chief TSgt Benton

Asst Crew Chief TSgt Griffith

LAUNCH AND LAUNCH SUPPORT CREW(S)

		Instrumentation	Communications
SSgt O'Connell	Mr. Tenney	Mr. Gutierrez	
Sgt Glenn		SSgt Whaley	
Sgt Taack			
Sgt Stanley			

CONTROL CENTER AND SUPPORT PERSONNEL

Control Center Coordinator
Mr Richards - Capt Barry

Meteorologist(s) - Flight Controller(s)
Mr Hall

Communications Coordinator(s)
TSgt Jorgensen
TSgt Beauvais

Command Technician(s)

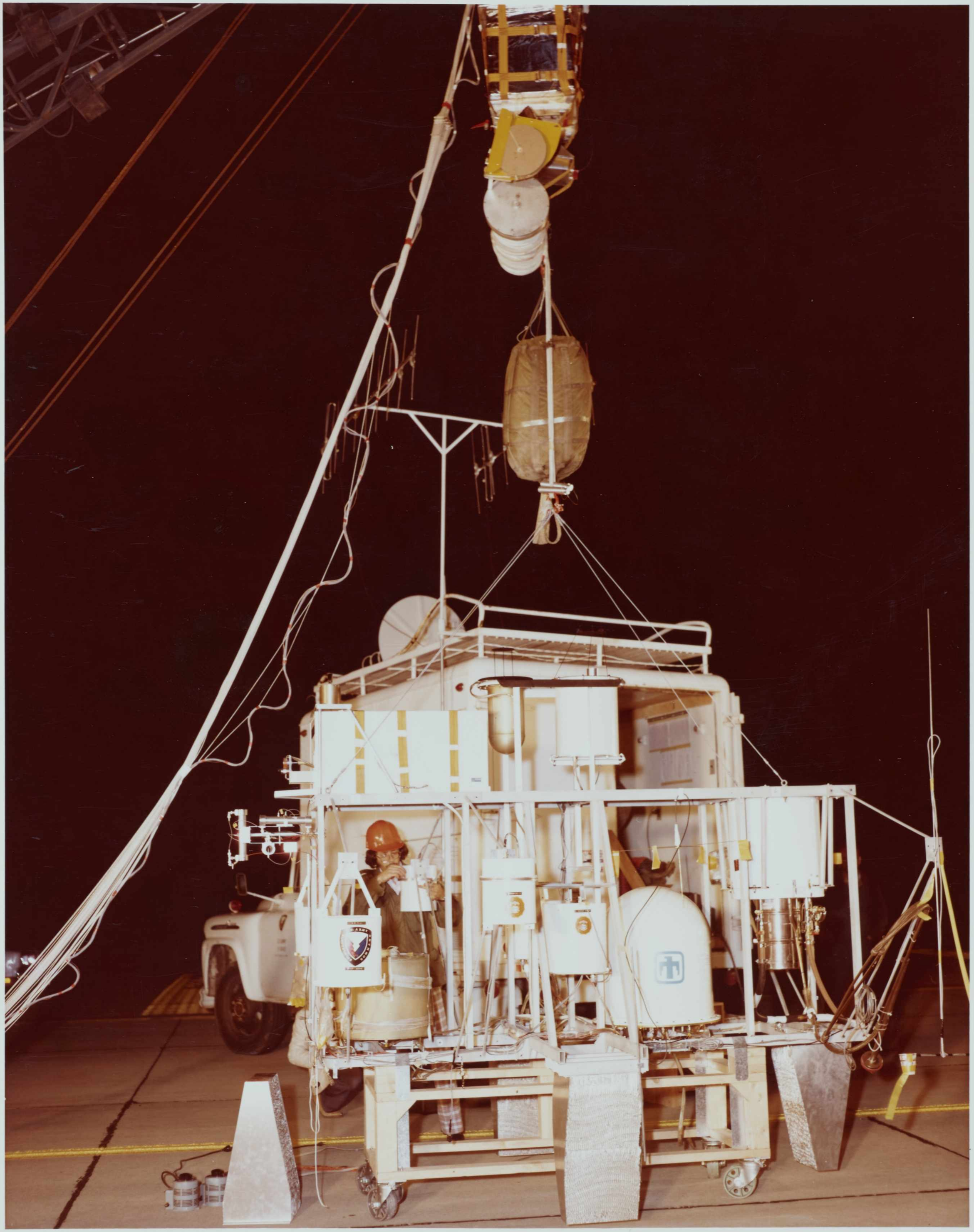
Aircraft Observers
Major Koehly
SSgt Stuart

