

1. DATE - TIME GROUP 7 Sept 64 08/0306Z	2. LOCATION Whiteman AFB, Missouri
3. SOURCE Military	10. CONCLUSION INSUFFICIENT DATA FOR EVALUATION
4. NUMBER OF OBJECTS One	
5. LENGTH OF OBSERVATION One Hour	11. BRIEF SUMMARY AND ANALYSIS Object changing course moving with wind. Observed as a bright light to South of several Missile sites. In sight for over one hour. Kept changing course. Report as low (200 ft). Efforts by mobile team to close on object failed. Chase turned over to civil authorities. Object described as a blue light size and brightness of auto headlight. At one time reported to appear to explode in mid air. Kept moving and reported to be as low as 20 ft off ground at one of the sites.
6. TYPE OF OBSERVATION Ground-Visual	
7. COURSE Erratic	
8. PHOTOS ☐ Yes ☒ No	COMMENTS: Object apparently moving with wind. Definite track of object as observed not included with the report. Sighting indicates a possible balloon at low altitude with light attached. Insufficient data for a firm analysis. No report from the civil authorities who continued chase of object and no flight path of object included with the report.
9. PHYSICAL EVIDENCE ☐ Yes ☒ No	

COLUMBIA, MO.
38° 58' N 92° 22' W
T-90th Meridian El. 238
Rawinsonde WBRT-57

U.S. DEPARTMENT OF COMMERCE
WEATHER BUREAU

WINDS-ALOFT COMPUTATION SHEET (LAND STATION FORM)

WBAN-20

	Year	Month	Day	Time
Actual time th mer.	1964	SEP	5	1215
Scheduled (G.M.T.)	1964	SEP	6	20
Ascension No.	025			

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2

Slant range (M.) (yds.)	Pibal ht. above sfc. (m.)	Minute	Raw in ht. above surface (m.)	Elevation angle°		Distance from observation point (m.)	Azimuth angle °	Minute	Wind	
	100- gram			Observed	Smoothed				Direction° 360°= N	Speed (m.p.s.)
	14570	51	17420	17.25		39500	256.2	51		
	14860	52		17.15			256.3	52	261	23.0
	15145	53	13020	17.05		41800	256.6	53		
	15425	54	13280	16.75		43500	256.7	54	260	25.0
	15705	55	12630	16.55		45100	256.8	55		
	15985	56	13880	16.45		46400	256.8	56	260	24.5
	16265	57		16.20			256.9	57		
	16545	58	14420	16.00		49400	257.2	58	262	21.0
	16825	59		16.00			257.6	59		
	17105	60	14920	15.95		51400	257.7	60	264	16.5
	17385	61		15.90			257.7	61		
	17670	62	15440	15.80		53300	257.8	62	268	13.0
	17950	63		16.00			258.2	63		
	18235	64	15980	16.10		54450	258.2	64	274	8.5
	18515	65		16.25			258.3	65		
	18795	66	16520	16.45		55000	258.5	66	275	8.0
	19080	67		16.55			258.8	67		
	19360	68	17200	16.70		56400	258.8	68	266	8.5
	19645	69		16.90			258.6	69		
	19925	70	17890	17.10		57200	258.5	70	248	6.5
	20210	71		17.30			258.4	71		
	20490	72	18500	17.50		57700	258.2	72	242	5.5
	20775	73		17.65			258.0	73		
	21055	74	19100	17.80		58500	258.1	74	244	6.0
	21340	75		17.95			258.1	75		
	21620	76	19780	18.15		59300	258.0	76	258	5.0
	21905	77		18.35			258.1	77		
	22185	78	20420	18.20		59500	256.2	78	89	4.0
	22470	79		18.95			258.1	79		
	22750	80	20980	19.25		59200	258.0	80	81	4.0
	23040	81		19.60			257.9	81		
	23320	82	21580	19.55		58800	258.0	82	72	2.5
	23600	83		20.2			258.1	83		
	23880	84	22200	20.4		58500	258.2	84	53	2.0
	24160	85		20.7			258.3	85		
	24440	86	22820	21.0		58200	258.5	86	43	2.0

Slant range (m.) (yds.)	Minute	Rawin ht. above surface (m.)	Elevation angle° Observed	Smoothed	Distance from observation Point (m.)	Azimuth angle °	Minute	Direction° 360° = N	Wind Speed (m.p.s.)
	106						106		
	107						107		
	108						108		
	109						109		
	110						110		
	111						111		
	112						112		
	113						113		
	114						114		
	115						115		

*Stamp the following:

1. Name of Station
2. Lat. and long.
3. Local Standard time, _____ meridian
4. El. of S
5. Method of obs., e. rawinson, rawin, p
6. Type of equip., WBRT-5, GMD-1A, SCR-65, theodal

Altitude:
in km., m.

Punched Card Data

Card No. 3			Card No. 4		
Type of	Altitude #	Direction (degrees)	Type of	Altitude #	Direction (degrees)
		Speed (m.p.s.)			Speed (m.p.s.)

20210	71		17.30						
20490	72	18500	17.50		57700	258.2	72	242	5.5
20775	73		17.65			258.0	73		
21055	74	19100	17.80		58500	258.1	74	244	6.0
21340	75		17.95			258.1	75		
21620	76	19780	18.15		59300	258.0	76	258	5.0
21905	77		18.35			258.1	77		
22185	78	20420	18.70		59500	258.2	78	89	4.0
22470	79		18.95			258.1	79		
22750	80	20980	19.25		59200	258.0	80	81	4.0
23040	81		19.60			257.9	81		
23320	82	21580	19.85		58800	258.0	82	72	2.5
23600	83		20.2			258.1	83		
23880	84	22200	20.4		58500	258.2	84	53	2.0
24160	85		20.7			258.3	85		
24440	86	22830	21.0		58200	258.5	86	49	2.0
24730	87		21.5			258.6	87		
25010	88	23470	21.8		58000	258.4	88	76	1.5
25300	89		22.1			258.2	89		
25580	90	24140	22.3		57900	258.2	90	134	3.0
25860	91		22.6			258.1	91		
26140	92	24900	22.9		57800	258.0	92	158	3.5
26420	93		23.3			257.8	93		
26700	94	25640	23.6		57800	257.6	94	167	3.5
26980	95		24.0			257.6	95		
27260	96	26500	24.4		57600	257.4	96	165	3.0
27540	97		24.7			257.3	97		
27820	98	27300	25.0		57800	257.0	98	167	2.5
28100	99		25.3			256.9	99		
28380	100	28100	25.5		58000	256.9	100	169	2.5
28660	101		25.8				101		
28940	102						102		
29220	103						103		
29500	104	28370					104		
29780	105						105		

Minute	106	107	108	109	110	111	112	113	114	115
Slant range (m.) (yds.)										

Altitude in km., m.

Punched Card Data

Altitude#	Direction (degrees)	Speed (m.p.s.)	Card columns	Altitude#	Direction (degrees)	Speed (m.p.s.)
Card No. 3			15	Card No. 4		
Type of equipment	8		16	Type of equipment	8	
19	241	5	17-21	31		
20	255	5	22-26	32		
21	84	4	27-31	33		
22	68	2	32-36	34		
23	48	2	37-41	35		
24	94	2	42-46	36		
25	152	3	47-51	37		
26	167	4	52-56	38		
27	166	3	57-61	39		
28	169	3	62-66	40		
29			67-71	41		
30			72-76	42		

Maximum Wind Speed Data

Min. alt. wind speed 45 m.p.s. or more (m.)		
Alt. of maximum wind speed (m.)		
Dir. (degrees) and speed (m.p.s.) of Max. wind		
Max. alt. wind speed 45 m.p.s. or more (m.)		

Name of Station
Lat. and long.
Local Standard time, _____
meridian

El. of Station
Method of obs., e.g.,
rawinsonde, rawin, pibal

Type of equip., e.g.,
WBRT-57,
GMD-1A,
GMD-1,
SCR-638,
theodolite

Alt. for
150 & 300 m.
are with
respect to
ground, alt.
for other
standard levels
are in km., msl.

*Identification

COLUMBIA, MO.
38° 58' N 92° 22' W
LST-00th Meridian El. 238
Rawinsonde WBRT-57

U.S. DEPARTMENT OF COMMERCE
WEATHER BUREAU

WINDS-ALOFT COMPUTATION SHEET
(LAND STATION FORM)
WBAN-20

Actual time th mer. 1964 SEP 6
Scheduled (G.M.T.) 1964 SEP 6
Ascension No. 927

Type of balloon 600 G

Slant range (m.) (yds.)	Pibal ht. above sfc. (m.) 30 gram 100 gram	Minute	Rawin ht. above surface (m.)	Elevation angle °		Distance from observation point (m.)	Azimuth angle °	Minute	Wind	
				Observed	Smoothed				Direction ° 360° = N.	Speed (m.p.s.)
sfc.	130	3.1								
	216 350	1	240	213		620	155.2	1	170	12.4
	414 570	2	320	18.65		1450	169.6	2	181	14.8
	612 980	3	230	17.65		2280	178.2	3	199	13.0
	801 1285	4	960	18.15		2920	185.1	4	214	10.4
	990 1585	5	1170	19.90		3400	190.2	5	221	10.2
	1170 1880	6	1390	19.20		4000	195.6	6	224	11.4
	1350 2170	7	1620	19.55		4600	199.8	7	227	11.1
	1530 2455	8	1860	19.75		5200	203.3	8	229	11.3
	1710 2740	9	2100	19.65		5800	206.4	9	228	12.5
	1890 3020	10	2310	19.40		6600	208.6	10	227	12.3
	2070 3300	11	2530	19.10		7300	210.8	11	232	12.6
	2280 3580	12	2780	19.10		8000	212.9	12	235	12.4
	2430 3855	13	3020	19.05		8700	214.8	13	234	11.9
	2610 4130	14	3250	19.05		9350	216.0	14	229	13.0
	2790 4405	15	3500	18.80		10250	216.6	15	219	15.2
	2970 4675	16	3720	18.50		11200	216.5	16	216	14.4
	3180 4945	17	3940	18.15		12050	216.5	17	222	12.1
	3330 5210	18	4200	18.40		12650	217.3	18	239	11.6
	3510 5485	19	4460	18.50		13300	218.7	19	245	10.6
	3705 5765	20	4740	18.20		13800	219.7	20	251	9.6
	3905 6045	21	4980	18.10		14300	221.1	21	262	10.0
	4110 6325	22	5240	18.50		14750	222.7	22	268	10.4
	4320 6605	23	5510	18.80		15200	224.5	23	260	11.4
	4535 6885	24						24	249	11.5
	4755 7165	25						25	241	11.5
	4980 7445	26						26	241	15.0
	5210 7725	27						27		
	5445 8005	28						28		
	5685 8285	29						29		
	5930 8565	30						30		
	6175 8845	31						31		
	6425 9125	32						32		
	6680 9405	33	8110	19.05		23500	225.4	33		
	6940 9685	34		19.05			230.8	34	254	14.5
	7205 9965	35	8650	19.00		24400	231.6	35		
	7475 10245	36					231.9	36	256	13.0

Rawinsonde Time-Altitude Data

Contact	Pressure (mb.)	Altitude (m., m.s.l.)	Elapsed time (min.)
1.5	936	235	0.0
10	942	640	
15	878	1260	4.0
20	817	1850	7.0
25	758	2470	10.0
30	702	3110	12.0
35	648	3740	15.0
40	598	4420	18.0
45	549	5100	20.0
50	502	5800	23.0
55	459	6490	26.0
60	417	7210	28.0
65	379	7890	31.0
70	342	8620	34.0
75	307	9390	37.0
80	275	10150	39.0
85	244	11000	42.0
90	216	11800	45.0
95	190	12600	48.0
100	167	13400	52.0
105	144	14300	55.0
110	123	15220	58.0
115	105	16220	62.0
120	88	17280	65.0
125	72	18410	69.0
130	57	19710	74.0
135	42	21220	80.0
140	28	22820	86.0

Punched Card Data

Altitude	Direction (degrees)	Speed (m.p.s.)	Card columns	Altitude	Direction (degrees)	Speed (m.p.s.)
Card No. 1	15	Card No. 2				
Type of	16	Type of				

Computer: C. PARNES
Verifier: M. L. ANHAM

6485	19	2420	18.50	13300	219.7	19	249	15.0
6690	20	4710	18.20	13300	219.7	20	251	9.6
6756								
6670	21	4950	18.10	14300	221.1	21	262	10.0
6025								
4080	22	5240	19.50	14750	222.7	22	268	10.4
6298								
4230	23	5510	19.90	15200	224.5	23	260	11.4
6668								
4410	24	5800	19.70	15900	225.6	24	239	12.5
6835								
4590	25	6010	19.70	16000	225.7	25	232	15.5
7105								
4770	26	6300	19.45	17500	226.4	26	232	16.0
7375								
4950	27	6570	19.25	18200	226.5	27		
7645								
5190	28		19.30		227.2	28	241	11.5
7915								
5310	29	7040	19.25	20000	227.6	29		
8185								
5490	30		19.15		228.1	30	241	15.0
8455								
5670	31	7600	19.15	21750	228.6	31		
8730								
5850	32		19.10		229.2	32	248	14.0
9005								
6030	33	8110	19.05	23300	229.9	33		
9285								
6210	34		19.05		230.8	34	254	14.5
9565								
6390	35	8650	19.00	24900	231.6	35		
9850								
6570	36		18.90		232.3	36	256	13.0
10135								
6750	37	9170	18.95	26500	232.9	37		
10420								
6930	38		19.00		233.5	38	257	11.0
10710								
7110	39	9030	19.00	27700	234.2	39		
11005								
7290	40		19.20		234.8	40	260	14.0
11300								
7470	41	10230	19.10	29200	235.2	41		
11595								
7650	42		19.35		236.3	42	270	11.5
11890								
7830	43	10780	19.45	30300	237.1	43		
12185								
8010	44		19.50		238.0	44	276	12.5
12480								
8190	45	11300	19.60	31500	238.9	45		
12775								
8370	46		19.70		239.4	46	282	13.0
13075								
8550	47	11830	19.70	32750	240.8	47		
13375								
8730	48		19.65		241.6	48	271	15.0
13675								
8910	49	12330	19.66	34300	242.4	49		
13975								
9090	50		19.45		243.3	50	273	19.5
14275								

[illegible]

105	144	74000	55.5
110	123	15220	58.7
115	105	10220	62.0
120	88	17280	65.5
125	72	18480	69.6
130	57	19930	74.4
135	43	21770	80.0
140	28		
145	13		
150	34	23260	83.5

Punched Card Data													
Altitude #		Direction (degrees)		Speed (m.p.s.)		Card columns		Altitude #		Direction (degrees)		Speed (m.p.s.)	
Card No. 1						15		Card No. 2					
Type of equipment				8		16		Type of equipment				8	
sfc.	130	3		17-21		7	240	12		12		12	
150 M.	158	10		22-26		8	240	14		14		14	
300 M.	173	13		27-31		9	255	15		15		15	
0.5	168	13		32-36		10	258	12		12		12	
1.0	200	13		37-41		11	274	17		17		17	
1.5	227	10		42-46		12	270	14		14		14	
2.0	228	11		47-51		13	275	15		15		15	
2.5	228	13		52-56		14	270	15		15		15	
3	234	12		57-61		15	252	15		15		15	
4	217	14		62-66		16	248	15		15		15	
5	249	10		67-71		17	291	15		15		15	
6	243	12		72-76		18	302	15		15		15	

Maximum Wind Speed Data		
Min. alt. wind speed 45 m.p.s. or more (m.)		
Alt. of maximum wind speed (m.)		
Dir. (degrees) and speed (m.p.s.) of Max. wind		
Max. alt. wind speed 45 m.p.s. or more (m.)		
Enter check if additional levels appear on reverse side.		

