THE IMPACT OF TRANSPORT FROM THE SOUTH COAST AIR BASIN ON OZONE LEVELS IN THE SOUTHEAST DESERT AIR BASIN

VOLUME 4 - METEOROLOGICAL AND AIR QUALITY DATA

by

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1. INTRODUCTION

During July and August of 1981, a field study was conducted to provide the technical data base by which the impact of anthropogenic activities in the South Coast Air Basin on the air quality in the Southeast Desert Air Basin could be evaluated. Participants in the field effort included Meteorology Research, Inc. (MRI), the Chemical Engineering Department and the Jet Propulsion Laboratory of the California Institute of Technology (Caltech), and the Environmental Research Laboratory of the EPA. Additional data and logistical support were provided by the Naval Weapons Center at China Lake, Edwards Air Force Base, the South-coast Air Quality Management District, the San Bernardino County Air Pollution Control District, Cal-Trans, the Research and El Monte divisions of the California Air Resources Board, and the Southern California Edison Company.

As a major part of the field study, MRI implemented an environmental monitoring program which consisted of the following elements:

- Continuous surface measurements of ozone and b_{scat} (the coefficient of atmosphere backscatter of light) at Edwards Air Force Base and Mt. Wilson.

- Airborne measurements of air quality on a regional basis during selected periods.

- Measurements of winds and temperatures aloft in support of eight atmospheric tracer experiments, and

- Supplemental surface wind observations.

This Data Volume contains the data acquired by MRI during the field study and describes the formats on which the data have been archived. Section 2 contains the winds and temperatures aloft data. Section 3 gives the surface air quality and meteorological data base obtained and some summary statistics. Section 4 describes the MRI 206 airborne air quality sampling activities and presents the data base in plotted form.

2. UPPER AIR OBSERVATIONS

Temperatures and winds aloft observations were taken by MRI and Caltech during the experimental periods of the field study. Temperature soundings were made utilizing both airsondes and T-sondes. Airsondes continuously transmit temperature as a function of pressure thus making it possible to compute altitude using the hydrostatic equation. T-sondes also continuously transmit temperature but do not have the capability to sense pressure. Standard ascension tables for balloon rise rate are used to determine height. Measurements of the winds aloft were accomplished by optically tracking a helium-filled balloon (pibal). Azimuth and elevation angles were recorded every thirty seconds for up to 24 minutes (approximately 15,000 ft) or until the balloon could no longer be sighted. Clouds or the difficulties associated with nighttime tracking at times precluded completing observations to the scheduled altitude. Balloons were tracked by a single theodolite. Using this method, balloons are carefully weighed for free lift and a pre-determined rise rate is assumed.

2.1 LOCATIONS AND SCHEDULE OF OBSERVATIONS

Winds aloft observations were taken by MRI simultaneously from two locations during each tracer experiment. Observations were scheduled to be taken every two hours for 24-32 hours, depending upon the test. Temperature soundings were scheduled to begin coincident with the first pibal observation and to continue with one sounding every 4-6 hours during the experiment. The last test (8), which was supplemental to the original statement of work, had less meteorological coverage. One MRI pibal crew was deployed and after taking observations from the Salton Sea for 10 hours, moved to Brawley for 13 hours. No temperature soundings were taken during the test.

Caltech personnel supported pibals from at least two additional sites each test. The tracer release location always served as one site. Observations were scheduled every two hours for 10-12 hour periods.

The specific locations varied according to the experiment and are shown on Figures 2-1 through 2-8. Site latitudes and longitudes, elevations, and schedules for each test are given in Tables 2-1 through 2-9.

2.2 WINDS ALOFT

2.2.1 Data Reduction

For each reading or set of azimuth and elevation angles, the balloon's altitude must be estimated. With standard or single theodolite pibals these heights are taken from standard ascension rate tables. Under certain conditions, these assumptions can lead to serious errors in computing the winds. However, these errors are eliminated when airsonde or temperature and pressure are simultaneously measured. From the hydrostatic equation, a true time-altitude curve can be computed. Once a height by either technique

Table 2-1. Upper Air Observing Locations and Identifiers

SITE #	LOCATION	ELEVATION (ft-msl)	LATITUDE (N)	LONGITUDE (W)
03	N. San Bernardino	1280	34°09.5'	117°17.5'
04	Lake Gregory	4600	34°14.8'	117°16.0'
05	Acton Fire Station	3140	34°29.3'	118°08.7'
06	Barstow	1960	34°54.2'	116°53.3'
07	Victorville	2950	34°30.3'	117°19.2'
08	Palm Springs	560	33°45.0'	116°31.5'
09	Desert Center Fire Station	720	33°43.8'	115°24.3'
10	S. Fork Santa Ana River	6300	34°10.1'	116°49.5'
11	Twenty-Nine Palms	2000	34°08.0'	116°02.3'
12	Brawley-Wirst Lake	-110	33°02.3'	115°29.3'
13	Salton Sea - W. Shore	-225	33°18.5'	115°56.4'
14	Brawley Airport	-128	32°59.0'	115°31.0'
15	Cajon Summit	4200	34°21.2'	117°27.0'
16	Banning	2200	33°56.2'	116°53.0'
17	Wilsonia Garden	2600	34°40.7'	117°49.6'
18	Cajon Junction	3100	34°28.8'	117°28.5'
19	Crestline	5000	34°14.7'	117°18.0'
20	Fontana	1000	34°03.7'	117°27.3'
21	Carson	75	33°50.7'	118°15.5'
22	Redlands	1350	34°03.0'	117°10.8'
23	Ontario	998	34°01.7'	117°33.5'
24	Indio	0	33°43.3'	116°13.5'
25	Sylmar	1000	34°18.7'	118°27.5'
26	E. Garden Grove	85	33°47.0'	117°55.0'

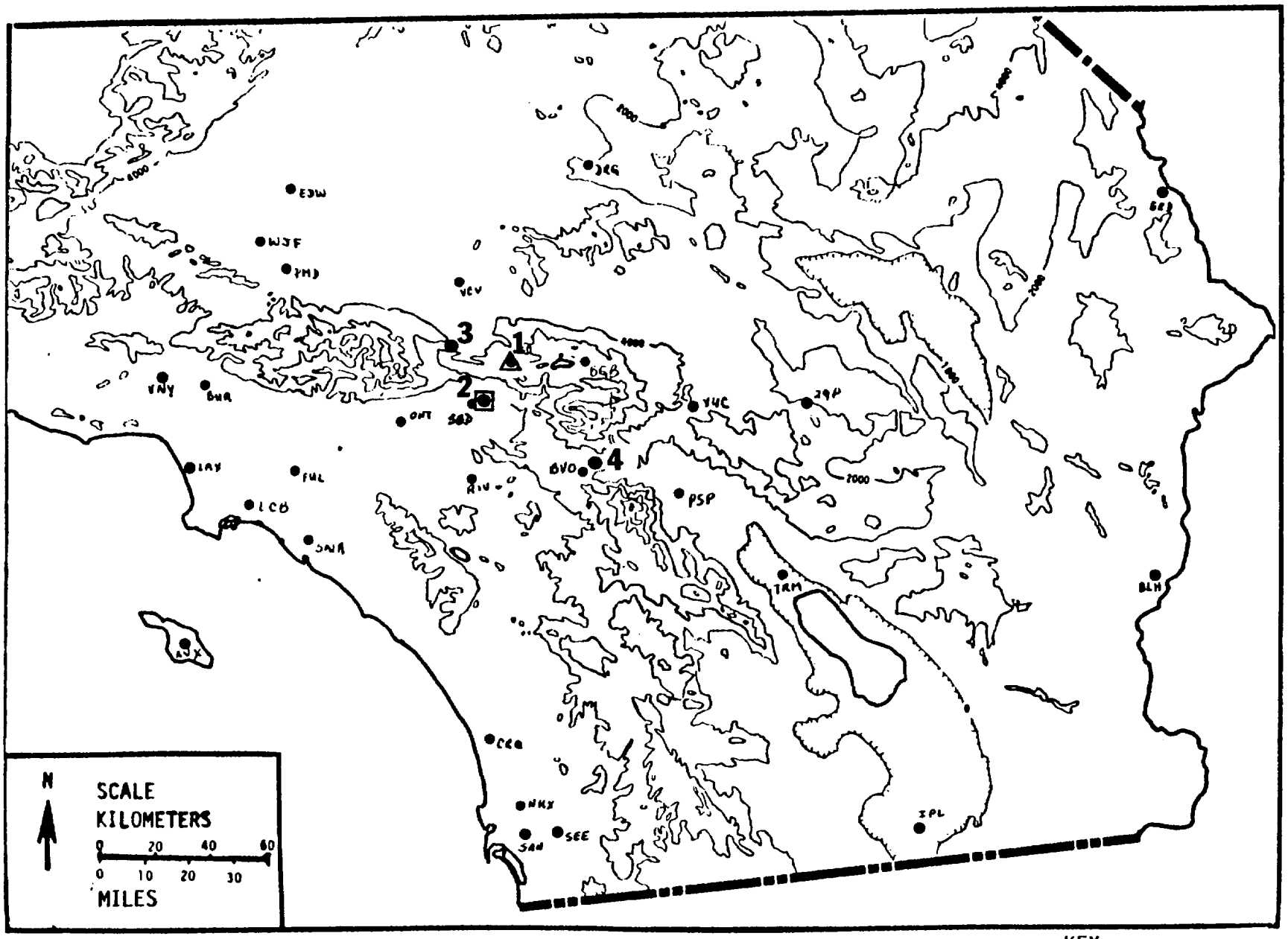

Figure 2-1
UPPER AIR OBSERVATION NETWORK
Test #1 July 9-10 1981

Table 2-2

SOUTHEAST DESERT STUDY
T-SONDE - AIRSONDE - PIBAL OBSERVATION SCHEDULE

TEST 1

Hour	Day	Site 1 P	Site 1 A	Site 2 P	Site 2 T	Site 3 P	Site 4 P	Site 5 P
1200	7/9/81					X		
1300	"			X	X		X	
1400	"	X		X		X	X	
1500	"							
1600	"			X	X	X	X	
1700	"	X	X					
1800	"	X		X		X	X	
1900	"							
2000	"	X	X	X	X	X	X	
2100	"							
2200	"	X		X		X	X	
2300	"							
0000	7/10/81	X	X		X			
0100	"							
0200	"	X		X				
0300	"							
0400	"	X	X					
0500	"							
0600	"	X		X	X			
0700	"							
0800	"	X	X	X	X			
0900	"							
1000	"	X		X	X			
1100	"							
1200	"	X		X	X			

P = Pibal
A = Airsonde
T = T-sonde

Site 1 = Lake Gregory
Site 2 = San Bernardino
Site 3 = Cajon Summit
Site 4 = Banning
Site 5 = N/A

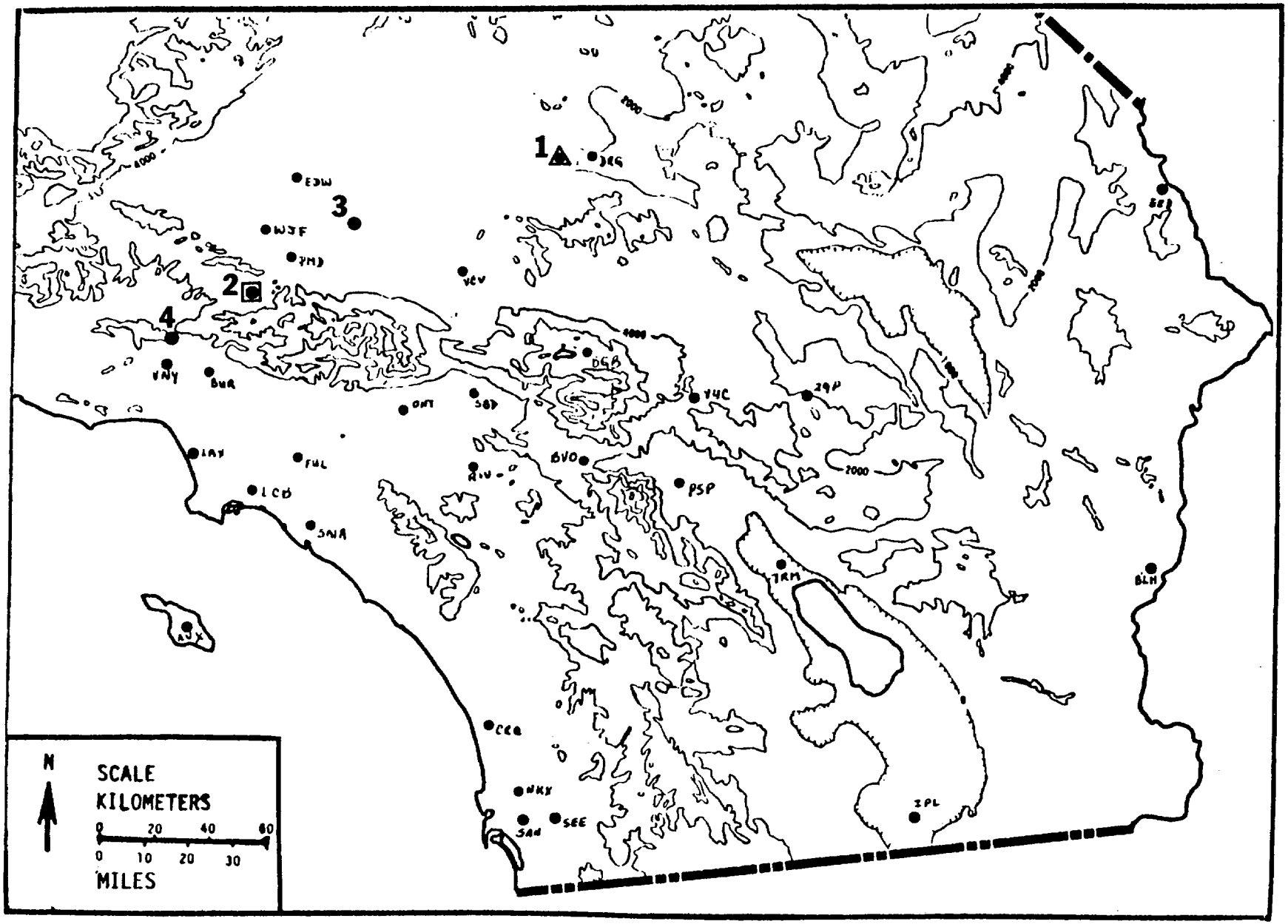

Figure 2-2

UPPER AIR OBSERVATION NETWORK

Test #2 14-15 July 1981

KEY

- ● Pibal Site
- ▲ Pibal/Airsonde Site
- ◉ Pibal/T-Sonde Site

Table 2-3

SOUTHEAST DESERT STUDY
T-SONDE - AIRSONDE - PIBAL OBSERVATION SCHEDULE

TEST 2

Hour	Day	Site 1 P	Site 1 A	Site 2 P	Site 2 T	Site 3 P	Site 4 P	Site 5 P
1000	7/14/81						X	
1100	"							
1200	"			X	X		X	
1300	"					X		
1400	"	X	X			X	X	
1500	"			X				
1600	"	X				X	X	
1700	"			X	X	X		
1800	"	X		X		X		
1900	"							
2000	"	X	X	X	X	X		
2100	"							
2200	"	X		X		X		
2300	"							
0000	7/15/81	X		X	X			
0100	"							
0200	"	X	X					
0300	"							
0400	"	X	X					
0500	"							
0600	"	X						
0700	"							
0800	"	X	X					
0900	"							
1000	"	X						
1100	"							
1200	"	X						
1300	"							
1400	"	X	X					
1500	"							
1600	"	X						
1700	"							
1800	"	X						

P = Pibal
A = Airsonde
T = T-sonde

Site 1 = Barstow
Site 2 = Acton
Site 3 = Wilsonia Gardens
Site 4 = Sylmar
Site 5 = N/A

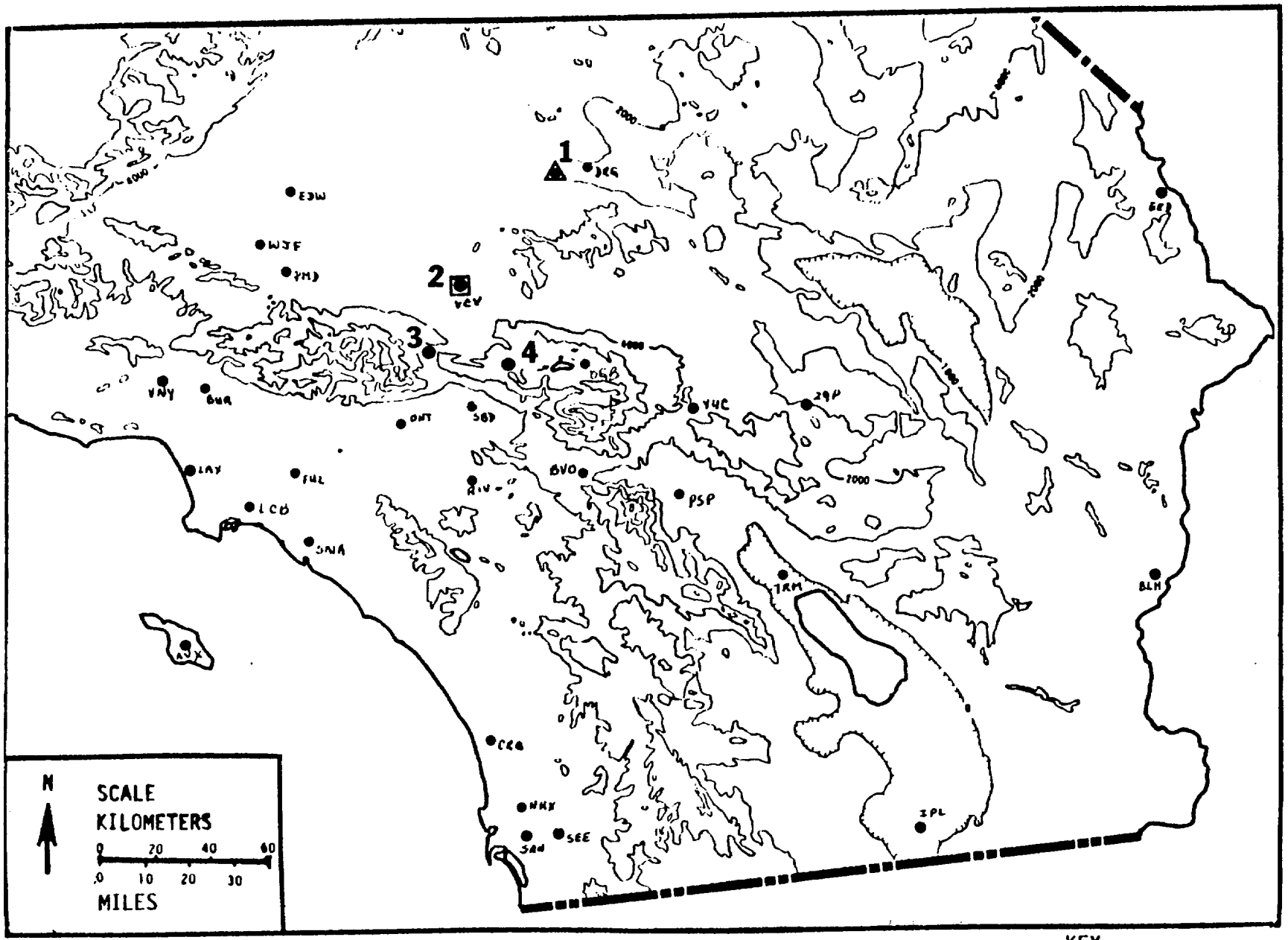

Figure 2-3

UPPER AIR OBSERVATION NETWORK

Test #3 18-19 July 1981

Table 2-4

SOUTHEAST DESERT STUDY
T-SONDE - AIRSONDE - PIBAL OBSERVATION SCHEDULE

TEST 3

Hour	Day	Site 1 P	Site 1 A	Site 2 P	Site 2 T	Site 3 P	Site 4 P	Site 5 P
1200	7/18/81					X		
1300	"						X	
1400	"			X	X	X	X	
1500	"	X	X				X	
1600	"	X		X		X	X	
1700	"						X	
1800	"	X		X		X	X	
1900	"							
2000	"	X	X	X	X	X		
2100	"							
2200	"	X		X				
2300	"					X		
0000	7/19/81	X		X				
0100	"							
0200	"	X	X	X	X			
0300	"							
0400	"	X		X				
0500	"							
0600	"	X		X				
0700	"							
0800	"	X	X	X				
0900	"							
1000	"	X		X				
1100	"							
1200	"	X		X				
1300	"							
1400	"	X	X	X	X			
1500	"							
1600	"							
1700	"							
1800	"	X		X				
1900	"	X						

P = Pibal
A = Airsonde
T = T-sonde

Site 1 = Barstow
Site 2 = Victorville
Site 3 = Cajon Junction
Site 4 = Crestline
Site 5 = N/A

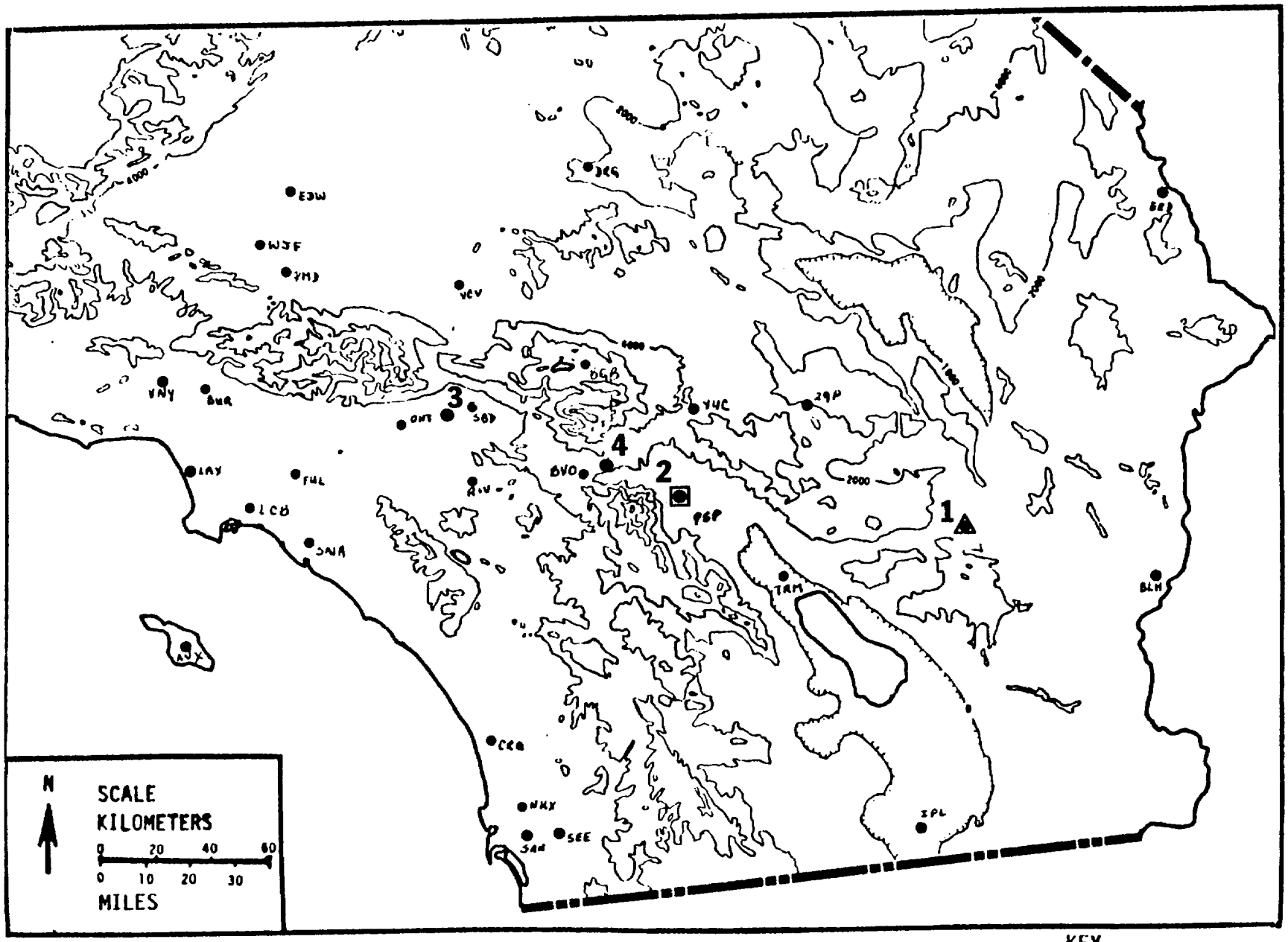

Figure 2-4

UPPER AIR OBSERVATION NETWORK

Test #4 22-23 July 1981

Table 2-5

SOUTHEAST DESERT STUDY
T-SONDE - AIRSONDE - PIBAL OBSERVATION SCHEDULE

TEST 4

Hour	Day	Site 1 P	Site 1 A	Site 2 P	Site 2 T	Site 3 P	Site 4 P	Site 5 P
1200	7/22/81					X		
1300	"							
1400	"					X	X	
1500	"	X	X					
1600	"			X	X	X	X	
1700	"					X		
1800	"	X		X		X	X	
1900	"							
2000	"			X		X	X	
2100	"			X				
2200	"	X		X	X		X	
2300	"							
0000	7/23/81	X		X				
0100	"							
0200	"	X	X	X				
0300	"							
0400	"	X		X	X			
0500	"	X						
0600	"			X				
0700	"	X						
0800	"	X	X	X				
0900	"							
1000	"	X		X				
1100	"							
1200	"	X		X				
1300	"							
1400	"	X	X	X				
1500	"							
1600	"	X		X				
1700	"							
1800	"	X		X				
1900	"	X						
2000	"	X		X				
2100	"							
2200	"	X						

P = Pibal
A = Airsonde
T = T-sonde

Site 1 = Desert Center
Site 2 = Palm Springs
Site 3 = Fontana
Site 4 = Banning
Site 5 = N/A