Recovery Crew(s)
Mr Blankenship
Sgt Donohue

2. Personnel will report on dates and times indicated above. Changes in personnel assignments or times are prohibited unless initiated by the Commander, Det 1, AFCRL, Operations Officer or NCOIC. A pre-flight briefing will be conducted in the Conference Room at 1030 hrs, 13 Oct 1971 (date).

ROBERT J. REDDY, Lt Col, USAF
Commander, Det 1, AFCRL

Planned Launch 0630



29-040-C-3602-0185-WSMR76-UNCL

STRATCOM BALLOON

Stratcom Balloon Launch, Flight Number
H76-54, 28 Sept. 1976.

Photo Date: 28 Sept. 76

Photographer: Land-Air B. Service, CI
U. S. Army Photograph
Department of the Army
U. S. Army White Sands Missile Range
White Sands Missile Range, N. M. 8
By Contract Ar[illegible] DAA[illegible]-74-C-



040-C-3602-8186-WSMR76-UNCL

STRATCOM BALLOON

Stratcom Balloon launch, Flight Number
76-54, 28 Sept. 1976.

Photo Date: 28 Sept. 1976

Photographer: Land-Air: B. Reavis, Civ.
U. S. Army Photograph
Department of the Army
U. S. Army White Sands Missile Range,
White Sands Missile Range, N. M. 88002
By Contract Authority DAAD07-74-C-0116

PUBLICATION OR COMMERCIAL USE OF THIS
PHOTOGRAPH REQUIRES RELEASE BY A U.S.
ARMY INFORMATION OFFICER. CREDIT U.S.
ARMY PHOTOGRAPHER.

DEPARTMENT OF THE AIR FORCE
DET 1, AIR FORCE CAMBRIDGE RESEARCH LABORTORIES (AFSC)
HOLLOMAN AIR FORCE BASE, NEW MEXICO 88330

COMMUNICATIONS FLIGHT LOG

Date 25 Sep 71 Flight No H71-38 Project No BAPE Page 1 Of _____
Mission Code AC Aircraft Type/No Cessna 206/ 50L Launch Site Rhodes Canyon
Communications Frequencies: (a) Motorola (b) _____ (c) _____
Meteorologist(s): (a) Mr Gildenberg (b) Mr Hall
Control Center Coordinator(s): (a) Mr Richards (b) TSgt Beauvais (c) _____
Project Officer Capt Curran Launch Crew Chief TSgt Benton
Communications Coordinator(s): (a) SSgt Stuart (b) TSgt Jorgensen
Frequencies Command Receiver: Primary (a) 5708.5 (b) 13245.5 Secondary 9019.5
Frequencies Flight Transmitter: Primary (a) 7305.0 Secondary _____