Identification

COLUMBIA, MO.

38° 53' N 92° 22' W
LST-90th Meridian El. 238
Rawinsonde WBRT-57U.S. DEPARTMENT OF COMMERCE
WEATHER BUREAUWINDS-ALOFT COMPUTATION SHEET
(LAND STATION FORM)

WBAN-20

Year Month Day Time

Actual
time
th mer.

1964 SEP 6 0515

Scheduled
(G.M.T.)

1964 SEP 6 12

Ascension No.

927

Page
2

Slant range (M.) (yds.)	Pibal ht. above sfc. (m.)	Minute	Rawin ht. above surface (m.)	Elevation angle°		Distance from observation point (m.)	Azimuth angle °	Minute	Wind	
	100- gram			Observed	Smoothed				Direction° 360°= N	Speed (m.p.s.)
	14570	51	12960	19.4		36400	244.3	51		
	14860	52		19.35			245.1	52	270	16.0
	15145	53	13400	19.20		38100	245.5	53		
	15425	54	13720	19.05		39200	246.0	54	270	17.0
	15705	55	13980	18.90		40200	246.8	55		
	15985	56	14280	18.75		41200	247.2	56	262	18.7
	16265	57		18.60			247.5	57		
	16545	58	14860	18.45		43600	247.9	58	247	17.0
	16825	59		18.30			248.6	59		
	17105	60	15430	18.15		45300	249.3	60	238	12.6
	17385	61		18.00			249.9	61		
	17670	62	16000	17.85		46800	250.2	62	269	10.7
	17950	63		17.70			249.6	63		
	18235	64	16560	17.55		47800	249.4	64	294	12.4
	18515	65		17.40			249.1	65		
	18795	66	17240	17.25		48800	249.8	66	301	8.3
	19080	67		17.10			250.0	67		
	19360	68	17870	16.95		49000	250.0	68	301	2.5
	19645	69		16.80			250.0	69		
	19925	70	18470	16.65		49200	250.2	70	224	2.0
	20210	71		16.50			250.0	71		
	20490	72	19080	16.35		49500	249.6	72	197	5.5
	20775	73		16.20			249.2	73		
	21055	74	19720	16.05		49800	249.1	74	185	5.0
	21340	75		15.90			248.6	75		
	21620	76	20300	15.75		50100	248.5	76	179	4.0
	21905	77		15.60			248.4	77		
	22185	78	20930	15.45		50200	248.0	78	156	3.5
	22470	79		15.30			247.7	79		
	22750	80	21554	15.15		50200	247.5	80	148	1.5
	23040	81		15.00			247.5	81		
	23320	82	22240	14.85		50200	247.5	82	66	2.5
	23600	83	22600	14.70		50000	247.7	83		
	23880	84						84		
	24160	85						85		

Wind Direction° 360°= N	Speed (m.p.s.)											
Minute		106	107	108	109	110	111	112	113	114	115	
Azimuth angle °												
Distance from observation point (m.)												
Elevation angle°												
Observed												
Smoothed												
Rawin ht. above surface (m.)												
Minute		106	107	108	109	110	111	112	113	114	115	
Slant range (m.) (yds.)												

*Stamp the following:

1. Name of Station
2. Lat. and long.
3. Local Standard time, meridian
4. El. of S
5. Method obs., e. rawinsonde, rawin, p.
6. Type of equip., WBRT-5, GMD-1A, GMD-1, SCR-65, theodolite

Altitude in km., n

Punched Card Data

Altitude	Direction (degrees)	Speed (m.p.s.)	Card columns	Altitude	Direction (degrees)	Speed (m.p.s.)
Card No. 3			15	Card No. 4		

19360	68	11870	19.00						
19645	69		20.1						
19925	70	18470	20.4		49200	2332	70	224	2.0
20210	71		20.6			2500	71		
20490	72	19080	20.9		49300	249.6	72	197	5.5
20771	73		21.1			249.2	73		
21055	74	17770	21.3		49800	249.1	74	185	5.0
21340	75		21.5			248.6	75		
21620	76	20300	21.8		50100	248.5	76	179	4.0
21905	77		22.0			248.4	77		
22185	78	20930	22.4		50200	248.0	78	156	3.5
22470	79		22.7			247.7	79		
22750	80	21554	23.0		50200	247.5	80	148	1.5
23040	81		23.3			247.5	81		
23320	82	22240	23.7		50200	247.5	82	66	2.5
23600	83	22600	24.0		50000	247.7	83		
23880	84						84		
24160	85						85		
24440	86	22470					86		
24730	87						87		
25010	88						88		
25300	89						89		
25580	90						90		
25860	91						91		
26140	92						92		
26420	93						93		
26700	94						94		
26980	95						95		
27260	96						96		
27540	97						97		
27820	98						98		
28100	99						99		
28380	100						100		
28660	101						101		
28940	102						102		
29220	103						103		
29500	104						104		
29760	105						105		

Row in ht. above surface (m.)																				
Minute	106	107	108	109	110	111	112	113	114	115										
Slant range (m.) (yds.)																				

Altitude
in km., n

Punched Card Data

Altitude#	Direction (degrees)	Speed (m.p.s.)	Card columns	Altitude#	Direction (degrees)	Speed (m.p.s.)
Card No. 3			15	Card No. 4		
Type of equipment	8		16	Type of equipment	2	
19	213	4	17- 21	31		
20	186	5	22- 26	32		
21	161	4	27- 31	33		
22	133	2	32- 36	34		
23			37- 41	35		
24			42- 46	36		
25			47- 51	37		
26			52- 56	38		
27			57- 61	39		
28			62- 66	40		
29			67- 71	41		
30			72- 76	42		

Maximum Wind Speed Data

Min. alt. wind speed 45 m.p.s. or more (m.)		
Alt. of maximum wind speed (m.)		
Dir. (degrees) and speed (m.p.s.) of Max. wind		
Max. alt. wind speed 45 m.p.s. or more (m.)		

camp the
following:
Name of
Station
Lat. and
long.
Local
Standard
time, 90th
meridian
El. of Station
Method of
obs., e.g.,
rawinsonde,
rowin, pibal
Type of
equip., e.g.,
WBRT-57,
GMD-1A,
GMD-1,
SCR-658,
theodolite

Termination
Alt. for
150 & 300 m.
are with
respect to
ground, alt.
for other
standard levels
are in km., msl.

*Identification										U.S. DEPARTMENT OF COMMERCE WEATHER BUREAU		Year Month Day Time			
COLUMBIA, MO. 38° 58' N 92° 22' W LST-90th Meridian El. 238 Rawinsonde WBRT-57										WINDS-ALOFT COMPUTATION SHEET (LANDSTATION FORM) WBAN-20		1964 SEP 6 1715 1964 SEP 7 00 Ascension No. 929			
Type of balloon <u>Laete</u>										Orientation, 360° = South		Rawinsonde Time-Altitude Data			
Slant range (m.) (yds.)	Pibal ht. above sfc. (m.) 30 gram 100 gram	Minute	Rawin ht. above surface (m.)	Elevation angle °		Distance from observation point (m.)	Azimuth angle °	Minute	Wind		Con- tact	Pressure (mb.)	Altitude (m., m.s.l.)	Elapsed time (min.)	
				Observed	Smoothed				Direction ° 360° = N.	Speed (m.p.s.)					
	216	1	210	23.1		490	180.6	1	183	7.5	6.5	984	238	0.0	
	350										10	942	630	1.9	
	414	2	460	25.7		950	185.2	2	182	7.3	15	897	1250	4.4	
	620										20	814	1880	7.0	
	612	3	700	26.7		1390	182.1	3	179	7.7	25	754	2530	9.8	
	980										30	697	3160	12.8	
	801	4	980	27.7		1860	180.6	4	178	7.4	35	642	3840	15.8	
	1285										40	590	4530	18.7	
	990	5	1210	28.4		2220	180.3	5	174	7.0	45	539	5260	21.7	
	1585										50	491	6000	25.2	
	1170	6	1480	27.6		2720	178.7	6	177	8.0	55	446	6730	28.2	
	1880										60	403	7540	31.4	
	1350	7	1690	27.4		3240	179.3	7	180	8.2	65	361	8360	34.7	
	2170										70	324	9160	38.0	
	1530	8	1920	27.8		3610	179.2	8	180	7.0	75	287	10000	41.6	
	2455										80	253	10880	45.0	
	1710	9	2180	28.9		3910	179.5	9	183	6.1	85	222	11740	48.2	
	2740										90	194	12600	52.7	
	1890	10	2400	29.2		4290	181.7	10	186	6.3	95	168	13500	56.3	
	3020										100	143	14500	60.1	
	2070	11	2680	29.6		4670	180.7	11	183	5.8	105	122	15480	64.1	
	3300										110	102	16580	67.9	
	2250	12	2900	29.7		4970	180.3	12	188	4.0	115	85	17650	71.9	
	3580										120	70	18860	76.0	
	2430	13	3120	31.4		5100	181.6	13	199	2.3	125	56	20240	81.5	
	3855										130	43	21950	87.6	
	2610	14	3360	33.2		5200	181.7	14	262	1.5	135	31	24100	95.1	
	4130										140	19	27400	106.0	
	2790	15	3580	35.0		5100	183.3	15	276	3.8					
	4405														
	2970	16	3790	36.7		5000	186.6	16	262	4.2					
	4676														
	3150	17	4000	37.2		5250	189.5	17	241	6.4					
	4945														
	3330	18	4240	37.6		5550	191.2	18	241	6.5					
	5216														
	3510	19	4480	38.2		5700	194.6	19	249	6.0					
	5485														
	3690	20	4720	38.3		6000	197.2	20	237	6.2					
	5756														
	3870	21	4950	38.3		6300	199.1	21	232	6.2					
	6025														
	4080	22	5190	38.2		6550	200.2	22	225	6.0					
	6295														
	4230	23	5430	38.1		6950	201.4	23	222	6.4					
	6565														
	4410	24	5670	37.7		7400	202.7	24	225	7.2					
	6835														
	4590	25	5900	37.6		7750	204.3	25	234	6.0					
	7105														
	4770	26	6120	37.7		7950	206.2	26	240	6.0					
	7375														
	4950	27	6350	37.6		8300	207.8	27	232	6.8					
	7645														
	5130	28	6580	37.1		8700	208.2	28	226	7.6					
	7915														
	5310	29	6800	36.6		9200	209.2	29							
	8185														
	5490	30		36.2			210.5	30	235	8.0					
	8455														
	5670	31	7300	35.9		10100	211.8	31							
	8730														
	5850	32		35.6			213.4	32	243	9.0					
	9005														
	6030	33	7780	35.1		11000	215.0	33							
	9285														
	6210	34		34.5			216.7	34	243	12.0					
	9565														
	6390	35	8920	32.4		12300	218.4	35							

Punched Card Data					
Altitude #	Direction (degrees)	Speed (m.p.s.)	Card columns	Altitude #	Direction (degrees)

GMD-1A,
GMD-1,
SCR-658,
theodolite

Termination
Alt. for
150 & 300 m.
are with
respect to
ground, alt.
for other
standard levels
are in km., msl.

Bureau

Computer A. R. Brown
Verifier D. D. Linnick

3180	17	0400	37.0	5550	191.2	18	241	65
3195	18	4240	37.6	5700	194.6	19	247	60
3210	19	4450	38.2	6000	197.2	20	237	62
3510	20	4770	38.3	6300	199.1	21	232	62
3485	21	4950	38.3	6550	200.2	22	225	60
3690	22	5140	38.2	6950	201.4	23	221	64
3756	23	5470	38.1	7150	202.7	24	215	72
3870	24	5670	37.7	7500	204.5	25	234	60
3825	25	5900	37.6	7700	206.2	26	240	60
4080	26	6200	37.7	8300	207.8	27	232	68
4295	27	6350	37.6	8700	208.2	28	226	76
4230	28	6580	37.1	9200	209.2	29		
4565	29	6800	36.6		210.5	30	235	80
4410	30		36.2	10100	211.8	31		
4855	31	7300	35.9		213.4	32	243	90
4770	32		35.6	11000	215.0	33		
7375	33	7750	35.1		216.7	34	243	120
4050	34		34.5	12300	218.4	35		
7645	35	8220	33.8		219.8	36	245	136
5190	36		33.1	13750	221.1	37		
7915	37	8900	32.3		222.7	38	246	144
5310	38		31.5	15300	224.3	39		
8185	39	9180	30.7		225.4	40	237	150
5490	40		30.2	17100	226.0	41		
8455	41	9680	29.4		226.5	42	237	155
5670	42		28.7	19000	227.0	43		
8730	43	10120	28.0		227.7	44	238	165
6030	44		27.6	21000	228.4	45		
9005	45	10580	26.6		229.1	46	242	172.5
6030	46		26.0	23000	229.9	47		
9285	47	11050	25.5		230.9	48	244	170
6210	48		25.1	25000	231.5	49		
9565	49	11580	24.7		231.9	50	245	175
6390	50		24.3					
9850								
6570								
10135								
6750								
10420								
6930								
10710								
7110								
11005								
7290								
11300								
7470								
11695								
7650								
11890								
7830								
12185								
8010								
12480								
8190								
12775								
8370								
13075								
8550								
13375								
8730								
13675								
8910								
13975								
9090								
14275								

Coded Data for Transmission

PP92415	00951	2009	21814	1815	41814	1715	61816	1814	81812
1912	01809	22605	42412	62412	82211	02311	32315	52416	02528
52432	02433	52525	02521	32523	02521	92526	02512	42702	80905
01205	21506	60204	00910	00809	70607				

100	143	14500	60.7
105	122	15410	50.7
110	102	16580	67.7
115	85	17650	71.9
120	70	18860	76.4
125	56	20240	81.5
130	43	21950	87.6
135	31	24100	95.1
140	19	27400	106.0
			81
143	17	29828	114.6

Punched Card Data

Altitude #	Direction (degrees)	Speed (m.p.s.)	Card columns	Altitude #	Direction (degrees)	Speed (m.p.s.)
Card No. 1			15	Card No. 2		
Type of equipment	8	16	Type of equipment	8		
sfc.	210	4	17-21	7	229	8
150 M.	190	6	22-26	8	244	11
300 M.	182	7	27-31	9	246	14
0.5	184	7	32-36	10	236	16
1.0	179	8	37-41	11	242	18
1.5	175	7	42-46	12	245	18
2.0	179	8	47-51	13	245	13
2.5	184	6	52-56	14	250	15
3	185	5	57-61	15	254	16
4	265	4	62-66	16	253	16
5	236	6	67-71	17	251	11
6	229	7	72-76	18	255	9

Maximum Wind Speed Data

Min. alt. wind speed 45 m.p.s. or more (m.)		
Alt. of maximum wind speed (m.)		
Dir. (degrees) and speed (m.p.s.) of Max. wind		
Max. alt. wind speed 45 m.p.s. or more (m.)		
Enter check if additional levels appear on reverse side.		

