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SUMMARY OF JIMSONDE TEMPERATURE PROFILES--PART II: PROGRAMS, DATA COMMENTS

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16. ABSTRACT

This summary documents Jimsonde temperature profiles for the Eastern Test Range, Cape Kennedy, Florida, and the White Sands Missile Range, New Mexico. Profile information for 1970-1974 includes data summaries and formats, composite listings, frequency distributions, etc., for use in establishing and interpreting natural environment criteria for aeronautical vehicle design and engineering operations. Magnetic tapes of the data summarized are available from the Atmospheric Sciences Division, Space Sciences Laboratory, Marshall Space Flight Center, Alabama. This summary — Part II — concerns Jimsonde temperature profiles. Similar publications — Parts I and III — document, respectively, Jimsphere wind profiles and data from the NASA 150-Meter Ground Winds Tower Facility at Kennedy Space Center, Florida.

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SECTION 1 — INTRODUCTION

To establish natural environmental criteria for atmospheric research studies, aeronautical vehicle safety and operational problems, etc., requires extensive collections of meteorological data. Because of a requirement to develop and evaluate descriptions of environmental parameters the National Aeronautics and Space Administration - George C. Marshall Space Flight Center has operated and/or directed since 1964 atmospheric measuring programs at MSFC, other NASA and military installations, and national test ranges. The results of these data acquisition programs were voluminous data inventories. Thus, it became necessary to survey these inventories and develop a retrieval system to facilitate use of the data in statistical analyses and climatological studies. Products of the effort are three publications:

Part I	Summary of Jimsphere Wind Profiles
Part II	Summary of Jimsonde Temperature Profiles
Part III	Summary of the NASA 150-Meter Ground Winds Tower Facility, Kennedy Space Center, Florida

This report, Part II, concerns data summaries, computer formats, frequency distributions, composite listings, etc., of the Jimsonde temperature profiles acquisition program. Contents of Part II include master data in sections 2 and 3 and computer program to interrogate the master files in section 4.

General Comments

During 1970-1974 a total of 136 Jimsonde temperature profiles were acquired at the Eastern Test Range (ETR), Cape Kennedy, Florida and White Sands Missile Range (WSMR), New Mexico. Sites, periods of record, number of profiles and frequency distributions of these acquisitions are given in sections 2 and 3. Jimsonde temperature profile data consist of values averaged over an approximate 50-meter layer and printed out in 25-meter increments,

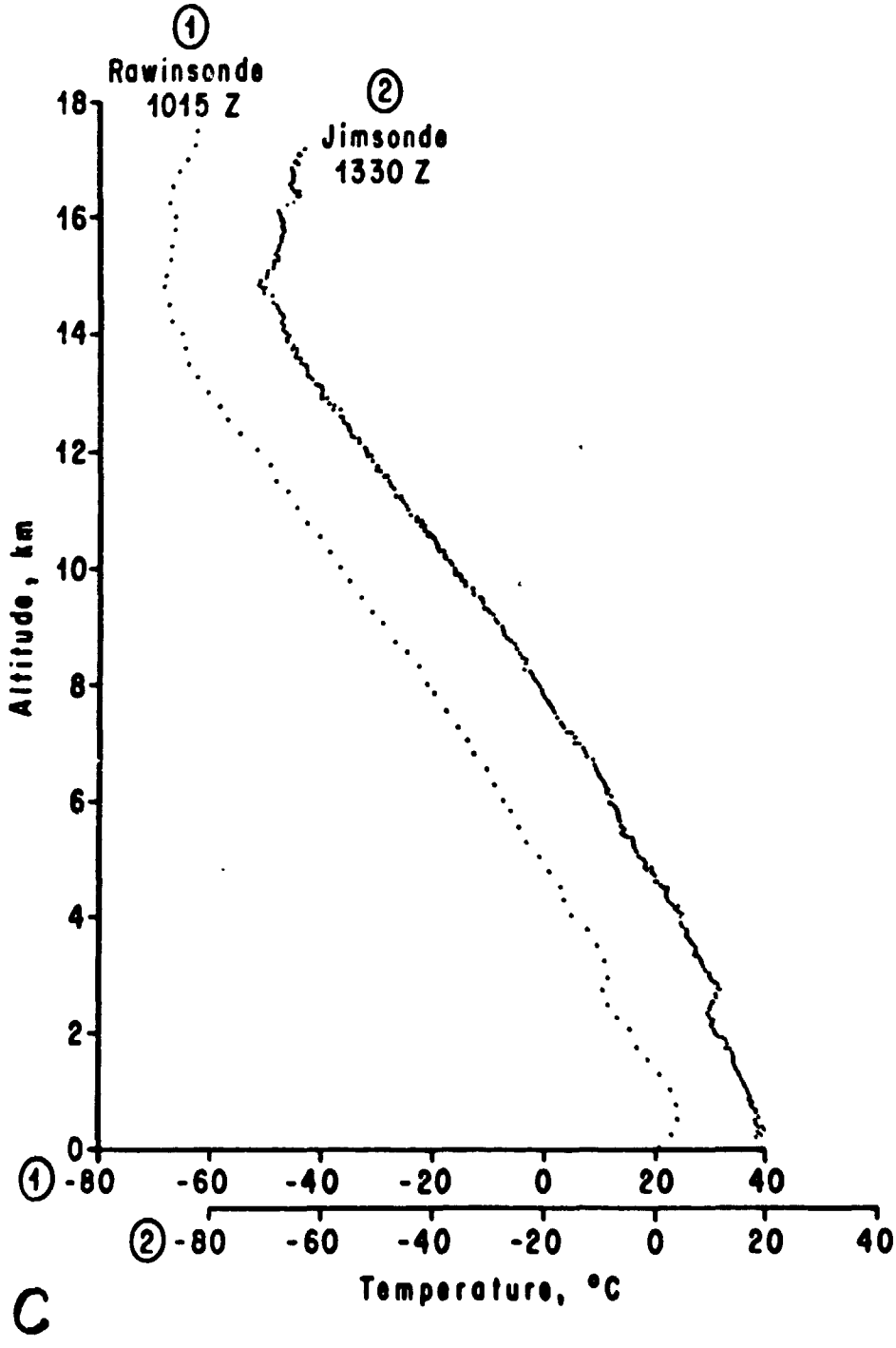
thus providing an overlap of 25 meters for adjacent data points. Jimsonde data were received at MSFC from the two sites as TAER - an acronym for time, azimuth, elevation and range - data. The TAER data averaging, editing, converting and reducing to detailed temperature profiles were consistent with the Jimsphere wind profile procedures to ensure quality and compatibility. The illustrations at the end of this section are samples of Jimsonde temperature and Jimsphere wind profile data obtained on July 2, 1970, at Cape Kennedy, Florida.