TIME (GMT)	REMARKS:
0800	Control center opened to support project BAPE
0810	WWV time hack and equipment status check completed
0852	All launch crew vehicles have departed for Rhodes Canyon Range Camp.
0900	No contact with launch crew on motorola, further checks indicate that there is no F-2 frequency available but F-1 working fine...
0946	Contact with SD-24 on F-1 from Rhodes Canyon range camp launch area..
0949	Contact with crew chief on F-1 good and readable...
1030	All vehicles are at the launch site..
1035	Attempted to run command check for launch site.. negative results...
1054	Command check from test set completed..Inst ran the antenna up on a pibal and the control center was able to get a command thru...
1059	Received gas figures...
1104	Balloon layout completed ..started at 1055....
1141	Inflation figures now confirmed...
1208	Permission given to start inflation...
1215	Inflation begun.
1232	Inflation complete.
1234	Package HOT...
1245	Permission granted for LAUNCH
1246	Tape recorder started ...tape #7
1248	The balloon is launched.
1253	The reel down command is fired from comtrol center-confirmed by personnel at launch site.
1404	LASER van commenced LASING.
1411	Launnh crew back t o Bldg 850.
1522	LASER van ceased transmitting
1600	SSGT Stuart off duty, ,TSGT Jorgensen off duty.
1820	Recovery departing for Apache Summit.
1823	Aircrew departing for Airport, TSGT Head was called to duty at this time.
1842	TSGT Head arrived for duty.
1903	Aircraft Airborne at this time.
1936	Termination, 20K anoroid terminated the flight. We have neg. contact with recovery or Aircraft.
2042	Recovery called in from Fox Cave. They will meet the Aircraft at Arabala so they can guide them into the package.
2201	Aircraft guiding the recovery party to the package.
2249	Recovery has package, they could not get the balloon, it is wrapped around a power line, they will spend the night in Roswell and get the power company to aid them in the morning.

DEPARTMENT OF THE AIR FORCE
DET 1, AIR FORCE CAMBRIDGE RESEARCH LABORATORIES (OAR)
HOLLOMAN AIR FORCE BASE, NEW MEXICO 88330

MEMO FOR RECORD: Aircraft Observers Report

1. Mission Identification:

Date 25 Sept 71 Flt No H71-38 Mission Code ~~AC~~ AC Project No BAPE

Aircraft Type Cessna No 3450L Pilot PATTON Co-Pilot -

Observers A BARRY 2. _____ 3. _____ 4. _____

2. Observers Report:

Time						
1300	Aircraft Take-off					
1300	Radio Comm on VHF	-		Communications Freq	Repeater not operational	
	Radio Comm on	-		Communications Freq		
	Radio Comm on	-		Command Freq		
	Balloon Position - Direction		@	nm from		
1320	Balloon Position - Direction NE		@ 20	nm from	Capitan	
	Balloon Position - Direction		@	nm from		
	Balloon Position - Direction		@	nm from		
1400	Recovery Radio Contact					
1335	Observed Cut					
*1336	OBSERVED PARACHUTE DEPLOYED - (Parachute oscillations) NO					
*1336	BALLOON DESTRUCT					
**1348	Balloon Impact - Direction 300		@ 24	nm from	Roswell VOR	
**1350	Payload Impact - Direction 300		@ 26	nm from	Roswell VOR	
1350	Parachute ~~Collapse~~ did not - Parachute Drag About 50 yards					
1650	Recovery Arrival at Payload					
1650	Recovery - PAYLOAD CONDITION ESTIMATE Upside down.					
1625	Recovery Arrival at Balloon					
1726	Aircraft Landing					

REMARKS: Balloon and chute were visible all the way to impact. Balloon landed on 110/220V power pole and line along side a road. Payload landed about 100 yards from a road. It was traveling forward when it impacted and upon impact it was turned upside down by chute which did not collapse or release. No property damage.

Ambrose S. Barry
(Signature)

25 Sept 71
(Date)

*Advise Balloon Control Technician, if not in direct contact with Balloon

Date Launched	MISSION SUMMARY STATEMENT	Flight Number
24 April 1975		H75-26/H-60X

Project Number and Title	Project Officer	Experimenter
Ash Can	Lt Greenlee	York Univ (Dr. Ridley)

Flight Objectives
Intercomparison of Snooper II and Minisnooper NO Sampling Systems

Launch Site	Balloon Volume and Model	Maximum Altitude
Rnwy 03, HAFB, NM	$.859 \times 10^6$ ft^3; LTV-010	88.8 Kft (B-60)

Summary

1. The flight line instrumentation checkout and other flight preparations were conducted with no significant problems. The balloon ducts were pulled. The 125 ft launch run and release in a 4 Kt wind were exceptionally smooth.