Identification		COLUMBIA, MO. 38° 58' N 92° 22' W LST-90th Meridian El. 238 Rawinsonde WBRT-57		U.S. DEPARTMENT OF COMMERCE WEATHER BUREAU WINDS-ALOFT COMPUTATION SHEET (LAND STATION FORM) WBAN-20		Year Month Day Time 1964 SEP 6 1715 Scheduled (G.M.T.) 1964 SEP 7 00 Ascension No. 929			
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Slant range (M.) (yds.)	Pibal ht. above sfc. (m.)	Minute	Rawin ht. above surface (m.)	Elevation angle°		Distance from observation point (m.)	Azimuth angle °	Minute	Wind	
				Observed	Smoothed				Direction° 360°= N	Speed (m.p.s.)
	14570	51	17040	24.0		27900	232.3	51		
	14860	52		23.7			232.7	52	246	14.0
	15145	53	17510	23.5		28800	232.0	53		
	15425	54		23.3			233.1	54	246	13.0
	15705	55	18020	23.1		30400	232.7	55		
	15985	56	18250	22.9		31200	234.2	56	248	12.5
	16265	57	18540	22.8		32000	234.6	57		
	16545	58	18800	22.6		32900	235.1	58	250	14.5
	16825	59		22.4			235.5	59		
	17105	60	14300	22.2		34750	236.0	60	252	15.0
	17385	61		22.1			236.5	61		
	17670	62	14500	22.1		36100	237.0	62	254	11.0
	17950	63		22.1			237.3	63		
	18235	64	15020	22.2		37200	237.6	64	256	10.5
	18515	65		22.2			237.8	65		
	18795	66	15800	22.1		38500	238.2	66	253	12.0
	19080	67		22.1			238.4	67		
	19360	68	16220	22.0		39950	238.5	68	251	10.5
	19645	69		22.0			239.0	69		
	19925	70	16860	22.1		41000	239.4	70	252	11.0
	20210	71		22.2			239.5	71		
	20490	72	17540	22.2		42500	239.6	72	253	9.5
	20775	73		22.3			239.8	73		
	21055	74	18020	22.4		43300	240.2	74	256	6.5
	21340	75		22.6			240.5	75		
	21620	76	18600	22.7		44000	240.6	76	254	3.5
	21905	77		22.9			240.5	77		
	22185	78	19160	23.3		44200	240.4	78	249	1.5
	22470	79		23.6			240.3	79		
	22750	80	19700	23.7		44400	240.3	80	32	1.0
	23040	81		24.1			240.3	81		
	23320	82	20240	24.4		44200	240.0	82	79	2.5
	23600	83		24.7			239.6	83		
	23880	84	20780	25.0		44000	239.3	84	107	3.0
	24160	85		25.2			239.3	85		

Wind Direction° 360°= N	Speed (m.p.s.)	Minute	Azimuth angle °	Distance from observation Point (m.)	Elevation angle° Observed	Smoothed	Rawin ht. above surface (m.)	Minute	Slant range (m.) (yds.)
84	4.5	106	235.9	41400	33.2		27170	106	
		107	235.6		34.2			107	
95	6.0	108	235.3	40700	34.7		27730	108	
		109	235.2		35.1			109	
113	5.5	110	235.3	39800	35.3		28380	110	
		111	235.2		35.7			111	
129	4.0	112	234.9	39400	36.1		28920	112	
		113	235.2		36.4			113	
160	3.5	114	235.4	39000	36.9		29440	114	
		115						115	

Punched Card Data

Altitude#	Direction (degrees)	Speed (m.p.s.)	Card columns	Altitude#	Direction (degrees)	Speed (m.p.s.)
Card No. 3	15	Card No. 4				

- *Stamp the following:
1. Name of Station
 2. Lat. and long.
 3. Local Standard time, meridian
 4. El. of S
 5. Method obs., e. rawinsonde, rawin, p
 6. Type of equip., WBRT-5, GMD-1A, GMD-1, SCR-65, theodolite

Altitudes in km., n

19645	69		22.0		41000	239.0	69		
19925	70	16860	22.1		41000	239.0	70	252	11.0
20210	71		22.2			239.5	71		
20490	72	17540	22.2		42500	239.6	72	253	9.5
20775	73		22.3			239.8	73		
21055	74	18020	22.4		43300	240.2	74	256	6.5
21340	75		22.5			240.5	75		
21620	76	18600	22.7		44000	240.6	76	254	3.5
21905	77		22.8			240.5	77		
22185	78	19160	23.3		44200	240.4	78	249	1.5
22470	79		23.6			240.3	79		
22750	80	19700	23.7		44400	240.3	80	32	1.0
23040	81		24.1			240.3	81		
23320	82	20240	24.4		44200	240.0	82	79	2.5
23600	83		24.7			239.6	83		
23880	84	20780	25.0		44000	239.3	84	107	3.0
24160	85		25.2			239.3	85		
24440	86	21300	25.5		44200	239.4	86	129	3.0
24730	87		25.7			239.4	87		
25010	88	21850	26.0		44200	239.2	88	147	3.0
25300	89		26.3			239.0	89		
25580	90	22400	26.5		44300	238.0	90	76	1.0
25860	91		26.9			237.9	91		
26140	92	22940	27.2		44200	238.1	92	25	2.0
26420	93		27.4			238.5	93		
26700	94	23560	28.0		43800	238.4	94	77	4.0
26980	95		28.6			238.1	95		
27260	96	24130	29.1		43000	237.4	96	94	5.0
27540	97		29.5			236.9	97		
27820	98	24720	29.9		42600	236.9	98	92	4.0
28100	99		30.3			236.6	99		
28380	100	25300	30.6		42400	236.7	100	91	3.0
28660	101		31.0			236.8	101		
28940	102	25990	31.4		42000	236.8	102	70	3.0
29220	103		32.1			236.2	103		
29500	104	26540	32.3		41800	236.0	104	93	4.0
29780	105		33.1			236.0	105		

Rawin ht. above surface (m.)	27170	27730	28320	28920	29440	29670
Minute	106	107	108	109	110	111
Slant range (m.) (yds.)						

Altitudes
in km., n

Punched Card Data

Altitude#	Direction (degrees)	Speed (m.p.s.)	Card columns	Altitude#	Direction (degrees)	Speed (m.p.s.)
Card No. 3			15	Card No. 4		
Type of equipment	8	16	Type of equipment	8		
19	253	3	17- 21	31		
20	32	1	22- 26	32		
21	106	3	27- 31	33		
22	144	2	32- 36	34		
23	113	2	37- 41	35		
24	83	4	42- 46	36		
25	92	4	47- 51	37		
26	91	3	52- 56	38		
27	91	4	57- 61	39		
28	75	6	62- 66	40		
29	70	5	67- 71	41		
30			72- 76	42		

Maximum Wind Speed Data

Min. alt. wind speed 45 m.p.s. or more (m.)		
Alt. of maximum wind speed (m.)		
Dir. (degrees) and speed (m.p.s.) of Max. wind		
Max. alt. wind speed 45 m.p.s. or more (m.)		

WHITEMAN AFB, 7 Sep 64 *Missouri*

On 8 Sep 64 Hq USAF SAFOI PB (Helen) called regarding a sighting at Whiteman AFB on 7 Sep 64. UPI had asked them for information on sighting. Helen gave this information: Blue object 500 ft in air, speed 5 knots, & crashed in field, rose about 5 ft took off at 4 - 5 knots. This was reported by Highway Patrol. Air Force Security People on station at Whiteman had done reporting to Highway Patrol. *rose 20 ft in air*

On 8 Sep 64 call made to Whiteman AFB, Base Security Office, area code 816 Logan 3 5511. Spoke with Airman Farley. told him we were checking up on a UFO report. We have reports from Wash which we want to find out about. Call transfered to Wing (387). Spoke with Sgt Lemington. Last night at 2106 hours about 20 and 25 miles. Appeared about 200 ft in air. Similar reports. Directly South of original sighting. Col Baker said no action unless object intends penetration. Sgt Lemington said he would find out more information and give us a call right back after Maj Q informed him that the Secreaty of the Air Force needed this information in a hurry as someone had reported it to the UPI and associated press also had info on it.

10 Sep 64 placed a Call to Whiteman AFB, spoke with Command post. Sighting at 0336Z, 8 Sep 64, India reported sighting UFO, small blue light size of auto headlight. Also 5 other sighted south of Whiteman Moved ~~in~~ ~~South~~ towards Clington, Missouri about 20 ft off ground. Mobile Strike team sent ~~in~~ out. Looked like it was hovering over another site. State highway patrol notified. Always in South. Striketeam called back in. Seemed to be moving with wind. Wind to South. Ask command Post to find out lateral movement. Command post ext 3855.

WX ORDERED 9/22

Termination
Alt. for
150 & 300 m.
are with
respect to
ground, alt.
for other
standard levels
are in km., msl.

BURST

R.S. Voach

C. F. BARNES

2250	12	2000	19.60	8300	200.4	12	201	12.5
3580	13	3210	19.55	9000	200.9	13	208	10.8
2430	14	3430	19.75	9600	201.3	14	204	10.0
3855	15	3700	19.95	10200	201.2	15	194	10.0
2010	16	3930	20.0	10800	200.5	16	192	11.4
4130	17	4180	19.90	11500	200.1	17	190	12.6
2790	18	4410	19.80	12300	199.2	18	184	12.5
4405	19	4650	19.70	13000	198.3	19	186	11.1
2970	20	4910	19.75	13600	197.9	20	191	10.2
4675	21	5140	19.90	14200	197.7	21	192	9.1
3150	22	5400	20.2	14700	197.8	22	200	9.0
4945	23	5660	20.3	15300	197.9	23	202	9.0
3330	24	5900	20.5	15800	198.1	24	206	2.5
5215	25	6140	20.8	16500	198.4	25	213	6.0
3510	26	6400	21.2	16500	198.6	26	213	5.0
5485	27	6640	21.5	16800	198.9	27	208	6.2
3690	28	6900	21.6	17400	199.2	28	208	5.6
5755	29	7080	21.9	17500	199.3	29	1	
3870	30		22.1		199.0	30	198	5.3
6025	31	7560	22.4	18200	198.8	31		
4050	32		22.8		198.5	32	196	6.0
6295	33	8060	23.0	18900	198.8	33		
4230	34		23.3		199.1	34	219	6.2
6565	35	8550	23.5	19600	199.6	35		
4410	36		23.9		200.4	36	234	7.5
6835	37	9120	24.0	20400	201.1	37		
4590	38		24.2		201.2	38	230	8.8
7105	39	9670	24.2	21400	202.4	39	243	8.5
4770	40		24.3		203.1	40		
7375	41	10240	24.5	22200	204.1	41		
4950	42		25.1		204.2	42	245	6.4
7615	43	10540	25.4	22750	205.4	43		
5130	44		25.9		206.2	44	294	4.2
7915	45	11350	26.3	22750	206.9	45		
5310	46		26.7		207.6	46	273	6.0
8185	47	11930	27.2	23100	208.5	47		
5490	48		27.6		209.1	48	262	5.3
8455	49	12500	27.9	23500	209.8	49		
5670	50		28.3		210.8	50	273	7.0
8730								
5850								
9005								
6030								
9285								
6210								
9565								
6390								
9850								
6570								
10135								
6750								
10420								
6930								
10710								
7110								
11005								
7290								
11300								
7470								
11595								
7650								
11890								
7830								
12185								
8010								
12480								
8190								
12775								
8370								
13075								
8550								
13375								
8730								
13675								
8910								
13975								
9090								
14275								

Coded Data for Transmission

[illegible]

70	332	4950	35.2
75	298	9700	38.3
80	264	10550	41.3
85	234	11360	44.4
90	206	12180	47.5
95	180	13160	50.7
100	156	13950	53.9
105	135	14840	57.3
110	114	15860	60.7
115	97	16800	64.5
120	81	17860	68.2
125	66	19130	72.4
130	52	20610	77.1
135	39	22500	82.8
140	26	25180	90.1
145	12		1.3
No.	24	25661	91.6

Punched Card Data

Altitude #	Direction (degrees)	Speed (m.p.s.)	Card columns	Altitude #	Direction (degrees)	Speed (m.p.s.)
Card No. 1			15	Card No. 2		
Type of equipment		8	16	Type of equipment		8
sfc.	160	4	17-21	7	209	6
150 M.	179	9	22-26	8	198	6
300 M.	193	13	27-31	9	253	7
0.5	192	13	32-36	10	240	9
1.0	208	14	37-41	11	261	6
1.5	207	11	42-46	12	270	6
2.0	197	9	47-51	13	272	7
2.5	195	9	52-56	14	275	8
3	196	13	57-61	15	265	9
4	193	10	62-66	16	262	7
5	187	11	67-71	17	240	5
6	204	9	72-76	18	236	3

Maximum Wind Speed Data

Min. alt. wind speed 45 m.p.s. or more (m.)		
Alt. of maximum wind speed (m.)		
Dir. (degrees) and speed (m.p.s.) of Max. wind		
Max. alt. wind speed 45 m.p.s. or more (m.)		
Enter check if additional levels appear on reverse side.		

FORM 610-12
63)
COMM-WB-DC

Page

1

Stamp the following:
Name of Station
Lat. and long.
Local Standard time, 20th meridian
El. of Station
Method of obs., e.g., rawinsonde, rawin, pibal
Type of equip., e.g., WBRT-57, GMD-1A, GMD-1, SCR-658, theodolite

*Identification

COLUMBIA, MO.
38° 58' N · 92° 22' W
LST-00th Meridian El. 238
Rawinsonde WBRT-57

U.S. DEPARTMENT OF COMMERCE
WEATHER BUREAU

WINDS-ALOFT COMPUTATION SHEET
(LAND STATION FORM)

WBAN-20

	Year	Month	Day	Time
Actual time mer.	1964	SEP	7	0515
Scheduled (G.M.T.)	1964	SEP	7	12
Ascension No.	931			

Type of balloon Goocr

Orientation, 360° = South

Rawinsonde Time-Altitude Data

Slant range (m.) (yds.)	Pibal ht. above sfc. (m.) 30 gram 100 gram	Minute	Rawin ht. above surface (m.)	Elevation angle °		Distance from observation point (m.)	Azimuth angle °	Minute	Wind		Contact	Pressure (mb.)	Altitude (m., m.s.l.)	Elapsed time (min.)
				Observed	Smoothed				Direction ° 360° = N. sfc.	Speed (m.p.s.)				
	216 350	1	270	20.1		740	187.3	1	194	13.8	6.5	988	238	0.0
	414 670	2	520	17.35		1660	193.9	2	204	15.5	10	936	710	2.1
	612 980	3	770	16.95		2500	198.3	3	211	13.8	15	870	1360	4.7
	801 1285	4	1020	17.15		3300	202.3	4	215	12.5	20	807	2000	7.2
	990 1585	5	1280	17.80		4000	205.5	5	207	10.8	25	749	2630	9.9
	1170 1880	6	1520	18.25		4600	208.9	6	201	9.0	30	692	3280	12.6
	1350 2170	7	1760	19.10		5100	203.3	7	196	9.3	35	639	3940	15.3
	1530 2455	8	2020	19.55		5700	202.8	8	196	9.2	40	587	4620	18.1
	1710 2740	9	2260	20.0		6200	202.2	9	195	9.0	45	539	5290	20.9
	1890 3020	10	2480	20.1		6800	201.4	10	194	11.0	50	494	5980	23.6
	2070 3300	11	2730	19.90		7500	201.0	11	195	12.5	55	450	6680	26.5
	2250 3580	12	2960	19.60		8300	200.4	12	201	12.5	60	410	7390	29.4
	2430 3855	13	3210	19.55		9000	200.9	13	208	10.8	65	369	8200	32.3
	2610 4130	14	3430	19.75		9600	201.3	14	204	10.0	70	332	8930	35.4
	2790 4405	15	3700	19.95		10200	201.2	15	194	10.0	75	298	9700	38.3
	2970 4675	16	3950	20.0		10800	200.5	16	192	11.4	80	264	10550	41.3
	3150 4945	17	4180	19.90		11500	200.1	17	190	12.6	85	234	11360	44.4
	3330 5215	18	4410	19.80		12300	199.2	18	184	12.5	90	206	12180	47.5
	3510 5485	19	4650	19.70		13000	198.3	19	186	11.1	95	180	13160	50.7
	3690 5755	20	4910	19.75		13600	197.9	20	177	10.2	100	156	13950	53.9
	3870 6025	21	5140	19.70		14200	197.2	21	172	9.1	105	135	14840	57.7
											110	114	15860	60.2
											115	77	16300	64.5

Slant range (m.) (yds.)	Minute	Raw in ht. above surface (m.)	Elevation angle°	
			Observed	Smoothed
	106			
	107			
	108			
	109			
	110			
	111			
	112			
	113			
	114			
	115			

6. Type of equip., WBRT-5 GMD-1A GMD-1, SCR-658 theodolite

Altitudes
in km., n

Punched Card Data

Altitude#	Direction (degrees)	Speed (m.p.s.)	Card columns	Altitude#	Direction (degrees)	Speed (m.p.s.)
Card No. 3			15	Card No. 4		
Type of equipment			16	Type of equipment		
19	227	3	17- 21	31		
20	195	3	22- 26	32		
21	75	2	27- 31	33		
22	75	2	32- 36	34		
23	91	3	37- 41	35		
24	70	4	42- 46	36		
25	73	8	47- 51	37		
26			52- 56	38		
27			57- 61	39		
28			62- 66	40		
29			67- 71	41		
30			72- 76	42		

Maximum Wind Speed Data

Min. alt. wind speed 45 m.p.s. or more (m.)		
Alt. of maximum wind speed (m.)		
Dir. (degrees) and speed (m.p.s.) of Max. wind		
Max. alt. wind speed 45 m.p.s. or more (m.)		