For concise and compact storage all Jimsonde files were transferred during retrieval system development from 7-track 800 bits per inch (BPI) to 9-track 6250 BPI. Detailed information pertaining to the data files for each site is given in sections 2 and 3. Tables 1 and 2 show the distribution of profiles according to month and year of record.

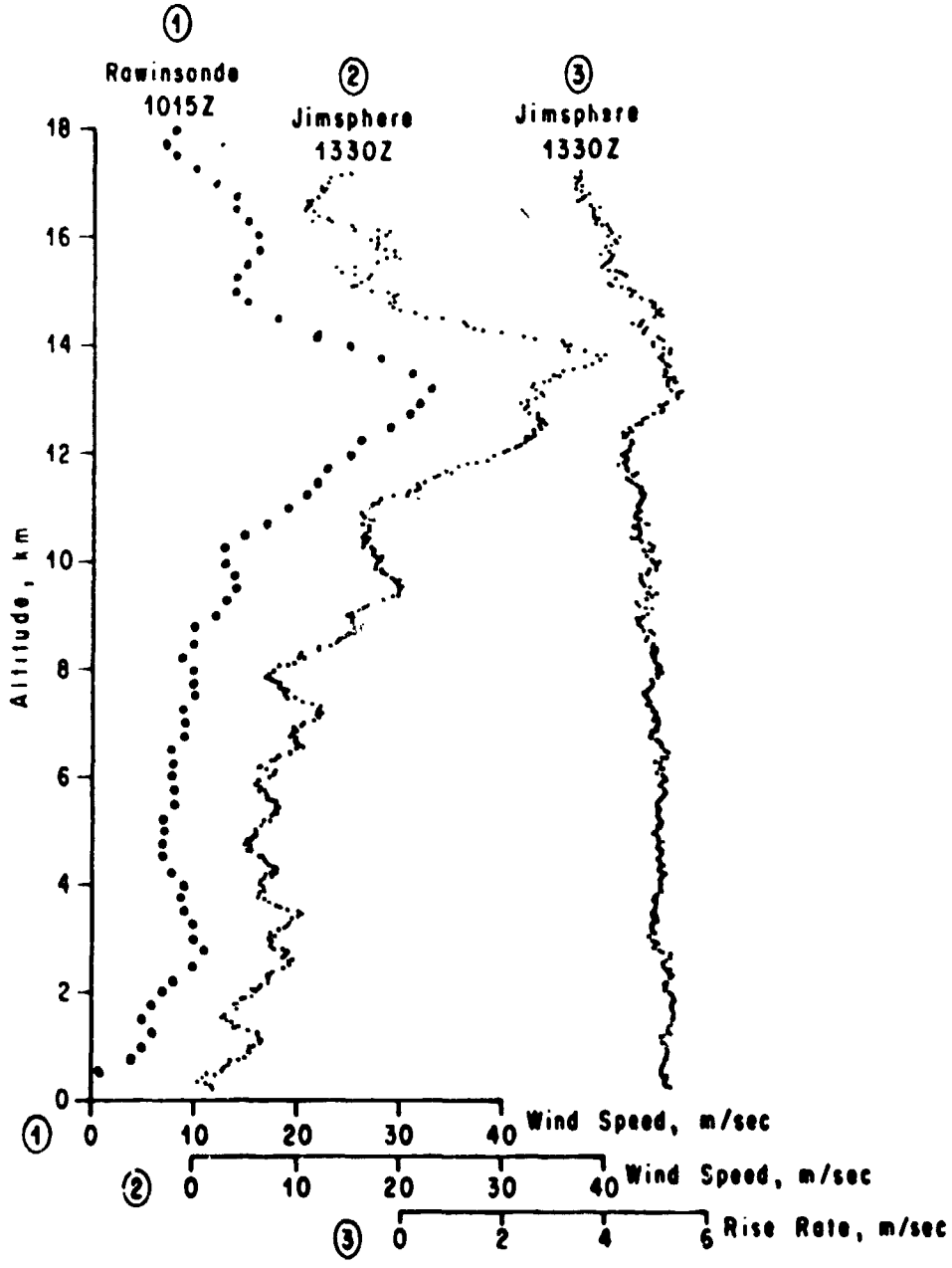
Composite reports consisting of date and time of balloon release, end-of-test time, test, balloon, sensor and file numbers are contained in Appendices A and B. Appendix C contains the source listing of the interrogation program. Jimsonde data are available on magnetic tape from the Chief, Atmospheric Sciences Division (ES81), Space Sciences Laboratory, Marshall Space Flight Center, Alabama 35812.