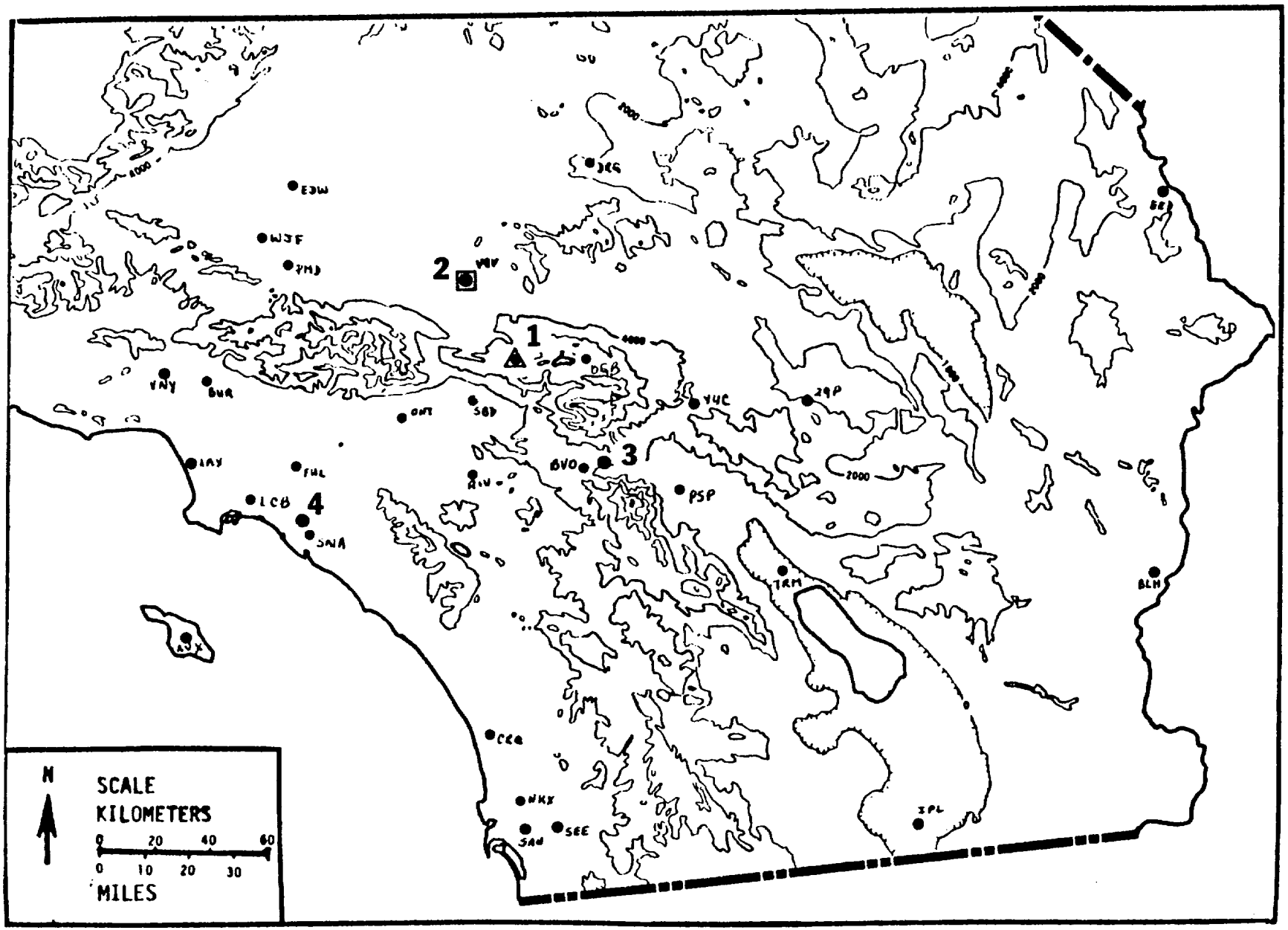

Figure 2-5

UPPER AIR OBSERVATION NETWORK

Test #5 27-28 July 1981

Table 2-6

SOUTHEAST DESERT STUDY
T-SONDE - AIRSONDE - PIBAL OBSERVATION SCHEDULE

TEST 5

Hour	Day	Site 1 P	Site 1 A	Site 2 P	Site 2 T	Site 3 P	Site 4 P	Site 5 P
0600	7/27/81						X	
0700	"							
0800	"						X	
0900	"							
1000	"						X	
1100	"							
1200	"						X	
1300	"							
1400	"	X	X			X		
1500	"			X				
1600	"	X		X		X		
1700	"							
1800	"	X		X				
1900	"							
2000	"	X	X	X	X			
2100	"							
2200	"	X		X				
2300	"							
0000	7/28/81	X		X				
0100	"							
0200	"							
0300	"							
0400	"							
0500	"	X	X					
0600	"							
0700	"							
0800	"	X						
0900	"							
1000	"	X	X					
1100	"							
1200	"	X						
1300	"			X				
1400	"	X						
1500	"							
1600	"	X	X	X				
1700	"							
1800	"	X		X				
1900	"							
2000	"	X		X				

P = Pibal
A = Airsonde
T = T-sonde

Site 1 = Lake Gregory
Site 2 = Victorville
Site 3 = Banning
Site 4 = E. Garden Grove
Site 5 = N/A

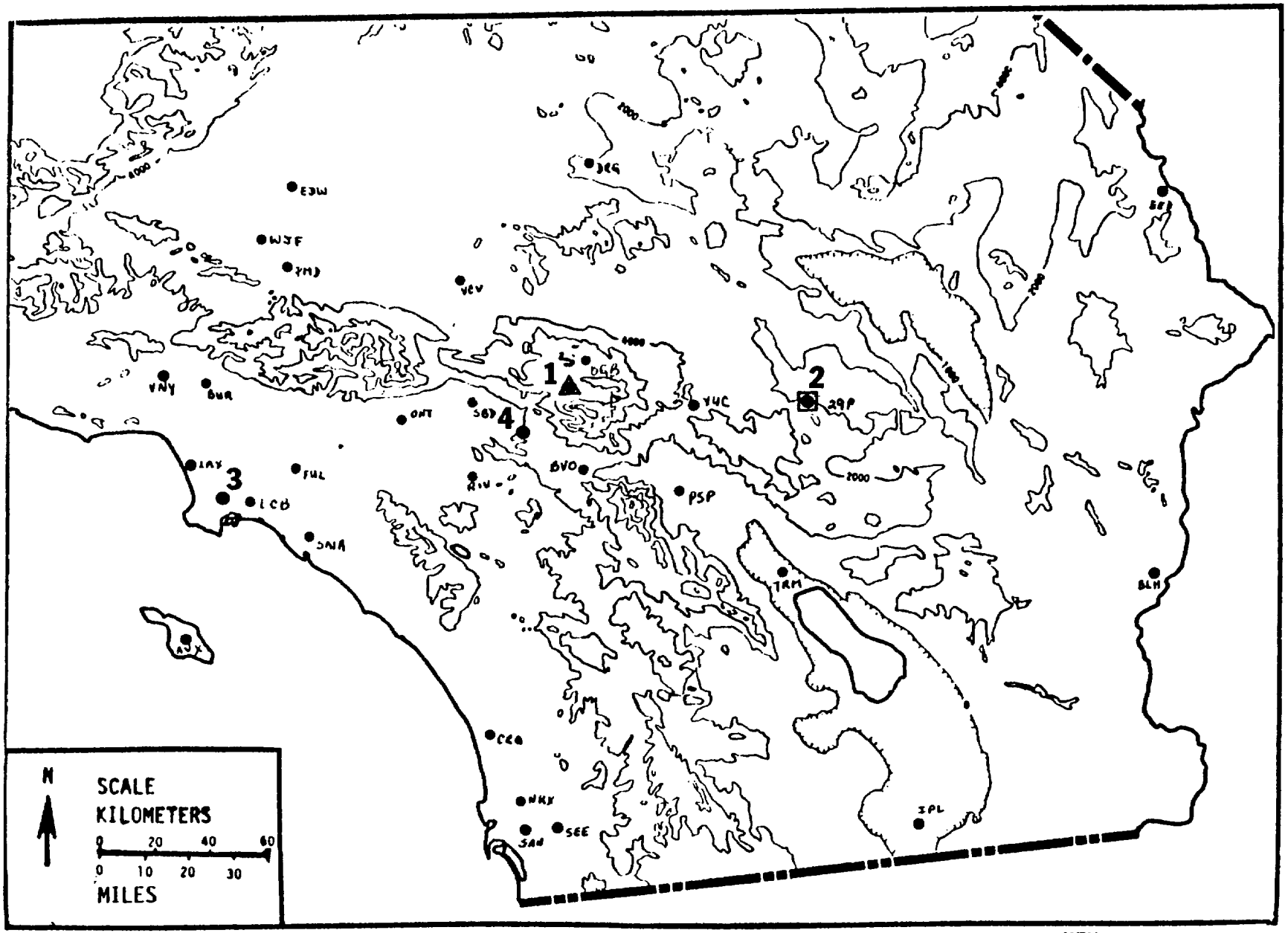

Figure 2-6

UPPER AIR OBSERVATION NETWORK

Test #6 30-31 July 1981

KEY

- ● Pibal Site
- ▲ Pibal/Airsonde Site
- ◉ Pibal/T-Sonde Site

Table 2-7

SOUTHEAST DESERT STUDY
T-SONDE - AIRSONDE - PIBAL OBSERVATION SCHEDULE

TEST 6

Hour	Day	Site 1 P	Site 1 A	Site 2 P	Site 2 T	Site 3 P	Site 4 P	Site 5 P
0600	7/30/81					X		
0700	"							
0800	"					X		
0900	"					X		
1000	"						X	
1100	"					X		
1200	"							
1300	"							
1400	"			X	X		X	
1500	"	X	X					
1600	"			X			X	
1700	"	X						
1800	"	X		X			X	
1900	"							
2000	"			X	X			
2100	"	X	X				X	
2200	"	X		X				
2300	"							
0000	7/31/81	X		X				
0100	"							
0200	"							
0300	"							
0400	"							
0500	"							
0600	"							
0700	"	X	X					
0800	"	X		X				
0900	"							
1000	"	X	X	X	X			
1100	"							
1200	"	X		X				
1300	"							
1400	"	X		X				
1500	"							
1600	"	X	X	X	X			
1700	"							
1800	"	X		X				
1900	"			X				
2000	"	X						
2100	"	X						

P = Pibal
A = Airsonde
T = T-sonde

Site 1 = Santa Ana River Canyon
Site 2 = Twenty-Nine Palms
Site 3 = Carson
Site 4 = Redlands
Site 5 = N/A

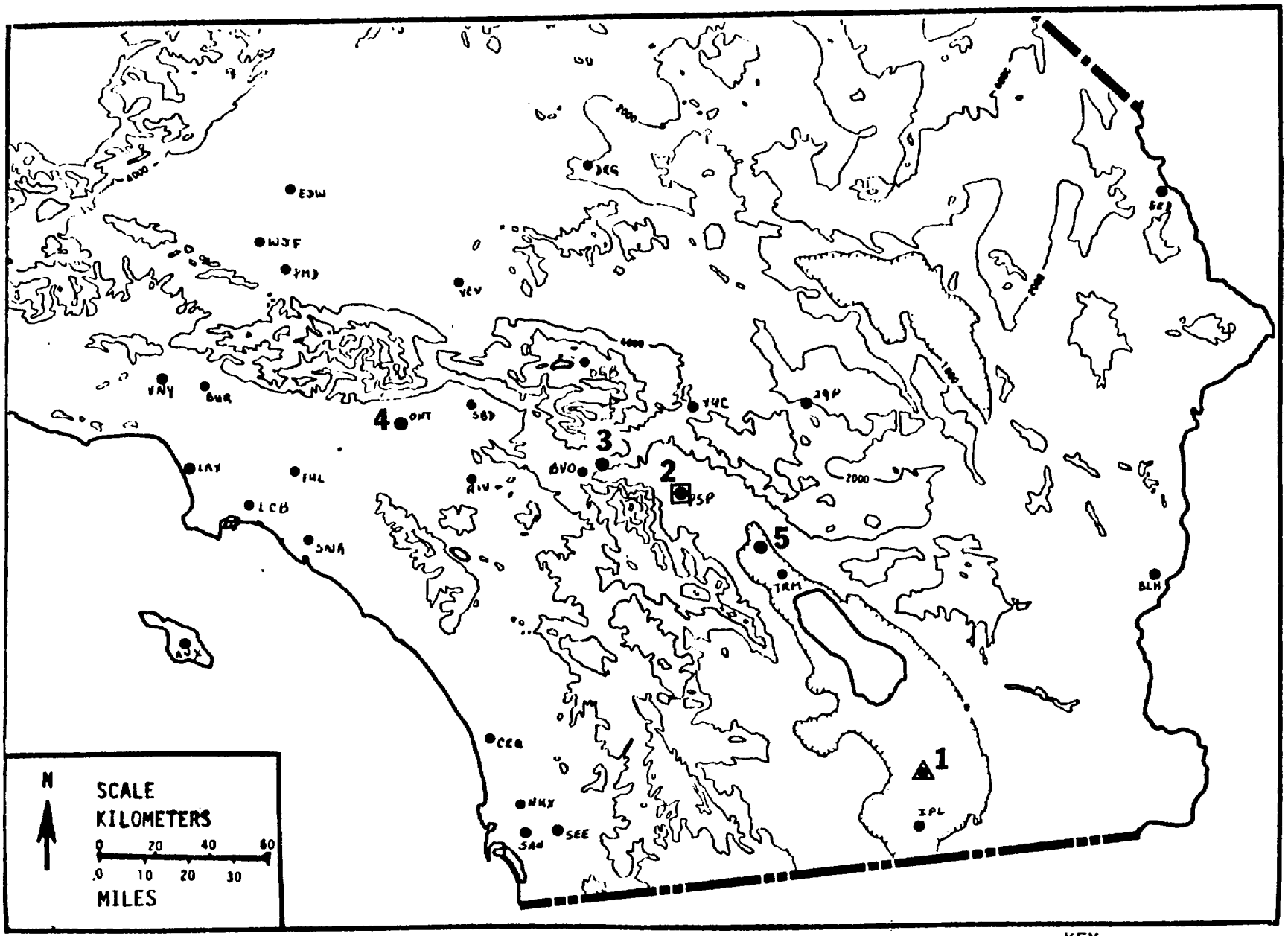

Figure 2-7

UPPER AIR OBSERVATION NETWORK

Test #7 3-4 August 1981

Table 2-8

SOUTHEAST DESERT STUDY
T-SONDE - AIRSONDE - PIBAL OBSERVATION SCHEDULE

TEST 7

Hour	Day	Site 1 P	Site 1 A	Site 2 P	Site 2 T	Site 3 P	Site 4 P	Site 5 P
0600	8/3/81						X	
0700	"							
0800	"						X	
0900	"							
1000	"						X	
1100	"							
1200	"						X	
1300	"							
1400	"			X		X		
1500	"	X						
1600	"			X		X		
1700	"	X	X					
1800	"	X		X		X		
1900	"							
2000	"	X		X		X		
2100	"	X	X					
2200	"	X		X		X		
2300	"							
0000	8/4/81	X		X				
0100	"							
0200	"	X	X	X	X			
0300	"							
0400	"	X		X				
0500	"							
0600	"	X		X				X
0700	"							
0800	"	X	X	X	X			X
0900	"							
1000	"	X		X				
1100	"	X						X
1200	"	X		X				X
1300	"							
1400	"	X	X	X	X			
1500	"							
1600	"	X		X				
1700	"							
1800	"	X		X				
1900	"	X						
2000	"			X	X			

P = Pibal
A = Airsonde
T = T-sonde

Site 1 = Brawley
Site 2 = Palm Springs
Site 3 = Banning
Site 4 = Ontario
Site 5 = Indio

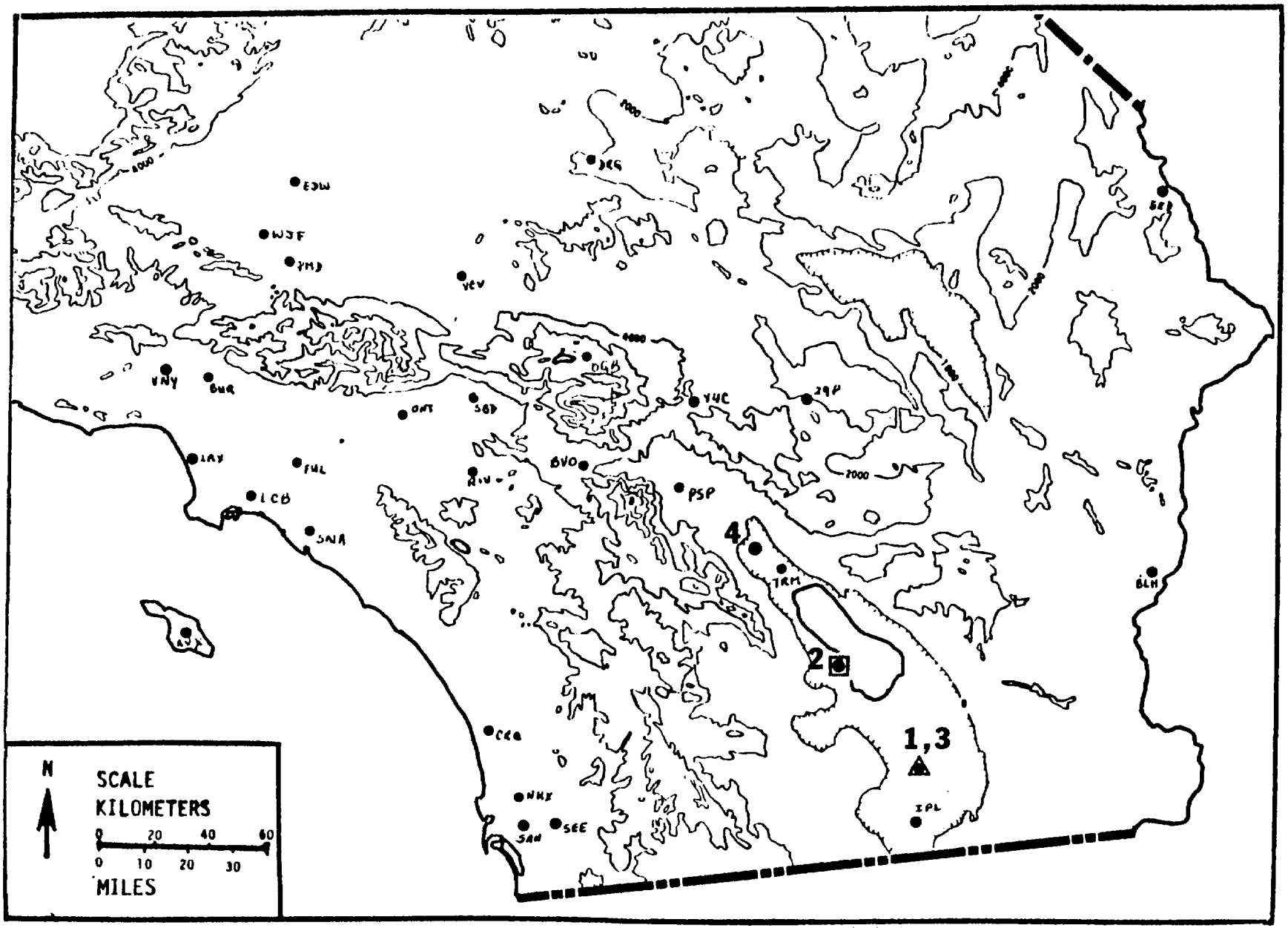

Figure 2-8

UPPER AIR OBSERVATION NETWORK

Test #8 11-12 August 1981

Table 2-9

SOUTHEAST DESERT STUDY
T-SONDE - AIRSONDE - PIBAL OBSERVATION SCHEDULE

TEST 8

Hour	Day	Site 1 P	Site 1 A	Site 2 P	Site 2 T	Site 3 P	Site 4 P	Site 5 P
0600	8/11/81					X		
0700	"							
0800	"			X		X		
0900	"						X	
1000	"			X		X	X	
1100	"							
1200	"			X			X	
1300	"							
1400	"			X			X	
1500	"							
1600	"			X				
1700	"							
1800	"			X			X	
1900	"							
2000	"						X	
2100	"	X						
2200	"	X						
2300	"							
0000	8/12/81	X						
0100	"	X						
0200	"	X						
0300	"							
0400	"	X						
0500	"							
0600	"	X						
0700	"							
0800	"	X						

P = Pibal
A = Airsonde
T = T-sonde

Site 1 = Brawley Airport
Site 2 = Salton Sea
Site 3 = Brawley
Site 4 = Indio
Site 5 = N/A

has been determined, the balloon position projected onto a horizontal plane is calculated for each 30 second observation. The wind speed and direction for a given layer are calculated using the vector between the bottom and top of the layer. Thus, the winds calculated are 30 second averages and are assigned a height at the midpoint of that layer.

All pibal data were verified when digitized for computer processing to minimize transcribing errors. Reduced pibals were quality checked by a meteorologist for internal consistency and general consistency with other observations. Questionable data were flagged as missing.

2.2.2 Data Tape Format

The pibal data have been transcribed to 9-track magnetic tape for transmission to the CARB. Tape density is 800 bpi, parity is odd, and unlabeled. The data are written in 80 character ASCII records, unblocked. The record format is as follows:

Column No.	Format	Parameter
1-3	A3	Site Identifier (Refer to Table 2-1)
4-8	I5	Site Elevation (ft-msl)
10	A1	Reporting units M = meters, F = feet
11	A1	Reference Elevation M = msl, A = agl
13-14	I2	Year
15-17	I3	Julian Day
19-22	I4	Observation Time
23-25	A3	Time Zone
26-31	I6	Height of Observation
33-35	I3	Wind Direction (True) 999 = missing
37-40	F4.1	Wind Speed (m/sec) 99.9 = missing

There will always be 49 records per observation.

2.2.3 Pibal Data Listing

The reduced pibal observations are given in this section. The data are first ordered by location and then by date and time. Pibals taken in conjunction with airsondes were reduced by a different computer program than were the single theodolite type. Thus, when the observations at one location are of both types, the reduced data are presented on different reports and not necessarily in time sequence. The location order is as follows:

N. San Bernardino	Cajon Summit
Lake Gregory	Banning
Acton	Wilsonia Garden
Barstow	Cajon Junction
Victorville	Crestline
Palm Springs	Fontana
Desert Center	Carson
S. Fork Santa Ana River	Redlands
Twentynine Palms	Ontario
Brawley	Indio
Salton Sea	Sylmar
Brawley Airport	E. Garden Grove

The winds have been reduced as thirty second averages; the midpoint height of the layers is the indicated altitude. The wind speed is presented in units of meters per second and heights are in meters above ground level. All bearings are true.

Table 2-10

PIBAL WIND DATA

ARB SOUTHEAST DESERT STUDY — WINDS ALOFT

LOCATION: N SAN BERNARDINO (003) DATE: 7/ 9/81 GROUND ELEVATION: 390 METERS

RELEASE TIME(PDT)	1241		1400		1603		1800		2003	
HEIGHT (M AGL)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)
0	0	0.0	90	1.0	0	0.0	270	0.5	0	0.0
53	230	2.0	244*	2.9	247	1.9	250	3.2	256	3.2
159	224	3.1	243	2.9	248	3.7	250	4.0	256	3.6
263	233	2.8	261	4.8	270	3.0	257	4.6	249	2.7
365	258*	3.4	262	5.5	281	3.5	270	4.9	274	1.1
466	258*	3.4	253	5.2	282	2.5	301	2.5	345	1.1
565	273	3.7	262	3.8	273	2.9	326	1.8	10	1.1
662	277	3.1	270	2.3	249	2.3	303	0.9	51	0.6
758	286	1.7	272	1.8	251	1.2	11	0.4	215	1.2
852	243	0.9	308	1.4	261	0.9	173	1.0	214	1.9
944	231	1.3	44	0.8	251	1.3	218	1.6	225	2.8
1035	253	2.2	148	1.5	196	2.2	224	3.3	222	3.0
1125	146	0.8	148	1.2	221	2.6	220	3.5	202	2.8
1215	129	2.1	169	2.3	239	3.2	221	3.7	198	4.5
1305	999	99.9	185	4.5	236	4.3	226	4.5	212	5.1
1395	999	99.9	201	3.8	238	4.9	233	5.4	229	5.4
1485	999	99.9	210	3.0	217	1.9	233	5.6	999	99.9
1575	999	99.9	213	4.0	237	7.8	231	6.3	999	99.9
1665	999	99.9	215	4.3	231	5.8	232	6.6	999	99.9
1755	999	99.9	221	5.1	228	6.2	233	7.0	999	99.9
1845	999	99.9	214	5.9	224	6.3	233	6.6	999	99.9
1935	999	99.9	208	5.8	224	5.5	224	5.7	999	99.9
2025	999	99.9	202	5.7	226	6.2	217	5.2	999	99.9
2115	999	99.9	201	5.4	225	6.3	205*	4.6	999	99.9
2205	999	99.9	204	5.8	218	5.6	205*	4.6	999	99.9
2295	999	99.9	201	5.9	216	5.8	207	3.2	999	99.9
2385	999	99.9	203	8.3	209	5.5	215	3.7	999	99.9
2475	999	99.9	164	3.5	202	5.1	224	3.6	999	99.9
2565	999	99.9	188	5.2	201	5.1	228	2.5	999	99.9
2655	999	99.9	191	5.5	205	4.5	236	2.4	999	99.9
2745	999	99.9	199	5.8	204	3.6	249	2.4	999	99.9
2835	999	99.9	202	4.7	217	2.9	236	2.7	999	99.9
2925	999	99.9	208	4.7	215	3.7	219	3.5	999	99.9
3015	999	99.9	208	4.8	231	3.7	223	3.9	999	99.9
3105	999	99.9	205	4.9	232	3.7	225	3.4	999	99.9
3195	999	99.9	212	5.0	236	3.2	227	3.0	999	99.9
3285	999	99.9	207	5.1	241	3.2	221	1.2	999	99.9
3375	999	99.9	196	5.4	229	3.1	156	1.1	999	99.9
3465	999	99.9	189	4.6	217	3.7	148	1.5	999	99.9
3555	999	99.9	197	3.3	206	3.9	131	2.0	999	99.9
3645	999	99.9	196	3.3	194	3.7	140	2.6	999	99.9
3735	999	99.9	198	2.6	200	4.0	151	1.8	999	99.9
3825	999	99.9	189	1.5	205	4.5	155	2.5	999	99.9
3915	999	99.9	177	1.0	206	5.0	184	2.7	999	99.9
4005	999	99.9	174	0.9	205	3.3	205	4.0	999	99.9
4095	999	99.9	134	0.6	183	1.7	215	4.4	999	99.9
4185	999	99.9	125	0.8	137	1.4	216	5.4	999	99.9
4275	999	99.9	120	0.8	134	1.7	222	6.0	999	99.9
4365	999	99.9	150	1.0	150	1.8	226	6.2	999	99.9

"*" DENOTES INTERPOLATED DATA, "9"S MISSING DATA

P18PLT VER 03 MOD 04 04-MAY-82 07:55:26 PAGE 2

ARB SOUTHEAST DESERT STUDY WINDS ALOFT
LOCATION: N SAN BERNARDINO (003) DATE: 7/ 9/81 GROUND ELEVATION: 390 METERS

RELEASE TIME(PDT) 2204

HEIGHT (M AGL)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)
0	0	0.0
53	244*	1.0
159	243	1.0
263	56	0.4
365	67	0.7