Identification
COLUMBIA, MO.
38° 58' N 92° 22' W
LST-90th Meridian El. 238
Rawinsonde WBRT-57

U.S. DEPARTMENT OF COMMERCE
WEATHER BUREAU
WINDS-ALOFT COMPUTATION SHEET
(LAND STATION FORM)
WBAN-20

Actual time th mer.	Year	Month	Day	Time
	1964	SEP	7	0515
Scheduled (G.M.T.)	1964	SEP	7	12
Ascension No.	951			

Page
2

Slant range (M.) (yds.)	Pibal ht. above sfc. (m.)	Minute	Rawin ht. above surface (m.)	Elevation angle°		Distance from observation point (m.)	Azimuth angle °	Minute	Wind	
				Observed	Smoothed				Direction° 360°= N	Speed (m.p.s.)
	14570	51	13080	28.6		23900	211.8	51		
	14860	52	13380	29.0		24000	213.3	52	285	8.5
	15145	53	13620	29.3		24200	214.1	53		
	15425	54	13890	29.6		24500	215.0	54	274	8.0
	15705	55		29.7			216.0	55		
	15985	56	14380	29.8		25000	217.1	56	265	9.5
	16265	57		29.8			218.0	57		
	16545	58	14900	29.8		25900	218.8	58	263	9.5
	16825	59		29.8			219.8	59		
	17105	60	15430	29.8		26700	220.6	60	263	9.3
	17385	61		29.8			221.5	61		
	17670	62	15950	30.0		27500	222.1	62	250	6.5
	17950	63		30.2			222.3	63		
	18235	64	16490	30.4		27900	222.5	64	239	4.6
	18515	65		30.5			222.9	65		
	18795	66	17080	30.7		28600	222.7	66	241	5.5
	19090	67		30.8			223.1	67		
	19360	68	17700	31.1		29200	223.6	68	236	3.8
	19645	69		31.4			223.4	69		
	19925	70	18300	31.7		29500	223.6	70	224	2.6
	20210	71		31.9			223.6	71		
	20490	72	18920	32.2		29900	223.5	72	227	3.7
	20775	73		32.3			223.5	73		
	21055	74	19560	32.4		30600	223.5	74	224	3.6
	21340	75		32.6			223.5	75		
	21620	76	20100	32.9		30900	223.5	76	122	1.0
		77					223.5	77		

Wind Direction° 360°= N	Speed (m.p.s.)	Minute	Azimuth angle °	Distance from observation Point (m.)	Elevation angle° Observed	Smoothed	Rawin ht. above surface (m.)	Minute	Slant range (m.) (yds.)
		106						106	
		107						107	
		108						108	
		109						109	
		110						110	
		111						111	
		112						112	
		113						113	
		114						114	
		115						115	

*Stamp the following:
1. Name of Station
2. Lat. and long.
3. Local Standard time, meridian
4. El. of St
5. Method of obs., e.g. rawinsonde, rawin, p
6. Type of equip., WBRT-5, GMD-1A, GMD-1, SCR-65, theodolite

Altitude in km, m

Stamp the following:

Name of Station

Lat. and long.

Local Standard time, 90th meridian

El. of Station

Method of obs., e.g., rawinsonde, rawin, pibal

Type of equip., e.g., WBRT-57, GMD-1A, GMD-1, SCR-658, theodolite

*Identification COLUMBIA, MO. 38° 53' N 92° 22' W LST-90th Meridian El. 238 Rawinsonde WBRT-57				U.S. DEPARTMENT OF COMMERCE WEATHER BUREAU WINDS-ALOFT COMPUTATION SHEET (LAND STATION FORM) WBAN-20				<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th>Actual time</th> <th>Year</th> <th>Month</th> <th>Day</th> <th>Time</th> </tr> <tr> <td>20th mer.</td> <td>1964</td> <td>SEP</td> <td>7</td> <td>1715</td> </tr> <tr> <td>Scheduled (G.M.T.)</td> <td></td> <td>SEP</td> <td>8</td> <td>00</td> </tr> <tr> <td colspan="5">Ascension No. 425</td> </tr> </table>				Actual time	Year	Month	Day	Time	20 th mer.	1964	SEP	7	1715	Scheduled (G.M.T.)		SEP	8	00	Ascension No. 425				
Actual time	Year	Month	Day	Time																											
20 th mer.	1964	SEP	7	1715																											
Scheduled (G.M.T.)		SEP	8	00																											
Ascension No. 425																															
Type of balloon G00FRA# PA 322				Orientation, 360° = South				Rawinsonde Time-Altitude Data																							
Slant range (m.) (yds.)	Pibal ht. above sfc. (m.)	Minute	Rawin ht. above surface (m.)	Elevation angle °		Distance from observation point (m.)	Azimuth angle °	Minute	Wind		Contact	Pressure (mb.)	Altitude (m., m.s.l.)	Elapsed time (min)																	
	30 gram			100 gram	Observed				Smoothed	Direction ° 360° = N.					Speed (m.p.s.)																
	sfc.			100 gram																											
	216	1	230	32.2		370	204.4	1	207	8.1	LP	988	238	0.0																	
	350										10	994	740	2.0																	
	414	2	500	29.0		890	206.6	2	206	9.9	15	866	1410	4.6																	
	670										20	801	2080	7.5																	
	612	3	770	27.0		1500	207.6	3	204	10.0	25	740	2760	9.9																	
	980										30	681	3410	12.5																	
	801	4	1040	26.5		2090	203.2	4	196	10.1	35	627	4100	15.5																	
	1285										40	574	4800	18.5																	
	990	5	1290	25.9		2690	201.1	5	191	10.0	45	524	5540	21.4																	
	1585										50	477	6280	24.7																	
	1170	6	1560	25.4		3250	199.9	6	190	10.5	55	432	7030	27.7																	
	1880										60	390	7800	30.8																	
	1350	7	1800	24.3		3950	197.7	7	188	11.2	65	350	8609	33.9																	
	2170										70	314	9450	37.3																	
	1530	8	2050	23.7		4590	196.1	8	188	10.7	75	280	10190	40.4																	
	2455										80	246	11110	43.6																	
	1710	9	2280	23.8		5100	195.2	9	189	9.4	85	217	11950	46.9																	
	2740										90	190	12960	50.5																	
	1890	10	2540	24.0		5630	194.7	10	193	8.1	95	164	13680	54.2																	
	3020										100	141	14640	57.9																	
	2070	11	2800	24.4		6080	195.0	11	201	7.9	105	120	15600	61.8																	
	3300										110	101	16650	65.1																	
	2250	12	3050	24.5		6590	195.9	12	206	9.0	115	84	17740	68.8																	
	3580										120	69	18730	72.5																	
	2430	13	3280	24.4		7130	196.5	13	209	8.7	125	54	19720	76.2																	
	3855										130	41	20710	80.0																	
	2610	14	3500	24.4		7580	197.6	14	213	8.6	135	28	21660	83.9																	
	4130										140	14	22650	87.8																	
	2790	15	3780	24.2		8250	198.7	15	214	9.4																					
	4405																														
	2970	16	3990	24.1		8740	199.5	16	214	10.5																					
	4675																														
	3150	17	4250																												

Verifier

Coded Data for TransmissionPunched Card Data

Maximum Wind Speed Data

Min. alt. wind speed 45 m.p.s. or more (m.)		
Alt. of maximum wind speed (m.)		
Dir. (degrees) and speed (m.p.s.) of Max. wind		
Max. alt. wind speed 45 m.p.s. or more (m.)		
Enter check if additional levels appear on reverse side.		

17670	62	15.5					
17950	63		35.9		2287	63	
18235	64	16.140	35.9	22200	2294	64	250 7.0
18515	65		35.8		2302	65	
18795	66	16680	36.0	22800	2307	66	247 5.5
19080	67		36.2		2310	67	
19360	68	17220	36.4	23300	2312	68	243 5.0
19645	69		36.5		2306	69	
19925	70	17780	36.5	23900	2308	70	240 4.0
20210	71		36.6		2316	71	
20490	72	18300	37.1	24100	2316	72	239 3.0
20775	73		37.3		2313	73	
21055	74	18920	37.5	24550	2312	74	222 2.5
21340	75		37.7		2311	75	
21620	76	19520	38.3	24700	2308	76	198 3.5
21905	77		38.7		2313	77	
22185	78	20080	38.9	24800	2292	78	165 3.0
22470	79		39.0		2295	79	
22750	80	20700	39.1	25300	2293	80	157 2.0
23040	81		39.5		2295	81	
23320	82	21300	40.1	25300	2295	82	150 1.5
23600	83		40.5		2293	83	
23880	84	21900	40.9	25200	2291	84	122 2.0
24160	85		41.3		2290	85	
24440	86	22480	41.8	25050	2289	86	85 3.0
24730	87		42.0		2291	87	
25010	88	23080	43.3	24400	2292	88	58 6.0
25300	89		44.1		2288	89	
25580	90	23620	44.9	23600	2283	90	18 6.5
25860	91		45.5		2277	91	
26140	92	24350	46.1	23250	2277	92	75 4.0
26420	93		46.8		2273	93	
26700	94	25240	47.5	23000	2275	94	78 4.5
26980	95		48.4		2269	95	
27260	96	25920	49.2	22300	2259	96	85 6.5
27540	97		49.9		2251	97	
27820	98	26500	50.5	21700	2241	98	94 5.5
28100	99		51.0		2230	99	
28380	100	27140	51.3	21500	2226	100	102 4.0
28660	101		51.9		2222	101	
28940	102	27800	52.5	21300	2219	102	96 3.0
29220	103		52.9		2218	103	
29500	104	28480	53.5	21000	2213	104	66 4.0
29780	105		54.2		2214	105	

Elevation angle	Observed	Smoothed
Rowin	550	555
ht. above surface (m.)	29080	29680
Minute	106	107
Slant range (m.) (yds.)	108	109
	110	111
	112	113
	114	115

6. Type of equip.,
WBRT-5
GMD-1A
GMD-1,
SCR-65
theodol

* Altitude
in km.,

Punched Card Data

Altitude#	Direction (degrees)	Speed (m.p.s.)	Card columns	Altitude#	Direction (degrees)	Speed (m.p.s.)
Card No. 3			15	Card No. 4		
Type of equipment	8	16	Type of equipment	8		
19 224	2	17-21 31	57	5		
20 171	4	22-26 32				
21 156	2	27-31 33				
22 130	2	32-36 34				
23 70	4	37-41 35				
24 69	7	42-46 36				
25 76	4	47-51 37				
26 82	6	52-56 38				
27 98	5	57-61 39				
28 100	3	62-66 40				
29 57	5	67-71 41				
30 45	5	72-76 42				

Maximum Wind Speed Data

Min. alt. wind speed 45 m.p.s. or more (m.)		
Alt. of maximum wind speed (m.)		
Dir. (degrees) and speed (m.p.s.) of Max. wind		
Max. alt. wind speed 45 m.p.s. or more (m.)		

Identification

COLUMBIA, MO.
38° 58' N 92° 22' W
LST-90th Meridian El. 238
Rawinsonde WBRT-57

U.S. DEPARTMENT OF COMMERCE
WEATHER BUREAU

WINDS-ALOFT COMPUTATION SHEET
(LAND STATION FORM)

WBAN-20

	Year	Month	Day	Time
Actual time with mer.	1964	SEP	7	1715
Scheduled (G.M.T.)	1964	SEP	8	00
Ascension No.	933			

Page
2

Slant range (M.) (yds.)	Pibal ht. above sfc. (m.)	Minute	Rawin ht. above surface (m.)	Elevation angle°		Distance from observation point (m.)	Azimuth angle °	Minute	Wind	
	100- gram			Observed	Smoothed				Direction° 360°= N	Speed (m.p.s.)
	14570	51	12710	33.7		18800	218.4	51		
	14860	52		34.0			219.2	52	280	4.0
	15145	53	13230	34.4		19200	219.9	53		
	15425	54	13490	34.6		19430	220.4	54	278	5.5
	15705	55	13750	35.0		19670	221.6	55		
	15985	56	14020	35.2		19900	223.2	56	279	7.5
	16265	57		35.6			225.5	57		
	16545	58	14520	36.0		20000	226.8	58	285	9.0
	16825	59		36.1			227.3	59		
	17105	60	15020	36.0		20600	227.6	60	280	5.0
	17385	61		35.9			228.2	61		
	17670	62	15530	36.0		21300	228.6	62	265	7.0
	17950	63		35.9			228.7	63		
	18235	64	16140	35.9		22200	229.4	64	250	7.0
	18515	65		35.8			230.2	65		
	18795	66	16680	36.0		22800	230.7	66	247	5.5
	19080	67		36.2			231.0	67		
	19360	68	17220	36.4		23300	231.2	68	243	5.0
	19645	69		36.5			230.6	69		
	19925	70	17780	36.5		23900	230.8	70	240	4.0
	20210	71		36.6			231.6	71		
	20490	72	18300	37.1		24100	231.6	72	237	3.0
	20775	73		37.3			231.3	73		
	21055	74	18970	37.5		24550	231.2	74	222	2.5
	21340	75		37.7			231.1	75		
	21620	76	19520	38.3		24700	230.8	76	178	3.5
	21905	77		38.7			230.7	77		
	22185	78	20080	38.9		24800	229.7	78	165	3.0
	22470	79		39.0			229.5	79		
	22750	80	20700	39.1		25300	229.3	80	157	2.0
	23040	81		39.5			229.1	81		

Wind Direction° 360°= N	Speed (m.p.s.)	Minute	Azimuth angle °	Distance from observation Point (m.)	Elevation angle° Observed	Smoothed	Rawin ht. above surface (m.)	Minute	Slant range (m.) (yds.)
48	5.5	106	221.0	20700	55.0		29000	106	
		107	220.6		55.5			107	
45	5.0	108	221.3	19700	56.2		29680	108	
		109	221.3		56.9			109	
52	5.0	110	220.9	19200	57.7		30240	110	
		111	220.2		58.5			111	
58	5.5	112	219.3	18600	58.9		30860	112	
		113	219.1	18400	59.2		31140	113	
		114					238	114	
		115					31098	115	

*Stamp the
following:

1. Name of Station
2. Lat. and long.
3. Local Standard time, meridian
4. El. of S.
5. Method of obs., e. rawinsonde, rawin, p.
6. Type of equip., WBRT-5, GMD-1A, GMD-1, SCR-65, theodolite

Altitude
in km., m.