Recommendation

It is recommended that each magnetic tape file of Jimsonde data be recopied every two years to ensure file integrity.



C


① Rawinsonde 1015Z
② Jimsphere 1330Z
③ Jimsphere 1330Z
Altitude, km
0
2
4
6
8
10
12
14
16
18
① 0 10 20 30 40 Wind Speed, m/sec
② 0 10 20 30 40 Wind Speed, m/sec
③ 0 2 4 6 Rise Rate, m/sec

SECTION 2 – EASTERN TEST RANGE (ETR), CAPE KENNEDY, FLORIDA, JIMSONDE TEMPERATURE PROFILES

Data Summary for ETR Jimsonde

There is only one file of ETR Jimsonde Temperature Profiles. A composite report of this file is found in Appendix A.

Number of Profiles	Period of Coverage		Historical		In-House File
	From	To	File 1	File 2	
99	June 6, 1970	July 13, 1972	70761	70762	20639

To create a copy of the ETR Jimsonde, use the following run set up sample.

```
@RUN      COPY,ACCOUNT NR.,NAME&BIN,SUP TIME,PAGES
@ASG,T    IN,U9S,REEL NUMBER (70761,70762, or 20639)
@ASG,T    OUT,U9S,SAVE04.  Description of file
@REWIND   IN.
@COPY,MN  IN.,OUT.,99
@MARK     OUT.
@FIN
```

Current Data Format

I. **Mode:** 7094 non-FORTRAN binary

Sequence: Data sorted chronologically (year, month, day, and hour)

Record: 15 records per file

File: N files per tape

EOF: Tapes contain an end of file after each file and a double end of file at the end of the tape.

II. **Record 1:**
279 words of identification
See Item IV for description.

Record 2:
801 words containing altitudes (FPS-16) 0 thorugh 20000 meters in 25 meter increments

Record 3:
801 words containing the Zonal Wind Component (FPS-16) for each of the altitudes defined in record 2.

Record 4:
801 words containing the Meridional Wind Component (FPS-16) for each of the altitudes defined in record 2.

Record 5:
801 words containing the Scalar Wind Speed (FPS-16) for each of the altitudes defined in record 2.

Record 6:
801 words containing the wind direction (FPS-16) for each of the altitudes defined in record 2.

Record 7:
801 words containing the rise rate (FPS-16) for each of the altitudes defined in record 2.

Record 8:
801 words containing the time in seconds (FPS-16) for each of the altitudes defined in record 2.

Record 9:
801 words containing the temperature in degrees F (Jimsonde) for each of the altitudes defined in record 2.

Record 10:
801 words containing the altitudes (RAOB) 0 through 20000 meters in 250 meter increments. Missing altitudes are 1×10^6.

Record 11:
801 words containing the wind direction (RAOB) for each of the altitudes defined in record 10.

Record 12:
801 words containing the wind speed (RAOB) for each of the altitudes defined in record 10.

Record 13:
801 words containing the temperature in degrees C (RAOB) for each of the altitudes defined in record 10.

Record 14:
801 words containing the pressure in Mb (RAOB) for each of the altitudes defined in record 10.

Record 15:
801 words containing the density in g/m^{-3} (RAOB) for each of the altitudes defined in record 10.

III. 1. Wind components and speeds are in meters/second.

2. Wind direction is in degrees.

3. All missing data is flagged as 1×10^{6}.

IV. Description of Record 1

Word Number	Contents
1	FPS-16 Test Number
2	FPS-16 Balloon Number
3	FPS-16 Year of Release
4	FPS-16 Month of Release
5	FPS-16 Day of Release
6	FPS-16 Hour of Release
7	FPS-16 Range Code
8	FPS-16 Site Code
9	FPS-16 Balloon Type Code
10	FPS-16 Radar Number
11	FPS-16 Tracking Code
12-18	Not used
19	RAOB Station Number
20	RAOB Year of Release
21	RAOB Month of Release
22	RAOB Day of Release
23	RAOB Hour of Release
24-29	Not used
30	Jimsonde Month of Release
31	Jimsonde Day of Release
32	Jimsonde Year of Release
33	Jimsonde Hour of Release
34	Jimsonde Thermister Number
35	Jimsonde Ground Reference Temperature
36	Jimsonde Calibration Frequency at Start
37	Jimsonde Carrier Frequency at Start
38	Jimsonde FPS-16 Test Number
39	Jimsonde Hour Test Ends
40	Jimsonde Sensor Number
41	Jimsonde Signal Frequency at Start
42	Jimsonde Carrier Frequency at End
43-279	Not used

Table 1. Distribution of Jimsonde Temperature Profiles for Eastern Test Range

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Totals
1970	-	-	-	-	-	1	10	7	8	10	7	8	51
1971	4	4	2	-	-	3	3	2	-	1	-	2	21
1972	2	8	5	6	3	-	3	-	-	-	-	-	27
Total	6	12	7	6	3	4	16	9	8	11	7	10	99

SECTION 3 – WHITE SANDS MISSILE RANGE (WSMR), NEW MEXICO, JIMSONDE TEMPERATURE PROFILES

Data Summary for WSMR Jimsonde

There is only one file of WSMR Jimsonde Temperature Profiles. A composite report of this file is found in Appendix B.