2. Shortly after launch the radiosonde signal faded and no GMD track was obtained. Post flight analysis revealed that the radiosonde was of defective manufacture.

3. During ascent the telemetry quality was good, but there was TM interference from the barocoder (as was experienced on the last NO flight, H75-03/H-56X). The barocoder was turned off at about 75 Kft with the B-60 being used subsequently for altitude determinations. Later analysis revealed no equipment malfunctions.

4. The balloon system ascended at an average rate of 1030 fpm to 88.8 Kft, 2.5 Kft above the theoretical ceiling altitude. At this point the burst indication was received and the system began a rapid descent. Termination was commanded. The payload was recovered with only slight damage and the balloon valve was recovered in good condition.

5. Extensive post flight analysis was conducted into the possible cause(s) of the balloon failure. Digital C-band radar data indicated a significant ascent rate acceleration as the balloon passed through the altitude at which ducting should have begun. It appears most likely that a ducting failure precipitated the balloon failure rather than earlier damage to the balloon envelope. The same payload configuration, but with reduced weight, flew successfully on H75-29/H-61X.

Flight Results	Completion Date
Unsuccessful; Balloon Failure	18 Aug 75

ADVANCE FLIGHT INFORMATION

1. On 24 APRIL Flight HZS-36/H60X was launched at 1000Z and terminated at 1125Z on 24 APRIL 75.

2. The (experimenter) (~~contractor~~) was YORK U./RIDLEY and the study was INTER COMPARISON OF NO SAMPLERS under program title NO SAMPLER project number ~~[redacted]~~ TRASH CAN SNOOPER

3. The balloon was:

   a. balloon number 1 of 12.

   b. item number 1.

   c. serial number 16.

   d. (AF) contract number F29651-75-90080.

   e. balloon size (volume) .859 X 10^6 CU. FT.

   f. balloon type STRATOFILM 1.5 MIL

   g. balloon manufacturer WINZEN.

4. The balloon reached an altitude of 88.8K and it (~~was~~) (was not) a success.

5. The gross weight was 1518 lbs.

6. The balloon weight was 443 lbs.

7. The payload weight was 1075 lbs.

8. The above information was called to CAPT. MILLER on 25 APRIL 75 by A1C VIVEIROS of BALLOON BRANCH.

MALFUNCTION REPORT

EXPLAIN IN DETAIL THE FAILURE UNDER THE APPROPRIATE HEADING	FLT NR	FLT DATE
	H75-26/H-60X	24 April 1975

DESCRIPTION OF MALFUNCTION

Signal faded very shortly after launch on radiosonde. No GMD track obtained.

CAUSE OF MALFUNCTION AND ANALYSIS

Recheck of radiosonde after flight was made. The radiosonde was defective(no signal).

RECOMMENDATIONS AND REMARKS

No correction possible at present due to design of radiosonde for one-time use. The purchaser of these radiosondes indicate that while there has been some problems with quality control on these items, cost considerations preclude tightening proceedures to prevent failure on an item by item basis. The specifications for these items are sufficient for the primary use intended.

CORRECTIVE MEASURES TAKEN

None, see above.