Punched Card Data

Stamp the following:

Name of Station

Lat. and long.

Local Standard time, 90th meridian

El. of Station

Method of obs., e.g., rawinsonde, rawin, pibal

Type of equip., e.g., WBRT-57, GMD-1A, GMD-1, SCR-658, theodolite

Termination

*Identification

COLUMBIA, MO.
38° 58' N 92° 22' W
LST-90th Meridian El. 238
Rawinsonde WBRT-57

U.S. DEPARTMENT OF COMMERCE
WEATHER BUREAU

WINDS-ALOFT COMPUTATION SHEET
(LANDSTATION FORM)
WBAN-20

Actual time th mer.	Year	Month	Day	Time
Scheduled (G.M.T.)	1964	SEP	8	0515
	1964	SEP	8	12
Ascension No.	955			

Type of balloon 600CR

Orientation, 360° = South

Rawinsonde Time-Altitude Data

Slant range (m.) (yds.)	Pibal ht. above sfc. (m.) 30 gram 100 gram	Minute	Rawin ht. above surface (m.)	Elevation angle °		Distance from observation point (m.)	Azimuth angle °	Minute	Wind		Contact	Pressure (mb.)	Altitude (m., m.s.l.)	Elapsed time (min.)
				Observed	Smoothed				Direction ° 360° = N.	Speed (m.p.s.)				
									sfc. 180	3.1	65	990	238	0.0
	216 350	1	240	19.35		680	207.7	1	215	12.9	10	925	730	2.2
	414 670	2	480	17.20		1540	214.9	2	221	14.8	15	668	1360	4.9
	612 980	3	730	16.45		2450	217.3	3	222	14.2	20	802	2030	7.4
	801 1286	4	960	16.35		3240	219.6	4	223	13.8	25	742	2680	—
	990 1585	5	1200	16.40		4100	219.8	5	226	13.0	30	684	3370	12.9
	1170 1880	6	1470	17.15		4800	221.4	6	228	10.1	35	628	4070	15.5
	1350 2170	7	1700	17.80		5300	221.9	7	230	8.3	40	576	4760	18.1
	1530 2455	8	1960	18.75		5800	222.7	8	233	7.6	45	527	5460	21.1
	1710 2740	9	2200	19.65		6200	223.5	9	243	6.1	50	479	6220	23.9
	1890 3020	10	2480	20.9		6500	224.9	10	250	4.6	55	437	6920	26.7
	2070 3300	11	2710	22.1		6700	225.8	11	242	2.6	60	394	7710	29.6
	2250 3580	12	2970	23.3		6800	225.7	12	243	2.5	65	356	8460	32.5
	2430 3855	13	3220	24.4		7100	226.8	13	237	2.5	70	319	9260	35.6
	2610 4130	14	3480	25.7		7200	226.5	14	202	1.8	75	285	10040	38.6
	2790 4405	15	3740	26.9		7300	226.1	15	194	1.8	80	257	10840	41.7
	2970 4675	16	4000	28.3		7350	225.0	16	197	1.9	85	224	11650	44.7
	3150 4945	17	4250	29.5		7500	225.2	17	189	3.2	90	197	12510	47.9
	3330 5215	18	4520	30.4		7700	223.8	18	188	5.1	95	172	13380	51.0
	3510 5485	19	4800	30.9		8000	222.6	19	195	4.6	100	149	14250	54.0
	3690 5755	20	5030	31.5		8200	221.9	20	215	6.0	105	129	15120	57.1
	3870 6025	21	5300	31.6		8700	221.8	21	225	6.0	110	110	16070	60.4
	4050 6295	22	5590	31.9		8900	222.5	22	237	4.8	115	97	17060	63.7
	4230 6565	23	5870	32.3		9200	223.7	23	257	5.0	120	77	18200	67.0
	4410 6835	24	6080	32.9		9400	224.5	24	244	3.0	125	60	19400	70.3
	4590 7105	25	6320	33.7		9550	224.6	25	227	1.7	130	50	20100	73.6
	4770 7375	26	6600	34.2		9700	224.8	26	225	1.4	135	37	22820	81.0
	4950 7645	27	6860	34.8		9800	224.9	27			140	26	25200	88.3
	5130 7915	28		35.6			225.4	28	236	1.4	145	17	29770	95.6
							225.7	29						

Termination
Alt. for
150 & 300 m.
are with
respect to
ground, alt.
for other
standard levels
are in km., mal.

Reason for termination

Computer H. J. EMERY
 Verifier R. S. VEACH

2250	12	2970	23.3	6500	225.7	12	243	2.5
3590								
2430	13	3220	24.4	7100	226.8	13	237	2.5
3855								
2610	14	3480	25.7	7700	226.5	14	202	1.8
4130								
2790	15	3740	26.9	7300	226.1	15	194	1.8
4405								
2970	16	4000	28.3	7350	225.0	16	197	1.9
4675								
3150	17	4250	29.5	7500	225.2	17	189	3.2
4945								
3330	18	4520	30.4	7700	223.8	18	188	5.1
5215								
3510	19	4800	30.9	8000	222.6	19	175	4.6
5485								
3690	20	5030	31.5	8200	221.9	20	215	6.0
5755								
3870	21	5300	31.6	8700	221.8	21	225	6.0
6025								
4050	22	5590	31.9	8900	222.5	22	253	4.8
6295								
4230	23	5820	32.3	9200	223.7	23	257	5.0
6565								
4410	24	6080	32.9	9400	224.5	24	244	3.0
6835								
4590	25	6320	33.7	9550	224.6	25	227	1.7
7105								
4770	26	6600	34.2	9700	224.8	26	225	1.4
7375								
4950	27	6860	34.8	9800	224.9	27		
7645								
5130	28		35.6		225.4	28	236	1.4
7915								
5310	29	7570	36.0	10000	225.7	29		
8185								
5490	30		36.4		225.9	30	232	2.8
8455								
5670	31	7900	36.8	10600	225.5	31		
8730								
5850	32		37.6		225.8	32	343	4.0
9005								
6030	33	8430	38.4	10600	225.9	33		
9285								
6210	34		39.4		226.4	34	352	5.3
9565								
6390	35	8930	40.5	10300	227.8	35		
9850								
6570	36		41.4		228.9	36	323	3.0
10135								
6750	37	9440	42.4	10300	230.0	37		
10420								
6930	38		43.2		231.5	38	324	5.5
10715								
7110	39	9970	43.9	10250	233.7	39		
11005								
7290	40		44.7		236.9	40	328	8.8
11300								
7470	41	10510	45.5	10250	239.9	41		
11595								
7650	42		46.4		242.9	42	330	8.8
11890								
7830	43	11020	47.0	10250	245.8	43		
12185								
8010	44		47.4		247.5	44	326	5.5
12480								
8190	45	11540	47.8	10400	249.4	45		
12775								
8370	46		47.9		251.0	46	284	5.0
13075								
8550	47	12080	48.0	10800	251.7	47		
13375								
8730	48		48.0		252.2	48	274	4.3
13675								
8910	49	12660	47.9	11400	253.3	49		
13975								
9090	50		47.8		255.1	50	303	10.0
14275								

Coded Data for Transmission

[illegible]

70	319	9260	35.6
75	285	10040	38.6
80	253	10840	41.7
85	224	11650	44.7
90	197	12510	47.9
95	172	13380	51.0
100	149	14250	54.0
105	129	15120	57.1
110	110	16070	60.4
115	93	17060	63.7
120	77	18200	67.3
125	63	19430	71.2
130	50	20701	75.2
135	37	22820	81.0
140	26	25200	88.7
145	13	29771	99.1
1450	13	29771	99.1

Punched Card Data

Altitude #	Direction (degrees)	Speed (m.p.s.)	Card columns	Altitude #	Direction (degrees)	Speed (m.p.s.)
Card No. 1			15	Card No. 2		
Type of equipment			16	Type of equipment		
afc.	180	3	17-21	7	227	1
150 M.	120	5	22-26	8	232	3
300 M.	214	13	27-31	9	350	5
0.5	212	12	32-36	10	324	5
1.0	214	14	37-41	11	332	9
1.5	227	12	42-46	12	210	5
2.0	230	8	47-51	13	270	8
2.5	244	6	52-56	14	288	1
3	247	3	57-61	15	284	8
4	194	2	62-66	16	264	6
5	192	5	67-71	17	287	6
6	256	5	72-76	18	207	3

Maximum Wind Speed Data

Min. alt. wind speed 45 m.p.s. or more (m.)		
Alt. of maximum wind speed (m.)		
Dir. (degrees) and speed (m.p.s.) of Max. wind		
Max. alt. wind speed 45 m.p.s. or more (m.)		
Enter check if additional levels appear on reverse side.		

UNCLAS EFTO

14 SEP 81 21 01z

WPA054

CZCSQJ279ZCJYA823

RR RUCDSQ

DE RUEAGL 58 14/1803Z

R 141751Z

FM AFSC

TO FTD WPAFB OHIO

BT

UNCLAS E F T O SCFTC 74-9-13.

FOR TDEW (UFO). THE FOLLOWING MSG FROM 351 STRATMSLWG

WHITEMAN AFB MO IS QUOTED FOR YOUR INFORMATION. QUOTE. UNCLAS

BC 00001. AFSC FOR SCFD & SCFT; CSAF FOR AFNIN;

USAF FOR SAFOI

~~SAFOI~~, SAFOIPB & SAFOIPC. UFO. IN ACCORDANCE WITH PARA

W

ITH PARA

14, AFR -00--, THE FOLLOWING IS SUBMITTED: IARA A, (1) ROUND, (2) BLANK, (3) BLUE, (4) ONE, (5) N/A, (6) BLUE LIG T ABOUT THE SIZE OF AN AUTOMMBILE HEADLIGHT, (7) BLANK, (8) NONE, (9) APPEARED TO EXPLODE IN MID AIR AND LAND IN FIELD, KEPT MOVING ABOUT 20 FEET OFF GROUND AT SITE I-10 (ABOUT 15 MILES SOUTHWEST OF WHITEMAN AFB

COLUMBIA, MO.
38° 58' N 92° 22' W
LST-00:h Meridian El. 238
Rawinsonde WBRT-57

WINDS-ALOFT COMPUTATION SHEET
(LAND STATION FORM)
WBAN-20

	Year	Month	Day	Time
Actual time th mer.	1964	SEP	8	0515
Scheduled (G.M.T.)	1964	SEP	8	12
Ascension No. 935				

Page
2

Slant range (M.) (yds.)	Pibal ht. above sfc. (m.)		Minute	Raw in ht. above surface (m.)	Elevation angle°		Distance from observation point (m.)	Azimuth angle °	Minute	Wind	
	100- gram	Observed			Smoothed	Direction° 360°= N				Speed (m.p.s.)	
	14570	51	13200	47.7			12000	256.9	51		
	14860	52	13470	47.4			12100	255.9	52	306	10.0
	15145	53	13780	47.1			12800	261.0	53		
	15425	54	14040	46.8			13200	262.9	54	289	8.0
	15705	55		46.6				263.1	55		
	15985	56	14680	46.2			14100	262.8	56	283	7.8
	16265	57		45.7				263.1	57		
	16545	58	15230	45.4			15000	263.4	58	269	6.0
	16825	59		45.3				263.6	59		
	17105	60	15760	45.2			15500	263.5	60	262	6.2
	17385	61		45.0				263.5	61		
	17670	62	16400	44.6			16500	263.5	62	264	6.0
	17950	63		44.6				263.6	63		
	18235	64	16970	44.5			17200	263.4	64	247	5.0
	18515	65		45.0				263.1	65		
	18795	66	17600	45.0			17600	263.0	66	220	3.3
	19080	67		45.6				261.5	67		
	19360	68	18240	45.9			17700	261.6	68	154	1.0
	19645	69		46.4				261.5	69		
	19925	70	18900	46.7			17800	261.2	70	121	1.5
	20210	71		47.0				261.6	71		
	20490	72	19500	47.0			18000	262.7	72	101	2.0
	20775	73		47.5				263.6	73		
	21055	74	20180	48.6			17500	263.1	74	85	2.5
	21340	75		49.9				262.1	75		
	21620	76	20870	50.9			16800	260.8	76	54	2.5
	21905	77		51.4				261.0	77		
	22185	78	21540	51.5			17200	260.8	78	347	2.0
		79						261.6	79		

Slant range (m.) (yds.)	Minute	Row in int. above surface (m.)	Elevation angle°		Distance from observation Point (m.)	Azimuth angle °	Wind Direction 360° = N	Speed (m.p.s.)
			Observed	Smoothed				
	106							
	107							
	108							
	109							
	110							
	111							
	112							
	113							
	114							
	115							

1000

* Altitudes
in km., n

17950	63		44.6		263.6	63		
18235	64	16970	44.5	17200	263.4	64	247	5.0
18515	65		45.0		263.1	65		
18795	66	17600	45.0	17600	263.0	66	220	3.3
19080	67		45.6		261.5	67		
19360	68	18240	45.9	17700	261.6	68	154	1.0
19645	69		46.4		261.5	69		
19925	70	18900	46.7	17800	261.2	70	121	1.5
20210	71		47.0		261.6	71		
20490	72	19500	47.0	18000	262.7	72	101	2.0
20775	73		47.5		263.6	73		
21055	74	20180	48.6	17500	263.1	74	85	2.5
21340	75		49.9		262.1	75		
21620	76	20870	50.9	16800	260.8	76	54	2.5
21905	77		51.4		261.0	77		
22185	78	21540	51.5	17200	260.8	78	347	2.0
22470	79		51.9		261.2	79		
22750	80	22280	52.3	17200	261.3	80	320	2.0
23040	81		52.8		261.4	81		
23320	82	23030	53.2	17200	263.6	82	333	2.0
23600	83		53.9		263.6	83		
23880	84	23650	54.0	17200	264.0	84	87	4.0
24160	85		54.9		263.5	85		
24440	86	24260	56.3	16200	263.2	86	97	12.5
24730	87		57.7		261.7	87		
25010	88	25000	60.1	14300	261.3	88	85	13.5
25300	89		61.8		261.2	89		
25580	90	25810	63.3	129500	263.3	90	62	10.8
25860	91		64.5		264.9	91		
26140	92	26590	65.7	11900	265.2	92	79	8.6
26420	93		67.0		265.0	93		
26700	94	27480	68.2	10900	264.1	94	90	6.5
26980	95		69.1		263.7	95		
27260	96	28230	69.9	10300	264.6	96	82	4.4
27540	97		70.6		265.4	97		
27820	98	29030	71.1	9900	264.4	98	86	3.6
28100	99	29440	71.9	9500	265.4	99		
28380	100	238				100		
28660	101	29268				101		
28940	102					102		
29220	103					103		
29500	104					104		
29780	105					105		

Elevation angle°	Smoothed									
	Observed									
Raw in ht. above surface (m.)										
Slant range (m.) (yds.)										
Minute	106	107	108	109	110	111	112	113	114	115

Punched Card Data

Altitude#	Direction (degrees)	Speed (m.p.s.)	Card columns	Altitude#	Direction (degrees)	Speed (m.p.s.)
Card No. 3			15	Card No. 4		
Type of equipment	8		16	Type of equipment	8	
19	132	1	17-21	31		
20	96	2	22-26	32		
21	60	3	27-31	33		
22	354	1	32-36	34		
23	326	2	37-41	35		
24	85	4	42-46	36		
25	92	13	47-51	37		
26	64	11	52-56	38		
27	82	5	57-61	39		
28	88	6	62-66	40		
29	84	4	67-71	41		
30			72-76	42		

Maximum Wind Speed Data

Min. alt. wind speed 45 m.p.s. or more (m.)		
Alt. of maximum wind speed (m.)		
Dir. (degrees) and speed (m.p.s.) of Max. wind		
Max. alt. wind speed 45 m.p.s. or more (m.)		

obs., e.
rawinso
rawin, p
6. Type of
equip.,
WBRT-5
GMD-1A
GMD-1,
SCR-65
theodol

Altitudes
in km., n

UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU
Airport Station
Springfield, Missouri

September 28, 1964

Colonel Eric T. de Jonckheere
Deputy for Technology & Subsystems
Foreign Technology Division
United States Air Force
Wright-Patterson AFB, Ohio

Dear Colonel:

Reference is made to your letter of September 25, 1964, requesting wind data. It is assumed that you are interested in upper air data. Copies for the period requested are enclosed.