Number of Profiles	Period of Coverage		Historical		In-House File
	From	To	File 1	File 2	
37	November 8, 1972	December 19, 1974	70758	70759	01981

To create a copy of the WSMR Jimsonde, use the following run setup sample.

```
@RUN      COPY,ACCOUNT NR.,NAME&BIN,SUP TIME,PAGES
@ASG,T    IN,U9S,REEL NUMBER (70758,70759,or 01981)
@ASG,T    OUT,U9S,SAVE04.  Description of File
@REWIND   IN.
@COPY,MN  IN.,OUT ,37
@MARK     OUT.
@FIN
```

Current Data Format

I. Mode: 7094 non-FORTRAN binary

Sequence: Data sorted chronologically (year, month, day, and hour)

Record: 15 records per file

File: N files per tape

EOF: Tapes contain an end of file after each file and a double end of file at the end of the tape.

II. Record 1:
279 words of identification
See Item IV for description

Record 2:
801 words containing altitudes (FPS-16) 0 through 20000 meters in 25 meter increments

Record 3:
801 words containing the Zonal Wind Component (FPS-16) for each of the altitudes defined in record 2.

Record 4:
801 words containing the Meridional Wind Component (FPS-16) for each of the altitudes defined in record 2.

Record 5:
801 words containing the Scalar Wind Speed (FPS-16) for each of the altitudes defined in record 2.

Record 6:
801 words containing the wind direction (FPS-16) for each of the altitudes defined in record 2.

Record 7:
801 words containing the rise rate (FPS-16) for each of the altitudes defined in record 2.

Record 8:
801 words containing the time in seconds (FPS-16) for each of the altitudes defined in record 2.

Record 9:
801 words containing the temperature in degrees F (Jimsonde) for each of the altitudes defined in record 2.

Record 10:
801 words containing the altitudes (RAOB) 0 through 20000 meters in 250 meter increments. Missing altitudes are 1×10^{6}.

Record 11:
801 words containing the wind direction (RAOB) for each of the altitudes defined in record 10.

Record 12:
801 words containing the wind speed (RAOB) for each of the altitudes defined in record 10.

Record 13:
801 words containing the temperature in degrees C (RAOB) for each of the altitudes defined in record 10.

Record 14:
801 words containing the pressure in Mb (RAOB) for each of the altitudes defined in record 10.

Record 15:
801 words containing the density in g/m^{-3} (RAOB) for each of the altitudes defined in record 10.

III. 1. Wind components and speeds are in meters/second.

2. Wind direction is in degrees.

3. All missing data is flagged as 1×10^6.

IV. Description of Record 1

Word Number	Contents
1	FPS-16 Test Number
2	FPS-16 Balloon Number
3	FPS-16 Year of Release
4	FPS-16 Month of Release
5	FPS-16 Day of Release
6	FPS-16 Hour of Release
7	FPS-16 Range Code
8	FPS-16 Site Code
9	RPS-16 Balloon Type Code
10	FPS-16 Radar Number
11	FPS-16 Tracking Code
12-18	Not used
19	RAOB Station Number
20	RAOB Year of Release
21	RAOB Month of Release
22	RAOB Day of Release
23	RAOB Hour of Release
24-29	Not used
30	Jimsonde Month of Release
31	Jimsonde Day of Release
32	Jimsonde Year of Release
33	Jimsonde Hour of Release
34	Jimsonde Thermistor Number
35	Jimsonde Ground Reference Temperature
36	Jimsonde Calibration Frequency at Start
37	Jimsonde Carrier Frequency at Start
38	Jimsonde FPS-16 Test Number
39	Jimsonde Hour Test Ends
40	Jimsonde Sensor Number
41	Jimsonde Signal Frequency at Start
42	Jimsonde Carrier Frequency at End
43-279	Not used

Table 2. Distribution of Jimsonde Temperature Profiles for White Sands Missile Range

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Totals
1972	-	-	-	-	-	-	-	-	-	-	1	-	1
1973	2	2	-	1	2	-	-	-	-	-	-	-	7
1974	-	2	3	-	1	6	5	4	3	-	3	2	29
Total	2	4	3	1	3	6	5	4	3	-	4	2	37

SECTION 4 – PROGRAM TO INTERROGATE JIMSONDE MASTER FILES

Program Summary

This program uses the Current Data Format for input. The file description of the Current Data Format is found in Sections 1 and 2. This program produces a composite report with the following information: test number, balloon number, date of release, release hour, hour test ends, sensor number, and the file number. The composite reports are contained in Appendices A and B. The data listed are available from the Atmospheric Sciences Division.

The program source listing is found in Appendix C.

To execute the program, use the following job setup.

```
@RUN       JSONDE,ACCOUNT NR.,NAME&BIN,SUP TIME,PAGES
@FOR,IS    MAINDK,MAINDK

   Place source card deck here.

@PREP
@MAP,IS    A,B
 LIB SYS$*MSFC$.
@ASG,T     1,U9S, REEL NUMBER TO BE INTERROGATED
@XQT       B
@PMD,E
@FREE      1.
@FIN
```