NAME, POSITION AND SECTION	DATE PREPARED	SIGNATURE
James K Hall Flight Meteorologist GS-11	29 Apr 75	James K Hall

INFORMATION FOR ANALYSIS

OF APPARENT BALLOON MALFUNCTION

1. Flight Number H75-26/11-60X & Date 24 April 75.
2. Experimenter AFCRL / NCAR
3. Launch Location Holloman (Rwy 03)
4. AFCRL Balloon Model Number* LTV 010
5. Balloon Volume 0.859×10^6 cubic feet
6. Contract Number F29651-75-90080
7. Item Number 1
8. Balloon Number 1 of 12
9. Length of Ducts Removed None feet. Weight 0 lbs.
10. Balloon Weight (unadjusted) 443 lbs
11. Top mounted payload weight (including valves) 11 lbs
12. Suspended payload weight (including radar reflector) 1064 lbs
13. Free Lift Force 167 lbs
14. Timers (functions & settings)? Primary termination 9 hrs
Backup termination 9½ hrs
15. Aneroids (functions & settings)? Antenna deploy 60 Kft MSL
Safety altitude 150 min. below 60 Kft MSL
16. Surface temperature 7 °C. Experiment ON 45 Kft.
17. Surface pressure 873 mbs
18. Inflation start time 0940 (Z)
19. Inflation finish time 0954 (Z)
20. Maximum surface wind speed (during inflation) 4 knots
(at launch)

*If balloon was not procured by AFCRL, furnish copy of balloon specifications, inspection records, etc, if available.

21. Final weigh-off bubble length 80 feet. Weight 186 lbs.

22. Platform reading for weigh-off bubble length 1500 lbs.

22a. Last platform calibration date 14 NOV 74

23. Bubble deployment & sailing prior to bubble release? None

24. Bubble length at release from arms 80 feet.

25. Layout direction vs wind direction at bubble release? about 90°

26. Amount of sailing at bubble release? Very little

27. Severity of bubble release dynamics? Very Smooth

28. Severity of launch run dynamics? Very Smooth

29. Launch time 1000 (Z)

30. Low level jet: 0 knots at N/A feet.

31. Temperature inversion of 10 °C at 800 feet.

32. Cloud penetration at altitude of None feet.

33. Ascent ballasting information:

33a. Total pourable 150 lbs

33b. Rate 25 lbs/min

33c. Times of pourings and durations of pourings?

1025 Z	33 sec
1032 Z	33 sec
1037 Z	33 sec

33d. Slug ballast drops (times & quantities)? N/A

34. Ascent valving (times & durations)? None

35. Documents to furnish. See Flight Folder

35a. Height-time curve

35b. Height-temperature profile.

35c. Control center log

35d. Telemetry log(s)

35e. Barocoder calibration sheet used for mission.

36. Separation by: Primary _____, Secondary, other Burst switch

37. Other significant facts and difficulties (layout surface, propagation problems, special profile requirements, etc).

38. Separation was observed visually by Not Obs.

39. Specific observations

40. General comments (including post balloon & instrumentation recovery inputs)?

James R Fowler
Project Coordinator
1Lt USAF

24 April 75
date

Site Commander

date

AFCRL package checkout and experimenter checkout performed smoothly without difficulty. Radiosonde failed at launch. Balloon ducts were pulled.

Telemetry data quality good. Interference on TM ~~during~~ (2233.5 MHz) during ascent from barocoder (4875.5 KHz), consequently barocoder turned off at 1109Z and B-60 used for altitude. Balloon ascended to 88.8Kft at 1122Z, burst ~~lone~~ indication at 1123Z (altitude drop on B-60).

Design ceiling altitude with ballast dropped (46 lbs) 85.8Kft by payload altitude curve.

OVER

This was the first LTV 010 balloon flown from contract -90080. Maximum humidity though which balloon ascended was 31%, no clouds were penetrated.