"*" DENOTES INTERPOLATED DATA, "9"S MISSING DATA

ARB SOUTHEAST DESERT STUDY — WINDS ALOFT

LOCATION: N SAN BERNARDINO (0003) DATE: 7/10/81 GROUND ELEVATION: 390 METERS

RELEASE TIME(PDT)	213		625		800		955		1205	
HEIGHT (M AGL)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)
0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
53	149*	0.5	132*	0.9	158	0.5	209	0.6	231	3.4
159	150	0.5	132	0.9	134	0.3	187	0.9	231	4.1
263	107	1.7	112	1.1	125	0.5	253	1.6	235	4.6
365	143	1.2	123	1.0	25	0.3	317	1.2	252	3.8
466	309	1.0	360	0.4	222	0.8	314	0.9	277	1.2
565	999	99.9	286	0.7	233	0.9	238*	0.6	261	0.2
662	999	99.9	305	0.8	322	0.4	238*	0.6	323	0.9
758	999	99.9	292	0.8	254	1.3	217	1.2	36	0.7
852	999	99.9	285	0.2	210	0.6	178	0.9	143	1.2
944	999	99.9	0	0.0	197	0.9	193	1.4	128	1.3
1035	999	99.9	999	99.9	189	0.8	153	1.0	155	2.1
1125	999	99.9	999	99.9	143	2.1	138	3.3	181	3.8
1215	999	99.9	999	99.9	183	2.7	261	4.4	198	4.1
1305	999	99.9	999	99.9	184	2.6	134	10.8	201	3.9
1395	999	99.9	225	5.2	228	4.1	182	4.2	214	3.4
1485	999	99.9	239	6.1	242	6.2	210	3.9	225	4.2
1575	999	99.9	236	6.2	237	6.1	238	6.0	227	5.5
1665	999	99.9	225	6.4	231	7.6	233	6.1	227	6.6
1755	999	99.9	220	6.7	230	7.6	240	8.5	220	7.7
1845	999	99.9	221	7.6	227	9.2	221	7.8	218	7.4
1935	999	99.9	221	7.5	223	7.1	228	8.5	219	8.0
2025	999	99.9	221	7.8	218	8.9	226	8.9	217	7.9
2115	999	99.9	219	7.8	218	8.6	223	9.1	214	7.7
2205	999	99.9	222	6.9	218	8.4	217	9.1	214	8.1
2295	999	99.9	220	6.9	218	7.3	217	8.5	212	8.7
2385	999	99.9	217	7.4	217	7.5	216	8.2	212	8.2
2475	999	99.9	217	7.5	221	8.0	217	7.7	207	8.4
2565	999	99.9	217	6.5	212	7.8	219	8.2	203	8.6
2655	999	99.9	217	6.0	211	7.8	219	7.9	201	7.6
2745	999	99.9	204	6.0	211	7.3	222	7.9	205	7.7
2835	999	99.9	199	6.9	212	7.1	215	7.7	206	8.0
2925	999	99.9	184	6.9	212	6.3	217	7.5	205	7.7
3015	999	99.9	186	7.4	202	6.2	217	7.2	207	8.0
3105	999	99.9	189	6.7	201	7.5	217	6.3	208	6.9
3195	999	99.9	200	5.3	191	6.9	205	7.2	203	7.8
3285	999	99.9	195	4.3	184	6.6	198	6.9	206	8.8
3375	999	99.9	189	2.6	185	6.6	194	8.7	203	9.1
3465	999	99.9	195	1.8	185	5.9	189	10.0	201	10.3
3555	999	99.9	150	1.2	187	5.0	188	10.5	202	9.9
3645	999	99.9	146	1.2	181	4.4	185	12.0	202	10.2
3735	999	99.9	114	1.1	168	3.3	190	11.0	213	8.5
3825	999	99.9	161	1.4	146	2.2	194	10.2	223	5.8
3915	999	99.9	152	1.6	124	2.0	194	9.6	246	4.4
4005	999	99.9	165	2.7	121	2.3	197	6.6	243	4.1
4095	999	99.9	173	2.3	119	2.3	204	6.5	232	2.5
4185	999	99.9	121	2.3	134	2.4	208	4.4	247	1.5
4275	999	99.9	118	1.4	130	2.7	202	4.4	232	1.3
4365	999	99.9	115	1.4	156	3.0	192	3.4	999	99.9

"*" DENOTES INTERPOLATED DATA, "9"S MISSING DATA

ARB SOUTHEAST DESERT STUDY (0004) WINDS ALOFT
LOCATION: LAKE GREGORY DATE: 7/ 9/81 GROUND ELEVATION: 1371 METERS

RELEASE TIME(PDT)	1417		1800		2200	
HEIGHT (M AGL)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)
0	180	1.0	180	3.0	999	99.9
53	187	7.5	176	9.7	184	3.9
159	179	12.8	180	11.2	181	7.8
263	181	11.3	176	10.2	194	11.4
365	187	11.6	181	12.9	207	9.9
466	193	12.2	196	13.8	222	11.9
565	193	12.7	202	14.3	231	11.9
662	190	10.1	207	12.3	234	11.5
758	189	8.3	216	8.9	278	4.6
852	192	6.0	209	4.5	310	3.0
944	189	6.5	211	2.7	331	1.9
1035	188	5.9	188	2.0	274	1.6
1125	186	7.4	216	1.8	320	0.8
1215	193	6.6	254	2.7	315	0.9
1305	198	5.8	262	2.7	271	0.8
1395	199	4.8	237	3.1	228	1.3
1485	197	3.1	245	3.1	208	1.4
1575	244	2.6	238	2.4	201	2.7
1665	183	2.0	228	0.8	189	3.1
1755	152	3.9	188	2.0	170	3.1
1845	171	2.3	193	1.8	157	3.2
1935	173	2.8	208	2.6	179	1.8
2025	167	2.7	212	2.9	210	1.3
2115	174	3.1	208	4.2	198	0.9
2205	157	2.5	205	4.7	200	4.5
2295	118	2.0	206	4.1	158	2.3
2385	146	2.5	203	4.6	168	3.0
2475	148	2.2	210	2.9	128	1.3
2565	150	2.8	184	1.7	230	2.0
2655	156	1.7	175	1.7	236	2.7
2745	162	2.2	159	1.9	251	2.7
2835	166	2.7	146	2.2	252	3.1
2925	175	1.8	147	1.9	274	2.5
3015	193	1.7	108	1.8	279	2.6
3105	183	2.2	131	2.5	273	3.3
3195	188	3.5	155	2.7	285	3.4
3285	172	4.2	180	3.7	275	4.2
3375	180	4.8	199	4.2	256	4.9
3465	169	5.0	202	5.4	263	5.3
3555	168	7.3	208	5.5	276	5.1
3645	157	6.2	213	6.4	293	6.8
3735	150	6.7	219	6.7	233	3.8
3825	151	6.6	212	8.0	999	99.9
3915	166	7.7	209	7.4	999	99.9
4005	180	7.6	209	7.6	999	99.9
4095	174	7.8	201	8.5	999	99.9
4185	177	8.0	205	8.0	999	99.9
4275	182	8.1	197	8.2	999	99.9
4365	182	8.3	199	8.4	999	99.9

*** DENOTES INTERPOLATED DATA 999S MISSING DATA

WINDS ALOFT (SINGLE AND DOUBLE THEODOLITE DATA) PAGE 1

ARB SOUTH EAST DESERT

RELEASE SITE = LAKE GREGORY

SITE ELEVATION = 1372 (M)

07/09/81 1645 (PDT) 07/09/81 2010 (PDT)

HEIGHT (M AGL)	WIND DIR (DEG)	WIND SPEED (M/S)	HEIGHT (M AGL)	WIND DIR (DEG)	WIND SPEED (M/S)
60	176	8.9	43	176	9.6
174	188	11.3	133	182	13.4
273	190	10.1	224	182	14.9
363	195	11.7	312	187	16.3
447	203	12.9	386	200	14.4
528	203	13.8	450	205	15.9
610	201	12.7	511	219	13.9
693	204	12.3	576	223	14.2
775	207	9.9	656	223	14.3
863	207	11.7	741	230	11.7
955	206	10.0	828	230	11.5
1034	204	10.1	914	230	9.1
1100	202	8.8	995	218	7.7
1147	194	6.4	1076	223	7.4
1192	192	5.7	1156	239	5.3
1256	214	4.6	1230	248	3.9
1318	260	1.4			
1371	231	2.2			
1425	231	1.9			
1479	256	.6			
1551	230	.9			
1646	176	.9			
1739	224	1.2			
1819	275	.4			
1900	207	2.0			
1986	195	1.5			
2058	169	.9			
2133	180	2.3			
2214	171	1.9			
2287	184	1.6			
2360	209	2.2			
2433	214	2.9			
2506	204	4.1			
2582	191	4.4			
2656	196	4.8			
2731	203	5.6			
2806	204	5.8			
2876	209	5.9			
2945	213	3.7			
3017	206	3.0			
3092	198	2.7			
3167	170	1.3			
3239	168	1.8			
3313	165	2.2			
3389	175	3.1			
3461	128	1.6			

3525 * 160	3.5
3595 * 156	4.0

* = WIND CALCULATIONS INCLUDE SINGLE-THEODOLITE DATA.

ARB SOUTHEAST DESERT STUDY WINDS ALOFT
LOCATION: LAKE GREGORY (0004) DATE: 7/10/81 GROUND ELEVATION: 1371 METERS

RELEASE TIME(PDT)	200		600		1000		1200	
HEIGHT (M AGL)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)
0	180	5.0	180	1.0	180	0.5	180	2.0
53	172	4.6	173	5.9	165	7.7	167	8.5
159	178	8.4	178	8.4	164	11.4	174	8.8
263	181	9.9	169	9.4	163	9.3	171	11.2
365	200	11.3	187	8.9	179	6.6	172	11.3
466	209	11.9	207	10.1	201	6.9	186	11.5
565	207	12.4	218	10.0	210	11.7	200	14.1
662	209	11.8	213	9.3	211	12.4	203	12.7
758	223	8.6	210	9.5	211	12.1	212	8.8
852	233	7.1	214	9.0	214	10.5	211	8.6
944	248	6.4	212	8.5	217	8.6	213	6.9
1035	249	4.8	215	7.0	219	7.2	209	7.9
1125	241	3.3	218	6.9	219	5.7	205	7.6
1215	237	2.8	222	6.3	218	5.4	203	8.0
1305	265	1.4	222	6.1	223	5.2	198	8.5
1395	259	1.6	215	6.3	222	5.5	197	9.2
1485	238	1.9	214	6.7	218	5.7	197	8.5
1575	217	1.9	209	6.6	216	5.5	201	8.6
1665	184	2.4	212	6.5	214	5.9	202	8.6
1755	167	3.9	222	5.3	213	5.8	207	6.8
1845	171	4.5	226	4.5	223	4.5	220	5.0
1935	160	5.0	216	4.8	211	4.1	235	4.4
2025	164	6.9	204	5.3	211	4.6	235	4.1
2115	163	6.8	194	6.1	193	6.8	234	4.9
2205	177	6.2	189	7.8	192	6.8	238	3.6
2295	999	99.9	182	8.3	189	8.5	223	5.0
2385	999	99.9	184	7.2	183	10.7	218	5.6
2475	999	99.9	165	2.0	180	10.2	210	6.4
2565	999	99.9	197	3.1	187	9.1	204	7.3
2655	999	99.9	213	3.9	191	7.0	201	8.3
2745	999	99.9	204	1.1	194	3.9	201	7.3
2835	999	99.9	222	1.1	199	3.8	219	5.2
2925	999	99.9	168	1.1	208	2.7	240	3.3
3015	999	99.9	181	2.7	200	2.5	263	2.8
3105	999	99.9	168	2.9	184	1.4	266	2.8
3195	999	99.9	137	1.5	180	2.4	258	2.0
3285	999	99.9	165	1.7	180	3.4	242	1.3
3375	999	99.9	92	1.1	178	4.4	204	1.0
3465	999	99.9	88	1.1	165	3.6	150	1.5
3555	999	99.9	75	0.9	167	4.7	174	3.4
3645	999	99.9	72	0.9	161	4.9	166	4.9
3735	999	99.9	80	1.2	164	7.1	176	6.7
3825	999	99.9	120	0.7	173	6.5	181	7.6
3915	999	99.9	160	1.1	175	7.6	180	9.0
4005	999	99.9	187	1.5	185	8.4	180	9.2
4095	999	99.9	214	1.4	207	8.7	182	11.8
4185	999	99.9	235	2.5	204	6.1	187	10.5
4275	999	99.9	220	2.2	218	5.2	196	10.5
4365	999	99.9	207	3.5	225	8.4	201	10.8

"*" DENOTES INTERPOLATED DATA, "9"S MISSING DATA

ARB SOUTH EAST DESERT

RELEASE SITE = LAKE GREGORY

SITE ELEVATION = 1372 (M)

07/10/81 0018 (PDT)			07/10/81 0410 (PDT)			07/10/81 0800 (PDT)		
HEIGHT (M AGL)	WIND DIR (DEG)	WIND SPEED (M/S)	HEIGHT (M AGL)	WIND DIR (DEG)	WIND SPEED (M/S)	HEIGHT (M AGL)	WIND DIR (DEG)	WIND SPEED (M/S)
49	174	7.5	42	165	5.3	44	171	5.1
139	175	11.5	121	174	8.4	124	154	7.2
222	180	12.1	189	184	9.5	211	168	9.4
299	203	11.4	244	180	8.8	294	187	7.7
371	216	11.8	297	180	8.8	362	205	8.3
437	218	11.8	352	191	8.7	426	221	9.0
488	220	10.0	409	205	10.7	485	215	10.5
544	219	10.9	472	211	12.6	537	217	9.9
603	242	6.7	522	218	8.3	584	212	10.6
666	235	8.2	566	208	9.8	630	212	9.9
745	241	7.6	628	206	10.1	679	208	9.2
824	249	5.6	699	208	8.3	743	207	10.0
906	247	6.4	780	210	9.1	819	210	9.0
992	252	5.3	864	216	7.2	906	209	9.7
1073	258	5.0	947	216	8.8	993	215	7.0
1152	257	4.4	1028	222	7.1	1078	230	9.3
1235	241	4.9	1105	224	8.1	1162	201	7.1
1387	214	3.4	1175	231	5.9	1240	216	8.6
	---	---	1236	221	6.1	1313	218	8.7
	---	---	1297	217	6.3	1379	218	8.4
1517	195	3.7	1354	210	5.4	1438	216	7.7
1561	186	4.3	1401	209	3.7	1540	210	19.3
1607	188	5.6	1460	209	7.2	1690	211	19.3
1653	149	2.5	1526	211	4.6	1840	215	17.9
1698	156	2.8	1583	211	4.8	1990	217	17.6
1745	163	3.0	1639	213	4.4	2140	220	16.0
1789	151	3.4	1695	222	3.3	2290	223	14.5
1837	163	3.8	1750	218	3.0	2440	220	12.8
1893	146	3.4	1813	209	5.0	2590	213	13.2
1960	169	4.3	1878	215	3.5	2740	211	12.8
2026	153	3.0	1937	214	2.8	2890	206	12.9
2086	164	3.1	2002	205	3.7	3040	200	12.0
2154	178	3.5	2072	198	4.4	3190	191	11.7
2219	170	2.3	2149	192	5.6	3340	188	11.3
2285	189	3.6	2235	183	6.4	3490	187	11.8
2346	180	2.3	2320	174	6.4	3640	189	11.5
2405	194	3.6	2400	173	7.4	3790	193	12.4
2467	191	2.5	2482	183	6.8	3940	199	11.5
2548	183	3.7	2557	193	6.5	4090	193	12.1
	---	---				4240	190	11.4
2636	193	3.7				4390	184	10.1
2747	185	3.1				4540	183	10.8
	---	---				4690	178	10.3
						4840	179	10.9
						4990	179	12.2
						5140	168	10.1

5290 * 162	9.6
5440 * 153	9.2

* = WIND CALCULATIONS INCLUDE SINGLE-THEODOLITE DATA.

ARB SOUTHEAST DESERT STUDY
LOCATION: CAJON SUMMIT (015) WINDS ALOFT DATE: 7/ 9/81 GROUND ELEVATION: 1280 METERS

RELEASE TIME(PDT)	1155		1358		1601		1758		1956	
HEIGHT (M AGL)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)
0	999	99.9	999	99.9	999	99.9	999	99.9	999	99.9
93	213	6.5	227	10.0	203	12.7	197	9.2	210	10.4
159	209	8.6	220	11.2	199	15.1	204	12.9	205	15.2
263	204	12.3	205	12.4	191	10.3	205	16.5	207	21.9
365	207	14.4	203	11.9	202	11.7	210	17.2	212	18.3
466	207	10.9	203	11.6	204	14.1	220	15.3	225	10.9
565	214	7.9	210	16.1	206	12.7	219	12.3	231	13.0
662	222	4.3	212	16.0	206	11.4	220	11.7	245	8.1
758	221	4.2	210	16.9	207	11.8	228	7.7	272	4.2
852	220	2.8	212	13.0	210	10.1	237	5.4	295	1.8
944	212	3.3	211	13.1	222	7.6	276	3.0	360	1.3
1035	210	3.1	212	10.9	218	9.2	344	2.6	50	2.8
1125	222	2.1	212	10.7	218	7.1	203	2.6	26	2.1
1215	227	1.5	216	11.8	230	3.5	185	1.9	23	3.3
1305	226	2.3	221	6.9	257	1.9	160	0.5	17	2.7
1395	211	2.0	319	2.8	289	1.2	266	1.0	359	1.8
1485	195	2.2	219	2.5	341	1.0	282	1.1	360	1.8
1575	199	3.0	295	6.8	322	1.8	349	1.0	15	1.6
1665	208	3.5	280	4.5	289	2.9	325	1.0	359	1.6
1755	213	4.2	344	3.8	284	3.5	336	0.9	318	0.7
1845	207	6.2	313	2.7	309	3.1	353	1.3	224	0.1
1935	209	6.3	290	1.9	276	3.0	356	1.4	168	0.5
2025	213	7.4	260	1.9	282	3.2	12	2.1	224	1.3
2115	209	8.2	264	1.8	296	5.7	249	1.5	224	1.8
2205	207	9.6	296	1.0	295	1.1	205	0.8	224	1.7
2295	210	9.0	263	1.4	285	3.5	205	2.3	205	3.3
2385	207	9.4	225	3.4	282	4.0	210	2.6	263	4.1
2475	208	9.2	220	3.2	301	3.1	225	3.4	242	4.0
2565	207	7.3	230	4.0	303	2.6	231	3.8	252	2.7
2655	198	2.9	231	5.7	289	2.2	239	3.9	226	2.4
2745	191	2.9	225	4.7	280	2.5	233	4.7	191	2.8
2835	183	2.1	221	5.5	201	2.0	236	4.3	179	3.3
2925	179	1.2	213	5.5	239	3.0	235	4.8	173	2.9
3015	176	1.1	217	6.4	224	3.4	239	3.3	204	3.0
3105	188	0.9	217	6.4	224	4.6	238	2.7	229	3.7
3195	186	0.8	218	9.5	224	6.5	222	1.4	235	3.8
3285	195	1.4	223	8.7	206	4.9	171	1.3	244	4.9
3375	195	2.8	217	7.7	198	5.1	187	0.9	249	4.7
3465	181	2.2	202	5.7	200	5.0	169	1.9	244	5.5
3555	191	3.5	118	2.3	195	3.6	154	2.8	238	5.5
3645	193	4.1	159	3.6	190	3.7	160	4.2	246	5.8
3735	177	4.7	167	4.5	175	4.6	168	4.1	261	6.1
3825	168	6.1	178	3.5	154	4.0	183	4.4	253	5.1
3915	165	7.3	171	3.8	166	3.8	197	5.1	240	5.9
4005	159	7.9	180	3.1	157	3.1	212	4.9	232	7.1
4095	163	8.4	189	4.0	162	2.5	213	6.2	222	6.8
4185	156	9.4	178	3.0	150	1.5	222	5.7	215	7.8
4275	156	10.5	193	3.7	175	3.7	227	6.6	209	6.9
4365	162	10.8	192	3.7	181	5.1	228	8.2	212	7.6

"*" DENOTES INTERPOLATED DATA, "9"S MISSING DATA

ARB SOUTHEAST DESERT STUDY WINDS ALOFT
LOCATION: CAJON SUMMIT (015) DATE: 7/ 9/81 GROUND ELEVATION: 1280 METERS

RELEASE TIME(PDT)	2200		2214	
HEIGHT (M AGL)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)
0	999	99.9	999	99.9
53	209	9.5	210	8.5
159	202	18.0	203	12.6
263	213	10.2	218	6.1
365	999	99.9	228	5.0
466	999	99.9	314	1.0
565	999	99.9	315*	0.8
662	999	99.9	315*	0.8
758	999	99.9	350	1.0
852	999	99.9	335	2.0
944	999	99.9	347	1.9
1035	999	99.9	327	2.0
1125	999	99.9	319	2.7
1215	999	99.9	300	2.7
1305	999	99.9	285	1.8
1395	999	99.9	268	1.4
1485	999	99.9	242	2.0
1575	999	99.9	237	1.7
1665	999	99.9	241	1.9
1755	999	99.9	221	1.2
1845	999	99.9	219	1.8
1935	999	99.9	227	1.6
2025	999	99.9	251	2.3
2115	999	99.9	240	3.2
2205	999	99.9	212	1.8
2295	999	99.9	179	2.4
2385	999	99.9	171	2.7
2475	999	99.9	169	3.0
2565	999	99.9	181	3.2
2655	999	99.9	199	1.4
2745	999	99.9	255	1.1
2835	999	99.9	274	1.3
2925	999	99.9	276	1.6
3015	999	99.9	283	2.4
3105	999	99.9	282	3.0
3195	999	99.9	285	3.1
3285	999	99.9	283	3.3
3375	999	99.9	294	3.1
3465	999	99.9	312	3.5
3555	999	99.9	293	4.4
3645	999	99.9	274	4.0

"*" DENOTES INTERPOLATED DATA, "9"S MISSING DATA

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ARB SOUTHEAST DESERT STUDY WINDS ALOFT

LOCATION: BANNING (016) DATE: 7/ 5/81 GROUND ELEVATION: 670 METERS

RELEASE TIME(PDT)	1239		1417		1607		1809		2010	
HEIGHT (M AGL)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)
0	310	7.5	240	5.0	220	5.0	999	99.9	999	99.9
53	278	4.4	270	4.4	293	3.2	283	4.2	264	6.9
159	288	9.5	268	5.3	293	4.5	279	8.0	266	10.5
263	292	7.8	261	8.7	306	7.3	265	7.6	268	10.9
365	290	7.0	255	8.4	287	5.8	253	6.4	271	9.4
466	274	7.3	261	5.4	281	6.5	254	6.1	274	7.4
565	260	8.3	263	11.4	242	10.7	251	8.3	264	7.7
662	257	10.3	263	7.5	266	8.5	239	6.7	260	8.0
758	260	11.0	267	4.8	260	9.1	272	6.0	259	8.9
852	243	8.3	256	7.0	250	7.9	275	6.1	253	8.6
944	235	3.9	244	6.7	247	6.0	265	6.7	260	8.9
1035	231	3.4	236	5.7	259	10.1	261	6.2	284	7.3
1125	241	2.6	241	5.7	249	6.2	261	5.6	286	8.3
1215	249	2.6	238	6.1	222	2.4	259	5.5	279	9.7
1305	255	2.6	230	5.0	258	8.3	258	4.7	275	9.3
1395	259	3.1	176	2.1	245	4.2	252	4.7	267	9.4
1485	255	2.9	231	7.8	240	3.6	252	4.9	261	9.7
1575	238	3.3	211	4.1	234	3.1	256	4.4	263	9.0
1665	236	4.1	201	3.8	240	3.6	256	4.7	265	7.4
1755	234	4.9	200	3.5	257	3.7	271	3.3	267	6.4
1845	227	5.0	194	2.8	269	3.6	285	2.9	262	6.3
1935	230	4.7	214	2.9	271	3.5	295	2.9	263	4.3
2025	232	5.0	218	2.6	278	3.0	290	2.6	263	4.2
2115	223	4.8	220	2.4	273	2.3	277	2.7	267	2.1
2205	224	5.8	225	3.1	246	1.7	273	2.6	273	3.8
2295	216	5.0	231	2.0	248	2.0	235	2.7	260	2.7
2385	216	4.2	232	2.3	243	2.9	232	4.3	254	4.5
2475	228	4.7	227	3.2	237	2.9	235	4.1	259	5.2
2565	232	4.5	214	2.3	220	4.0	238	5.6	251	5.2
2655	230	5.1	223	3.6	223	4.9	237	5.1	263	5.9
2745	208	6.3	215	3.2	218	5.8	244	4.9	250	4.0
2835	256	3.7	213	2.6	225	5.9	249	4.8	261	4.8
2925	224	2.6	217	2.4	205	4.4	258	1.2	261	4.7
3015	207	3.0	215	2.9	238	2.9	27	1.0	999	99.9
3105	198	1.5	206	3.7	253	1.0	42	0.9	999	99.9
3195	145	1.4	200	4.5	271	0.9	57	1.4	999	99.9
3285	144	1.7	195	5.5	204	0.4	47	1.0	999	99.9
3375	146	2.5	196	4.6	205	1.1	100	1.5	999	99.9
3465	157	2.7	219	3.0	184	1.7	177	1.0	999	99.9
3555	154	3.0	217	1.8	184	3.0	186	2.1	999	99.9
3645	161	3.6	194	2.1	187	3.7	189	2.8	999	99.9
3735	999	99.9	999	99.9	999	99.9	181	3.8	999	99.9
3825	999	99.9	999	99.9	999	99.9	183	4.4	999	99.9
3915	999	99.9	999	99.9	999	99.9	198	5.2	999	99.9
4005	999	99.9	999	99.9	999	99.9	210	6.1	999	99.9
4095	999	99.9	999	99.9	999	99.9	216	7.0	999	99.9
4185	999	99.9	999	99.9	999	99.9	215	5.7	999	99.9
4275	999	99.9	999	99.9	999	99.9	213	5.8	999	99.9
4365	999	99.9	999	99.9	999	99.9	193	5.0	999	99.9

*** DENOTES INTERPOLATED DATA, "9"S MISSING DATA

ARB SOUTHEAST DESERT STUDY WINDS ALOFT
LOCATION: BANNING (016) DATE: 7/ 9/81 GROUND ELEVATION: 670 METERS

RELEASE TIME(PDT) 2210

HEIGHT (M AGL)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)
0	999	99.9
53	246	6.0
159	249	8.2
263	255	9.2
365	258	7.7
466	262	8.7
565	262	8.7
662	258	8.6
758	278	8.1
852	290	8.1
944	295	7.6
1035	282	9.1
1125	279	8.3
1215	280	8.5
1305	277	8.0
1395	279	6.9
1485	275	5.5
1575	273	6.0
1665	267	5.2
1755	267	5.1
1845	250	5.2
1935	251	4.2
2025	261	6.1
2115	254	4.6