APPENDIX A

A Composite Report of All Eastern Test Range (ETR) Jimsonde Temperature Profiles

RUN DATE JAN 4 1979 JIMSONDE DATA INPUT REEL NR 70761 PAGE 1

TEST NUMBER	BALLOON NUMBER	FPS-16 RELEASE DATE YY MM DD	FPS-16 RELEASE HOUR	JIMSONDE RELEASE DATE MM DD YY	JIMSONDE RELEASE HOUR	HOUR TEST ENDS	SENSOR NUMBER	FILE NUMBER
1680	1	70 6 15	1330	6 15 70	1330	1430	168	1
4386	1	70 7 1	1428	7 1 70	1430	1530	134	2
5770	1	70 7 6	1344	7 6 70	1345	1445	138	3
8255	1	70 7 7	1329	7 7 70	1330	1430	127	4
145	1	70 7 9	1330	7 9 70	1332	1432	150	5
7073	1	70 7 13	1345	7 13 70	1345	1443	155	6
2184	1	70 7 14	1330	7 14 70	1330	1430	129	7
1855	1	70 7 15	1400	7 15 70	1400	1500	137	8
5792	1	70 7 17	1349	7 17 70	1350	1451	156	9
8110	1	70 7 29	1345	7 29 70	1350	1450	161	10
6509	1	70 7 30	1331	7 30 70	1330	1430	158	11
5066	1	70 8 6	1355	8 6 70	1355	1455	157	12
8074	1	70 8 7	1345	8 7 70	1345	1445	223	13
1461	1	70 8 10	1345	8 10 70	1345	1445	211	14
5374	1	70 8 14	1344	8 14 70	1344	1445	135	15
4089	1	70 8 24	1345	8 24 70	1345	1445	201	16
7768	1	70 8 26	1345	8 26 70	1345	1445	153	17
4815	1	70 8 27	1329	8 27 70	1330	1430	147	18
6656	1	70 9 3	1430	9 3 70	1430	1530	212	19
2973	1	70 9 4	1350	9 4 70	1350	1450	203	20
2346	1	70 9 15	1331	9 15 70	1331	1431	226	21
7466	1	70 9 22	1346	9 22 70	1346	1446	126	22
2742	1	70 9 25	1300	11 12 70	1300	0	209	23
7185	1	70 9 28	1345	9 28 70	1345	1445	219	24
7185	1	70 9 28	1345	10 1 70	1345	1445	282	25
9263	1	70 9 30	1345	9 30 70	1345	1445	280	26
384	1	70 10 7	1345	10 7 70	1345	1440	291	27
7561	1	70 10 8	1400	10 8 70	1400	1500	290	28
1982	1	70 10 15	1400	10 15 70	1400	1500	296	29
1830	1	70 10 16	1345	10 16 70	1345	1445	274	30
7896	1	70 10 19	1348	10 19 70	1348	1448	297	31
1126	1	70 10 22	1345	10 22 70	1345	1445	320	32
1843	1	70 10 26	1400	10 26 70	1400	1500	315	33
5601	1	70 10 27	1447	10 27 70	1447	1547	319	34
9291	1	70 10 28	1445	10 28 70	1445	1545	169	35
4250	1	70 10 29	1445	10 29 70	1445	1545	277	36
268	1	70 11 4	1445	11 4 70	1445	1545	238	37
2734	1	70 11 12	1445	11 12 70	1445	1545	300	38
4644	1	70 11 18	1445	11 18 70	1445	1545	307	39
7916	1	70 11 20	1445	11 20 70	1445	1547	310	40
3595	1	70 11 23	1455	11 23 70	1455	1555	311	41
4396	1	70 11 24	1415	11 24 70	1415	1515	314	42
9683	1	70 11 25	1445	11 25 70	1445	1545	316	43
7666	1	70 12 1	1400	12 1 70	1400	1500	322	44
4024	1	70 12 3	1452	12 3 70	1452	1552	324	45

TEST NUMBER	BALLOON NUMBER	FPS-16 RELEASE DATE YY MM DD	FPS-16 RELEASE HOUR	JIMSONDE RELEASE DATE MM DD YY	JIMSONDE RELEASE HOUR	HOUR TEST ENDS	SENSOR NUMBER	FILE NUMBER
4897	1	70 12 17	1445	12 17 70	1445	1545	171	46
4621	1	70 12 21	1445	12 21 70	1445	1546	170	47
3777	1	70 12 22	1445	12 22 70	1445	1545	151	48
6663	1	70 12 24	1445	12 24 70	1445	1545	176	49
5798	1	70 12 29	1445	12 29 70	1445	1545	194	50
4273	1	70 12 30	1445	12 30 70	1445	1545	178	51
5774	1	71 1 6	1450	1 6 71	1450	1550	242	52
6583	1	71 1 7	1445	1 7 71	1445	1530	243	53
895	1	71 1 12	1445	1 12 71	1445	1545	247	54
4348	1	71 1 15	1500	1 15 71	1500	1600	248	55
4955	1	71 2 9	1445	2 9 71	1445	1545	270	56
9672	1	71 2 17	1455	2 17 71	1455	1555	581	57
4450	1	71 2 18	1445	2 18 71	1445	1545	597	58
5763	1	71 2 25	1455	2 25 71	1455	1555	304	59
1573	1	71 3 5	1400	3 5 71	1400	1500	328	60
1590	1	71 3 9	1445	3 9 71	1445	1545	331	61
7729	1	71 6 1	1423	6 1 71	1423	1523	529	62
8652	1	71 6 3	1415	6 3 71	1415	1515	557	63
6764	1	71 6 18	1450	6 18 71	1450	1550	530	64
4122	1	71 7 14	1530	7 14 71	1530	1630	673	65
5775	1	71 7 22	1315	7 22 71	1315	1415	667	66
9490	1	71 7 23	1415	7 23 71	1415	1515	656	67
163	1	71 8 10	1515	8 10 71	1515	1615	654	68
2592	1	71 8 20	1415	8 20 71	1415	1515	645	69
1307	1	71 10 21	1415	10 21 71	1415	1519	735	70
4016	1	71 12 7	1515	12 7 71	1515	1554	438	71
6654	1	71 12 23	1515	12 23 71	1515	1630	816	72
6658	1	72 1 13	1525	1 13 72	1525	1641	811	73
2627	1	72 1 24	1515	1 24 72	1515	1630	719	74
4755	1	72 2 1	1515	2 1 72	1515	1631	820	75
4635	1	72 2 2	1445	2 2 72	1445	1600	815	76
4190	1	72 2 7	1516	2 7 72	1516	999999	737	77
4757	1	72 2 10	1515	2 10 72	1515	1630	817	78
2355	1	72 2 14	1550	2 14 72	1550	1705	812	79
2757	1	72 2 15	1515	2 15 72	1515	1630	822	80
4356	1	72 2 17	1515	2 17 72	1515	1530	895	81
2671	1	72 2 23	1515	2 23 72	1515	1630	893	82
5470	1	72 3 7	1525	3 7 72	1525	1626	722	83
4051	1	72 3 10	1645	3 10 72	1645	1905	717	84
8193	1	72 3 17	1545	3 17 72	1545	1700	885	85
6177	1	72 3 20	1515	3 20 72	1515	1645	889	86
7234	1	72 3 21	1515	3 21 72	1515	1630	897	87
8755	1	72 4 3	1525	4 3 72	1525	1640	715	88
5946	1	72 4 5	1525	4 5 72	1529	1640	886	89
2950	1	72 4 14	1515	4 14 72	1515	1631	851	90