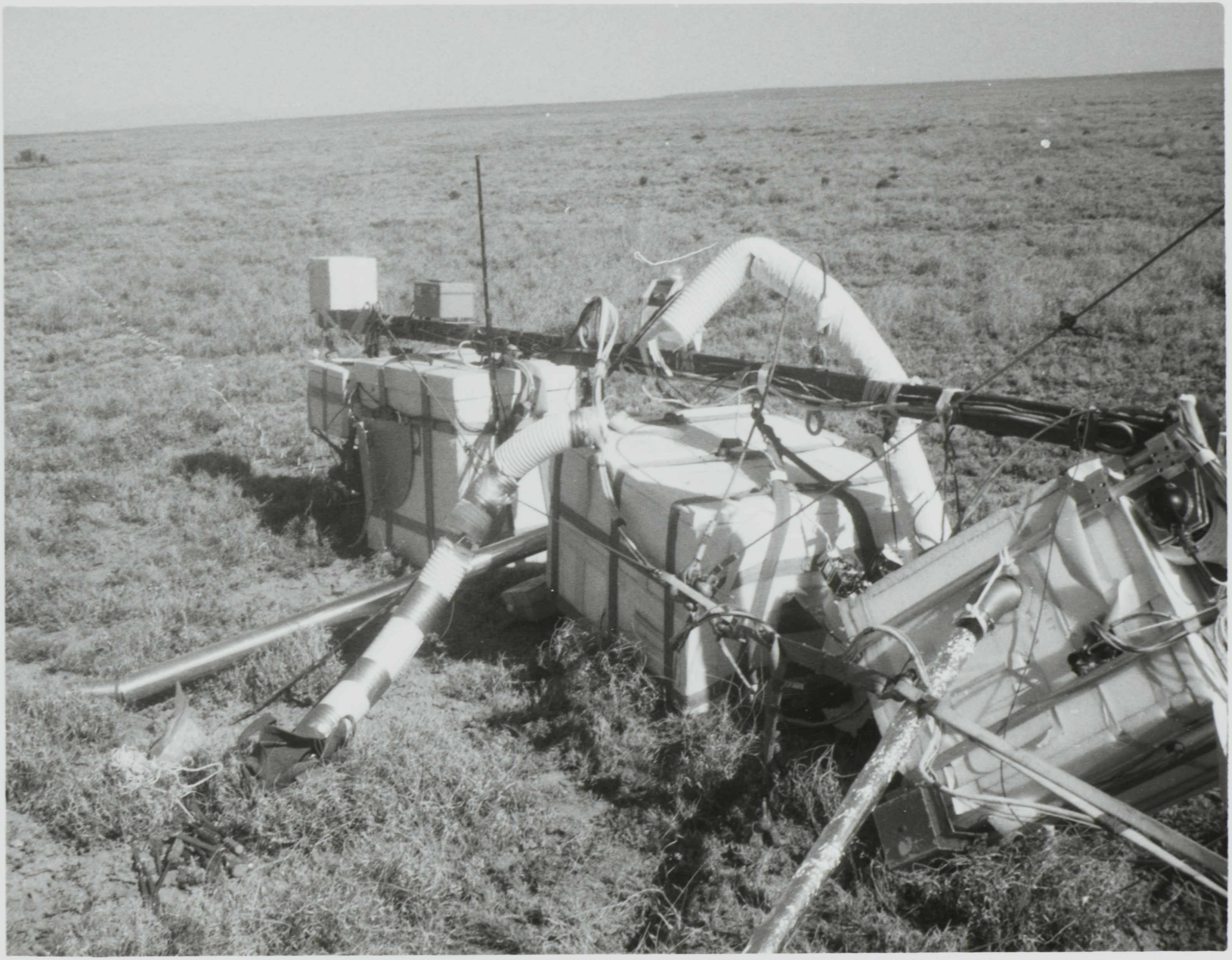
Mr Gildenberg comments that 3 Holloman radiosonde balloons launched between 0500Z and 1030Z failed at the tropopause.

DIGS recording of the flight was obtained and will be forwarded when reduced.

Results of Post Flight Analysis: Due to instrumentation error, actual ballast pour rate was about 521 ppm and total ballast dropped was 8516.