"*" DENOTES INTERPOLATED DATA, "9"S MISSING DATA

ARB SOUTHEAST DESERT STUDY — WINDS ALOFT
LOCATION: SYLMAR RELEASE (025) DATE: 7/14/81 GROUND ELEVATION: 304 METERS

RELEASE TIME(PDT)	1012		1200		1404		1600	
HEIGHT (M AGL)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)
0	999	99.9	200	2.0	155	2.0	155	3.0
53	208	2.0	199	2.1	172	2.7	146	5.1
159	191	1.9	180	2.3	177	2.0	149	5.6
263	126	1.9	180	2.8	177	2.3	153	5.8
365	112	0.4	163	1.9	168	2.9	159	5.6
466	85	0.9	148	0.7	161	3.4	164	5.2
565	38	0.3	201	0.6	168	3.5	204	2.4
662	140	0.8	163	0.9	176	3.0	219	3.1
758	151	1.3	161	1.9	179	3.6	241	3.7
852	162	2.8	132	2.1	212	3.4	240	4.0
944	146	3.4	169	1.1	223	3.2	236	4.6
1035	130	2.4	186	1.3	227	2.8	229	4.5
1125	182	1.8	172	1.3	226	2.8	231	3.4
1215	199	2.6	198	1.6	229	3.2	217	3.2
1305	328	2.1	216	3.0	231	3.5	205	3.9
1395	170	7.2	229	3.5	230	2.7	204	4.3
1485	202	2.7	224	2.9	219	3.0	200	4.6
1575	208	3.0	207	2.5	201	3.6	198	5.0
1665	225	3.8	202	2.4	191	3.8	206	4.7
1755	214	3.5	186	2.8	185	4.2	203	4.8
1845	201	2.9	163	3.6	179	4.1	189	5.2
1935	182	2.8	153	3.9	159	4.2	197	5.3
2025	163	3.4	150	4.2	160	5.3	188	5.6
2115	147	3.6	154	4.4	154	5.4	182	9.0
2205	141	4.2	151	4.4	145	5.0	143	2.4
2295	143	4.3	149	4.4	131	5.4	160	5.1
2385	135	4.3	151	4.7	115	5.9	156	5.3
2475	136	4.0	143	4.1	129	7.1	153	5.4
2565	134	3.9	143	5.0	122	6.3	151	4.9
2655	131	4.0	137	4.9	130	6.6	147	5.1
2745	129	4.5	125	5.7	132	6.4	148	4.9
2835	134	5.2	133	6.2	133	5.1	137	4.4
2925	133	5.7	139	5.4	138	5.3	133	3.8
3015	136	5.4	148	5.0	145	3.4	111	5.5
3105	146	5.7	152	4.7	132	3.8	105	6.4
3195	144	6.7	152	3.8	125	4.1	101	6.5
3285	165	6.3	148	3.6	131	3.3	116	5.0
3375	999	99.9	131	1.9	133	3.2	136	4.5
3465	999	99.9	113	2.3	123	2.9	139	4.3
3555	999	99.9	120	3.4	136	4.0	156	4.3
3645	999	99.9	125	4.6	142	2.4	165	3.7
3735	999	99.9	134	5.2	158	3.2	169	2.0
3825	999	99.9	138	3.8	153	5.2	161	3.7
3915	999	99.9	171	3.9	151	4.3	169	3.1
4005	999	99.9	115	5.4	158	4.3	169	3.6
4095	999	99.9	147	4.3	162	3.8	164	3.0
4185	999	99.9	158	2.9	158	3.9	175	3.0
4275	999	99.9	172	3.1	158	3.3	160	1.8
4365	999	99.9	183	3.4	153	3.3	169	1.7

"0" DENOTES INTERPOLATED DATA, "9"S MISSING DATA

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ARB SOUTHEAST DESERT STUDY WINDS ALOFT
LOCATION: ACTON FIRE STATION (005) DATE: 7/14/81 GROUND ELEVATION: 957 METERS

RELEASE TIME(PDT)	1206		1433		1632		1805		2004	
HEIGHT (M AGL)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)
0	0	0.0	225	9.0	0	0.0	225	6.5	0	0.0
53	286	5.0	249	5.6	250	8.7	276	5.2	295	9.2
159	304	3.2	267	5.4	256	9.4	275	7.2	286	7.8
263	295	2.1	275	7.1	275	7.0	269	7.7	271	8.9
365	293	2.3	280	8.1	274	6.1	274	8.9	256	9.6
466	270	1.0	282	7.8	278	6.2	274	9.7	252	9.7
565	284	1.1	303	5.0	290	6.7	264	9.2	249	10.5
662	329	0.8	308	3.4	290	5.1	263	7.8	249	10.4
758	210	0.3	296	2.9	275	7.6	259	7.9	246	9.6
852	157	1.3	286	1.4	270	5.8	254	8.6	236	9.2
944	166	1.2	282	2.1	221	0.7	230	7.1	237	9.4
1035	164	0.9	300	0.5	999	1.8	223	8.5	245	8.8
1125	164	1.6	287	0.7	243	5.2	222	8.6	246	9.5
1215	180	1.9	217	1.1	228	4.8	220	7.4	242	9.8
1305	182	2.2	177	1.1	214	2.9	218	6.1	235	9.5
1395	180	2.8	190	1.4	198	2.4	221	4.4	226	8.5
1485	188	3.5	166	1.3	177	3.0	150	1.7	221	8.6
1575	189	3.8	153	1.8	134	2.6	126	1.6	212	6.4
1665	183	3.7	147	2.8	117	3.0	123	1.6	134	1.4
1755	181	3.7	151	3.1	110	3.1	110	2.4	118	1.0
1845	184	3.4	160	3.0	115	2.8	116	3.3	104	1.7
1935	173	3.1	166	3.3	112	3.1	100	3.5	109	1.9
2025	156	3.0	171	3.2	122	2.9	110	4.0	93	2.2
2115	136	2.7	162	2.9	112	2.9	119	3.7	86	2.1
2205	136	3.2	159	2.9	114	2.3	112	4.3	117	1.2
2295	141	3.1	183	2.1	183	2.7	118	4.1	164	2.0
2385	139	2.8	216	2.1	207	3.4	123	3.9	148	3.4
2475	133	2.7	230	1.9	190	4.0	142	3.9	127	4.8
2565	115	3.3	225	1.8	164	4.1	137	3.4	133	5.0
2655	107	4.3	209	2.2	162	4.5	138	2.2	120	5.3
2745	118	3.2	192	2.8	166	4.3	156	1.4	129	5.3
2835	123	4.2	191	2.8	174	3.9	127	1.5	123	5.8
2925	149	2.8	189	3.5	179	4.1	125	2.0	130	5.5
3015	19	1.3	191	3.3	180	3.1	138	2.4	136	5.3
3105	167	4.5	185	3.2	196	2.8	145	3.3	142	5.8
3195	173	4.3	189	3.6	192	2.2	171	2.3	141	6.7
3285	182	4.6	190	3.2	180	1.8	173	1.2	141	7.1
3375	181	5.1	188	2.6	162	1.9	153	1.2	999	99.9
3465	184	4.5	205	2.0	153	1.6	146	1.3	999	99.9
3555	183	4.3	226	3.0	159	1.7	111	1.1	999	99.9
3645	177	4.3	229	4.0	175	1.5	124	1.4	999	99.9
3735	195	5.7	224*	3.9	999	99.9	132	1.7	999	99.9
3825	187	5.2	224*	3.9	999	99.9	129	1.7	999	99.9
3915	185	6.0	237	2.1	999	99.9	144	1.1	999	99.9
4005	186	6.7	237	1.4	999	99.9	151	0.7	999	99.9
4095	199	5.3	271	0.9	999	99.9	157	1.7	999	99.9
4185	210	4.5	251	1.4	999	99.9	158	1.0	999	99.9
4275	232	3.7	268	1.2	999	99.9	155	0.9	999	99.9
4365	999	99.9	326	1.5	999	99.9	69	0.8	999	99.9

"*" DENOTES INTERPOLATED DATA, "9"S MISSING DATA

ARB SOUTHEAST DESERT STUDY WINDS ALOFT
LOCATION: ACTON FIRE STATION (0005) DATE: 7/14/81 GROUND ELEVATION: 957 METERS

RELEASE TIME(PDT)	2212		2357	
HEIGHT (M AGL)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)
0	315	0.5	0	0.0
53	273	3.1	253	2.9
159	268	4.2	254	4.5
263	269	6.1	260	5.6
365	259	7.1	254	7.4
466	260	8.2	257	7.4
565	265	9.0	266	8.0
662	261	8.5	259	11.7
758	260	9.5	257	10.1
852	269	9.0	260	10.7
944	264	7.9	267	10.4
1035	255	8.2	267	10.2
1125	239	6.0	262	9.8
1215	227	3.9	256	9.2
1305	228	5.9	255	9.5
1395	181	4.4	252	8.5
1485	152	3.1	231	5.8
1575	114	3.5	212	5.9
1665	101*	3.4	174	4.5
1755	101*	3.4	152	3.9
1845	81	1.5	117	3.7
1935	104	1.9	119	3.7
2025	154	1.5	125	3.3
2115	159	1.3	130	2.8
2205	155	2.7	128	2.8
2295	160	3.9	119	3.1
2385	151	4.5	140	3.6
2475	150	5.7	152	3.6
2565	147	6.5	166	4.8
2655	155	7.3	161	5.5
2745	162	7.7	173	6.3
2835	161	7.1	165	8.8
2925	172	6.5	164	10.3
3015	175	5.7	163	10.1
3105	999	99.9	167	10.1

"*" DENOTES INTERPOLATED DATA, "9"S MISSING DATA

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ARB SOUTHEAST DESERT STUDY WINDS ALOFT
LOCATION: BARSTOW (0006) DATE: 7/14/81 GROUND ELEVATION: 597 METERS

RELEASE TIME(PDT)	1600		1800		2201	
HEIGHT (M AGL)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)
0	0	0.0	225	1.0	270	2.5
53	141	2.5	292	4.3	273	6.9
159	149	1.4	282	3.9	274	10.7
263	237	1.4	273	4.4	272	13.3
365	187	1.8	291	3.2	273	12.8
466	182	2.8	291	2.5	267	13.7
565	167	2.8	264	3.3	265	12.7
662	76	1.8	250	4.0	266	11.5
758	121	1.9	234	3.3	266	10.9
852	108	1.4	237	3.5	269	10.0
944	157	0.9	219	2.9	270	12.7
1035	306	0.4	199	2.0	275	15.7
1125	291	0.6	199	1.6	279	16.0
1215	230	0.8	178	2.1	281	14.9
1305	103	1.6	175	1.6	286	13.1
1395	215	3.3	165	1.9	287	10.6
1485	155	0.9	155	1.3	304	3.9
1575	165	1.9	170	1.2	310	2.3
1665	139	1.4	168	1.3	293	4.3
1755	156	3.5	162	1.8	286	3.9
1845	163	3.7	170	1.7	276	1.1
1935	160	4.3	172	1.9	108	4.8
2025	161	4.3	171	2.0	127	3.8
2115	153	4.4	174	1.9	117	4.3
2205	146	4.3	164	1.9	117	5.0
2295	144	4.4	156	1.7	124	5.0
2385	154	5.1	197	1.7	136	4.4
2475	150	4.9	171	1.7	130	4.8
2565	147	4.7	176	2.4	132	4.8
2655	138	3.8	160	3.0	137	5.1
2745	131	3.9	161	3.4	138	5.1
2835	133	4.4	172	4.0	135	4.8
2925	138	5.0	176	4.3	140	4.3
3015	150	4.2	174	5.0	138	5.2
3105	155	2.8	163	4.9	205	6.8
3195	168	2.3	161	5.0	118	9.0
3285	170	1.6	126	4.3	154	5.8
3375	198	0.2	126	4.2	157	5.7
3465	300	0.3	125	3.9	141	5.2
3555	307	0.4	132	4.3	143	4.7
3645	265	1.0	136	4.2	141	4.7
3735	356	1.2	112	2.1	144	4.3
3825	1	0.6	110	1.0	121	3.6
3915	337	4.2	87	1.1	999	99.9
4005	142	3.3	17	0.5	999	99.9
4095	10	1.0	231	0.2	999	99.9
4185	53	1.2	211	0.8	999	99.9
4275	98	1.3	132	0.5	999	99.9
4365	51	2.0	60	1.4	999	99.9

"*" DENOTES INTERPOLATED DATA. "9"S MISSING DATA

WINDS ALOFT (SINGLE AND DOUBLE THEODOLITE DATA) PAGE 1

ARB SOUTH EAST DESERT

RELEASE SITE = BARSTOW

SITE ELEVATION = 597 (M)

07/14/81 1424 (PDT) 07/14/81 2002 (PDT)

HEIGHT (M AGL)	WIND DIR (DEG)	WIND SPEED (M/S)	HEIGHT (M AGL)	WIND DIR (DEG)	WIND SPEED (M/S)
40	098	2.8	33	247	9.8
109	118	3.1	99	248	14.3
153	122	3.0	165	248	13.6
205	129	4.2	231	249	14.1
256	128	2.0	297	252	13.8
292	129	2.7	363	254	14.5
349	138	2.3	429	255	13.8
422	226	.4	495	255	15.2
492	165	1.3	561	256	14.2
526	278	2.6	627	258	14.4
555	279	1.5	693	258	14.9
619	259	1.3	759	260	13.5
693	233	1.3	825	262	11.1
791	246	.7	891	264	11.1
913	163	.4	957	266	7.6
1013	250	1.6	1023	266	5.7
1097	260	1.5	1089	285	3.0
1186	227	1.7	1155	277	4.9
1273	224	1.3	1221	279	4.6
1356	253	1.4	1287	287	4.5
1422	351	.5	1353	311	3.2
1462	303	.7	1419	315	2.8
1521	190	1.6	1485	326	2.4
1615	160	2.7	1551	298	3.7
1681	157	3.4	1617	304	3.3
1722	160	5.7	1683	309	3.1
1773	164	5.5	1749	306	2.9
1829	163	6.8	1815	304	2.8
1890	171	6.6	1881	311	2.7
1951	173	4.4	1947	299	2.1
			2013	311	1.7
			2079	336	.9
			2145	035	.7
			2211	057	.9
			2277	035	.4
			2343	065	1.3
			2409	109	.8
			2475	126	1.4
			2541	146	1.8
			2673	147	3.1
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			2838	139	3.9
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			2937	135	4.1
			3036	133	4.5

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* = WIND CALCULATIONS INCLUDE SINGLE-THEODOLITE DATA.

ARB SOUTHEAST DESERT STUDY WINDS ALOFT
LOCATION: BARSTOW (006) DATE: 7/15/81 GROUND ELEVATION: 597 METERS

RELEASE TIME(PDT)	6		615		1000		1200		1605	
HEIGHT (M AGL)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)
0	270	1.5	135	0.5	150	1.0	115	3.0	90	3.0
93	287	5.8	183	0.3	64	1.9	95	6.8	87	4.3
159	270	7.0	357	1.4	59	2.0	87	7.8	102	5.4
263	274	10.2	208	1.1	71	2.0	82	6.9	107	5.4
365	273	10.5	999	99.9	79	2.0	89	6.1	101	5.2
466	272	10.8	999	99.9	133	1.8	91	4.6	98	4.6
565	269	10.4	999	99.9	170	2.1	108	1.7	104	4.2
662	265	11.4	183	5.2	176	4.3	149	1.0	101	4.0
758	273	14.0	190	5.8	160	4.8	117	3.3	109	3.5
852	275	11.9	202	5.8	172	5.5	134	3.0	124	3.4
944	275	11.2	205	5.9	180	6.3	147	3.8	146	3.1
1035	275	10.7	214	5.6	185	5.9	171	3.1	175	2.6
1125	267	11.0	241	6.1	207	4.9	185	4.4	193	3.3
1215	263	9.7	251	5.4	206	5.2	193	3.4	215	3.1
1305	259	9.8	241	4.3	211	5.0	204	3.2	235	2.6
1395	263	10.6	237	2.9	213	4.5	205	2.8	255	3.5
1485	268	8.6	246	2.7	201	4.6	207	3.3	277	3.8
1575	282	7.6	240	2.6	196	4.8	217	3.2	290	4.4
1665	288	4.3	232	2.2	200	4.7	248	4.2	306	5.7
1755	251	0.9	226	1.8	240	3.6	262	5.7	326	5.1
1845	223	2.5	215	1.4	267	2.4	268	5.6	352	4.8
1935	189	3.1	249	1.5	293	1.6	269	6.0	3	4.6
2025	184	4.1	285	1.7	306	2.2	278	6.0	16	5.5
2115	170	4.1	237	1.1	317	1.8	285	5.6	31	6.7
2205	167	3.8	217	0.7	306	2.0	301	6.1	47	7.3
2295	153	4.0	226	0.8	319	2.4	318	6.0	52	7.5
2385	152	3.9	207	0.7	314	2.9	999	99.9	52	7.4
2475	155	4.8	229	0.6	309	3.2	999	99.9	44	6.8
2565	148	5.5	217	2.1	305	3.9	999	99.9	39	6.6
2655	142	6.3	234	2.4	313	4.1	999	99.9	35	6.5
2745	154	6.0	257	2.2	347	5.0	999	99.9	29	6.4
2835	146	6.1	330	1.4	355	5.9	2	6.1	21	5.6
2925	156	5.8	325	1.7	360	5.8	999	99.9	18	5.6
3015	166	5.1	327*	2.2	6	6.1	999	99.9	17	6.2
3105	145	5.9	327*	2.2	11	6.7	999	99.9	18	5.6
3195	149	6.3	332	2.4	999	99.9	999	99.9	25	6.2
3285	146	6.2	353	2.9	999	99.9	999	99.9	28	6.4
3375	134	6.7	4	3.1	999	99.9	999	99.9	37	9.4
3465	128	7.1	17	4.1	999	99.9	999	99.9	43	9.9
3555	125	7.0	26	5.4	999	99.9	999	99.9	41	6.6
3645	119	7.1	26	5.9	999	99.9	999	99.9	47	9.2
3735	119	6.5	28	6.3	999	99.9	999	99.9	47	10.8
3825	120	6.0	30	6.4	999	99.9	999	99.9	54	13.4
3915	123	4.4	37	6.9	999	99.9	999	99.9	50	15.2
4005	159	3.5	42	6.7	999	99.9	999	99.9	44	16.7
4095	151	2.6	38	6.6	999	99.9	999	99.9	46	15.6
4185	137	2.9	999	99.9	999	99.9	999	99.9	37	14.7
4275	153	3.2	999	99.9	999	99.9	999	99.9	35	16.0
4365	156	3.9	999	99.9	999	99.9	999	99.9	34	14.4

"*" DENOTES INTERPOLATED DATA, "9"S MISSING DATA

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ARB SOUTHEAST DESERT STUDY WINDS ALOFT
LOCATION: BARSTOW (006) DATE: 7/15/81 GROUND ELEVATION: 597 METERS

RELEASE TIME(PDT)	1800	
HEIGHT (M AGL)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)
0	360	1.0
53	7	2.3
159	356	2.5
263	348	1.7
365	238*	3.1
466	238*	3.1
565	236	4.7
662	233	5.0
758	243	5.3
852	264	5.3
944	284	5.2
1035	297	5.1
1125	305	5.3
1215	310	6.3
1305	313	5.8
1395	325	4.7
1485	329	4.5
1575	339	4.3
1665	360	3.8
1755	4	3.7
1845	359	3.7
1935	10	4.2
2025	351	6.0
2115	30	4.5
2205	360	5.7
2295	359	5.7

"*" DENOTES INTERPOLATED DATA, "9"S MISSING DATA

ARB SOUTH EAST DESERT

RELEASE SITE = BARSTOW

SITE ELEVATION = 597 (M)

07/15/81 0223 (PDT)

HEIGHT (M AGL)	WIND DIR (DEG)	WIND SPEED (M/S)
31	303	4.1
90	291	6.2
151	283	7.5
217	272	8.6
290	266	11.2
363	272	11.5
429	277	11.7
495	275	12.3
561	271	13.7

07/15/81 0415 (PDT)

HEIGHT (M AGL)	WIND DIR (DEG)	WIND SPEED (M/S)
32	300	2.2
95	313	3.0
163	283	4.9
222	271	6.1
273	261	6.9
336	258	9.3
404	260	10.3
473	261	9.7
537	265	9.3
596	265	10.3
656	268	9.8
721	269	11.2
778	272	7.4
834	275	9.0
901	275	7.9
965	277	8.0
1023	280	6.6
1069	280	5.2
1121	272	7.4
1180	270	6.1
1224	277	3.0
1274	278	7.8
1327	281	3.2
1380	264	4.8
1440	248	1.9
1494	217	.9
1564	234	2.5
1627	127	2.9
1691	232	2.5
1757	127	2.7
1807	127	2.9
1861	124	3.4
1918	130	5.1
1987	161	2.2
2050	127	4.1
2112	165	3.2
2178	145	4.0
2240	167	3.6
2299	142	4.3
2352	159	4.7
2406	159	5.7
2452	156	5.7
2495	161	5.4
2552	171	5.2
2607	153	4.7
2655	156	4.6

07/15/81 0806 (PDT)

HEIGHT (M AGL)	WIND DIR (DEG)	WIND SPEED (M/S)
84	146	5.9
145	159	6.3
300	176	7.9
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454	172	11.4
560	177	12.1
654	181	10.9
738	180	9.6
819	190	7.7
894	193	7.5
965	195	7.4
1047	193	7.1
1131	194	6.3
1213	202	5.2
1295	207	3.8
1378	208	3.9
1454	209	5.3
1514	219	4.5
1579	217	5.2
1651	224	5.0

07/15/81 1407 (PDT)

HEIGHT (M AGL)	WIND DIR (DEG)	WIND SPEED (M/S)
30	092	8.3
91	096	8.8
148	095	7.0
204	092	7.0
268	098	6.1
332	096	5.5
404	101	5.4
484	107	4.1

2704	* 141	4.6
2752	* 142	4.2

* = WIND CALCULATIONS INCLUDE SINGLE-THEODOLITE DATA.

ARB SOUTHEAST DESERT STUDY WINDS ALOFT
LOCATION: WILSONIA GARDEN (017) DATE: 7/14/81 GROUND ELEVATION: 792 METERS

RELEASE TIME(PDT)	1231		1400		1606		1651		1808	
HEIGHT (M AGL)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)
0	0	0.0	0	0.0	290	0.0	270	5.0	225	7.0
53	318	2.0	285	2.3	297	2.1	275*	8.7	239	7.7
159	314	2.8	293	0.9	286	2.5	275	8.7	244	11.5
263	321	4.6	9	1.1	301	2.0	271	10.4	246	12.0
365	307	3.6	112	0.2	240	4.0	258	7.2	253	11.5
466	281	2.1	198	0.7	254	4.0	264	8.6	254	7.3
565	332	0.7	194	1.4	248	4.7	265	16.7	255	8.2
662	311	1.1	189	1.5	258	3.8	269	11.0	261	7.0
758	309	1.6	194	1.1	247	2.6	255	9.7	268	5.5
852	82	0.9	205	1.0	231	2.5	266	10.4	266	7.1
944	53	3.1	210	1.5	233	1.9	267	10.5	262	7.1
1035	31	2.2	210	2.3	230	1.7	269	10.6	263	7.7
1125	56	2.2	192	3.0	206	2.2	273	9.4	264	6.2
1215	59	2.0	186	1.2	184	2.4	267	7.8	269	5.0
1305	66	2.8	130	1.0	170	2.6	281	6.2	278	6.1
1395	108	2.7	152	2.8	161	2.7	245	7.1	282	4.8
1485	121	3.5	112	1.6	194	1.8	280	7.3	288	4.2
1575	140	3.7	116	2.6	190	1.4	302	6.3	279	1.9
1665	135	3.7	106	3.0	159	2.7	248	6.3	353	0.8
1755	133	3.8	107	2.4	157	3.0	279	4.8	327	0.9
1845	151	3.8	101	3.1	148	3.4	292	6.9	41	1.0
1935	156	3.7	127	2.7	162	3.4	238	7.2	61	1.9
2025	152	3.6	151	1.3	154	3.1	278	6.2	64	1.4
2115	152	2.9	155	1.4	163	3.3	280	7.1	81	2.7
2205	157	2.7	140	1.0	158	3.4	282	6.0	77	3.4
2295	161	2.5	158	1.3	155	3.4	281	3.7	81	5.2
2385	161	2.2	333	10.7	150	3.6	255	1.5	87	6.3
2475	163	2.4	999	99.9	135	3.3	100	5.6	94	5.7
2565	172	2.5	999	99.9	160	6.1	98	2.4	97	6.4
2655	168	2.3	999	99.9	145	5.4	96	8.3	97	6.4
2745	165	2.2	999	99.9	150	5.2	107	7.9	102	6.5
2835	126	2.4	999	99.9	178	3.3	99	6.2	104	6.6
2925	111	4.1	999	99.9	147	3.3	79	8.4	111	6.0
3015	104	4.7	999	99.9	195	1.9	123	8.6	130	4.3
3105	109	5.0	999	99.9	229	1.1	100	7.8	191	1.7
3195	120	5.4	999	99.9	200	2.4	101	5.7	204	2.3
3285	132	5.0	999	99.9	185	1.8	104	4.5	218	2.2
3375	135	4.6	999	99.9	198	2.4	92	10.3	236	2.3
3465	138	3.7	999	99.9	191	3.0	174*	4.8	214	2.6
3555	153	4.2	999	99.9	185	1.8	174*	4.8	193	2.2
3645	159	5.6	999	99.9	301	73.7	189	2.7	196	3.2
3735	158	5.3	999	99.9	123	73.3	175	6.2	190	3.1
3825	162	4.9	999	99.9	251	1.7	178	3.5	170	2.9
3915	165	5.9	999	99.9	230	1.8	242	1.2	142	1.8
4005	149	5.8	999	99.9	244	1.1	189	2.6	152	1.2
4095	172	5.5	999	99.9	246	1.1	187	4.7	52	0.8
4185	180	4.7	999	99.9	249	1.1	196	1.8	43	0.9
4275	182	4.8	999	99.9	330	1.2	224	1.1	44	1.0
4365	171	5.5	999	99.9	335	2.1	235	1.0	71	0.4

"9" DENOTES INTERPOLATED DATA, "999" MISSING DATA

ARB SOUTHEAST DESERT STUDY WINDS ALOFT
LOCATION: WILSONIA GARDEN (017) DATE: 7/14/81 GROUND ELEVATION: 792 METERS

RELEASE TIME(PDT)	2004		2201	
HEIGHT (M AGL)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)
0	270	2.5	270	0.0
53	250	4.8	299	5.0
159	243	6.9	286	8.0
263	242	8.9	276	7.7
365	238	8.6	268	9.5
466	235	8.5	264	10.5
565	236	7.4	258	11.7
662	241	6.8	254	12.3
758	248	6.4	256	12.3
852	255	6.3	256	12.2
944	259	5.9	257	13.0
1035	267	6.1	258	13.9
1125	266	7.1	258	14.2
1215	292	8.5	258	14.4
1305	305	9.3	264	12.2
1395	193	7.5	269	9.3
1485	308	1.5	276	9.4
1575	252	0.6	290	4.9
1665	252	0.1	300	1.1
1755	72	0.5	271	2.8
1845	135	0.4	245	3.9
1935	117	1.5	241	2.5
2025	123	1.8	203	2.3
2115	132	1.7	173	2.0
2205	133	2.1	123	2.6
2295	143	2.4	169	2.0
2385	140	2.6	167	2.3
2475	141	3.4	150	3.1
2565	140	4.1	165	3.6
2655	138	4.9	145	4.9
2745	146	5.5	149	6.3
2835	144	6.0	133	7.8
2925	157	4.3	134	8.3
3015	175	3.0	130	8.9
3105	164	2.4	132	8.4
3195	144	2.3	138	7.5
3285	172	2.1	144	7.4
3375	125	1.0	156	6.5
3465	137	1.7	153	6.8
3555	152	3.1	157	5.8
3645	153	3.5	157	4.7
3735	163	3.6	164	4.4
3825	152	2.2	167	4.9
3915	138	2.4	163	5.2
4005	111	2.9	185	3.6
4095	159	3.8	146	8.3
4185	54	5.7	148	5.4
4275	93	1.9	999	99.9
4365	86	1.8	999	99.9