•••••••••••• FPS-16 ••••••••••••						•••••••••••• JIMSONDE ••••••••••••				
		RELEASE				RELEASE				
TEST NUMBER	BALLOON NUMBER	DATE YY	MM	DD	RELEASE HOUR	DATE MM	DD	YY	RELEASE HOUR	HOUR TEST ENDS	SENSOR NUMBER	FILE NUMBER
8837	1	72	4	17	1515	4	17	72	1515	1630	858	91
7353	1	72	4	20	1518	4	20	72	1518	1633	849	92
46	1	72	4	21	1515	4	21	72	1515	1630	856	93
5784	1	72	5	1	1430	5	1	72	1430	1546	879	94
6272	1	72	5	4	1430	5	4	72	1430	1545	862	95
7746	1	72	5	17	1430	5	17	72	1430	1545	873	96
1541	1	72	7	3	1430	7	3	72	1430	1530	414	97
9820	1	72	7	10	1432	7	10	72	1432	1547	409	98
5762	1	72	7	13	1700	7	13	72	1700	1845	429	99

APPENDIX B

A Composite Report of All White Sands Missile Range (WSMR) Jimsonde Temperature Profiles

RUN DATE JAN 4 1979 JIMSONDE DATA INPUT REEL NR 70758 PAGE 1

•••••••••••• FPS-16 •••••••••••• •••••••••••• JIMSONDE ••••••••••••

TEST NUMBER	BALLOON NUMBER	RELEASE DATE YY MM DD	RELEASE HOUR	RELEASE DATE MM DD YY	RELEASE HOUR	HOUR TEST ENDS	SENSOR NUMBER	FILE NUMBER
16	1	72 11 8	1330	11 8 72	1330	1430	1148	1
33	1	73 1 19	2000	1 19 73	2000	2100	1163	2
36	1	73 1 31	1745	1 31 73	1745	1830	1059	3
39	1	73 2 2	1432	2 2 73	1431	1532	1054	4
40	1	73 2 2	1630	2 2 73	1630	1720	1053	5
66	1	73 4 27	1730	4 27 73	1730	1902	1064	6
69	1	73 5 4	1600	5 4 73	1630	1705	1061	7
75	1	73 5 18	1700	5 18 73	1700	1805	1167	8
145	1	74 2 4	1645	2 4 74	1645	1745	1077	9
149	1	74 2 22	2000	2 22 74	2033	2100	23243	10
153	1	74 3 11	1930	3 11 74	1930	2030	23245	11
155	1	74 3 18	1615	3 18 74	1615	1715	23248	12
157	1	74 3 29	1545	3 29 74	1545	1645	23252	13
162	1	74 5 31	1645	5 31 74	1645	1745	23256	14
164	1	74 6 5	1930	6 5 74	1930	2000	1172	15
165	1	74 6 7	1615	6 7 74	1615	1715	23257	16
167	1	74 6 13	1600	6 13 74	1630	1700	23258	17
168	1	74 6 20	1630	6 20 74	1630	1730	23259	18
169	1	74 6 25	1745	6 25 74	1745	1840	23227	19
170	1	74 6 27	1645	6 27 74	1645	1745	23226	20
171	1	74 7 1	1530	7 1 74	1530	1630	23222	21
172	1	74 7 3	1800	7 3 74	1800	1900	23230	22
173	1	74 7 9	1800	7 9 74	1800	1900	23231	23
174	1	74 7 11	1500	7 11 74	1500	1600	23223	24
175	1	74 7 16	1800	7 16 74	1800	1900	23225	25
181	1	74 8 6	1630	8 6 74	1630	1730	23235	26
183	1	74 8 13	1715	8 13 74	1715	1815	23236	27
184	1	74 8 15	1700	8 15 74	1700	1800	23238	28
188	1	74 8 29	1630	8 29 74	1630	1730	2327	29
190	1	74 9 10	1600	9 10 74	1600	1700	23211	30
191	1	74 9 17	1700	9 17 74	1700	1800	2321	31
193	1	74 9 26	1630	9 26 74	1630	1730	2323	32
200	1	74 11 12	1700	11 12 74	1700	1800	23214	33
201	1	74 11 14	1700	11 14 74	1700	1800	23215	34
202	1	74 11 20	1930	11 20 74	1930	2030	23216	35
206	1	74 12 17	1600	12 17 74	1600	1700	23220	36
207	1	74 12 19	1730	12 19 74	1730	1815	1097	37