Yours truly,

Ray C. Nelson

Ray C. Nelson
Meteorologist in Charge

Encls

TDEW

Wind Data for Springfield, Missouri, 7 - 8 September 1964 25 Sep 64

U S Weather Station
Springfield, Missouri

1. We would like to have copies of the wind data for 7 - 8 Sep 64. Contact with the U S Weather Records Center at Ashville, North Carolina, revealed that these records are not forwarded for approximately thirty days.

2. We are attaching a self addressed label for your convenience in mailing. Thank you for your cooperation in this matter.

FOR THE COMMANDER

ERIC T de JONCKHEERE
Colonel, USAF
Deputy for Technology
and Subsystems

1 Atch
a/s

U.S. FORM 512-12
1-20-31
11-20-31-11-31

STATION: ST. LOUIS, MISSOURI				DEPARTMENT OF COMMERCE NAVY BUREAU				ALSO COMPUTATION SHEET				PLANS FOR			
Type of station				Elevation				Distance to				Remarks			
Station	Height	Distance	Remarks	Observed	Computed	Observed	Computed	Observed	Computed	Observed	Computed	Observed	Computed		
1. Signal	100	100	100	100	100	100	100	100	100	100	100	100	100		
2. Light	100	100	100	100	100	100	100	100	100	100	100	100	100		
3. Light	100	100	100	100	100	100	100	100	100	100	100	100	100		
4. Light	100	100	100	100	100	100	100	100	100	100	100	100	100		
5. Light	100	100	100	100	100	100	100	100	100	100	100	100	100		
6. Light	100	100	100	100	100	100	100	100	100	100	100	100	100		
7. Light	100	100	100	100	100	100	100	100	100	100	100	100	100		
8. Light	100	100	100	100	100	100	100	100	100	100	100	100	100		
9. Light	100	100	100	100	100	100	100	100	100	100	100	100	100		
10. Light	100	100	100	100	100	100	100	100	100	100	100	100	100		
11. Light	100	100	100	100	100	100	100	100	100	100	100	100	100		
12. Light	100	100	100	100	100	100	100	100	100	100	100	100	100		
13. Light	100	100	100	100	100	100	100	100	100	100	100	100	100		
14. Light	100	100	100	100	100	100	100	100	100	100	100	100	100		
15. Light	100	100	100	100	100	100	100	100	100	100	100	100	100		
16. Light	100	100	100	100	100	100	100	100	100	100	100	100	100		
17. Light	100	100	100	100	100	100	100	100	100	100	100	100	100		
18. Light	100	100	100	100	100	100	100	100	100	100	100	100	100		
19. Light	100	100	100	100	100	100	100	100	100	100	100	100	100		
20. Light	100	100	100	100	100	100	100	100	100	100	100	100	100		

1. Signal
2. Light
3. Light
4. Light
5. Light
6. Light
7. Light
8. Light
9. Light
10. Light
11. Light
12. Light
13. Light
14. Light
15. Light
16. Light
17. Light
18. Light
19. Light
20. Light

The image shows a document page, likely a ledger or account book, with a prominent vertical crease or fold line running down the center. The page is heavily textured and noisy, with a high-contrast, black and white appearance. The left side of the page contains a column of text, which appears to be a list of items or entries, though the text is mostly illegible due to the noise. The right side of the page contains a large, empty rectangular area, likely a space for calculations or descriptions. The overall appearance is that of a scanned document with significant degradation.

[illegible][illegible]

WS Form 110-12
Rev. 1-1-30

Identification
WEATHER FIELD MISSOURI
Date: 6/10/30
Time: 1200
Wind: 100
Temp: 70
Bar: 30.0

U.S. DEPARTMENT OF COMMERCE
WEATHER BUREAU
WINDS-ALOFT COMPUTATION SHEET
(LAND STATION FORM)
WEATHER

Year	Month	Day	Time
1930	09	7	1200
Approximate No. 38			

Page 1

Notes are following:
1. Type of balloon
2. Time of day
3. Name of observer
4. Name of station
5. Name of balloon
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99. Name of balloon
100. Name of balloon

Type of balloon		Observation		340° to 360°		For Logarithmic Time-Altitude Data					
Time range (hr. min.)	Fibrel or above alt. (ft.)	Haze in above range (0-5)	Direction (angle)		Distance from observing point (mi.)	Azimuth angle	Elevation angle (0-90)	Con- stant	Pressure (mb.)	Altitude (mi. or ft.)	Sighted time (min.)
			Observed	Standard							
	100	1	240		250	174	159	11			
	200	2	250		250	175	160	12			
	300	3	260		260	176	161	13			
	400	4	270		270	177	162	14			
	500	5	280		280	178	163	15			
	600	6	290		290	179	164	16			
	700	7	300		300	180	165	17			
	800	8	310		310	181	166	18			
	900	9	320		320	182	167	19			
	1000	10	330		330	183	168	20			
	1100	11	340		340	184	169	21			
	1200	12	350		350	185	170	22			
	1300	13	360		360	186	171	23			
	1400	14				187	172	24			
	1500	15				188	173	25			
	1600	16				189	174	26			
	1700	17				190	175	27			
	1800	18				191	176	28			
	1900	19				192	177	29			
	2000	20				193	178	30			
	2100	21				194	179	31			
	2200	22				195	180	32			
	2300	23				196	181	33			
	2400	24				197	182	34			
	2500	25				198	183	35			
	2600	26				199	184	36			
	2700	27				200	185	37			
	2800	28				201	186	38			
	2900	29				202	187	39			
	3000	30				203	188	40			
	3100	31				204	189	41			
	3200	32				205	190	42			
	3300	33				206	191	43			
	3400	34				207	192	44			
	3500	35				208	193	45			
	3600	36				209	194	46			
	3700	37				210	195	47			
	3800	38				211	196	48			
	3900	39				212	197	49			
	4000	40				213	198	50			
	4100	41				214	199	51			
	4200	42				215	200	52			
	4300	43				216	201	53			
	4400	44				217	202	54			
	4500	45				218	203	55			
	4600	46				219	204	56			
	4700	47				220	205	57			
	4800	48				221	206	58			
	4900	49				222	207	59			
	5000	50				223	208	60			
	5100	51				224	209	61			
	5200	52				225	210	62			
	5300	53				226	211	63			
	5400	54				227	212	64			
	5500	55				228	213	65			
	5600	56				229	214	66			
	5700	57				230	215	67			
	5800	58				231	216	68			
	5900	59				232	217	69			
	6000	60				233	218	70			
	6100	61				234	219	71			
	6200	62				235	220	72			
	6300	63				236	221	73			
	6400	64				237	222	74			
	6500	65				238	223	75			
	6600	66				239	224	76			
	6700	67				240	225	77			
	6800	68				241	226	78			
	6900	69				242	227	79			
	7000	70				243	228	80			
	7100	71				244	229	81			
	7200	72				245	230	82			
	7300	73				246	231	83			
	7400	74				247	232	84			
	7500	75				248	233	85			
	7600	76				249	234	86			
	7700	77				250	235	87			
	7800	78				251	236	88			
	7900	79				252	237	89			
	8000	80				253	238	90			
	8100	81				254	239	91			
	8200	82				255	240	92			
	8300	83				256	241	93			
	8400	84				257	242	94			
	8500	85				258	243	95			
	8600	86				259	244	96			
	8700	87				260	245	97			
	8800	88				261	246	98			
	8900	89				262	247	99			
	9000	90				263	248	100			
	9100	91				264	249	101			
	9200	92				265	250	102			
	9300	93				266	251	103			
	9400	94				267	252	104			
	9500	95				268	253	105			
	9600	96				269	254	106			
	9700	97				270	255	107			
	9800	98				271	256	108			
	9900	99				272	257	109			
	10000	100				273	258	110			
	10100	101				274	259	111			
	10200	102				275	260	112			
	10300	103				276	261	113			
	10400	104				277	262	114			
	10500	105				278	263	115			
	10600	106				279	264	116			
	10700	107				280	265	117			
	10800	108				281	266	118			
	10900	109				282	267	119			
	11000	110				283	268	120			
	11100	111				284	269	121			
	11200	112				285	270	122			
	11300	113				286	271	123			
	11400	114				287	272	124			
	11500	115				288	273	125			
	11600	116				289	274	126			
	11700	117				290	275	127			
	11800	118				291	276	128			
	11900	119				292	277	129			
	12000	120				293	278	130			
	12100	121				294	279	131			
	12200	122				295	280	132			
	12300	123				296	281	133			
	12400	124				297	282	134			
	12500	125				298	283	135			
	12600	126				299	284	136			
	12700	127				300	285	137			
	12800	128				301	286	138			
	12900	129				302	287	139			
	13000	130				303	288	140			
	13100	131				304	289	141			
	13200	132				305	290	142			
	13300	133				306	291	143			
	13400	134				307	292	144			
	13500	135				308	293	145			
	13600	136				309	294	146			
	13700	137				310	295	147			
	13800	138				311	296	148			
	13900	139				312	297	149			
	14000	140				313	298	150			
	14100	141				314	299	151			
	14200	142				315	300	152			
	14300	143				316	301	153			
	14400	144				317	302	154			
	14500	145				318	303	155			
	14600	146				319	304	156			
	14700	147				320	305	157			
	14800	148				321	306	158			

A scan of a piece of lined paper with a grid pattern. The paper is oriented vertically and features horizontal ruling lines. A prominent diagonal crease runs from the top left towards the bottom center. Faint, illegible handwriting is visible in the upper right quadrant, possibly including the words "RECEIVED" and "JAN 1941". The paper appears aged and slightly worn, with some dark spots and a grainy texture. The overall image is in black and white, with high contrast and some noise.

PAGE 2 RUEAGL 58 UNCLAS E F T O

MISSOURI); PAR B, KEPT CHANGING COURSE, (1) OBJECT AT ABOUT 500 FEET OVER SEVERAL SITES, I-10, I-11, J-8, G-4, G-11; (2) BLANK, (3) BLANK, (4) MOVING WITH THE WIND, (5) BLANK, (6) APPROXIMATELY ONE HOUR; PAR C, (1) SOUND VISUAL, (2) BLANK, 3() N/A; PAR D, (1) 08/0306Z, (2) NIGHT, PAR EN SIGHT I-10, 15 MILES SOUTHWEST OF WHITEMAN AFB MO; PAR F, (1) N/A, (2) REPORTED BY CAPTAIN W.M. BERRY, MISSILE COMBAT CREW COMMANDER, AT I-1 LAUNCH CONTROL FACILITY, 510 MISSILE SQUADRON, 351ST STRATEGIC MISSILE WING. SITE GUARD AT I-11 SIGHTED OBJECT. CONFIRMED BY SEVERAL PERSONS; PAR G, WEATHER AT 0300Z CLEAR 10 1016.3 MB 76/66 190/03 3002, WEATHER AT 0400Z CLEAR, 10 75/66 180/04 3003, WINDS: 2M 210/20, 5M 190-20, 8M 200/20, 10M 200/15, 14M 210/20, 20M 210/15, 25M 230/15, 30M 240/15, 35M 260/08, 40M 270/20, 50M 240/12; PAR H. NONE; PAR I, EFFORTS BY MOBILE STRIKE TEAM TO INTERCEPT FAILED, OBJECT KEPT MOVING, APPEARED TO BE ABOUT 20 FEET OFF OF THE GROUND; PAR J, NOE; PAR K, MAJOR GEORGE B. BAXTER, DIRECTOR OF INFORMATION, 351ST STRATEGIC MISSILE WING, WHITEMAN AFB MO. EVIDENCE OF METEORITE SHOWING DURING THE PERIOD. THE CHASE WAS TURNED OVER TO CIVIL AUTHORITIES AND MSG WAS DIRECTED TO RETURN TO THE LAUNCH CONTROL FACILITY AT 0400Z, BY THE 351ST SMW DIRECTOR OF OPERATIONS; PAR L,

PAGE 3 RUEAGL 58 UNCLAS E F T O

NONE. UNQUOTE.