"*" DENOTES INTERPOLATED DATA, "9"S MISSING DATA

ARB SOUTHEAST DESERT STUDY — WINDS ALOFT
LOCATION: BARSTOW (0006) DATE: 7/18/81 GROUND ELEVATION: 597 METERS

RELEASE TIME(PDT)	1600		1800		2200	
HEIGHT (M AGL)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)
0	180	1.0	250	3.0	270	3.5
53	154	2.5	253	6.6	287	5.1
159	211	2.8	246	8.3	273	8.4
263	219	4.0	249	10.5	268	9.2
365	213	3.3	252	9.8	268	10.6
466	195	3.5	249	10.1	274	11.0
565	180	3.2	253	7.0	277	10.1
662	193	3.3	263	7.1	278	8.8
758	348	0.2	256	6.9	273	9.2
852	262	2.7	265	6.3	273	11.0
944	263	4.7	249	7.4	273	12.2
1035	261	5.0	242	5.6	274	10.5
1125	286	3.5	249	8.9	278	8.8
1215	275	5.6	248	7.8	265	7.5
1305	262	4.4	243	5.2	254	8.4
1395	262	4.4	229	5.9	243	8.0
1485	277	4.4	222	3.5	237	6.4
1575	250	6.3	216	3.4	229	5.6
1665	241	6.3	206	2.8	203	5.5
1755	243	5.7	202	2.7	182	5.3
1845	249	5.9	194	2.4	172	5.8
1935	243	4.9	185	3.1	169	6.5
2025	238	2.9	161	3.1	160	6.6
2115	257	2.9	167	2.9	168	6.5
2205	263	1.7	192	3.2	159	5.7
2295	262	1.9	200	4.6	175	5.9
2385	253	2.0	203	4.8	229	9.0
2475	260	3.0	199	4.3	68	5.5
2565	268	2.4	212	4.2	85	0.9
2655	294	2.7	245	3.2	98	1.1
2745	329	2.6	251	2.0	108	2.0
2835	339	2.3	316	0.8	120	2.6
2925	360	2.2	31	1.2	124	4.0
3015	22	2.7	44	1.1	120	2.8
3105	28	3.1	62	2.7	93	3.6
3195	22	3.1	74	3.3	78	3.8
3285	3	2.5	56	3.6	76	3.1
3375	360	2.3	48	3.1	80	3.2
3465	37	2.9	47	2.6	90	3.4
3555	36	3.1	38	2.8	82	3.2
3645	41	3.0	35	2.8	81	3.2
3735	32	2.8	28	2.6	91	3.0
3825	41	2.1	16	2.5	101	2.9
3915	47	1.7	17	3.1	100	3.5
4005	53	0.9	21	3.5	94	3.8
4095	49*	1.1	16	3.4	86	3.5
4185	49*	1.1	14	3.6	72	3.3
4275	39	1.5	12	3.4	64	2.4
4365	40*	1.6	24	3.4	999	99.9

"*" DENOTES INTERPOLATED DATA, "9"S MISSING DATA

WINDS ALOFT (SINGLE AND DOUBLE THEODOLITE DATA) PAGE 1

ARB SOUTH EAST DESERT

RELEASE SITE = BARSTOW

SITE ELEVATION = 597 (M)

07/18/81 1437 (PDT) 07/18/81 2000 (PDT)

HEIGHT (M AGL)	WIND DIR (DEG)	WIND SPEED (M/S)	HEIGHT (M AGL)	WIND DIR (DEG)	WIND SPEED (M/S)
38	283	.6	58	248	8.7
126	271	.7	156	241	9.6
213	176	1.0	230	242	12.1
280	238	1.3	300	250	11.9
357	238	1.4	367	254	12.7
459	234	3.1	439	254	13.4
581	183	1.6	520	258	13.0
733	104	1.5	599	258	12.7
887	354	1.5	671	266	13.2
1003	287	2.8	741	268	11.8
1092	263	3.5	821	267	11.3
1195	254	3.7	912	264	12.0
1302	244	6.4	1008	264	11.6
1427	237	6.5	1102	261	11.0
	---	---	1193	259	11.1
1536	235	7.9	1280	263	8.0
1601	230	8.6	1369	265	9.1
1672	213	7.7	1460	267	8.2
1744	210	6.6			
1824	218	11.3			
1898	211	8.2			
1967	213	8.9			
2029	207	8.6			
2061	208	7.9			
2102	216	8.2			
2157	227	4.9			
2225	237	4.5			
2309	248	3.5			
2405	246	4.2			
2503	259	3.4			
2587	269	3.6			
2668	262	3.1			
2748	255	3.4			
2830	259	2.5			
2903	258	3.0			
2978	254	4.7			
3072	250	5.9			
3172	247	4.9			
3253	253	2.8			
3338	263	2.6			
3439	275	1.2			
3532	347	1.0			
3620	350	1.0			
3717	314	1.1			
3817	356	1.8			
3911	346	2.4			

4005	* 311	1.8
4099	* 351	1.6

* = WIND CALCULATIONS INCLUDE SINGLE-THEODOLITE DATA.

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ARB SOUTHEAST DESERT STUDY
LOCATION: BARSTOW (0006) WINDS ALOFT
DATE: 7/15/81
GROUND ELEVATION: 597 METERS

RELEASE TIME(PDT)	0		414		608		1000		1200	
HEIGHT (M AGL)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)
0	290	3.5	270	0.5	270	1.5	270	3.0	360	1.0
53	304	5.8	306	3.5	283	5.0	274	4.7	341	1.4
159	291	9.7	304	6.1	296	4.6	275	3.2	3	0.5
263	280	11.3	288	8.8	287	6.5	290	3.9	27	0.1
365	272	11.2	274	10.1	281	8.9	298	5.2	284	0.4
466	269	12.7	266	10.5	268	9.1	292	3.3	206	0.2
565	272	11.6	260	10.6	265	9.4	283	2.4	309	0.8
662	262	9.5	261	10.9	261	8.3	216	1.5	255	0.4
758	263	9.6	262	9.3	249	6.3	150	3.4	234	1.3
852	263	8.4	257	6.9	242	5.5	124*	5.6	235	1.9
944	247	5.8	252	5.1	229	5.8	124*	5.6	229	3.6
1035	254	7.7	240	4.9	242	10.0	118	4.8	230	4.9
1125	246	7.8	238	6.9	203	6.4	145	2.3	230	5.2
1215	243	9.8	236	5.3	219	7.7	208	2.9	230	5.4
1305	244	7.5	239	4.8	220	5.4	217	5.1	230*	5.6
1395	240	7.5	227	6.8	210	4.2	218	6.6	230*	5.6
1485	231	6.2	223	6.8	201	4.5	217	7.5	223	6.8
1575	205	5.1	220	6.8	189	4.5	212	6.7	216	7.1
1665	202	4.9	208	6.2	189	5.4	210	4.5	220	7.4
1755	202	5.4	195	5.7	192	5.7	205	3.5	226	7.4
1845	180	5.7	190	5.7	183	5.7	189	3.2	229	7.3
1935	181	6.7	183	6.3	185	5.6	190	3.2	228	7.7
2025	177	7.0	176	7.2	194	6.1	212	4.4	227	8.2
2115	179	7.0	180	6.4	191	6.2	213	6.0	226	8.6
2205	180	7.0	194	5.5	195	5.6	219	7.7	224	9.8
2295	173	6.3	215	4.7	205	6.1	219	8.5	224	9.4
2385	188	5.5	209	3.5	199	6.4	217	9.0	224	9.8
2475	145	2.8	149	2.0	194	6.0	221	8.7	226	8.5
2565	122	2.2	124	3.0	211	4.6	223	8.3	222	7.9
2655	130	3.2	144	3.5	191	4.0	228	8.6	209	7.4
2745	140	3.3	136	5.3	204	2.8	244	9.1	211	7.5
2835	139	4.1	145	6.2	145	7.7	198	6.1	229	8.7
2925	121	4.5	146	6.2	149	6.1	196	5.8	194	11.4
3015	120	4.4	133	5.7	154	5.6	202	6.2	198	9.7
3105	111	4.6	135	5.4	173	5.7	203	6.9	202	10.5
3195	123	4.1	137	5.5	174	5.4	198	7.3	197	9.5
3285	112	4.1	148	6.3	181	6.2	202	7.9	196	9.8
3375	107	3.6	152	7.2	180	7.9	195	9.2	186	7.7
3465	108	2.9	162	4.8	165	7.9	190	9.1	182	9.2
3555	101	3.4	147	9.8	157	7.9	189	10.2	180	8.2
3645	117	3.1	150	6.8	163	7.7	184	10.1	181	10.4
3735	122	2.8	157	6.3	152	6.9	181	9.8	175	8.7
3825	121	3.0	147	6.5	147	6.0	175	8.7	181	9.3
3915	121	3.7	136	5.8	151	6.5	175	8.8	184	7.8
4005	118	3.7	139	5.8	158	6.5	176	8.8	189	7.6
4095	114	3.2	144	5.9	150	7.4	172	8.2	202	7.2
4185	119	2.9	146	5.2	158	7.2	175	7.9	200	6.0
4275	999	99.9	167	5.2	165	7.5	173	7.0	202	7.2
4365	999	99.9	999	99.9	175	6.9	181	6.5	195	6.2

"*" DENOTES INTERPOLATED DATA, "9"S MISSING DATA

ARB SOUTHEAST DESERT STUDY WINDS ALOFT
LOCATION: BARSTOW (006) DATE: 7/19/81 GROUND ELEVATION: 597 METERS

RELEASE TIME(PDT)	1800		1930	
HEIGHT (M AGL)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)
0	270	2.5	290	5.0
53	247	1.9	244	8.1
159	247	3.5	244	11.6
263	246	4.3	245	12.9
365	250	5.0	248	13.1
466	249	4.7	250	11.7
565	247	4.3	257	11.1
662	254	4.0	263	11.5
758	270	3.9	267	10.4
852	271	2.5	267	9.4
944	265	4.4	274	7.8
1035	269	3.4	278	7.4
1125	268	2.1	280	7.0
1215	254	1.9	282	6.0
1305	244	2.1	279	5.5
1395	272	2.2	284	2.9
1485	278	1.0	309	2.5
1575	254	2.2	304	2.8
1665	225	1.6	323	2.5
1755	223	3.1	304	2.2
1845	216	3.8	313	2.3
1935	202	4.3	319	1.2
2025	205	5.4	318	0.9
2115	210	5.6	291	1.2
2205	212	5.8	333	0.8
2295	209	5.2	283	0.8
2385	218	3.3	244	0.7
2475	234	4.3	163	2.8
2565	224	4.2	999	99.9
2655	223	4.3	999	99.9
2745	226	4.0	999	99.9
2835	244	5.5	999	99.9
2925	236	7.2	999	99.9
3015	236	7.6	216	4.3
3105	244	7.2	243	4.6
3195	202	8.3	243	6.6
3285	213	7.3	240	8.1
3375	217	7.3	239	8.4
3465	219	6.9	234	7.4
3555	225	6.4	218	7.6
3645	227	6.5	203	7.1
3735	229	6.0	212	8.0
3825	226	6.2	220	6.5
3915	222	5.6	219	6.5
4005	209	6.1	228	5.2
4095	215	5.2	236	5.0
4185	192	6.3	234	4.1
4275	195	5.1	228	4.2
4365	201	5.7	222	4.3

*** DENOTES INTERPOLATED DATA, 999S MISSING DATA

WINDS ALOFT (SINGLE AND DOUBLE THEODOLITE DATA) PAGE 2

ARB SOUTH EAST DESERT

RELEASE SITE = BARSTOW

SITE ELEVATION = 597 (M)

07/19/81 0200 (PDT)			07/19/81 0800 (PDT)			07/19/81 1400 (PDT)		
HEIGHT (M AGL)	WIND DIR (DEG)	WIND SPEED (M/S)	HEIGHT (M AGL)	WIND DIR (DEG)	WIND SPEED (M/S)	HEIGHT (M AGL)	WIND DIR (DEG)	WIND SPEED (M/S)
48	309	6.5	43	302	5.7	28	305	2.6
142	299	7.7	132	294	5.7	85	286	2.7
237	283	10.3	215	276	5.4	134	292	1.9
351	276	14.2	289	275	6.4	172	275	1.9
460	266	11.9	363	282	7.6	230	273	1.8
540	268	10.9	436	281	8.4	319	269	1.6
604	272	11.7	515	272	6.8	408	306	2.9
664	273	13.3	593	258	4.9	493	330	2.5
728	266	11.7	668	243	5.2	609	349	2.9
793	257	10.1	742	232	5.0	773	344	2.5
860	258	10.5	822	236	4.7	943	344	1.9
925	259	8.4	906	208	2.8	1090	315	2.5
985	261	8.6	1185	170	3.3	1218	303	4.4
1042	267	7.3		---	---	1308	291	2.7
1102	265	7.3		---	---	1373	248	3.2
1173	254	10.1		---	---	1441	256	3.7
1242	244	8.1		---	---	1500	233	4.8
1306	250	8.0		---	---	1604	235	6.3
1365	248	6.5	1461	223	6.3	1762	209	8.0
1421	247	7.6	1535	225	6.9	1911	203	8.6
1489	245	8.6	1615	226	6.8	2066	210	10.0
1557	231	7.0	1696	220	5.3	2196	212	9.6
1631	229	8.7	1770	217	4.4	2297	221	10.5
1700	198	6.6	1844	212	3.4	2396	227	10.5
1762	205	8.0	1919	201	3.1	2474	220	10.3
1835	206	8.2	1995	179	3.2	2554	222	11.4
1905	193	7.7	2073	163	3.6	2657	225	10.8
1967	183	7.8	2155	176	3.5	2772	226	10.5
2033	185	8.3	2237	192	3.3	2878	223	8.8
2098	169	7.6	2319	210	4.8	3001	229	12.0
2171	188	8.5	2407	215	5.9	3122	233	8.9
2246	176	7.3	2494	219	6.2	3232	232	11.7
2307	187	6.0	2572	222	7.3	3326	217	8.0
2379	194	4.3	2654	226	8.1	3381	215	10.1
2460	108	3.1	2734	232	7.3	3434	215	9.7
2546	130	1.9	2812	227	6.9	3475	212	8.7
2633	130	2.4	2892	222	4.9	3524	216	10.5
2705	108	3.2	2969	211	4.1	3577	207	8.1
2762	101	3.8	3049	186	4.6	3650	210	11.2
2830	154	4.0	3130	188	5.5	3740	203	9.5
2899	117	5.5	3209	192	5.9	3812	200	9.3
2961	122	5.2	3279	196	5.6	3879	196	8.6
3019	112	5.9	3342	196	7.3	3936	190	8.4
3081	139	4.8	3412	199	8.1	4007	194	10.4
3153	131	5.1	3491	196	9.1	4093	190	10.4

3274	*	131	4.9	3660	*	179	10.0	4219	*	185	10.8
3337	*	127	5.3	3739	*	169	9.6	4320	*	189	11.7

* = WIND CALCULATIONS INCLUDE SINGLE-THEODOLITE DATA.

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ARB SOUTHEAST DESERT STUDY WINDS ALOFT

LOCATION: VICTORVILLE (007) DATE: 7/18/81 GROUND ELEVATION: 899 METERS

RELEASE TIME(PDT)	1405		1603		1757		2000		2207	
HEIGHT (M AGL)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)
0	0	0.0	225	12.0	225	12.0	0	0.0	225	2.5
53	205	11.8	201	10.4	213	10.4	220	7.1	244	5.4
159	210	9.1	205	15.3	220	10.3	223	8.9	233	8.2
263	227	5.5	209	17.0	221	12.2	228	9.6	229	8.0
365	224	7.8	210	15.6	223	11.5	235	9.5	230	8.7
466	218	7.3	210	16.3	223	6.9	265	3.4	243	7.7
565	232	7.1	216	12.9	228	6.4	269	3.0	254	6.3
662	231	9.4	215	12.9	236	5.2	276	5.3	259	6.3
758	223	9.0	226	10.3	242	3.3	293	4.7	250	6.2
852	222	7.6	241	5.6	277	2.9	320	3.3	240	6.8
944	218	7.2	300	2.4	286	2.6	302	3.0	229	4.8
1035	214	5.7	360	1.1	294	2.8	291	2.0	223	5.9
1125	215	5.9	10	2.4	321	3.1	246	2.7	235	6.3
1215	211	4.8	4	3.0	322	3.2	235	2.6	234	5.9
1305	208	4.6	348	2.8	323	3.1	230	3.8	234	5.8
1395	209	4.3	315	2.1	316	3.5	225	3.3	229	6.7
1485	208	4.6	287	1.6	306	3.9	225	3.7	226	6.4
1575	208	5.0	312	1.5	303	3.9	219	3.8	220	6.0
1665	215	5.3	289	2.0	286	3.5	213	4.5	233	3.6
1755	217	5.2	287	2.5	277	4.6	212	4.5	254	4.7
1845	217	5.7	290	3.3	275	5.2	221	5.4	264	3.7
1935	220	4.4	273	4.5	257	2.5	224	5.1	258	4.5
2025	243	3.4	279	5.4	234	1.8	217	4.3	249	3.6
2115	250	4.2	264	4.5	196	1.0	213	3.6	234	3.4
2205	273	2.5	276	2.3	198	1.2	209	3.7	210	3.1
2295	257	2.5	303	1.8	212	0.8	207	3.6	192	2.0
2385	249	2.1	325	0.9	248	1.9	211	1.8	193	1.0
2475	270	1.7	31	0.7	265	1.2	241	1.6	171	1.6
2565	247	1.8	360	1.1	228	1.4	226	2.6	135	2.7
2655	249	1.7	31	1.3	327	1.0	228	1.7	126	3.6
2745	249	2.9	0	0.0	9	1.8	196	0.6	141	3.6
2835	237	3.2	51	0.1	24	1.9	92	1.0	145	5.1
2925	236	2.5	247	0.7	21	2.1	79	1.8	141	6.3
3015	261	1.3	342	2.0	43	2.4	106	2.1	130	6.3
3105	280	1.7	321	2.1	58	2.6	105	2.8	144	5.9
3195	283	1.7	342	1.3	56	2.6	111	4.2	141	6.2
3285	260	1.0	328	1.5	52	2.4	110	5.2	138	5.9
3375	307	0.6	13	1.9	55	3.1	102	5.2	134	6.2
3465	315	0.3	350	1.6	65	3.3	91	4.3	131	5.7
3555	224	0.5	357	1.4	77	3.3	102	4.6	129	5.5
3645	342	0.3	4	1.3	68	3.1	105	5.0	126	5.0
3735	25	0.9	36	1.8	78	2.0	101	4.9	118	4.8
3825	92	0.4	41	2.2	78	1.8	89	4.5	121	5.0
3915	159	0.6	57	2.2	89	0.5	92	4.0	112	5.0
4005	177	1.1	47	1.1	178	0.2	82	3.4	121	4.8
4095	166	1.3	85	0.8	153	1.6	88	3.0	119	4.3
4185	136	1.4	147	0.9	154	2.2	83	2.3	125	4.0
4275	103	2.3	116	2.4	132	2.1	71	2.9	127	3.2
4365	98	2.1	117	2.8	129	2.1	97	2.6	999	99.9

"*" DENOTES INTERPOLATED DATA, "9"S MISSING DATA

ARB SOUTHEAST DESERT STUDY WINDS ALOFT
LOCATION: VICTORVILLE (007) DATE: 7/15/81 GROUND ELEVATION: 899 METERS

RELEASE TIME(PDT)	9		219		420		605		758	
HEIGHT (M AGL)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)
0	225	1.0	0	0.0	225	3.5	0	0.0	135	0.8
53	251	4.3	227	8.7	236*	4.5	205	0.9	153	2.0
159	259	3.9	216	11.5	235	4.5	281	1.3	173	2.7
263	254	4.5	208	12.8	211	4.6	290	2.4	167	1.8
365	264	3.6	204	7.8	217	2.2	251	3.3	169	3.6
466	276	2.5	223	9.0	204	2.1	206	6.1	193	5.3
565	258	3.7	217	6.5	175	2.0	205	7.8	194	8.0
662	227	6.0	197	3.7	60	2.2	206	9.0	188	12.2
758	233	8.0	122	1.0	53	1.9	201	9.0	192	10.0
852	233	8.5	31	2.4	103	0.4	200	8.3	198	10.0
944	222	8.0	18	3.3	158	1.6	196	8.2	200	9.1
1035	215	7.5	4	1.5	223	3.6	195	8.4	204	8.1
1125	211	7.3	255	2.2	223	4.8	199	5.2	211	7.3
1215	244	3.7	271	4.0	221	5.3	214	4.8	221	6.3
1305	241	4.1	254	4.9	217	5.5	213	5.1	219	6.5
1395	232	4.0	239	5.7	217	6.6	212	5.0	215	5.9
1485	227	4.6	245	7.0	223	6.8	211	4.7	212	5.7
1575	220	4.4	241	8.1	221*	5.5	208	5.0	213	6.1
1665	225	5.6	234	8.5	221*	5.5	210	5.0	212	7.1
1755	220	5.8	232	9.2	231	3.4	202	5.4	210	7.7
1845	221	5.9	228	9.5	246	3.5	197	6.4	212	7.3
1935	220	4.8	227	9.8	245	3.7	202	6.9	216	7.6
2025	227	3.9	227	9.5	238	2.2	211	7.6	214	7.6
2115	235	4.2	230	8.9	202	1.1	222	7.1	209	7.6
2205	216	3.4	240	8.3	166	1.7	230	6.9	213	7.8
2295	172	3.0	244	7.3	164	2.5	228	5.1	218	8.1
2385	173	4.1	251	7.7	171	2.7	220	4.3	232	7.2
2475	164	3.0	249	6.2	999	99.9	226	3.7	238	7.5
2565	142	2.9	239	6.7	999	99.9	201	3.5	240	7.6
2655	158	3.8	243	6.0	999	99.9	180	3.1	239	6.4
2745	170	3.9	220	4.4	999	99.9	163	2.9	227	5.7
2835	153	4.8	215	4.4	999	99.9	172	3.1	217	5.5
2925	145	6.5	183	2.6	999	99.9	183	6.1	214	5.4
3015	141	6.6	197	3.0	999	99.9	186	7.4	206	5.3
3105	133	6.8	175	2.8	999	99.9	188	8.2	204	7.3
3195	129	6.6	169	3.0	999	99.9	174	8.6	201	8.4
3285	131	6.0	181	3.2	999	99.9	169	9.2	206	7.4
3375	129	5.6	165	4.6	999	99.9	160	9.2	201	8.7
3465	125	5.7	170	6.6	999	99.9	158	9.4	193	7.9
3555	122	5.9	152	6.6	999	99.9	154	9.9	186	9.5
3645	130	5.3	146	8.3	999	99.9	151	9.0	182	8.6
3735	128	5.4	137	9.0	999	99.9	153	9.8	181	10.1
3825	128	4.7	124	9.3	999	99.9	160	8.8	185	9.9
3915	122	5.4	135*	8.6	999	99.9	157	7.9	187	9.9
4005	999	99.9	135*	8.6	999	99.9	158	7.8	186	10.1
4095	999	99.9	135	9.3	999	99.9	166	7.2	185	10.3
4185	999	99.9	141	9.6	999	99.9	168	6.0	185	8.9
4275	999	99.9	139	9.4	999	99.9	176	5.7	190	10.3
4365	999	99.9	142	7.8	999	99.9	184	5.5	193	7.1

"*" DENOTES INTERPOLATED DATA. "9"S MISSING DATA

ARB SOUTHEAST DESERT STUDY WINDS ALOFT

LOCATION: VICTORVILLE (007) DATE: 7/19/81 GROUND ELEVATION: 899 METERS

RELEASE TIME(PDT)	1002		1206		1419		1803	
HEIGHT (M AGL)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)
0	0	0.0	225	5.0	0	0.0	180	8.5
53	108	1.6	211	3.8	197	6.4	210	11.6
159	196	2.3	210	4.2	204	7.3	213	13.1
263	210	4.6	207	2.4	198	7.0	219	10.9
365	999	99.9	211	2.8	209	8.0	222	6.9
466	999	99.9	200	3.6	218	9.0	218	7.5
565	999	99.9	194	4.1	218	8.7	226	5.2
662	208	7.5	202	3.3	229	3.6	231	4.9
758	214	7.0	216	2.8	232	4.0	233	2.9
852	219	6.7	218	2.7	234	4.7	253	1.6
944	219	6.4	217	2.7	235	4.6	276	1.5
1035	222	5.8	227	2.6	245	4.8	315	1.6
1125	224	5.7	215	2.9	261	4.3	328	2.1
1215	233	4.8	214	2.6	271	4.5	310	3.0
1305	227	4.3	219	4.0	251	4.4	305	3.5
1395	230	5.5	220	4.0	244	4.4	295	4.0
1485	234	6.0	217	3.7	247	4.7	305	4.0
1575	231	7.9	218	3.6	250	5.0	306	3.8
1665	235	7.1	221	4.1	249	5.7	310	3.7
1755	241	7.5	235	4.8	247	6.1	324	3.8
1845	240	7.7	240	5.3	244	6.0	333	3.4
1935	235	8.2	241	7.2	248	5.8	320	3.3
2025	233	8.4	237	7.8	245*	5.7	295	1.7
2115	233	8.7	239	7.8	245*	5.7	303	1.3
2205	235	9.1	239	7.5	256	6.1	292	1.3
2295	231	10.1	237	7.8	264	6.5	234	1.8
2385	231	10.6	230	7.7	264	6.5	226	3.6
2475	236	9.6	223	8.1	254	6.7	228	3.9
2565	235	8.2	224	7.2	250	7.2	217	4.3
2655	226	6.4	218	8.0	245	7.3	216	4.6
2745	217	6.5	215	9.6	233	6.7	218	4.6
2835	222	5.5	214	10.1	211	5.2	224	5.5
2925	230	5.5	214	9.4	210	6.0	234	7.0
3015	226	7.4	213	9.2	211	5.1	238	6.9
3105	208	7.8	214	8.8	220	7.2	234	6.9
3195	204	8.0	206	8.6	223	8.0	223	6.1
3285	208	9.0	199	8.3	223	9.0	216	6.5
3375	202	9.5	191	9.0	223	10.2	211	7.5
3465	195	7.5	191	8.1	226	8.6	211	6.5
3555	194	8.8	195	6.9	225	8.8	219	5.1
3645	192	7.6	205	7.6	221	8.0	223	5.6
3735	197	8.6	209	6.6	217	8.3	230	5.0
3825	199	7.1	216	6.6	206	9.0	236	4.4
3915	209	8.2	213	6.6	204	9.2	248	4.6
4005	210	6.9	209	6.7	201	10.9	244	4.5
4095	215	8.1	201	7.0	204	9.4	237	5.2
4185	214	6.7	208	6.9	206	8.0	233	4.6
4275	205	6.9	212	6.9	216	7.7	225	4.7
4365	200	5.4	223	7.0	224	8.9	236	4.6