APPENDIX C

Source Listing of Program to Interrogate Jimsonde Master Files

```
$FOR,IS  MAINOK,MAINOK
HSA  E3 -03/16/78-21:18:46 (,0)

   MAIN PROGRAM

   STORAGE USED: CODE(1) 000232; DATA(0) 002333; BLANK COMMON(2) 000000

   EXTERNAL REFERENCES (BLOCK, NAME)

     0003   PEELNU
     0004   SCLOCK
     0005   NOCODS
     0006   NIRAN
     0007   NINTRS
     0010   NIOJS
     0011   NIOZS
     0012   NWOUS
     0013   NIOIS
     0014   NSTOPS

   STORAGE ASSIGNMENT  (BLOCK, TYPE, RELATIVE LOCATION, NAME)

     0000   002134 1F      0000   002127 10F     0000   002143 2F      0001   000074 200L    0001   000033 25L
     0000   002164 3F      0001   000132 300L    0000   002175 4F      0001   000142 400L    0001   000151 450L
     0000   002204 5F      0001   000210 500L    0000   002217 6F      0001   000224 600L    0001   000226 900L
     0000 R 000427 A       0000 R 002112 CDATE   0000 R 002114 ESEC    0000 R 002115 E60SEC   0000 R 002073 FILE1
     0000 I 002126 I       0000 I 000000 IA      0000 I 002070 IDATE   0000 I 002121 IEOF     0000 I 002124 IER1
     0000 I 002125 IER2    0000 I 002075 MON     0000 I 002122 NFILE   0000 I 002117 NLINES   0000 I 002116 NMO
     0000 I 002120 NPAGE   0000 I 002123 NREC    0000 R 002111 REEL1   0000 R 002113 TIME

C-1

00101      1*          DIMENSION IA(279)                                          000000
00103      2*          DIMENSION A(801)                                           000001
00104      3*          DIMENSION IDATE(3)                                         000001
00105      4*          DIMENSION FILE1(2)                                         000001
00106      5*          DIMENSION MON(12)                                          000001
00107      6*          DATA MON/'JAN','FEB','MAR','APR','MAY','JUN','JUL','AUG','SEP','OC  000001
00107      7*         1T','NOV','DEC'/                                            000001
00111      8*          DATA FILE1/'1          '/                                  000001
00113      9*          CALL REELNU(FILE1,REEL1)                                   000001
00114     10*          CALL SCLOCK(CDATE,TIME,ESEC,E60SEC)                        000005
00115     11*          DECODE (10,CDATE) IDATE                                    000013
00120     12*       10 FORMAT (3I2)                                               000023
00121     13*          NMO = IDATE(1)                                             000023
00122     14*          NLINES = 0                                                 000025
00123     15*          NPAGE = 1                                                  000026
00124     16*          IEOF = 0                                                   000030
00125     17*          NFILE = 0                                                  000031
00126     18*       25 CONTINUE                                                   000033
00127     19*          NFILE = NFILE +1                                           000033
00130     20*          NREC = 0                                                   000035
00131     21*      100 CONTINUE                                                   000036
```

```
00132    22*          NREC = NREC + 1                                                    000036
00132    23*     C                                                                       000036
00132    24*     C*************************************************************        000036
00132    25*     C  READ FIRST 279 WORDS FIXED POINT BINARY                  *          000036
00132    26*     C*************************************************************        000036
00132    27*     C                                                                       000036
00133    28*          CALL NTRAN(1,2,279,IA,IER1,22)                                     000036
00134    29*          IF (IER1 .EQ. 279) GO TO 200                                       000041
00134    30*     C                                                                       000051
00134    31*     C*************************************************************        000051
00134    32*     C  CHECK FOR END OF FILE                                    *          000051
00134    33*     C*************************************************************        000051
00134    34*     C                                                                       000051
00136    35*          IF (IER1 .EQ. -2) GO TO 300                                        000051
00136    36*     C                                                                       000054
00136    37*     C*************************************************************        000054
00136    38*     C  WRITE ERROR CODE, RECORD NUMBER AND FILE NUMBER          *          000054
00136    39*     C*************************************************************        000054
00136    40*     C                                                                       000054
00140    41*          WRITE (6,1) IER1, NREC, NFILE                                      000054
00145    42*        1 FORMAT(1H1,'***ERROR =  ',I5, ' ON RECORD ',I5, '  OF FILE    '   000057
00145    43*         1,I5)                                                             000067
00145    44*     C                                                                       000067
00145    45*     C*************************************************************        000067
00145    46*     C  WIPE OUT ERROR CODE                                      *          000067
00145    47*     C*************************************************************        000067
00145    48*     C                                                                       000067
00146    49*          CALL NTRAN (1,22)                                                  000067
00147    50*        200 CONTINUE                                                         000067
00150    51*          NREC = NREC + 1                                                    000074
00150    52*     C                                                                       000074
00150    53*     C*************************************************************        000074
00150    54*     C  READ RECORDS 2 THRU 15 INTO ARRAY A (801 WDS)            *          000074
00150    55*     C*************************************************************        000074
00150    56*     C                                                                       000074
00151    57*          CALL NTRAN (1,2,801,A,IER2,22)                                     000074
00152    58*          IF (IER2 .EQ. 801) GO TO 600                                       000076
00152    59*     C                                                                       000106
00152    60*     C*************************************************************        000106
00152    61*     C  END OF FILE CHECK FOR RECORDS 2 THRU 15                  *          000106
00152    62*     C*************************************************************        000106
00152    63*     C                                                                       000106
00154    64*          IF (IER2 .EQ. -2) GO TO 400                                        000106
00154    65*     C                                                                       000111
00154    66*     C*************************************************************        000111
00154    67*     C  WRITE ERROR CODE (FOR RECORDS 2-15), RECORD NUMBER AND FILE NUMBER  *000111