BT

UNCLAS E F T O

WB Form 510-12
10-59
USCGC 6000

Identification
Vessel Name: USCGC 6000
Date: 64 09 7
Time: 1800
Location: 64 09 7

U.S. DEPARTMENT OF COMMERCE
WEATHER BUREAU
WIND-ALOFT COMPUTATION SHEET
(LAND STATION FORM)
WIND-50

Year: 64 Month: 09 Day: 7 Time: 1800
Station No.: 6000

- Type of balloon: W-1
- 1. Knots
 - 2. Feet
 - 3. Knots
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 - 95. Knots
 - 96. Feet
 - 97. Knots
 - 98. Feet
 - 99. Knots
 - 100. Feet

Type of balloon	Pilot	Barometer	Elevation	Distance	Azimuth	Wind		Temperature	Humidity	Direction	Speed
						Direction	Speed				
	1	30.0	100	100	180	10	10	60	100	180	10
	2	29.9	200	200	180	10	10	60	100	180	10
	3	29.8	300	300	180	10	10	60	100	180	10
	4	29.7	400	400	180	10	10	60	100	180	10
	5	29.6	500	500	180	10	10	60	100	180	10
	6	29.5	600	600	180	10	10	60	100	180	10
	7	29.4	700	700	180	10	10	60	100	180	10
	8	29.3	800	800	180	10	10	60	100	180	10
	9	29.2	900	900	180	10	10	60	100	180	10
	10	29.1	1000	1000	180	10	10	60	100	180	10
	11	29.0	1100	1100	180	10	10	60	100	180	10
	12	28.9	1200	1200	180	10	10	60	100	180	10
	13	28.8	1300	1300	180	10	10	60	100	180	10
	14	28.7	1400	1400	180	10	10	60	100	180	10
	15	28.6	1500	1500	180	10	10	60	100	180	10
	16	28.5	1600	1600	180	10	10	60	100	180	10
	17	28.4	1700	1700	180	10	10	60	100	180	10
	18	28.3	1800	1800	180	10	10	60	100	180	10
	19	28.2	1900	1900	180	10	10	60	100	180	10
	20	28.1	2000	2000	180	10	10	60	100	180	10
	21	28.0	2100	2100	180	10	10	60	100	180	10
	22	27.9	2200	2200	180	10	10	60	100	180	10
	23	27.8	2300	2300	180	10	10	60	100	180	10
	24	27.7	2400	2400	180	10	10	60	100	180	10
	25	27.6	2500	2500	180	10	10	60	100	180	10
	26	27.5	2600	2600	180	10	10	60	100	180	10
	27	27.4	2700	2700	180	10	10	60	100	180	10
	28	27.3	2800	2800	180	10	10	60	100	180	10
	29	27.2	2900	2900	180	10	10	60	100	180	10
	30	27.1	3000	3000	180	10	10	60	100	180	10
	31	27.0	3100	3100	180	10	10	60	100	180	10
	32	26.9	3200	3200	180	10	10	60	100	180	10
	33	26.8	3300	3300	180	10	10	60	100	180	10
	34	26.7	3400	3400	180	10	10	60	100	180	10
	35	26.6	3500	3500	180	10	10	60	100	180	10
	36	26.5	3600	3600	180	10	10	60	100	180	10
	37	26.4	3700	3700	180	10	10	60	100	180	10
	38	26.3	3800	3800	180	10	10	60	100	180	10
	39	26.2	3900	3900	180	10	10	60	100	180	10
	40	26.1	4000	4000	180	10	10	60	100	180	10
	41	26.0	4100	4100	180	10	10	60	100	180	10
	42	25.9	4200	4200	180	10	10	60	100	180	10
	43	25.8	4300	4300	180	10	10	60	100	180	10
	44	25.7	4400	4400	180	10	10	60	100	180	10
	45	25.6	4500	4500	180	10	10	60	100	180	10
	46	25.5	4600	4600	180	10	10	60	100	180	10
	47	25.4	4700	4700	180	10	10	60	100	180	10
	48	25.3	4800	4800	180	10	10	60	100	180	10
	49	25.2	4900	4900	180	10	10	60	100	180	10
	50	25.1	5000	5000	180	10	10	60	100	180	10

[illegible]

7-443 JASPER PARK WISCONSIN

U.S. DEPARTMENT OF COMMERCE
FEDERAL BUREAU OF INVESTIGATION
ENDS ALOFT COMMUNICATION SHEET
RE AND STATION NORM
FRAN-30

Year	Month	Day	Time
1907	07	07	1710
1907	07	07	0000

Typed at the Union. 1958

Prigodan, 24. 5. 59

Downloaded From: Time 4:14:45 PM

[illegible]

1. The first step is to identify the problem.
 2. The second step is to define the problem.
 3. The third step is to analyze the problem.
 4. The fourth step is to develop a solution.
 5. The fifth step is to implement the solution.
 6. The sixth step is to evaluate the solution.
 7. The seventh step is to monitor the solution.
 8. The eighth step is to maintain the solution.
 9. The ninth step is to improve the solution.
 10. The tenth step is to document the solution.

201510A

Time	Lat	Long	Alt	Temp	Wind	Clouds	Remarks
1000	12° 15' N	161° 00' W	1000	25.0	10	0	Clear
1100	12° 15' N	161° 00' W	1000	25.0	10	0	Clear
1200	12° 15' N	161° 00' W	1000	25.0	10	0	Clear
1300	12° 15' N	161° 00' W	1000	25.0	10	0	Clear
1400	12° 15' N	161° 00' W	1000	25.0	10	0	Clear
1500	12° 15' N	161° 00' W	1000	25.0	10	0	Clear
1600	12° 15' N	161° 00' W	1000	25.0	10	0	Clear
1700	12° 15' N	161° 00' W	1000	25.0	10	0	Clear
1800	12° 15' N	161° 00' W	1000	25.0	10	0	Clear
1900	12° 15' N	161° 00' W	1000	25.0	10	0	Clear
2000	12° 15' N	161° 00' W	1000	25.0	10	0	Clear
2100	12° 15' N	161° 00' W	1000	25.0	10	0	Clear
2200	12° 15' N	161° 00' W	1000	25.0	10	0	Clear
2300	12° 15' N	161° 00' W	1000	25.0	10	0	Clear
2400	12° 15' N	161° 00' W	1000	25.0	10	0	Clear

At a special meeting of the Board of Directors

1. All. of wood
 2. All. of wood
 3. All. of wood
 4. All. of wood
 5. All. of wood
 6. All. of wood
 7. All. of wood
 8. All. of wood
 9. All. of wood
 10. All. of wood

U.S. DEPT. OF COMMERCE
NO. 1117
1-1-1912

U.S. DEPARTMENT OF COMMERCE
WEATHER BUREAU
THERMOLOFT COMPUTATION SHEET
(LAND STATION FORM)
YEAR 1914

U.S. DEPARTMENT OF COMMERCE
WEATHER BUREAU
THERMOLOFT COMPUTATION SHEET
(LAND STATION FORM)
YEAR 1914

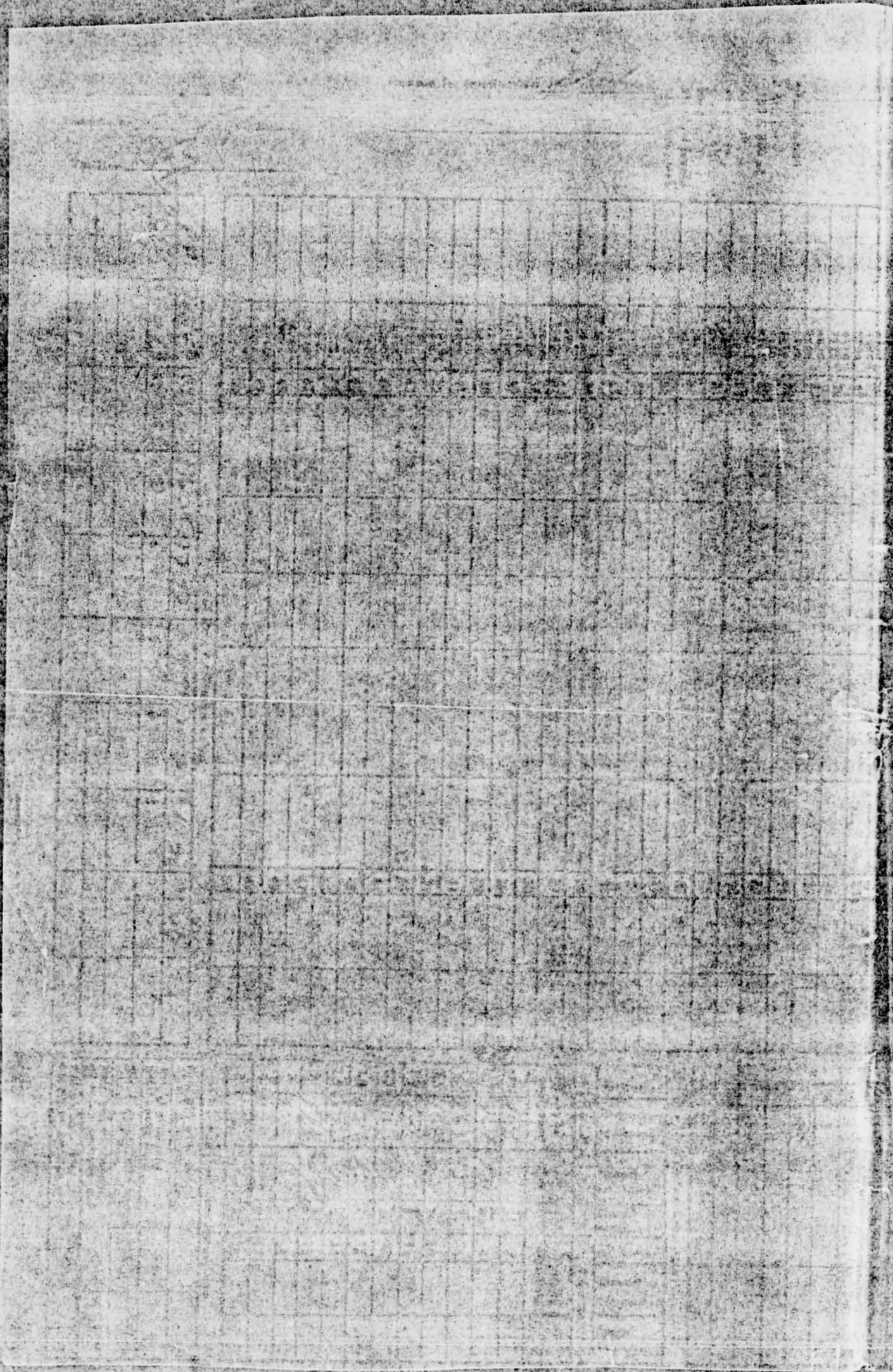
Year	Month	Day	Hour
1914	03	07	00
1914	03	07	00

Page 1

Name of Station
 Location
 Elevation
 Name of Observer
 Name of Assistant
 Name of Recorder
 Name of Teller
 Name of Watchman
 Name of Engineer
 Name of Fireman
 Name of Cook
 Name of Steward
 Name of Cabin Boy
 Name of Porter
 Name of Janitor
 Name of Watchman
 Name of Engineer
 Name of Fireman
 Name of Cook
 Name of Steward
 Name of Cabin Boy
 Name of Porter
 Name of Janitor

Time	Barometer	Thermometer	Hygrometer	Wind	Clouds	Remarks
0100	30.0	60	75	0	0	
0200	30.0	60	75	0	0	
0300	30.0	60	75	0	0	
0400	30.0	60	75	0	0	
0500	30.0	60	75	0	0	
0600	30.0	60	75	0	0	
0700	30.0	60	75	0	0	
0800	30.0	60	75	0	0	
0900	30.0	60	75	0	0	
1000	30.0	60	75	0	0	
1100	30.0	60	75	0	0	
1200	30.0	60	75	0	0	
1300	30.0	60	75	0	0	
1400	30.0	60	75	0	0	
1500	30.0	60	75	0	0	
1600	30.0	60	75	0	0	
1700	30.0	60	75	0	0	
1800	30.0	60	75	0	0	
1900	30.0	60	75	0	0	
2000	30.0	60	75	0	0	
2100	30.0	60	75	0	0	
2200	30.0	60	75	0	0	
2300	30.0	60	75	0	0	
2400	30.0	60	75	0	0	

Time	Barometer	Thermometer	Hygrometer	Wind	Clouds	Remarks
0100	30.0	60	75	0	0	
0200	30.0	60	75	0	0	
0300	30.0	60	75	0	0	
0400	30.0	60	75	0	0	
0500	30.0	60	75	0	0	
0600	30.0	60	75	0	0	
0700	30.0	60	75	0	0	
0800	30.0	60	75	0	0	
0900	30.0	60	75	0	0	
1000	30.0	60	75	0	0	
1100	30.0	60	75	0	0	
1200	30.0	60	75	0	0	
1300	30.0	60	75	0	0	
1400	30.0	60	75	0	0	
1500	30.0	60	75	0	0	
1600	30.0	60	75	0	0	
1700	30.0	60	75	0	0	
1800	30.0	60	75	0	0	
1900	30.0	60	75	0	0	
2000	30.0	60	75	0	0	
2100	30.0	60	75	0	0	
2200	30.0	60	75	0	0	
2300	30.0	60	75	0	0	
2400	30.0	60	75	0	0	



OFFICIAL FILE COPY

TDEW

Wind Data for Springfield, Missouri, 7 - 8 September 1964 25 Sep 64

U S Weather Station
Springfield, Missouri

1. We would like to have copies of the wind data for 7 - 8 Sep 64. Contact with the U S Weather Records Center at Ashville, North Carolina, revealed that these records are not forwarded for approximately thirty days.

2. We are attaching a self addressed label for your convenience in mailing. Thank you for your cooperation in this matter.

FOR THE COMMANDER

ERIC T de JONCKHEERE
Colonel, USAF
Deputy for Technology
and Subsystems

1 Atch
a/s

OFFICIAL FILE COPY

DATA PROCESSING DIVISION
CLIMATIC CENTER, USAF
Air Weather Service (MATS)
Asheville, North Carolina

REPLY TO
ATTN OF: CCDDPD

SUBJECT: Selected Surface and Winds Aloft Data

28 Sep 1964

TO: Aerospace Technical Intelligence Center
Foreign Technology Division (Sgt. Moody)
Wright-Patterson AFB, Ohio

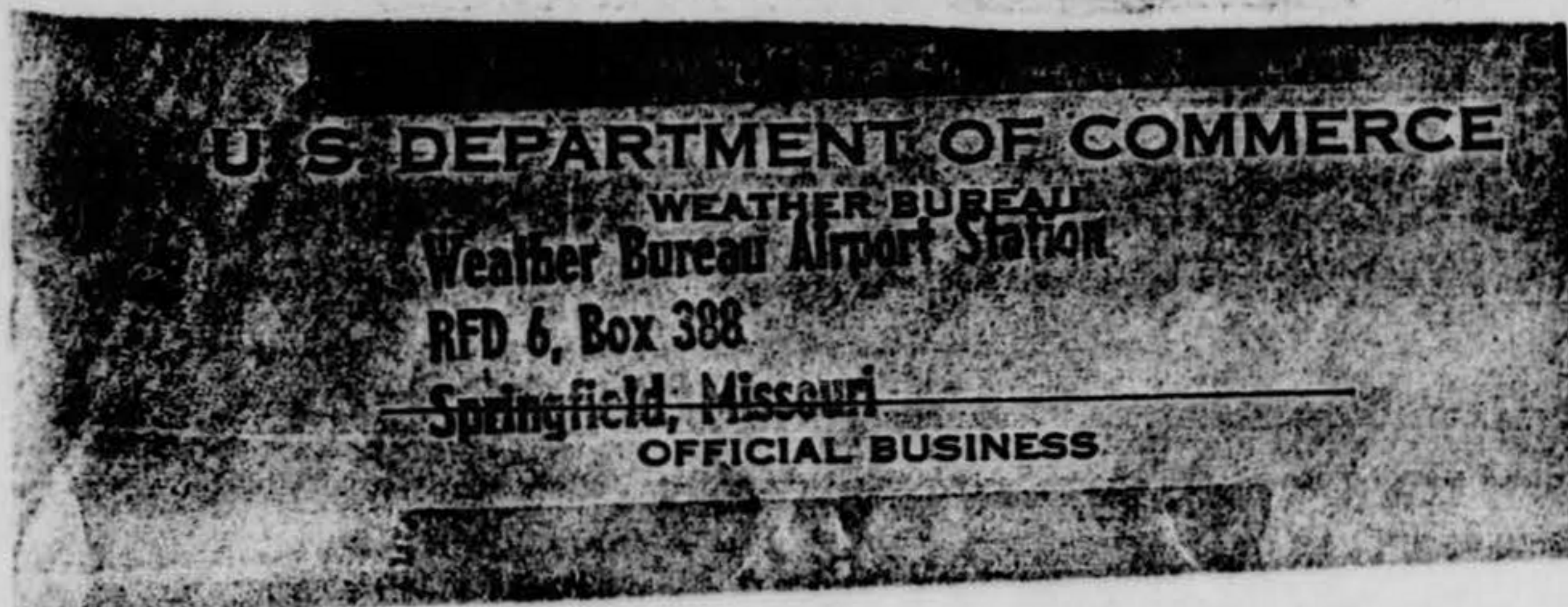
1. Reference: Telecon with this Division 24 Sep 64.
2. We are sending copies of weather records as follows:
 - a. WBAN-10 Anderson, S. C. 28-30 June 1964
 - b. WBAN-20 Colombia, Mo. 6-8 September 1964

3. Springfield, Missouri is a Pibal station, and it is doubtful that data reach 50-60,000 feet. This station submits data monthly and the September 1964 records are not yet available. However, Colombia, Missouri is a rawinsonde station which forwards records weekly and we have included copies of the 6-8 Sep 64 for Colombia as a substitute.