"*" DENOTES INTERPOLATED DATA, "9"S MISSING DATA

ARB SOUTHEAST DESERT STUDY WINDS ALOFT

LOCATION: CAJON JCT (018) DATE: 7/18/81 GROUND ELEVATION: 944 METERS

RELEASE TIME(PDT)	1210		1401		1605		1800		2010	
HEIGHT (M AGL)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)
0	155	6.0	135	6.0	110	6.0	135	6.0	155	5.0
53	165	7.1	146	8.4	145	6.2	146	6.8	174	4.1
159	168	12.7	163	11.2	140	11.3	157	7.2	169*	10.3
263	169	10.7	168	15.9	152	12.4	167	12.5	169*	10.3
365	169	8.8	168	15.0	162	18.1	174	13.1	179	9.0
466	171	4.7	175	12.2	170	14.7	180	11.1	189	8.0
565	180	4.2	180	13.7	167	20.2	182	11.5	195	8.0
662	219	2.5	220	4.1	176	12.5	197	9.7	205	6.6
758	221	4.9	185	8.0	182	10.1	190	7.4	207	4.6
852	188	5.0	184	6.1	191	8.9	208	6.6	224	4.3
944	189	7.2	225	4.3	196	8.4	219	5.5	219	5.4
1035	193	8.1	248	3.5	207	7.4	228	5.3	217	5.8
1125	196	8.9	214	2.2	227	5.2	232	5.6	214	6.9
1215	197	7.7	239	5.9	214	8.6	232	5.5	212	7.9
1305	200	7.1	225	4.3	220	7.6	241	5.0	213	8.2
1395	211	6.1	224	4.4	225	6.2	244	4.7	219	7.2
1485	217	6.3	227	5.6	240	4.6	253	3.3	218	5.2
1575	237	5.0	224	6.2	234	4.7	277	3.3	211	5.3
1665	235	5.8	228	6.8	257	3.7	199	70.0	217	3.8
1755	239	5.0	228	6.6	247	3.5	15	67.3	237	3.0
1845	233	4.9	237	6.4	277	3.4	255	1.6	231	3.7
1935	201	3.7	244	6.7	251	2.9	245	1.1	247	2.9
2025	247	5.6	241	5.1	271	3.2	252	1.0	215	3.0
2115	211	4.6	240	4.0	266	4.6	208	1.3	214	2.3
2205	205	5.0	241	3.7	272	5.1	276	1.2	203	1.6
2295	209	3.8	263	3.1	276	5.7	257	1.9	258	1.7
2385	227	4.1	234	3.7	272	5.5	265	1.1	251	1.2
2475	240	3.1	243	2.3	289	4.6	295	1.0	204	0.2
2565	228	3.2	231	3.3	292	4.3	351	1.1	128	0.5
2655	213	3.4	237	3.3	275	3.4	360	1.5	67	0.7
2745	212	2.7	203	2.0	253	3.4	352	2.2	57	1.2
2835	237	2.3	227	2.8	264	2.8	333	1.2	82	2.1
2925	226	2.0	217	1.2	251	3.7	342	1.7	92	3.3
3015	253	0.7	237	0.5	285	2.8	24	2.4	78	3.9
3105	999	99.9	68	0.4	245	3.0	10	2.1	76	3.9
3195	999	99.9	269	0.6	287	1.7	32	2.8	75	4.0
3285	999	99.9	332	0.7	353	0.5	42	2.3	71	3.8
3375	999	99.9	243	0.9	359	1.3	48	2.8	76	4.6
3465	999	99.9	294	0.8	180	0.7	43	2.4	75	4.9
3555	999	99.9	241	1.4	1	0.7	43	1.4	85	4.3
3645	999	99.9	25	0.1	352	1.5	70	1.1	75	4.0
3735	999	99.9	79	0.3	325	1.6	121	1.3	83	3.8
3825	999	99.9	999	99.9	323	1.9	136	1.9	92	2.7
3915	999	99.9	999	99.9	10	2.1	999	99.9	999	99.9
4005	999	99.9	999	99.9	326	1.9	999	99.9	999	99.9
4095	999	99.9	999	99.9	315	3.4	999	99.9	999	99.9
4185	999	99.9	999	99.9	107	2.5	999	99.9	999	99.9
4275	999	99.9	999	99.9	102	2.0	999	99.9	999	99.9
4365	999	99.9	999	99.9	116	2.4	999	99.9	999	99.9

"*" DENOTES INTERPOLATED DATA, "9"S MISSING DATA

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ARB SOUTHEAST DESERT STUDY WINDS ALOFT
LOCATION: CAJON JCT (018) DATE: 7/18/81 GROUND ELEVATION: 944 METERS

RELEASE TIME(PDT) 2240

HEIGHT (M AGL)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)
0	290	2.0
53	209*	2.5
159	208	2.5
263	180	5.9
365	168	8.7
466	175	9.6
565	181	8.2
662	193	5.9
758	209	4.0
852	200	3.2
944	220	3.1
1035	224	3.9
1125	215	5.0
1215	217	5.8
1305	219	4.8
1395	222	3.9
1485	231	3.0
1575	241	3.6
1665	245	2.7
1755	283	1.8
1845	314	1.2
1935	301	2.4
2025	110	1.2
2115	204	2.0
2205	152	1.2
2295	160	1.7
2385	119	2.2
2475	120	2.5
2565	125	3.2
2655	123	3.9
2745	114	5.5
2835	112	6.1
2925	112	6.4
3015	116	6.6
3105	116	6.6
3195	115	5.4
3285	112	4.8
3375	105	4.7
3465	102	3.9
3555	95	3.7
3645	85	3.6
3735	110	2.4

"*" DENOTES INTERPOLATED DATA, "9"S MISSING DATA

ARB SOUTHEAST DESERT STUDY WINDS ALOFT
LOCATION: CRESTLINE (019) DATE: 7/18/81 GROUND ELEVATION: 1524 METERS

RELEASE TIME(PDT)	1310		1402		1510		1604		1703	
HEIGHT (M AGL)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)
0	180	4.0	200	4.0	180	4.0	200	4.0	180	5.0
53	194	7.6	199	4.4	191	4.4	194	7.2	189	6.6
159	201	8.7	198	6.7	195	5.7	192	12.1	185	12.8
263	187	10.6	177	10.9	186	11.9	196	14.1	184	19.6
365	179	19.0	171	12.1	183	16.4	187	18.1	189	22.5
466	181	17.2	174	13.4	189	14.6	191	17.6	191	21.6
565	999	99.9	180	12.8	193	12.C	999	99.9	197	19.6
662	999	99.9	188	17.8	190	12.5	999	99.9	999	99.9
758	999	99.9	999	99.9	194	12.1	999	99.9	999	99.9
852	999	99.9	999	99.9	197	11.0	195	19.2	999	99.9
944	999	99.9	999	99.9	211	8.0	183	15.6	999	99.9
1035	216	6.7	999	99.9	234	7.4	232	10.7	999	99.9
1125	214	7.8	236	8.4	242	6.4	244	11.5	999	99.9
1215	242	6.8	248	6.2	246	7.1	246	10.8	999	99.9
1305	259	5.8	278	3.6	204	5.1	292	9.9	999	99.9
1395	269	4.4	292	3.6	238	5.2	311	8.9	999	99.9
1485	283	3.8	304	3.7	299	3.5	345	10.3	999	99.9
1575	297	4.1	301	2.5	320	2.5	359	7.5	999	99.9
1665	298	4.6	236	4.6	245	3.5	288	2.C	999	99.9
1755	293	4.5	355	5.0	223	8.1	285	6.6	999	99.9
1845	262	4.6	258	2.2	360	8.2	175	1.4	999	99.9
1935	252	3.1	252	1.6	311	4.3	318	3.5	999	99.9
2025	225	3.3	228	1.0	233	4.0	307	4.6	999	99.9
2115	229	1.2	203	0.8	225	3.6	268	4.8	999	99.9
2205	273	0.8	220	2.2	238	3.1	261	3.9	999	99.9
2295	281	0.8	216	2.0	237	2.2	257	2.4	999	99.9
2385	235	1.5	204	1.3	247	0.8	250	1.1	999	99.9
2475	266	1.2	221	0.8	304	0.8	16	1.5	999	99.9
2565	310	0.5	262	0.3	278	1.1	39	1.4	999	99.9
2655	312	0.8	227	0.6	227	1.0	129	0.9	999	99.9
2745	331	1.5	321	1.2	325	0.8	59	0.8	999	99.9
2835	292	2.0	280	1.2	354	1.2	20	0.9	999	99.9
2925	295	1.5	249	1.0	3	0.5	6	1.1	999	99.9
3015	251	1.5	205	0.1	7	1.8	349	1.5	999	99.9
3105	267	0.9	84	0.8	329	1.4	12	1.8	999	99.9
3195	8	0.7	72	2.7	226	5.8	330	1.2	999	99.9
3285	59	1.5	70	3.3	31	5.5	327	1.8	999	99.9
3375	47	3.0	53	4.2	76	1.1	332	1.5	999	99.9
3465	43	4.5	42	6.0	100	2.2	358	0.8	999	99.9
3555	46	4.9	999	99.9	87	3.3	76	1.5	999	99.9
3645	39	6.0	999	99.9	162	3.8	80	3.1	999	99.9
3735	27	6.9	999	99.9	46	9.1	77	3.7	999	99.9
3825	24	6.2	999	99.9	62	4.5	64	4.4	999	99.9
3915	21	6.8	999	99.9	53	5.1	66	5.0	999	99.9
4005	20	7.0	999	99.9	43	6.0	54	5.6	999	99.9
4095	22	6.8	999	99.9	28*	5.4	49	5.8	999	99.9
4185	10	6.3	999	99.9	28*	5.4	40	5.1	999	99.9
4275	36	6.3	999	99.9	26	5.8	31	5.9	999	99.9
4365	24	4.6	999	99.9	10	6.0	18	5.2	999	99.9

"*" DENOTES INTERPOLATED DATA, "9"S MISSING DATA

ARB SOUTHEAST DESERT STUDY WINDS ALOFT
LOCATION: CRESTLINE (019) DATE: 7/18/81 GROUND ELEVATION: 1524 METERS

RELEASE TIME(PDT)	1714		1747	
HEIGHT (M AGL)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)
0	200	5.0	180	5.0
53	197	7.0	187	7.8
159	194	16.6	180	11.2
263	189	21.4	182	10.7
365	185	23.9	195	13.7
466	187	18.1	195	16.2
565	196	18.5	197	16.8
662	999	99.9	197	15.8
758	999	99.9	194	14.5
852	999	99.9	209	11.9
944	999	99.9	216	14.0
1035	999	99.9	227	13.6
1125	999	99.9	269	9.1
1215	999	99.9	347	13.6
1305	999	99.9	336	6.8
1395	999	99.9	304	3.2
1485	999	99.9	277	2.5
1575	999	99.9	275	4.7
1665	999	99.9	264	4.2
1755	999	99.9	284	3.1
1845	999	99.9	292	3.7
1935	999	99.9	294	3.2
2025	999	99.9	272	3.1
2115	999	99.9	268	1.6
2205	999	99.9	9	1.0
2295	999	99.9	39	0.9
2385	999	99.9	355	1.4
2475	999	99.9	1	2.7
2565	999	99.9	348	2.6
2655	999	99.9	346	2.0
2745	999	99.9	332	2.0
2835	999	99.9	344	2.4
2925	999	99.9	8	3.9
3015	999	99.9	2	3.0
3105	999	99.9	12	3.2
3195	999	99.9	29	3.6
3285	999	99.9	27	3.6
3375	999	99.9	34	3.5
3465	999	99.9	39	2.6
3555	999	99.9	60	2.7
3645	999	99.9	93	2.1
3735	999	99.9	114	3.0
3825	999	99.9	101	3.6
3915	999	99.9	94	3.8
4005	999	99.9	82	3.8
4095	999	99.9	70	3.8
4185	999	99.9	58	3.1
4275	999	99.9	39	3.7
4365	999	99.9	27	3.5

"*" DENOTES INTERPOLATED DATA, "9"S MISSING DATA

ARB SOUTHEAST DESERT STUDY WINDS ALOFT

LOCATION: PALM SPRINGS (008) DATE: 7/22/81 GROUND ELEVATION: 17C METERS

RELEASE TIME(PDT)	1614		1804		2032		2226	
HEIGHT (M AGL)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)
0	0	0.0	290	8.5	360	12.0	0	0.0
53	342	12.2	328	7.9	339	9.8	341	9.1
159	342	12.1	310	5.6	327	6.7	298	5.1
263	350	12.0	327	5.6	323	7.1	286	2.1
365	341	17.8	322	3.4	326	8.5	226	1.7
466	345	14.5	304	2.2	148	5.6	203	2.7
565	339	9.6	265	1.8	219	0.9	178	3.4
662	304	6.4	248	1.7	215	1.0	165	2.9
758	999	99.9	207	1.5	180	1.5	150	2.0
852	999	99.9	187	1.9	158	2.1	129	1.7
944	999	99.9	194	2.1	156	2.0	96	1.8
1035	999	99.9	203	2.1	142	2.2	74	1.6
1125	999	99.9	203	2.4	329	9.5	340	1.5
1215	192	5.4	200	2.4	144	6.7	315	3.2
1305	209	5.8	197	2.3	314	3.7	300	6.8
1395	219	5.1	208	2.6	300	5.2	301	5.8
1485	217	4.8	227	2.1	307	6.4	305*	5.1
1575	226	4.0	262	1.2	309	7.3	305*	5.1
1665	229	3.3	339	1.7	310	7.4	309	4.2
1755	230	1.9	356	2.9	313	4.6	311	4.4
1845	275	1.1	340	3.2	325	3.4	316	3.9
1935	310	0.5	329	4.0	7	2.8	313	2.8
2025	354	1.4	317	4.9	16	2.3	321	2.0
2115	320	2.1	315	5.7	999	99.9	355	2.1
2205	296	2.1	330	4.5	999	99.9	11	2.1
2295	284	2.6	337	4.3	999	99.9	8	1.6
2385	264	4.2	338	4.6	999	99.9	27	1.6
2475	273	4.8	353	4.2	999	99.9	40	2.0
2565	281	4.4	360	4.0	999	99.9	45	2.3
2655	292	4.4	1	4.2	999	99.9	66	2.9
2745	297	5.8	4	4.3	999	99.9	76	3.5
2835	300	7.1	360	3.9	999	99.9	78	3.4
2925	309	7.4	355	3.9	999	99.9	80	3.4
3015	320	5.0	350	3.7	999	99.9	59	2.7
3105	334	4.9	347	4.0	339	3.8	60	3.3
3195	332	4.7	339	4.5	340	3.8	47	2.4
3285	323	4.8	324	4.5	340	3.8	30	2.4
3375	326	6.0	320	4.6	343	4.4	11	1.8
3465	330	5.3	319	3.8	340	3.7	359*	1.8
3555	336	5.6	310	3.6	341	3.7	359*	1.8
3645	341	6.0	306	3.0	341	3.7	1	2.0
3735	344	5.6	300	2.3	341	3.6	352	1.9
3825	338	4.6	302	2.6	341	3.6	314	2.6
3915	346	3.0	305	2.6	345	4.3	306	3.2
4005	332	2.0	314	4.5	352	3.7	313	3.3
4095	318	1.9	327	4.2	331	3.5	322	3.7
4185	309	2.8	331	5.2	342	3.5	337	4.0
4275	295	2.3	335	5.0	342	4.2	336	3.8
4365	276	2.6	328	5.0	349	3.5	326	3.0

"*" DENOTES INTERPOLATED DATA. "9"S MISSING DATA

ARB SOUTHEAST DESERT STUDY — WINDS ALOFT

LOCATION: PALM SPRINGS (008) DATE: 7/23/81 GROUND ELEVATION: 170 METERS

RELEASE TIME(PDT)	15		203		408		612		800	
HEIGHT (M AGL)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)
0	360	3.5	999	99.9	0	0.0	0	0.0	0	0.0
53	297	3.6	290	3.1	273	0.9	145	1.1	148	1.3
159	291	2.2	300	4.4	347	1.0	44	0.3	317	0.4
263	277	1.8	292	1.8	357	0.6	66	0.2	326	0.7
365	172	2.2	179*	1.9	293	1.2	176	1.8	150	2.0
466	175	2.9	179*	1.9	169	3.8	159	2.4	157	2.1
565	173	3.1	171	2.9	169	4.5	135	1.9	133	2.5
662	177	4.2	158	2.5	999	99.9	124	2.0	155	2.4
758	158	2.0	184	2.3	999	99.9	119	2.4	153	3.0
852	124	1.5	181	1.7	999	99.9	129	3.2	137	4.4
944	78	0.6	143	1.4	159	4.0	146	3.0	138	3.9
1035	999	99.9	999	99.9	157	3.1	83	0.6	160	1.7
1125	999	99.9	999	99.9	162	2.4	41	2.3	156	1.2
1215	999	99.9	999	99.9	169	2.2	66	1.0	100	1.3
1305	294	3.3	999	99.9	156	2.1	167	0.8	6	0.7
1395	292	4.1	270	3.7	137	1.1	154	0.9	309	1.4
1485	300	3.6	273	4.3	94	0.5	218	1.3	293	0.4
1575	306	3.9	273	4.1	316	1.2	252	2.0	220	0.3
1665	312	3.2	259	3.9	293	3.8	245	2.2	44	0.3
1755	313	2.8	243	3.0	999	99.9	242	0.9	281	2.3
1845	311	2.2	246	2.7	999	99.9	256	1.0	282	3.0
1935	339	1.5	239	1.9	999	99.9	213	0.7	275	3.7
2025	290	2.4	214	2.0	999	99.9	208	1.3	207	7.1
2115	288	2.3	213	2.2	999	99.9	233	1.5	259	2.7
2205	280	1.3	221	2.3	251	3.6	251	3.1	7	6.9
2295	269	1.0	217	2.2	240	2.1	250	3.1	98	0.9
2385	244	1.0	212	2.1	237	2.2	275	3.6	157	0.2
2475	242	0.5	205	2.0	245	3.1	274	4.2	255	1.6
2565	109	0.3	209	1.9	253	3.2	274	4.3	254	2.9
2655	105	1.5	210	3.4	264	3.2	278	3.7	249	2.9
2745	88	0.7	100	1.5	266	3.4	281	3.5	240	2.6
2835	29	0.2	170	1.2	269	3.5	283	3.5	239	2.8
2925	349	0.2	171	1.0	271	3.6	279	3.1	244	3.4
3015	284	0.6	180	1.4	271	3.2	253	3.4	228	2.7
3105	260	0.4	199	1.5	262	2.6	240	3.0	226	2.5
3195	999	99.9	210	1.9	223	3.1	240	3.8	234	3.4
3285	999	99.9	221	1.8	235	2.1	240	2.2	228	4.1
3375	999	99.9	256	2.6	263	2.8	235	6.8	233	5.1
3465	999	99.9	264	2.8	276	2.9	230	4.3	233	5.1
3555	999	99.9	270	3.9	999	99.9	224	4.6	230	5.3
3645	999	99.9	272	3.8	999	99.9	228	4.7	235	5.5
3735	999	99.9	267	3.7	999	99.9	236	4.6	239	5.8
3825	999	99.9	999	99.9	999	99.9	245	5.2	246	5.7
3915	999	99.9	999	99.9	999	99.9	254	6.3	248	5.7
4005	999	99.9	999	99.9	999	99.9	258	6.0	251	6.0
4095	999	99.9	999	99.9	999	99.9	261	6.8	251	6.6
4185	999	99.9	999	99.9	999	99.9	292	3.6	254	5.9
4275	999	99.9	999	99.9	999	99.9	260	9.4	259	7.1
4365	999	99.9	999	99.9	999	99.9	999	99.9	268	7.0

*** DENOTES INTERPOLATED DATA. "9"S MISSING DATA

ARB SOUTHEAST DESERT STUDY WINDS ALOFT
LOCATION: PALM SPRINGS (008) DATE: 7/23/81 GROUND ELEVATION: 170 METERS

RELEASE TIME(PDT)	1026		1200		1400		1610		1800	
HEIGHT (M AGL)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)
0	0	0.0	0	0.0	180	2.5	135	2.0	0	0.0
53	191	0.6	122	3.6	91	4.1	137	2.5	48	2.3
159	151	1.5	154	2.0	104	3.1	96	3.3	149	2.1
263	111	0.8	96	1.0	82	0.5	101	4.1	25	3.4
365	113	1.3	101	1.4	93	3.2	122	5.9	59	2.6
466	141	0.6	79	1.1	244	1.7	120	5.5	61	0.7
565	134	1.9	39	0.7	139	1.4	105	4.8	121	0.8
662	140	0.5	351	1.1	119	1.3	105	5.2	146	1.6
758	135	4.3	64	1.5	28	0.6	106	3.9	145	1.2
852	130	1.4	294	3.5	356	1.8	111	2.6	999	99.9
944	104	0.7	322	0.7	332	0.9	111	4.1	999	99.9
1035	60	1.3	233	0.9	263	1.7	81	2.3	999	99.9
1125	103	0.4	115	1.0	243	2.4	99	1.2	195	1.9
1215	177	1.6	133	1.3	237	2.3	85	2.4	197	1.7
1305	146	1.5	177	0.9	233	2.2	348	2.1	202	2.1
1395	152	1.5	224	0.9	226	3.1	324	5.1	213	2.2
1485	195	0.6	264	1.4	225	2.5	337	3.8	228	2.4
1575	250	1.3	274	2.5	229	3.5	356	3.2	268	3.3
1665	254	4.4	999	99.9	213	9.0	332	1.9	280	6.2
1755	246	4.8	999	99.9	324	3.7	53	0.8	285*	6.6
1845	245	5.7	999	99.9	253	5.7	266	5.8	285*	6.6
1935	246	5.3	999	99.9	249	5.9	265	3.4	284	7.3
2025	240	4.4	999	99.9	243	5.0	268	5.8	288	7.1
2115	234	3.6	999	99.9	243	4.2	265	6.2	303	5.6
2205	220	2.3	999	99.9	237	3.1	253	6.5	311	6.3
2295	223	2.8	999	99.9	235	3.6	258	8.2	317	5.9
2385	232	3.8	999	99.9	246	4.0	254*	7.3	309	5.1
2475	236	4.4	999	99.9	258	4.5	254*	7.3	312	6.0
2565	237	5.1	999	99.9	270	4.7	256	8.0	328	3.7
2655	230	4.9	999	99.9	280	5.3	266	7.8	339	4.0
2745	218	5.2	999	99.9	282	6.1	277	6.7	343	4.9
2835	209	5.4	999	99.9	279	6.3	281	6.5	340	4.5
2925	209	5.7	999	99.9	274	6.6	288	5.8	343	3.9
3015	207	6.1	999	99.9	276	6.6	301	5.8	328	4.4
3105	203	6.6	999	99.9	275	6.2	295	5.5	312	4.8
3195	212	6.5	999	99.9	273	6.4	290	5.6	317	4.7
3285	221	6.3	999	99.9	266	7.6	295	5.7	311	4.8
3375	240	6.1	999	99.9	272	7.1	302	6.3	302	4.6
3465	254	6.3	999	99.9	269	6.6	301	6.2	289	5.3
3555	261	6.5	999	99.9	267	7.2	294	6.5	282	6.1
3645	259	6.8	999	99.9	274	6.8	289	6.3	276	6.6
3735	257	6.7	999	99.9	270	6.0	278	6.3	274	6.9
3825	259	5.9	999	99.9	266	6.2	271	6.3	265	6.2
3915	252	5.7	999	99.9	259	5.8	266	6.3	261	6.5
4005	256	5.9	999	99.9	252	6.0	266	6.1	263	6.5
4095	253	5.9	999	99.9	238	5.4	260	5.7	264	7.0
4185	254	5.5	999	99.9	243	5.3	251	5.7	273	6.8
4275	247	6.5	999	99.9	245	5.4	254	5.7	263	6.9
4365	256	5.2	999	99.9	243	4.9	257	5.7	276	6.6

"*" DENOTES INTERPOLATED DATA, "9"S MISSING DATA

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ARB SOUTHEAST DESERT STUDY WINDS ALOFT

LOCATION: PALM SPRINGS (009) DATE: 7/23/81 GROUND ELEVATION: 17C METERS

RELEASE TIME(PDT) 2013

HEIGHT (M AGL)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)
0	315	5.0
53	330	6.0
159	337	5.8
263	297	2.5
365	292	1.2
466	244	1.1
565	208	1.5
662	158	1.4
758	122	1.5
852	126	2.0
944	158	3.0
1035	167	2.6
1125	176	2.6
1215	188	2.1
1305	184	1.8
1395	186	1.1
1485	202	0.7
1575	320	0.8
1665	298	2.2
1755	314	3.5
1845	303	4.8
1935	301	6.1
2025	304	5.7
2115	307	5.1
2205	322	3.2
2295	328	2.0
2385	308	1.2
2475	272	0.7
2565	191	0.7
2655	184	0.7
2745	137	1.1
2835	113	1.5
2925	96	0.7
3015	312	0.7
3105	282	1.2
3195	285	1.8
*3285	280	2.1
3375	276	2.5
3465	288	2.9
3555	291	4.3
3645	294	5.3
3735	295	6.7
3825	294	4.8
3915	293	5.0
4005	294	5.6

"*" DENOTES INTERPOLATED DATA, "9"S MISSING DATA

ARB SOUTH EAST DESERT

RELEASE SITE = DESERT CENTER

SITE ELEVATION = 274 (M)

07/22/81 1517 (PDT)

HEIGHT (M AGL)	WIND DIR (DEG)	WIND SPEED (M/S)
71	150	2.4
201	150	3.6
347	141	3.3
502	122	3.0
606	145	1.4
677	151	2.7
735	118	1.2
781	146	2.2
829	137	1.4
890	161	1.7
966	176	1.4
1060	155	2.0
1174	152	3.8
1281	135	1.4
1380	265	.9
1457	252	1.2
1511	252	.7
1560	194	1.6
1609	168	1.2
1678	182	.7
1777	227	2.5
1881	233	3.2
1973	222	3.4
2051	234	5.5
2098	235	5.2
2117	221	5.8
2129	225	7.1
2142	224	6.0
2168	225	5.7
2225	216	6.7
2316	211	5.9
2414	205	5.6
2514	219	5.4
2625	225	5.6
2727	242	5.1
2833	248	6.7
2931	260	4.5
3012	274	5.0
3100	281	4.1
3167	309	3.6
3259	305	3.0
3339	281	3.2
3428	290	2.7
3491	275	3.0
3562	276	3.5
3655	291	4.3

3721 *	205	1.4
3807 *	311	1.3

* = HI-HD CALCULATIONS INCLUDE SINGLE-THEODOLITE DATA.