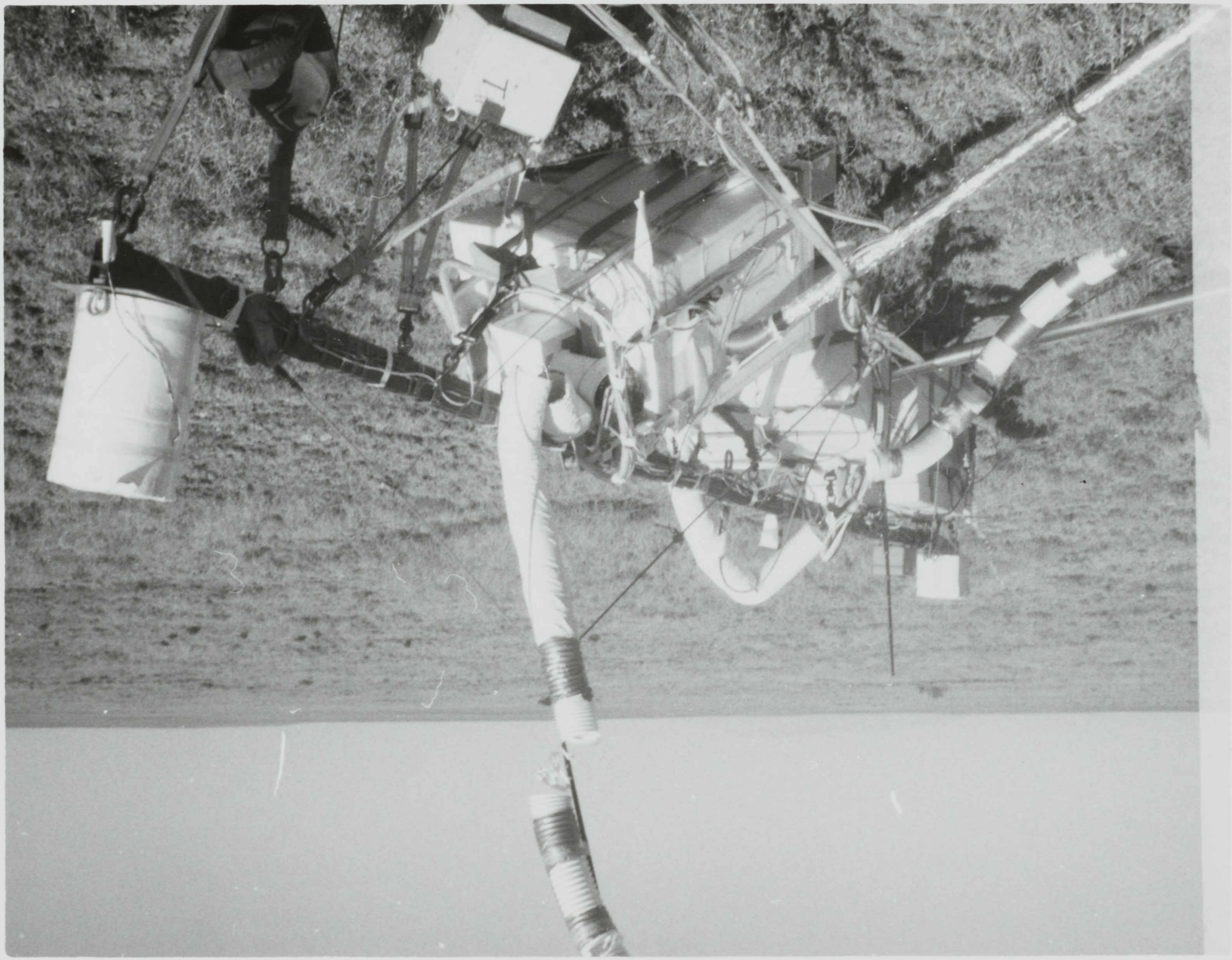
The balloon was inspected on return to Holloman. The rip line had pulled but the break cords were not. The duct openings looked normal. The knot and poly tape was missing from the end of the inflation tube. Representative samples of the balloon have been shipped to LC.

James R Greenlee
1Lt USAF






DODGE
DODGE




DODGE
DODGE