FOR THE DIRECTOR

Thomas D. Fillenworth
THOMAS D. FILLENWORTH
2D LT, USAF
Administrative Officer

Atch
a/s



amp the
following:

Name of
Station

Lat. and
long.

Local
Standard
time, 90th
meridian

El. of Station
Method of
obs., e.g.,
rawinsonde,
rawin, pibal

Type of
equip., e.g.,
WBRT-57,
GMD-1A,
GMD-1,
SCR-658,
theodolite

Termination

Alt. for
150 & 300 m.
are with
respect to
ground, alt.
for other
standard levels
are in km, msl.

*Identification

COLUMBIA, MO.
38° 58' N 92° 22' W
LST-90th Meridian El. 238
Rawinsonde WBRT-57

U.S. DEPARTMENT OF COMMERCE
WEATHER BUREAU

WINDS-ALOFT COMPUTATION SHEET
(LANDSTATION FORM)
WBAN-20

Year Month Day Time
1964 SEP 5 1911
1964 SEP 6 00
Ascension No. 95

Type of balloon 144 400

Orientation, 360° = South

Rawinsonde Time-Altitude Data

Slant range (m.) (yds.)	Pibal ht. above sfc. (m.) 30 gram 100 gram	Minute	Rawin ht. above surface (m.)	Elevation angle °		Distance from observation point (m.)	Azimuth angle °	Minute	Wind	
				Observed	Smoothed				Direction ° 360° = N. sfc. 140	Speed (m.p.s.) 3.6
	216	1	250	46.6		240	125.8	1	139	5.0
	350	2	520	42.7		570	138.8	2	146	5.5
	414	3	790	41.0		910	141.9	3	154	5.9
	612	4	1050	39.1		1280	143.8	4	166	6.1
	980	5	1300	39.4		1580	152.3	5	181	5.8
	801	6	1580	40.3		1860	158.7	6	193	5.0
	1285	7	1800	41.0		2060	163.1	7	196	4.7
	990	8	2080	41.9		2300	166.9	8	207	4.6
	1585	9	2300	42.8		2470	172.8	9	223	5.0
	1170	10	2570	43.9		2640	181.0	10	241	5.6
	1880	11	2800	45.8		2710	187.3	11	255	5.8
	1350	12	3010	46.8		2810	194.1	12	262	5.9
	2170	13	3280	47.4		2990	200.2	13	258	6.0
	1530	14	3500	46.7		3250	204.8	14	248	6.8
	2455	15	3750	45.6		3650	209.7	15	244	7.2
	1710	16	3980	44.7		3990	213.1	16	243	7.8
	2740	17	4180	43.5		4500	216.7	17	242	8.7
	1890	18	4450	41.9		5000	219.3	18	239	10.2
	3020	19	4690	40.1		5670	221.5	19	241	10.8
	2070	20	4920	38.6		6200	223.9	20	248	10.5
	3300	21	5150	37.1		6800	226.6	21	254	10.7
	2260	22	5390	35.9		7390	228.4	22	255	12.9
	3580	23	5630	34.4		8200	231.7	23	256	15.8
	2430	24		32.1		910		24	252	15.5
	4405	25		11.0		1000		25	270	1.4
	4405	26		20.3		10750		26	271	12.0
	2970	27		29.3		11600		27	278	12.3
	4675	28		28.2		12600		28	275	11.9
	3150	29		27.0		13600		29		
	4945	30		25.7				30		12.1
	3330	31	7510	25.0		14	151.1	31		
	5215	32		23.2			154.5	32		
	3610	33	8020	24.7		17330	151.8	33		
	5455	34		24.0			152.0	34	257	17.0
	3690	35	8520	23.5		17500	252.1	35		
	5720	36		22.0			256.2	36	256	11.5

Contact	Pressure (mb.)	Altitude (m., m.s.l.)	Elapsed time (min.)
6.5	986	238	0.0
10	941	600	1.4
15	899	1220	3.1
20	818	1600	6.3
25	760	2480	9.3
30	704	5060	11.8
35	652	3760	14.5
40	602	4400	17.1
45	556	5020	19.6
50	508	5720	22.6
55	456	6400	25.5
60	404	7120	28.1
65	385	7890	31.4
70	349	8600	34.2
75	311	9300	37.4
80	280	10020	40.5
85	251	10840	43.6
90	223	11600	46.7
95	197	12500	49.9
100	172	13300	53.1
105	150	14114	56.2
110	128	15100	59.7
115	109	16100	63.5
120	91	17190	67.0
125	74	18410	70.7
130	58	19000	75.0
135	44	20000	79.0
140	30	21000	82.7
145	18	22000	86.5

Punched Card Data

Altitude	Direction (degrees)	Speed (m.p.s.)	Card columns	Altitude	Direction (degrees)	Speed (m.p.s.)
Card No. 1			15	Card No. 2		
Type of			16	Type of		

Termination
Alt. for
150 & 300 m.
are with
respect to
ground, alt.
for other
standard levels
are in km., msl.

NECESSARY INFORMATION

BURST

Computer A. R. Brown

Verifier D. R. Leonard

5200	20	4720	38.6	6200	252.4	20	208	10.3
5670	21	5150	37.1	6500	226.6	21	254	10.7
6025	22	5390	35.9	7390	229.4	22	255	12.9
6298	23	5630	34.4	8200	231.7	23	256	15.8
6410	24	5820	32.9	9160	234.9	24	262	16.6
6835	25	6220	31.6	10200	237.6	25	270	16.4
4590	26	6720	30.5	10750	241.1	26	278	17.0
7105	27	7020	29.3	11600	244.7	27	278	17.3
4770	28	7520	28.2	12600	247.3	28	275	18.9
7378	29	8020	27.4	13600	249.3	29		
4950	30	8520	26.7		252.3	30	268	17.1
7615	31	9000	26.0	15400	251.1	31		
5150	32		25.3		251.5	32	257	16.0
7915	33	8020	24.7	17350	251.8	33		
5310	34		24.0		252.0	34	257	17.0
8185	35	8520	23.5	17500	252.1	35		
5490	36		22.8		252.2	36	256	17.5
8458	37	9000	22.2	21700	252.5	37		
5670	38		21.8		252.7	38	255	19.0
8730	39	9530	21.5	24000	252.9	39		
5850	40		21.1		253.1	40	256	18.2
9005	41	10000	20.8	26200	253.4	41		
6030	42		20.4		253.8	42	250	19.3
9285	43	10480	20.0	28500	254.0	43		
6210	44		19.75		254.3	44	251	19.5
9565	45	10960	19.35	30950	254.6	45		
6390	46		19.05		255.0	46	257	23.0
9850	47	11430	18.65	33700	255.4	47		
6570	48		18.35		255.7	48	260	22.3
10138	49	11960	17.95	36500	255.8	49		
6750	50		17.65		255.9	50	261	23.6
10420								
6930								
10710								
7110								
11005								
7290								
11300								
7470								
11595								
7650								
11890								
7830								
12185								
8010								
12480								
8190								
12778								
8370								
13078								
8550								
13375								
8730								
13675								
8910								
13975								
9090								
14276								

Coded Data for Transmission

00431	1408	2 1410	1512	4 1612	1811	6 1910	2009	8 2104
2310	02511	22613	42415	6 2420	8 2522	02632	32837	52833
52138	02645	52648	02633	32719	11 9999	02411	52510	80908
00809	50504	01306	01905	319050				

110	107	16100	63.5
115	91	17190	67.0
120	74	18410	70.7
125	58	19960	76.0
130	44	21510	82.0
135	28	24420	90.7
140	12		
145			
150	15	28694	100.5

Punched Card Data

Altitude #	Direction (degrees)	Speed (m.p.s.)	Card columns	Altitude #	Direction (degrees)	Speed (m.p.s.)
Card No. 1			15	Card No. 2		
Type of equipment			16	Type of equipment		
sfc.	110	4	17-21	7	279	19
150 M.	139	5	22-26	8	262	16
300 M.	139	5	27-31	9	255	2
0.5	137	5	32-36	10	256	1
1.0	132	6	37-41	11	261	2
1.5	178	6	42-46	12	249	21
2.0	195	5	47-51	13	262	2
2.5	215	5	52-56	14	260	2
3	253	6	57-61	15	264	1
4	243	7	62-66	16	271	1
5	243	11	67-71	17	272	1
6	260	17	72-76	18	253	1

Maximum Wind Speed Data

Min. alt. wind speed 45 m.p.s. or more (m.)		
Alt. of maximum wind speed (m.)		
Dir. (degrees) and speed (m.p.s.) of Max. wind		
Max. alt. wind speed 45 m.p.s. or more (m.)		
Enter check if additional levels appear on reverse side.		

amp the
llowing:
Name of
Station
Lat. and
long.
Local
Standard
time, 90th
meridian
El. of Station
Method of
obs., e.g.,
rawinsonde,
rawin, pibal
Type of
equip., e.g.,
WBRT-57,
GMD-1A,
GMD-1,
SCR-658,
theodolite

Termination
Alt. for
150 & 300 m.
are with
respect to
ground, alt.
for other
standard levels
are in km., msl.

*Identification										U.S. DEPARTMENT OF COMMERCE WEATHER BUREAU				Year Month Day Time			
COLUMBIA, MO. 38° 58' N 92° 22' W LST-90th Meridian El. 238 Rawinsonde WBRT-57										WINDS-ALOFT COMPUTATION SHEET (LANDSTATION FORM) WBAN-20				Actual time th mer. Scheduled (G.M.T.) 1964 SEP 5 191 1964 SEP 6 00			
Type of balloon 600 g. 1137										Orientation, 360° = South				Rawinsonde Time-Altitude Data			
Slant range (m.) (yds.)	Pibal ht. above sfc. (m.) 30 grom 100 grom	Minute	Rawin ht. above surface (m.)	Elevation angle °		Distance from observation point (m.)	Azimuth angle °	Minute	Wind		Con- fact	Pressure (mb.)	Altitude (m., m.s.l.)	Elapsed time (min.)			
				Observed	Smoothed				Direction ° 360° = N.	Speed (m.p.s.)							
	216	1	250	46.6		240	125.8	1	139	5.0	5	986	238	0.0			
	350										10	941	240	1.4			
	414	2	520	42.7		570	138.8	2	146	5.5	15	899	1220	3.1			
	670										20	818	1640	6.3			
	612	3	720	41.0		910	141.9	3	154	5.9	25	760	2480	9.3			
	980										30	704	3060	11.8			
	801	4	1250	39.1		1280	143.8	4	166	6.1	35	652	3760	14.5			
	1285										40	602	4400	17.1			
	990	5	1300	39.4		1580	152.3	5	181	5.8	45	556	5020	19.6			
	1585										50	508	5720	22.6			
	1170	6	1580	40.3		1860	158.7	6	193	5.0	55	456	6400	25.5			
	1880										60	404	7120	28.1			
	1350	7	1700	41.0		2060	163.1	7	196	4.7	65	385	7890	31.4			
	1530										70	349	8600	34.2			
	2455	8	2050	41.9		2300	166.9	8	207	4.6	75	311	9300	37.4			
	1710	9	2300	42.8		2470	172.8	9	223	5.0	80	282	10020	40.5			
	2740										85	251	10840	43.6			
	1800	10	2570	43.9		2640	181.0	10	241	5.6	90	223	11600	46.7			
	3020										95	197	12500	49.9			
	2070	11	2800	43.8		2710	187.3	11	255	5.8	100	172	13300	53.1			
	3300										105	150	14114	56.2			
	2260	12	3010	46.8		2810	194.1	12	262	5.9	110	128	15100	59.7			
	3580										115	109	16100	63.5			
	2430	13	3280	47.4		2990	200.2	13	258	6.0	120	91	17190	67.0			
	3855										125	84	18410	70.7			
	2610	14	3500	46.7		3250	204.8	14	248	6.8	130	77	19600	75.0			
	4130										135	74	20800	79.0			
	2790	15	3750	45.6		3650	209.7	15	244	7.2	140	71	22000	83.0			
	4405										145	68	23200	87.0			
	2970	16	3900	44.7		3990	213.1	16	243	7.8	150	65	24400	91.0			
	4675										155	62	25600	95.0			
	3180	17	4180	43.5		4500	216.7	17	242	8.7	160	59	26800	99.0			
	4945										165	56	28000	103.0			
	3330	18	4450	41.9		5000	219.3	18	239	10.2	170	53	29200	107.0			
	5215										175	50	30400	111.0			
	3510	19	4690	40.1		5670	221.5	19	241	10.8	180	47	31600	115.0			
	5455										185	44	32800	119.0			
	3690	20	4920	38.6		6200	223.9	20	248	10.5	190	41	34000	123.0			
	5785										195	38	35200	127.0			
	3870	21	5150	37.1		6800	226.6	21	254	10.7	200	35	36400	131.0			
	6025										205	32	37600	135.0			
	4080	22	5390	35.9		7390	228.4	22	255	12.9	210	29	38800	139.0			
	6395										215	26	40000	143.0			
	4215	23	5630	34.4		8200	231.4	23	256	15.1	220	23	41200	147.0			
	6495										225	20	42400	151.0			
	4415	24		32.1		910		24	252	15.5	230	17	43600	155.0			
	4335										235	14	44800	159.0			
	4155	25		29.3		10750	234.1	25	270	16.1	240	11	46000	163.0			
	4075										245	8	47200	167.0			
	3895	26		26.5		11600	236.7	26	278	17.0	250	5	48400	171.0			
	3815										255	2	49600	175.0			
	3735	27		23.7		12600	239.3	27	275	17.9	260	0	50800	179.0			
	3655										265	0	52000	183.0			
	3575	28		21.0		13600	242.0	28	275	17.9	270	0	53200	187.0			
	3495										275	0	54400	191.0			
	3415	29		18.2		14600	244.7	29	275	17.9	280	0	55600	195.0			
	3335										285	0	56800	199.0			
	3255	30		15.4		15600	247.4	30	275	17.9	290	0	58000	203.0			
	3175										295	0	59200	207.0			
	3095	31	7520	2.0		16600	250.1	31	275	17.9	300	0	60400	211.0			
	3015										305	0	61600	215.0			
	2935	32		0.2		17600	252.8	32	275	17.9	310	0	62800	219.0			
	2855										315	0	64000	223.0			
	2775	33	8020	2.7		18600	255.5	33	275	17.9	320	0	65200	227.0			
	2695										325	0	66400	231.0			
	2615	34		0.0		19600	258.2	34	275	17.9	330	0	67600	235.0			
	2535										335	0	68800	239.0			
	2455	35	8520	23.5		20600	260.9	35	275	17.9	340	0	70000	243.0			
	2375										345	0	71200	247.0			
	2295	36		0.0		21600	263.6	36	275	17.9	350	0	72400	251.0			

Punched Card Data					
Altitude #	Direction (degrees)	Speed (m.p.s.)	Card columns	Altitude #	Direction (degrees)
Card No. 1	15	Card No. 2	15	Card No. 3	15
Type of	15	Type of	15	Type of	15