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ARB SOUTHEAST DESERT STUDY WINDS ALOFT
LOCATION: DESERT CENTER (0009) DATE: 7/22/81 GROUND ELEVATION: 274 METERS

RELEASE TIME(PDT)	1800		2205	
HEIGHT (M AGL)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)
0	290	5.0	225	2.0
53	257	4.1	283	4.4
159	256	3.9	270	3.9
263	247	4.6	240	7.9
365	239	5.3	236	6.6
466	244	6.3	223	5.9
565	248	7.6	220	6.6
662	249	5.8	221	7.7
758	259	3.8	218	8.0
852	252	4.2	221	7.8
944	242	3.9	230	5.7
1035	248	2.3	225	5.0
1125	268	2.8	231	2.9
1215	276	2.5	213	1.6
1305	271	2.4	79	1.0
1395	272	3.0	51	2.0
1485	286	1.8	74	1.5
1575	335	1.5	82	1.9
1665	344	1.7	110	1.7
1755	313	2.2	102	2.0
1845	291	2.4	100	2.6
1935	280	2.9	95	2.6
2025	281	2.6	93	2.4
2115	282	2.5	97	2.6
2205	267	2.6	101	2.5
2295	258	2.8	106	2.6
2385	254	2.5	99	2.4
2475	255	2.8	124	2.1
2565	264	2.4	168	1.7
2655	272	1.8	183	2.3
2745	274	2.4	192	2.0
2835	268	3.0	194	2.4
2925	264	3.6	191	3.0
3015	261	1.6	201	1.4
3105	236	1.7	228	1.5
3195	220	1.9	255	1.7
3285	244	2.6	287	1.5
3375	250	2.1	301	2.2
3465	247	2.5	305	2.5
3555	246	2.5	315	2.5
3645	229	2.8	306	2.4
3735	227	2.3	302	2.1
3825	234	3.0	999	99.9
3915	226	3.7	999	99.9
4005	228	3.7	999	99.9
4095	230	3.1	999	99.9
4185	243	3.3	999	99.9
4275	248	4.2	999	99.9
4365	237	2.5	999	99.9

"*" DENOTES INTERPOLATED DATA. "9"S MISSING DATA

ARB SOUTH EAST DESERT

RELEASE SITE = DESERT CENTER

SITE ELEVATION = 219 (M)

07/22/81 2022 (PDT)

HEIGHT (M AGL)	WIND DIR (DEG)	WIND SPEED (M/S)
42	* 227	0.1
128	* 228	3.3
216	* 228	9.0
307	* 231	9.5
404	* 231	10.0
511	* 237	9.5
618	* 239	9.3
699	* 245	8.0
766	* 241	7.8
830	* 240	7.7
878	* 237	7.8
923	* 237	8.3
981	* 222	4.0
1044	* 216	2.0
1104	* 228	2.7
1153	* 211	1.0
1195	* 209	1.3
1258	* 256	2.3
1310	* 151	5.4
1347	* 147	.8
1396	* 124	.9
1453	* 185	2.4
1501	* 114	2.1
1554	* 174	2.0
1621	* 151	2.2
1683	* 112	2.2
1763	* 175	2.0
1841	* 098	2.1
1899	* 093	2.3
1962	* 101	2.1
2061	* 097	1.5
---	---	---
2153	* 095	2.3
2224	* 145	1.0
2304	* 112	1.5
2373	* 081	1.8
2477	* 063	.8
---	---	---
2581	* 185	.3
2652	* 169	1.0
2714	* 137	1.2
2776	* 161	2.3
2856	* 188	2.7
2965	* 202	4.5
3073	* 231	2.0
3135	* 251	2.2

3230 * 235 2.0
3316 * 246 2.0

* = WIND CALCULATIONS INCLUDE SINGLE-THEODOLITE DATA.

ARB SOUTHEAST DESERT STUDY WINDS ALOFT

LOCATION: DESERT CENTER (009) DATE: 7/23/81 GROUND ELEVATION: 274 METERS

RELEASE TIME(PDT)	2		435		631		1000		1200	
HEIGHT (M AGL)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)
0	270	3.5	270	2.0	225	3.5	110	1.5	135	2.5
53	263	6.1	241	2.4	254	5.5	133	2.7	100	1.7
159	252	8.4	243	4.4	251	4.5	136	1.2	111	1.5
263	253	6.1	278	3.0	276	2.8	232	1.2	127	1.8
365	247	0.7	293	2.5	302	1.4	248	1.8	33	0.6
466	128	1.3	299	2.8	323*	1.1	255	2.5	88	0.9
565	238	0.9	305	3.1	323*	1.1	256	2.5	114	1.5
662	257	1.8	312	2.5	313	0.7	220	1.5	237	0.7
758	257	1.9	265	1.6	279	1.1	172	2.3	219*	1.9
852	245	1.9	272	1.9	285	1.2	182	3.1	219*	1.9
944	231	2.0	276	2.0	291	1.2	183	3.5	201*	3.3
1035	200	1.8	306	2.1	283	1.4	175	3.9	201*	3.3
1125	160	1.2	349	3.0	254	1.2	178	3.2	218	4.5
1215	216	2.5	348	4.5	299	1.2	173	2.1	212	5.1
1305	189	2.9	345	4.6	338	1.8	173	1.1	194	4.8
1395	179	2.9	338	4.0	360	1.5	256	0.2	238	6.6
1485	153	2.3	329	3.5	3	0.7	308	1.0	204	5.0
1575	134	1.9	336	1.3	312	2.4	259	1.4	201	4.2
1665	120	1.7	65	0.4	311	3.0	227	2.1	201	2.3
1755	131	2.0	139	1.4	290	1.9	227	2.4	174	1.9
1845	157	2.4	166	1.1	188	0.8	222	3.4	202	2.6
1935	171	3.0	187	3.2	268	3.3	214	3.9	226	3.3
2025	174	3.2	205	3.5	262	2.6	227	2.7	241	5.3
2115	174	3.7	190	3.8	242	2.8	228	2.6	245	5.9
2205	162	2.9	192	3.9	218	3.2	237	3.2	249	6.8
2295	148	2.7	186	4.0	214	3.8	251	3.6	241	5.7
2385	160	2.5	185	4.5	217	4.0	249	3.7	230	5.8
2475	161	2.6	185	4.6	218	3.8	242	4.9	234	6.2
2565	154	2.9	191	5.1	219	3.8	234	4.8	242	5.9
2655	150	2.7	190	5.4	204	3.9	231	5.0	246	5.6
2745	160	2.5	189	5.8	204	4.1	227	5.7	253	5.4
2835	173	2.7	195*	6.1	195	4.7	224	5.2	242	4.7
2925	180	2.9	195*	6.1	191	5.6	223	5.5	214	4.2
3015	214	1.2	206	5.3	192	6.2	227	5.2	257	5.5
3105	236	0.8	219	4.9	200	5.3	226	4.8	227	5.1
3195	252	0.5	227	4.1	212	4.7	215	4.9	223	4.9
3285	307	0.8	224	3.5	218	4.4	211	5.2	218	5.4
3375	306	0.4	226	3.3	232	2.9	213	4.9	216	5.6
3465	195	0.3	239	2.8	235	1.8	220	3.9	220	5.7
3555	308	0.7	232	2.5	221	1.8	233	2.5	224	6.4
3645	268	0.7	233	1.7	217	2.5	238	2.5	229	6.1
3735	242	1.4	237	2.0	238	2.1	231	3.3	230	5.2
3825	240	1.7	220	2.0	244	1.8	229	2.8	233	5.3
3915	227	2.4	236	3.6	252	2.5	249	3.2	232	4.8
4005	229	3.1	250	3.6	268	2.0	253	4.3	237	5.6
4095	234	3.0	253	3.7	264	2.7	262	4.2	248	4.7
4185	220	3.3	255	4.6	259	2.6	263	4.8	257	6.5
4275	249	4.6	258	4.4	272	3.4	277	5.2	274	6.2
4365	999	99.9	244	5.0	270	5.6	283	5.7	263	7.0

"*" DENOTES INTERPOLATED DATA, "9"S MISSING DATA

ARB SOUTHEAST DESERT STUDY WINDS ALOFT
LOCATION: DESERT CENTER (0009) DATE: 7/23/81 GROUND ELEVATION: 274 METERS

RELEASE TIME(PDT)	1605		1800		1930		2010		2200	
HEIGHT (M AGL)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)
0	200	7.5	225	7.5	225	7.5	225	7.5	200	7.5
53	210	6.4	225	6.7	245	7.1	239	7.2	212	7.4
159	220	8.3	238	7.4	243	6.9	236	9.9	213	10.8
263	219	7.5	245	8.4	999	99.9	234	9.7	216	9.5
365	249	2.3	245	10.0	999	99.9	231	11.9	224	11.8
466	239	3.5	247	12.5	999	99.9	231	13.9	234	12.1
565	233	4.5	246	10.8	999	99.9	228	13.5	240	12.8
662	220	7.4	244	10.1	999	99.9	228	13.3	236	12.8
759	219	7.3	243	9.6	999	99.9	233	14.2	264	7.0
852	214	6.7	248	12.0	999	99.9	238	13.7	269	8.0
944	210	7.3	262	8.2	999	99.9	999	99.9	266	8.1
1035	208	7.9	269	6.9	999	99.9	999	99.9	259	10.0
1125	213	8.0	268	7.1	999	99.9	999	99.9	258	9.2
1215	216	8.8	274	5.7	999	99.9	999	99.9	257	9.8
1305	222	8.5	301	3.9	999	99.9	999	99.9	999	99.9
1395	223	7.1	275	4.3	999	99.9	999	99.9	999	99.9
1485	207	4.5	284	3.6	999	99.9	999	99.9	999	99.9
1575	223	5.2	347	1.7	999	99.9	999	99.9	999	99.9
1665	261	3.5	295	2.0	999	99.9	999	99.9	999	99.9
1755	250	4.5	311	1.3	999	99.9	999	99.9	999	99.9
1845	259	4.1	293	1.4	999	99.9	999	99.9	999	99.9
1935	267	3.6	310	1.6	999	99.9	999	99.9	999	99.9
2025	263	4.5	309	2.2	999	99.9	999	99.9	999	99.9
2115	266	4.4	296	3.6	999	99.9	999	99.9	999	99.9
2205	265	4.8	299	3.5	999	99.9	999	99.9	999	99.9
2295	264	5.2	294	3.8	999	99.9	999	99.9	999	99.9
2385	254	6.5	290	3.4	999	99.9	999	99.9	999	99.9
2475	256	6.5	291	4.0	999	99.9	999	99.9	999	99.9
2565	255	7.2	294	3.3	999	99.9	999	99.9	999	99.9
2655	261	7.6	298	4.0	999	99.9	999	99.9	999	99.9
2745	263	7.8	287	6.1	999	99.9	999	99.9	999	99.9
2835	260	8.5	296	5.8	999	99.9	999	99.9	999	99.9
2925	258	11.0	296	5.0	999	99.9	999	99.9	999	99.9
3015	267	10.3	298	2.7	999	99.9	999	99.9	999	99.9
3105	272	7.8	294	2.5	999	99.9	999	99.9	999	99.9
3195	266	6.5	314	1.2	999	99.9	999	99.9	999	99.9
3285	268	6.5	266	2.1	999	99.9	999	99.9	999	99.9
3375	269	6.5	266	2.6	999	99.9	999	99.9	999	99.9
3465	276	5.7	278	3.3	999	99.9	999	99.9	999	99.9
3555	299	4.9	286	4.1	999	99.9	999	99.9	999	99.9
3645	320	3.3	295	5.1	999	99.9	999	99.9	999	99.9
3735	355	3.4	299	5.2	999	99.9	999	99.9	999	99.9
3825	341	2.8	291	5.6	999	99.9	999	99.9	999	99.9
3915	344	2.4	281	5.4	999	99.9	999	99.9	999	99.9
4005	325	2.4	277	6.2	999	99.9	999	99.9	999	99.9
4095	303	2.4	278	5.5	999	99.9	999	99.9	999	99.9
4185	296	3.3	283	5.6	999	99.9	999	99.9	999	99.9
4275	296	4.5	281	6.5	999	99.9	999	99.9	999	99.9
4365	291	6.4	280	5.6	999	99.9	999	99.9	999	99.9

"#" DENOTES INTERPOLATED DATA, "9"S MISSING DATA

GLOSS ALERT (SINGLE AND DOUBLE) THERMOLITE DATA)

ARB SOUTH EAST DESERT

RELEASE SITE = DESERT CENTER

SITE ELEVATION = 219 (M)

07/23/81 0250 (PDT)			07/23/81 0810 (PDT)			07/23/81 1412 (PDT)		
HEIGHT (M AGL)	WIND DIR (DEG)	WIND SPEED (M/S)	HEIGHT (M AGL)	WIND DIR (DEG)	WIND SPEED (M/S)	HEIGHT (M AGL)	WIND DIR (DEG)	WIND SPEED (M/S)
33	262	4.5	50	197	1.6	47	245	5.5
103	254	5.4	136	224	2.3	123	245	6.3
179	257	4.8	222	258	2.7	189	243	6.1
257	265	3.9	321	281	3.5	266	242	6.1
335	277	3.0	416	321	1.0	367	240	6.4
421	278	3.0	505	097	.6	503	227	6.5
502	302	1.4	577	133	.9	664	220	5.7
575	293	1.6	650	200	.9	847	221	7.7
645	307	.9	729	215	.4	1004	217	5.2
712	283	1.0	804	231	.7	1119	225	5.2
802	272	2.5	881	205	1.6	1228	234	4.7
896	300	1.7	955	209	1.2	1337	236	6.8
978	321	1.7	1032	193	.7	1449	222	1.4
1058	325	2.1	1106	311	.4	1585	224	4.5
1179	325	2.4	1188	335	2.0	1724	211	3.5
	---	---	1265	342	2.7	1857	231	6.0
1294	323	2.6	1331	325	1.8	1993	251	6.7
1368	317	3.0	1404	297	1.5	2112	250	6.9
1455	322	2.6	1477	201	1.4	2204	261	5.6
1496	326	2.5	1555	189	2.1	2296	260	6.9
1564	307	2.2	1634	185	2.4	2371	263	5.3
1626	270	1.6	1713	187	3.2	2424	257	6.8
1684	223	2.8	1796	193	4.2	2489	260	6.5
1756	226	4.8	1876	240	1.6	2547	263	6.7
1819	218	4.9	1958	270	1.6	2611	262	7.2
1869	213	5.8	2049	281	1.7	2683	263	6.9
1938	220	7.2	2146	260	1.9	2748	271	5.9
2003	209	6.6	2225	239	3.0	2819	267	6.5
2063	216	6.3	2304	247	3.3	2899	270	4.9
2145	214	6.1	2385	246	3.8	2973	272	4.6
2218	188	4.7	2468	237	3.5	3052	272	4.2
2294	202	6.6	2563	225	3.7	3142	265	5.0
2373	177	5.4	2655	217	3.7	3234	260	3.8
2442	185	5.5	2737	214	4.1	3323	241	4.0
2511	172	6.0	2812	207	4.5	3410	239	4.1
2561	176	7.0	2893	203	5.0	3488	234	4.2
2691	181	5.3	2973	200	5.3	3565	240	4.9
2738	200	4.0	3041	202	5.3	3644	242	4.9
2819	219	5.2	3103	214	5.0	3713	247	6.0
2902	250	5.5	3166	221	5.8	3768	248	5.7
2980	259	6.0	3250	243	5.2	3813	249	5.6
3053	256	6.5	3339	216	4.6	3865	257	4.7
3129	235	1.6	3415	236	3.5	3924	270	4.6
3204	269	1.9	3495	237	2.8	3977	286	3.9
3250	160	1.5	3558	236	3.0	4025	294	3.9
3303	155	1.6	3701	241	2.6	4071	318	3.2

3442 * 165	1.7	3794 * 244	3.3	4113 * 309	3.6
		3882 * 248	2.7	4164 * 291	5.4

* = WIND CALCULATIONS INCLUDE SINGLE-THEODOLITE DATA.

ARB SOUTHEAST DESERT STUDY WINDS ALOFT

LOCATION: FONTANA (020) DATE: 7/22/81 GROUND ELEVATION: 304 METERS

RELEASE TIME(PDT)	1224		1415		1505		1613		1704	
HEIGHT (M AGL)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)
0	270	3.5	270	3.5	270	3.5	270	3.5	270	3.5
53	258	3.0	265	5.2	249	6.9	254	8.4	255	6.8
159	259	3.6	272	7.1	254	7.0	265	6.9	267	7.3
263	263	5.5	265	4.7	269	7.6	280	5.5	265	8.0
365	260	5.3	295	3.2	266	7.9	282	7.6	275	7.5
466	260	2.2	252	2.9	262	8.0	267	7.1	278	6.4
565	295	1.3	257	4.7	301	2.7	268	5.7	264	5.3
662	295	2.8	235	2.9	275	4.0	268	3.8	257	4.5
758	236	1.7	198	2.1	250	3.1	231	3.1	251	6.5
852	218	1.6	212	2.1	222	3.5	229	4.1	203	2.3
944	200	2.3	200	2.6	175	2.6	212	3.7	191	3.9
1035	179	3.2	222	2.5	213	4.4	209	4.0	190	4.3
1125	177	6.0	237	2.4	202	3.3	213	3.8	193	4.2
1215	239	2.4	212	3.3	217	3.2	226	2.9	197	4.6
1305	279	3.4	226	2.6	216	3.5	226	3.5	211	5.0
1395	208	4.3	228	3.0	209	3.0	223	4.0	209	3.7
1485	269	3.3	248	2.4	199	3.2	207	4.2	217	4.1
1575	284	4.5	271	2.5	188	2.4	227	3.3	230	4.0
1665	293	5.0	284	4.8	236	2.2	266	3.1	240	2.7
1755	284	8.3	281	4.9	263	1.7	286	2.9	285	2.4
1845	277	8.9	273	5.2	293	2.6	267	2.3	315	3.1
1935	275	8.2	278	4.3	301	2.8	263	1.2	306	4.1
2025	271	7.8	278	4.4	311	3.3	321	2.1	318	5.5
2115	261	6.5	269	4.8	319	3.1	291	2.3	250	2.8
2205	264	4.2	271	5.0	327	2.8	310	2.0	289	3.8
2295	269	4.3	264	4.5	312	2.7	352	1.8	305	4.3
2385	263	4.3	274	3.7	319	2.9	340	2.3	295	3.4
2475	261	4.4	262	3.7	315	2.8	322	3.2	298	3.3
2565	254	4.9	269	3.0	328	3.2	315	3.3	300	3.3
2655	258	4.9	276	3.8	318	3.5	314	3.5	327	3.5
2745	257	3.8	284	3.2	293	3.9	314	3.3	314	3.8
2835	264	3.3	286	4.0	315	3.0	319	3.4	317	3.9
2925	244	3.9	297	4.0	310	3.9	320	3.9	316	3.6
3015	237	4.1	303	3.7	316	4.2	302	2.7	310	4.1
3105	233	4.2	301	4.1	307	4.4	339	5.4	315	4.3
3195	246	4.3	308	2.8	310	4.5	338	5.3	311	3.9
3285	258	3.8	295	2.7	315	4.3	274	2.9	297	4.1
3375	999	99.9	301	2.3	319	4.0	311	4.1	301	3.8
3465	999	99.9	327	2.0	311	4.0	314	3.7	304	2.8
3555	999	99.9	312	1.9	308	4.2	313	4.1	298	3.6
3645	999	99.9	323	2.2	317	3.2	310	3.9	294	2.5
3735	999	99.9	321	2.0	999	99.9	999	99.9	999	99.9

"*" DENOTES INTERPOLATED DATA, "9"S MISSING DATA

ARB SOUTHEAST DESERT STUDY WINDS ALOFT
LOCATION: FONTANA (020) DATE: 7/22/81 GROUND ELEVATION: 304 METERS

RELEASE TIME(PDT)	1755		1955	
HEIGHT (M AGL)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)
0	270	3.5	270	3.5
53	258	5.7	265	5.0
159	271	7.6	274	7.5
263	272	7.6	270	8.1
365	267	6.4	272	8.2
466	262	6.0	266	6.9
565	257	6.2	268	5.0
662	247	5.8	221	2.9
758	253	4.4	179	3.4
852	240	4.4	167	2.8
944	229	4.7	169	2.8
1035	213	4.1	175	3.3
1125	167	2.9	168	3.3
1215	185	3.6	154	3.9
1305	180	4.1	160	3.7
1395	188	3.7	178	3.3
1485	191	3.6	183	3.6
1575	230	3.5	206	4.1
1665	257	3.0	226	4.5
1755	269	3.1	272	5.8
1845	269	3.0	282	8.9
1935	286	3.9	291	8.7
2025	299	7.0	288	7.5
2115	314	10.7	289	6.8
2205	306	6.5	291	6.6
2295	257	3.9	301	5.7
2385	304	6.4	294	5.8
2475	318	4.2	297	5.1
2565	302	3.9	302	5.4
2655	311	3.2	294	5.7
2745	326	1.8	294	6.2
2835	328	2.5	299	6.0
2925	318	3.7	298	7.1
3015	311	5.3	304	7.0
3105	307	5.5	312	7.8
3195	297	6.5	352	2.2
3285	302	5.8	286	11.0
3375	302	4.7	309	5.6
3465	303	4.2	311	4.3
3555	302	3.5	302	3.2
3645	299	4.0	314	2.8
3735	999	99.9	324	3.1
3825	999	99.9	318	2.7

"*" DENOTES INTERPOLATED DATA, "9"S MISSING DATA

ARB SOUTHEAST DESERT STUDY WINDS ALOFT
LOCATION: BANNING (016) DATE: 7/22/81 GROUND ELEVATION: 670 METERS

RELEASE TIME(PDT)	1443		1606		1759		2022		2159	
HEIGHT (M AGL)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)
0	225	3.0	247	4.0	270	3.0	270	3.0	270	4.0
53	218	6.2	245	9.4	247*	5.3	260	9.0	276	8.4
159	222	6.9	242	9.8	246	5.3	254	12.4	262	9.7
263	224	9.2	247	8.8	242	6.0	247	9.6	255	9.1
365	250	4.0	258	10.7	256	7.6	252	7.8	254	8.1
466	250	4.2	258	9.6	261	7.0	258	8.8	245	7.6
565	254	4.5	261	9.9	273	7.7	276	9.2	253	8.0
662	263	8.0	266	11.2	275	7.1	286	8.5	253	7.6
758	269	9.8	273	11.5	270	8.9	275	7.6	273	7.3
852	256	7.3	283	11.2	263	8.1	256	8.3	271	8.4
944	259	5.7	284	10.6	255	8.2	258	8.6	277	7.3
1035	261	3.8	278	8.1	253	8.2	265	8.0	280	8.1
1125	255	2.9	273	9.1	251	7.8	269	8.0	279	10.0
1215	274	2.9	274	4.1	255	5.8	270	7.5	293	9.6
1305	280	4.5	264	4.4	261	7.9	278	7.5	294	11.0
1395	276	6.2	266	6.9	269	7.3	286	7.7	304	8.5
1485	266	8.5	273	6.8	272	7.9	289	7.7	305	9.0
1575	267	8.6	285	7.8	282	10.9	302	8.5	304	7.9
1665	269	9.2	279	10.0	287	10.3	307	8.8	311	6.6
1755	267	8.6	275	11.0	292	7.9	309	11.6	318*	6.2
1845	262	6.8	280	7.5	282	6.6	307	11.2	318*	6.2
1935	259	6.9	255	7.5	279	4.9	317	6.8	324	5.6
2025	267	5.4	255	9.5	272	3.2	316	6.4	326	4.4
2115	262	5.9	253	7.4	271	3.8	351	3.9	335	3.6
2205	262	6.5	261	9.4	307	1.8	5	3.1	324	2.7
2295	260	6.5	266	7.1	343	2.0	28	2.3	329	1.7
2385	266	5.9	273	7.1	329	2.3	8	1.5	314	1.2
2475	267	5.9	269	8.2	336	2.5	340	1.5	296	1.7
2565	274	6.1	275	5.7	333	1.9	307	0.7	286	0.8
2655	317	2.5	289	4.6	359	2.0	84	1.0	109	5.6
2745	315	3.4	304	3.5	328	2.4	103	1.0	278	5.8
2835	325	4.1	354	2.5	347	2.1	103	0.3	259	3.7
2925	334	3.3	335	3.3	350	2.1	325	0.5	271	4.1
3015	323	3.3	359	2.6	352	1.8	262	1.8	280	4.0
3105	338	2.9	332	2.4	355	1.8	218	0.3	299	4.0
3195	326	2.9	335	2.4	296	1.6	282	2.9	304	4.0
3285	313	3.1	332	2.0	298	2.2	282	3.6	300	3.9
3375	319	2.1	335	1.9	313	2.5	290	5.0	291	3.7
3465	282	2.7	338	1.9	311	3.1	300	4.4	300	2.9
3555	261	3.3	322	2.8	307	3.7	306	5.4	300	2.8
3645	280	3.3	330	3.1	312	3.8	310	6.4	292	3.5
3735	283	4.1	20	1.8	332	4.0	308	5.4	286	0.9
3825	281	3.2	283	2.7	306	4.9	302	5.2	286	0.8
3915	282	3.2	305	1.7	313	3.6	296	4.2	182	0.4
4005	274	3.9	301	4.0	305	3.2	317	3.7	237	1.0
4095	268	4.6	296	3.8	301	3.8	318	3.7	999	99.9
4185	275	3.8	325	3.6	302	3.8	348	2.7	999	99.9
4275	248	2.2	289	5.8	292	3.6	324	2.7	999	99.9
4365	224	2.8	299	2.4	275	3.5	326	2.6	999	99.9

"*" DENOTES INTERPOLATED DATA, "99"S MISSING DATA

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ARB SOUTHEAST DESERT STUDY — WINDS ALOFT

LOCATION: E GARDEN GROVE (026) DATE: 7/27/81 GROUND ELEVATION: 25 METERS

RELEASE TIME(PDT)	557		823		1000		1216	
HEIGHT (M AGL)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)
0	0	5.0	0	5.0	0	5.0	0	5.0
53	246	1.6	202	1.7	293*	1.7	269*	1.2
159	246	1.4	195	1.2	293	1.7	268	1.2
263	255	0.6	209	0.4	236	1.8	286	1.2
365	278	0.4	249	0.8	194	1.6	312	1.2
466	999	99.9	271	0.5	213	2.6	243	1.6
565	999	99.9	999	99.9	197	1.3	187	2.5
662	999	99.9	999	99.9	999	99.9	129	1.9
758	999	99.9	999	99.9	999	99.9	169	1.6
852	999	99.9	999	99.9	999	99.9	137	2.0
944	999	99.9	999	99.9	999	99.9	122	2.1
1035	999	99.9	999	99.9	999	99.9	107	2.0
1125	999	99.9	999	99.9	999	99.9	145	2.9
1215	999	99.9	999	99.9	999	99.9	109	1.8
1305	999	99.9	999	99.9	999	99.9	132	1.5
1395	999	99.9	999	99.9	999	99.9	159	1.8
1485	999	99.9	999	99.9	999	99.9	144	2.2
1575	999	99.9	999	99.9	999	99.9	128	3.1
1665	999	99.9	999	99.9	999	99.9	138	3.0
1755	999	99.9	999	99.9	999	99.9	122	2.0
1845	999	99.9	999	99.9	999	99.9	114	1.9
1935	999	99.9	999	99.9	999	99.9	135	2.4
2025	999	99.9	999	99.9	999	99.9	140	3.2
2115	999	99.9	999	99.9	999	99.9	146	4.2
2205	999	99.9	999	99.9	999	99.9	143	4.0
2295	999	99.9	999	99.9	999	99.9	144	3.0
2385	999	99.9	999	99.9	999	99.9	151	2.6
2475	999	99.9	999	99.9	999	99.9	149	1.1
2565	999	99.9	999	99.9	999	99.9	166	1.1
2655	999	99.9	999	99.9	999	99.9	145	1.8
2745	999	99.9	999	99.9	999	99.9	139	2.5
2835	999	99.9	999	99.9	999	99.9	155	2.1
2925	999	99.9	999	99.9	999	99.9	162	2.0
3015	999	99.9	999	99.9	999	99.9	164	2.3
3105	999	99.9	999	99.9	999	99.9	180	1.5
3195	999	99.9	999	99.9	999	99.9	196	1.1
3285	999	99.9	999	99.9	999	99.9	206	1.2
3375	999	99.9	999	99.9	999	99.9	195	1.6
3465	999	99.9	999	99.9	999	99.9	184	1.3
3555	999	99.9	999	99.9	999	99.9	190	1.0
3645	999	99.9	999	99.9	999	99.9	160	0.8