00154    68*     C*************************************************************        000111
00154    69*     C                                                                       000111
00156    70*          WRITE (6,2) IER2, NREC, NFILE                                      000111
00163    71*        2 FORMAT(1H1, '***ERROR ON RECORDS 2 THRU 15 ERROR CODE =  ',I5,'   000114
00163    72*         1 ON RECORD  ',I5, '  OF FILE  ', I5)                             000124
00163    73*     C                                                                       000124
00163    74*     C*************************************************************        000124
00163    75*     C  WIPE OUT ERROR CODE                                      *          000124
00163    76*     C*************************************************************        000124
00163    77*     C                                                                       000124
                                                                                        000124
```

```
00164    79*        CALL NTRAN (1,22)                                                    000124
00165    79*        GO TO 200                                                            000130
00166    80*      300 CONTINUE                                                           000132
00166    81*      C                                                                      000132
00166    82*      C*************************************************************       000132
00166    83*      C  WRITE ERROR MESSAGE FOR END OF FILE ON 1ST RECORD          *       000132
00166    84*      C*************************************************************       000132
00166    85*      C                                                                      000132
00166    86*            IF (IEOF .NE. 0) GO TO 900                                     000132
00167    87*            WRITE (6,3)                                                    000133
00171    88*          3 FORMAT (1H1, '***ERROR FOUND END OF FILE ON RECORD NR 1***')   000140
00173    89*            GO TO 25                                                       000140
00174    89*        900 CONTINUE                                                       000142
00175    90*      C                                                                      000142
00175    91*      C*************************************************************       000142
00175    92*      C  CHECK FOR DOUBLE END OF FILE                               *       000142
00175    93*      C*************************************************************       000142
00175    94*      C                                                                      000142
00175    95*      C                                                                      000142
00176    96*            IF (IEOF .NE. 0) GO TO 900                                     000143
00200    97*            IF(MOD(NLINES,45) .EQ. 0) GO TO 500                            000151
00202    98*          450 CONTINUE                                                     000151
00202    99*      C                                                                      000151
00202   100*      C*************************************************************       000151
00202   101*      C  WRITE OUT RECORD FROM ARRAY IA                             *       000151
00202   102*      C*************************************************************       000151
00202   103*      C                                                                      000151
00203   104*            WRITE(6,4) (IA(I),I=1,6), (IA(I),I=30,33), IA(39), IA(40), NFILE 000151
00212   105*          4 FORMAT(1H ,2I6,I7,2I3,I7,I6,2I3,I7,2I10,I6)                    000167
00213   106*            NLINES = NLINES + 1                                            000167
00214   107*            IEOF = 1                                                       000172
00214   108*      C                                                                      000172
00214   109*      C*************************************************************       000172
00214   110*      C  CHECK FOR NUMBER OF RECORDS PER FILE AND WRITE MSG IF NE 15 PER FIL* 000172
00214   111*      C*************************************************************       000172
00214   112*      C                                                                      000174
00215   113*            IF(NREC .EQ. 16) GO TO 25                                      000174
00215   114*      C                                                                      000174
00215   115*      C*************************************************************       000174
00215   116*      C  EXCEPTION TO 15 RECORDS PER FILE                           *       000174
00215   117*      C*************************************************************       000174
00215   118*      C                                                                      000177
00217   119*            WRITE(6,5) NFILE, NREC                                         000206
00223   120*          5 FORMAT(1HO,'  FILE NUMBER  ', I5,'  CONTAINS  ', I5,'  RECORDS') 000206
00224   121*            GO TO 25                                                       000210
00225   122*          500 CONTINUE                                                     000210
00225   123*      C                                                                      000210
00225   124*      C*************************************************************       000210
00225   125*      C  WRITE HEADINGS IF LINE COUNT = 0 OR 45                     *       000210
00225   126*      C*************************************************************       000210
00225   127*      C                                                                      000210
00226   128*            WRITE (6,6) MON(NMO), IDATE(2), IDATE(3), REEL1, NPAGE         000222
00235   129*          6 FORMAT(1H1,'RUN DATE ',A3,I3,' 19',I2,4X,'JIMSONDE DATA',7X,'INPUT 000222
00235   130*           1 REEL NR ',A6,7X,'PAGE ',I3//                                  000222
00235   131*           21X,' ************ FPS-16 ************',2X,'************ JIMSONDE 000222
00235   132*           3************'/18X,'RELEASE',12X,'RELEASE',/                     000222
00235   133*           42X,'TEST   BALLOON   DATE',5X,'RELEASE   DATE',5X,'RELEASE',5X,'HO 000222
```

```
00235    134*          SUR   SENSOR  FILE*/                                                    000222
00235    135*          62X,*NUMBER NUMBER   YY MM DD   HOUR*,4X,*MM DD YY   HOUR*,4X,*TEST   000222
00235    136*          7 ENDS NUMBER  NUMBER*//)                                              000222
00236    137*           GO TO 450                                                             000222
00237    138*      600 CONTINUE                                                               000224
00240    139*          IEOF = 0                                                              000224
00241    140*          GO TO 200                                                             000224
00242    141*      900 CONTINUE                                                               000226
00243    142*          STOP                                                                  000226
00244    143*          END                                                                   000231

      END OF COMPILATION:  NO DIAGNOSTICS.

@PREP
FURPUR 27R3AE33 SL73R1 03/16/78 21:19:09
END PREP.
```