"*" DENOTES INTERPOLATED DATA. "9"S MISSING DATA

ARB SOUTHEAST DESERT STUDY WINDS ALOFT

LOCATION: LAKE GREGORY (0041) DATE: 7/27/81 GROUND ELEVATION: 1371 METERS

RELEASE TIME(PDT)	1600		1800		2202	
HEIGHT (M AGL)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)
0	180	3.5	180	2.5	0	0.0
53	194	6.2	191	9.1	169	3.4
159	190	10.5	181	6.7	172	6.1
263	187	9.6	178	7.6	207	7.0
365	184	10.8	193	12.0	200	7.9
466	185	12.9	193	12.6	194	8.4
565	188	13.8	188	12.3	200	6.4
662	190	13.7	192	7.1	194	5.6
759	196	10.5	298	0.4	170	2.1
852	200	7.9	326	0.7	103	0.6
944	203	6.2	344	0.8	167	0.6
1035	203	4.3	21	2.8	352	1.6
1125	360	0.9	22	3.6	345	1.3
1215	73	0.8	23	4.8	359	1.2
1305	4	3.0	19	5.3	17	2.1
1395	351	2.4	26	5.4	56	2.9
1485	347	2.4	30	5.3	75	4.2
1575	34	2.2	34	5.6	76	5.1
1665	52	3.7	43	5.4	77	4.8
1755	64	4.6	42	5.5	83	5.8
1845	71	6.3	36	5.7	86	5.5
1935	74	6.5	34	5.5	87	5.6
2025	81	6.5	31	5.1	86	5.0
2115	80	6.0	37	4.8	86	3.0
2205	87	5.8	38	4.2	39	1.0
2295	86	5.3	39	3.6	343	2.1
2385	94	4.2	44	2.3	344	2.1
2475	116	2.4	66	0.7	11	2.1
2565	155	1.6	304	0.7	32	2.6
2655	216	1.0	338	0.9	61	2.6
2745	246	1.4	295	0.5	76	3.1
2835	281	1.3	251	1.0	84	3.7
2925	290	1.2	330	1.2	66	2.0
3015	310	0.6	329	1.8	107	5.3
3105	202	0.5	341	0.8	101	3.3
3195	215	1.0	16	0.9	100	3.4
3285	204	0.7	24	1.3	104	4.3
3375	16	0.6	29	2.1	115	3.1
3465	15	1.8	24	2.9	113	2.1
3555	8	1.8	10	2.4	117	1.8
3645	9	2.6	11	2.5	113	1.5
3735	9	3.4	6	2.3	95	2.2
3825	7	3.1	20	2.9	128	2.5
3915	18	2.8	37	2.8	140	3.1
4005	16	3.0	48	2.4	141	3.1
4095	14	3.9	64	3.3	103	2.2
4185	24	3.8	72	3.5	999	99.9
4275	27	4.0	52	4.4	999	99.9
4365	40	4.6	54	2.8	999	99.9

"*" DENOTES INTERPOLATED DATA, "9"S MISSING DATA

WINDS ALOFT (SINGLE AND DOUBLE THEODOLITE DATA) PAGE 1

ARB SOUTH EAST DESERT

RELEASE SITE = LAKE GREGORY

SITE ELEVATION: = 1372 (M)

07/27/81 1415 (PDT) 07/27/81 2025 (PDT)

HEIGHT (M AGL)	WIND DIR (DEG)	WIND SPEED (M/S)	HEIGHT (M AGL)	WIND DIR (DEG)	WIND SPEED (M/S)
58	* 189	6.5	56	* 178	6.8
173	* 180	8.2	163	* 173	9.2
273	* 184	8.8	263	* 191	9.5
351	* 176	8.8	336	* 206	10.1
420	* 175	8.1	382	* 198	9.8
484	* 181	7.7	429	* 194	10.2
548	* 189	7.9	473	* 195	8.6
612	* 192	6.5	595	* 190	25.4
685	* 187	4.7	758	* 055	1.7
779	* 158	3.0	847	* 009	8.4
889	* 181	4.2	907	* 131	.9
992	* 121	1.3	986	* 321	.9
1078	* 020	1.2	1062	* 352	4.5
1154	* 016	.5	1127	* 015	2.4
1228	* 072	.5	1197	* 018	2.3
1319	* 117	1.3	1272	* 025	2.8
1417	* 084	1.7	1342	* 026	3.1
1504	* 080	2.3	1406	* 028	3.6
1576	* 075	4.1	1470	* 031	4.3
1645	* 069	4.6			
1728	* 075	5.4			
1813	* 083	5.5			
1895	* 092	5.8			
1979	* 098	4.1			
2073	* 116	5.4			
2180	* 137	6.8			
2276	* 139	5.0			
2358	* 154	6.1			
2463	* 165	5.4			
2554	* 184	4.0			
2647	* 187	3.2			
2730	* 245	1.3			
2803	* 187	1.6			
2886	* 192	1.5			
2974	* 176	2.1			
3055	* 195	1.2			
3131	* 198	1.8			
3222	* 196	1.7			
3310	* 223	1.2			
3382	* 170	4.6			
3468	* 329	3.9			
3554	* 226	.8			
3632	* 194	1.2			
3726	* 157	1.2			
3820	* 339	.5			
3907	* 315	.6			

3992	* 353	1.9
4064	* 359	1.3

* = WIND CALCULATIONS INCLUDE SINGLE-THEODOLITE DATA.

ARB SOUTHEAST DESERT STUDY WINDS ALOFT

LOCATION: LAKE GREGORY (0004) DATE: 7/28/81 GROUND ELEVATION: 1371 METERS

RELEASE TIME(PDT)	6		823		1200		1400		1800	
HEIGHT (M AGL)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)
0	0	0.0	0	0.0	180	2.0	180	2.5	180	3.0
53	177	4.0	173	3.4	182	5.1	182	4.7	184	7.7
159	168	4.9	185	4.3	175	11.1	187	8.1	196	11.4
263	189	6.2	171	5.3	170	9.6	197	12.1	204	11.7
365	183	7.5	169	7.3	179	11.1	196	12.0	212	12.0
466	186	6.3	175	6.9	184	12.9	198	11.1	211	10.9
565	195	4.6	181	6.5	194	11.6	198	9.7	205	10.8
662	199	5.3	188	6.5	200	12.6	188	8.3	199	9.5
758	184	3.5	194	7.1	202	11.3	179	5.9	192	8.0
852	165	3.7	191	7.3	200	7.7	174	8.2	188	6.5
944	161	2.3	178	7.8	176	5.5	173	8.4	183	6.0
1035	148	1.4	177	7.6	172	6.6	173	8.0	192	5.2
1125	142	1.2	174	7.8	180	8.0	178	8.9	199	4.3
1215	153	0.4	181	8.9	178	8.6	179	9.0	177	1.4
1305	119	0.6	188	10.0	176	10.1	180	9.8	199	1.5
1395	121	1.5	188	10.3	173	9.6	180	10.8	290*	1.3
1485	107	2.9	182	9.3	175	10.5	175	9.5	290*	1.3
1575	103	4.2	181	10.3	178	11.5	167	9.0	10	3.1
1665	99	5.8	176	10.3	175	11.0	150	8.1	31	2.9
1755	104	6.2	170	12.4	178	11.2	147	8.1	47	2.7
1845	105	5.7	162	11.1	174	9.2	152	8.4	40	0.9
1935	104	5.7	148	7.8	165	9.5	155	7.0	47	1.1
2025	108	6.0	127	3.8	161	11.0	166	6.4	58	1.8
2115	118	5.5	135	4.0	155	10.1	178	5.1	38	3.3
2205	111	1.8	136	3.7	160	9.7	185	4.9	40	3.6
2295	112	0.7	108	2.6	168	12.2	174	4.7	46	4.1
2385	83	0.5	108	2.3	163	5.0	148	2.8	48	3.9
2475	125	1.6	83	2.4	177	4.7	145	2.7	48	4.3
2565	128	1.4	101	2.3	30	3.1	136	2.8	57	4.6
2655	124	2.0	96	2.5	62	2.8	151	3.4	66	4.2
2745	112	2.2	93	2.5	57	2.4	145	2.2	67	4.3
2835	114	3.4	95	1.6	36	3.2	135	2.3	64	4.5
2925	122	3.5	66	1.9	63	3.2	113	1.3	65	4.8
3015	121	3.2	82	3.4	84	3.0	98	2.3	56	4.2
3105	128	3.8	70	4.7	48	4.1	73	3.1	54	3.6
3195	127	3.9	77	4.3	120	3.7	74	4.2	40	2.8
3285	127	3.2	84	4.1	66	4.8	86	3.4	32	3.6
3375	121	4.1	82	3.8	78	5.1	68	3.1	28	3.7
3465	122	3.3	104	3.7	75	3.8	56	4.1	34	4.1
3555	145	1.7	93	3.1	56	3.6	69	4.5	29	4.2
3645	125	0.8	79	2.2	73	4.2	58	5.1	31	1.8
3735	88	0.5	44	2.5	85	4.2	50	3.7	25	3.0
3825	13	0.9	42	2.5	70	4.6	27	3.3	352	2.3
3915	38	1.4	48	3.3	59	5.6	21	3.0	328	2.3
4005	51	1.4	17	2.4	67	5.0	32	2.4	315	2.2
4095	112	1.0	3	2.1	52	4.4	42	1.7	296	2.2
4185	122	0.8	2	0.7	30	3.8	16	2.0	312	1.7
4275	158*	0.8	63	0.9	81	1.7	15	2.0	351	1.4
4365	158*	0.8	16	0.9	48	1.8	22	2.2	330	2.2

"*" DENOTES INTERPOLATED DATA, "9"S MISSING DATA

ARB SOUTHEAST DESERT STUDY WINDS ALOFT
LOCATION: LAKE GREGORY (0004) DATE: 7/28/81 GROUND ELEVATION: 1371 METERS

RELEASE TIME(PDT) 2032

HEIGHT (M AGL)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)
0	180	1.5
53	178	5.4
159	178	10.1
263	198	14.5
365	205	17.8
466	208	16.0
565	209	12.6
662	200	10.5
758	196	7.6
852	194	6.8
944	194	6.9
1035	183	3.7
1125	108	2.5
1215	58	1.7
1305	353	1.4
1395	35	2.9
1485	45	1.9
1575	56	2.2
1665	58	2.8
1755	56	3.3
1845	65	3.9
1935	64	4.0
2025	75	4.3
2115	79	5.2
2205	86	5.0
2295	85	5.6
2385	87	5.4
2475	85	5.9
2565	95	6.3
2655	88	6.0
2745	115	7.9
2835	66	6.0
2925	105	6.3
3015	100	6.1
3105	104	5.0
3195	96	3.7
3285	106	4.0
3375	89	3.2
3465	76	2.5
3555	54	2.3
3645	60	2.5

"*" DENOTES INTERPOLATED DATA, "9"S MISSING DATA

ARB SOUTH EAST DESERT

RELEASE SITE = LAKE GREGORY

SITE ELEVATION = 1372 (ft)

07/28/81 0445 (PDT)			07/28/81 1010 (PDT)			07/28/81 1600 (PDT)		
HEIGHT (M AGL)	WIND DIR (DEG)	WIND SPEED (M/S)	HEIGHT (M AGL)	WIND DIR (DEG)	WIND SPEED (M/S)	HEIGHT (M AGL)	WIND DIR (DEG)	WIND SPEED (M/S)
41	183	3.3	66	162	3.7	57	192	6.1
114	162	4.3	206	166	5.1	172	211	7.0
177	153	4.7	346	160	5.2	288	198	7.4
239	162	4.8	491	170	8.9	391	206	10.4
306	166	5.1	613	169	7.3	480	208	13.5
370	164	4.4	707	180	8.7	561	202	12.8
430	166	5.6	806	193	9.3	635	199	12.6
497	176	4.7	899	180	8.1	715	196	11.9
547	195	3.3	986	172	8.5	808	191	10.8
605	186	6.6	1078	165	9.6	918	187	10.9
660	212	4.0	1168	168	9.1	1036	185	11.7
690	199	3.1	1268	176	11.3	1145	181	10.7
770	192	9.7	1353	185	6.9	1230	174	8.6
870	203	5.0	1431	182	10.5	1314	165	7.1
937	196	3.4	1523	191	9.1	1419	160	5.2
1004	186	4.3	1600	194	9.8	1518	141	4.1
1078	181	4.1	1668	195	9.1	1594	140	3.8
1135	175	1.6	1727	188	8.8	1666	145	4.1
1218	177	7.0	1784	184	9.4	1738	145	4.3
1322	170	4.5	1842	180	9.0	1810	143	3.9
1401	167	4.6	1908	170	10.0	1884	142	4.0
1454	158	2.8	1984	165	8.9	1959	139	3.7
1504	171	6.4	2054	167	9.5	2032	136	3.5
1595	176	11.1	2130	154	6.2	2099	141	3.5
1680	175	7.4	2215	159	7.9	2167	141	2.8
1757	176	10.3	2310	152	5.1	2249	151	3.4
1825	175	8.7	2415	146	4.1	2333	140	2.6
1861	175	8.8	2509	147	4.0	2414	144	2.6
1900	175	9.7	2611	147	4.0	2502	144	2.7
2020	165	5.0	2681	096	3.5	2591	131	2.4
2062	163	4.7	2758	104	3.8	2687	138	3.4
2115	152	4.3	2842	098	3.0	2795	145	4.2
2177	147	4.7	2924	094	2.3	2891	128	3.4
2258	150	9.4	3003	078	1.7	2977	135	4.4
2337	141	5.5	3086	094	1.8	3063	130	4.4
2392	140	5.3	3175	101	3.1	3144	123	2.9
2467	156	7.7	3267	091	4.5	3215	097	1.6
2554	149	6.6	3356	091	4.0	3292	097	1.8
2603	096	2.2	3441	067	3.7	3376	066	3.1
2675	165	6.7	3521	078	3.4	3452	069	5.2
2763	166	6.2	3606	073	3.2	3529	067	5.2
2856	005	.9	3688	061	2.3	3608	068	4.4
			3770	085	3.1	3686	064	3.9
			3854	060	3.2	3764	052	4.0
			3941	060	3.5	3847	044	2.6
			4009	071	3.5	3935	048	3.2

4082 *	656	3.6	4007 *	626	4.3
4168 *	658	3.5	4081 *	628	4.3

* = GRID CALCULATIONS INCLUDE SINGLE-THEODOLITE DATA.

ARB SOUTHEAST DESERT STUDY WINDS ALOFT
LOCATION: VICTORVILLE (007) DATE: 7/27/81 GROUND ELEVATION: 899 METERS

RELEASE TIME(PDT)	1432		1608		1803		2004		2218	
HEIGHT (M AGL)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)
0	225	3.5	195	5.0	225	3.5	0	0.0	315	1.0
53	233	2.9	188	6.3	201	9.2	221	6.3	286	1.1
159	203	2.7	204	5.2	204	11.3	224	10.8	301	2.2
263	154	1.3	199	4.1	213	10.2	222	14.8	252	3.1
365	200	6.7	200	2.7	217	11.0	219	11.4	233	2.3
466	188	5.0	193	3.4	214	9.1	222	12.7	212	1.6
565	191	6.4	188	3.3	214	6.0	233	7.2	185	1.0
662	184	5.4	175	3.1	235	2.2	247	6.7	194	1.4
758	188	5.0	166	2.2	244	2.3	269	4.1	331	0.4
852	189	4.8	139	1.4	259	2.4	282	5.0	328	1.4
944	198	5.3	124	1.3	265	2.7	272	5.8	314	2.7
1035	193	5.4	88	1.0	286	2.C	282	4.5	308	3.1
1125	186	7.7	106	0.9	283	3.3	304	5.0	317	1.7
1215	189	3.3	105	0.9	287	3.0	312	4.1	340	0.7
1305	177	2.8	146	1.7	302	2.3	288	4.8	358	0.7
1395	176	2.4	155	2.C	315	2.4	298	4.4	343	0.6
1485	167	2.6	132	1.0	349	1.7	307	4.2	331	0.6
1575	163	5.1	154	0.9	85	0.9	291	3.6	72	0.9
1665	119	2.9	247	1.6	67	1.7	266	3.0	99	2.7
1755	80	0.7	247	2.3	120	1.9	272	2.5	100	4.2
1845	92	0.9	244	2.5	120	1.7	289	1.2	104	5.3
1935	274	1.3	246	3.0	90	1.5	238	0.8	999	99.9
2025	217	2.0	246	2.6	71	1.3	123	0.2	999	99.9
2115	205	3.4	237	2.3	42	0.6	86	0.7	999	99.9
2205	206	4.0	235	2.8	60	0.3	120	1.7	999	99.9
2295	193	4.2	214	3.3	259	0.5	108	3.8	999	99.9
2385	183	4.6	210	3.5	295	1.0	106	4.5	999	99.9
2475	180	4.4	204	4.1	303	2.1	106	5.4	999	99.9
2565	175	2.8	202	3.8	305	1.8	999	99.9	999	99.9
2655	156	1.9	203	1.6	297	2.C	999	99.9	999	99.9
2745	154	2.2	159	0.8	305	1.6	999	99.9	999	99.9
2835	156	2.1	115	0.9	301	1.7	999	99.9	999	99.9
2925	159	2.0	124	0.9	322	1.5	999	99.9	999	99.9
3015	177	2.4	158	0.9	246	1.0	999	99.9	999	99.9
3105	209	1.4	233	0.7	237	1.4	999	99.9	999	99.9
3195	217	1.8	260	0.6	281	1.6	999	99.9	999	99.9
3285	207	1.6	275	0.9	254	1.7	999	99.9	999	99.9
3375	226	1.9	338	0.8	227	2.2	999	99.9	999	99.9
3465	199	1.8	342	1.2	241	2.2	999	99.9	999	99.9
3555	199	0.9	348	1.6	251	1.4	999	99.9	999	99.9
3645	230	0.6	358	2.1	87	0.2	999	99.9	999	99.9
3735	319	1.3	11	2.9	256	0.3	999	99.9	999	99.9
3825	302	1.3	356	2.4	333	0.3	999	99.9	999	99.9
3915	309	2.0	337	2.5	340	0.4	999	99.9	999	99.9
4005	306	1.5	345	2.4	31	2.2	999	99.9	999	99.9
4095	314	2.1	3	2.3	31	2.6	999	99.9	999	99.9
4185	332	2.1	21	2.8	38	2.3	999	99.9	999	99.9
4275	348	1.8	39	2.4	45	2.3	999	99.9	999	99.9
4365	360	1.8	48	3.2	55	2.3	999	99.9	999	99.9

"*" DENOTES INTERPOLATED DATA, "9"S MISSING DATA

ARB SOUTHEAST DESERT STUDY WINDS ALOFT

LOCATION: VICTORVILLE (007) DATE: 7/28/81 GROUND ELEVATION: 899 METERS

RELEASE TIME(PDT)	7		1317		1603		1802		1940	
HEIGHT (M AGL)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)
0	0	0.0	200	5.0	225	8.5	225	6.0	225	3.5
53	251	3.3	195	6.6	191	16.1	210	10.3	197	6.9
159	275	2.4	182	5.7	191*	15.8	210	15.7	201	10.0
263	73*	1.7	189	6.7	191*	15.8	214	15.0	210	13.5
365	73*	1.7	191	8.7	193	19.4	214	14.2	214	14.7
466	341	1.4	189	9.7	192	16.8	214	13.3	213	13.0
565	299	2.6	188	10.1	186	14.2	219	10.1	216	8.1
662	294	2.2	184	11.4	191	13.4	217	9.8	214	6.7
758	302	1.8	182	10.7	191	13.8	217	7.8	223	6.1
852	263	0.5	184	10.1	191	12.1	223	7.0	231	3.6
944	200	1.3	183	7.7	186	6.8	210	4.9	218	3.8
1035	187	2.9	180	9.0	186	9.4	211	2.9	233	3.4
1125	179	2.5	175	8.8	180	7.8	50	0.7	324	2.0
1215	179	2.7	172	6.5	182	8.6	19	0.7	4	3.5
1305	210	1.9	164	5.2	174	4.5	4	1.5	324	3.7
1395	200	2.1	166	4.8	160	3.1	12	1.9	321	4.0
1485	186	1.3	166	5.9	174	3.7	347	2.0	338	3.5
1575	117	2.6	161	2.4	172	2.2	351	2.9	320	3.7
1665	105	3.5	163	2.8	188	1.8	320	2.4	320	3.8
1755	106	4.4	171	3.7	188	1.6	330	2.8	325	3.8
1845	999	99.9	177	2.9	230	0.5	309	3.2	329	3.4
1935	999	99.9	177	3.3	215	1.4	320	3.0	325	2.4
2025	999	99.9	166	3.9	277	2.6	318	2.1	10	1.0
2115	999	99.9	164	4.5	242	3.3	328	2.9	67	2.0
2205	999	99.9	168	6.3	245	3.2	325	2.5	83	2.2
2295	999	99.9	170	6.3	236	3.8	338	2.4	95	3.7
2385	999	99.9	172	7.0	236	4.9	356	1.5	106	3.6
2475	999	99.9	176	6.2	249	4.2	313	0.7	105	4.3
2565	999	99.9	179	6.2	239	4.5	75	0.8	106	4.9
2655	999	99.9	184	6.3	241	4.4	106	2.1	109	5.9
2745	999	99.9	181	6.2	244	4.3	101	2.5	108	6.1
2835	999	99.9	179	4.5	235	3.5	106	3.1	107	6.2
2925	999	99.9	184	3.5	237	3.4	110	4.0	108	5.7
3015	999	99.9	139	3.3	230	4.2	104	4.2	102	5.5
3105	999	99.9	137	3.2	222	3.7	112	4.8	88	5.8
3195	999	99.9	114	3.2	215	5.5	109	4.9	78	5.7
3285	999	99.9	114	2.9	212	5.4	120	4.6	76	4.6
3375	999	99.9	95	2.2	208	5.3	81	4.1	62	4.3
3465	999	99.9	89	3.7	208	5.2	70	4.4	53	3.9
3555	999	99.9	99	4.2	199	5.1	66	5.1	51	3.2
3645	999	99.9	97	4.2	181	4.2	61	6.1	55	3.2
3735	999	99.9	69	3.8	156	3.8	56	5.2	55	3.3
3825	999	99.9	70	4.8	136	3.5	50	5.4	45	3.3
3915	999	99.9	68	4.8	128	4.3	61	3.9	35	2.9
4005	999	99.9	64	3.8	111	4.5	63	3.9	16	3.5
4095	999	99.9	46	3.4	77	4.1	62	4.2	17	3.6
4185	999	99.9	22	3.1	57	4.0	61	3.2	17	3.2
4275	999	99.9	1	4.1	52	4.9	44	1.8	20	3.0
4365	999	99.9	9	2.7	49	5.8	18	1.3	15	1.6

"*" DENOTES INTERPOLATED DATA, "9"S MISSING DATA

ARB SOUTHEAST DESERT STUDY WINDS ALOFT
LOCATION: BANNING (016) DATE: 7/27/81 GROUND ELEVATION: 670 METERS

RELEASE TIME(PDT)	1426		1553	
HEIGHT (M AGL)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)
0	0	5.0	0	5.0
53	261	7.2	274	8.8
159	240	5.5	269	11.6
263	248	6.1	272	9.6
365	257	7.1	272	9.3
466	258	6.2	272	9.5
565	257	3.8	272	6.8
662	249	5.4	264	8.4
758	248	4.4	260	7.1
852	250	3.5	251	5.2
944	231	1.5	248	6.4
1035	213	1.7	237	6.9
1125	198	1.2	244	8.3
1215	167	0.8	238	5.9
1305	224	1.1	208	3.4
1395	244	1.2	168	3.3
1485	231	0.7	150	2.1
1575	213	1.0	171	1.6
1665	187	1.4	181	1.5
1755	194	1.8	182	2.3
1845	181	2.7	191	2.9
1935	178	1.6	181	2.3
2025	166	1.4	155	1.7
2115	157	1.7	274	1.0
2205	155	1.0	278	0.9
2295	113	0.8	353	0.8
2385	342	0.5	50	1.5
2475	15	0.6	50	2.0
2565	74	1.8	36	2.8
2655	65	2.0	21	3.7
2745	37	2.5	15	1.8
2835	28	3.6	22	1.7
2925	44	2.9	29	1.6
3015	57	2.9	36	1.5
3105	62	2.8	63	1.3
3195	89	2.3	92	1.4
3285	100	1.7	145	1.1
3375	103	1.7	135	1.5
3465	108	2.1	145	1.5
3555	118	2.2	150	2.5
3645	125	2.2	143	2.0
3735	133	2.5	124	1.8
3825	119	1.7	100	1.0
3915	92	1.5	92*	0.9
4005	63	0.8	92*	0.9
4095	30	1.3	37	1.3
4185	27	0.9	39	2.2
4275	15	1.9	26	2.8
4365	15	2.6	28	2.9

*** DENOTES INTERPOLATED DATA, "9"S MISSING DATA

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ARB SOUTHEAST DESERT STUDY WINDS ALOFT

LOCATION: CARSON (021) DATE: 7/30/81 GROUND ELEVATION: 22 METERS

RELEASE TIME(PDT)	545		750		904		1114	
HEIGHT (M AGL)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)
0	290	2.0	180	0.0	180	0.0	180	2.0
53	222	1.4	222*	1.3	157	0.7	146	1.5
159	2	3.0	221	1.3	158	0.6	163	1.0
263	7	1.4	249	1.1	229	0.3	217	1.5
365	42	0.9	306	1.5	179	0.6	271	1.4
466	94	1.1	999	99.9	999	99.9	269	1.1
565	999	99.9	999	99.9	999	99.9	274	2.1
662	999	99.9	999	99.9	999	99.9	274	1.1

"*" DENOTES INTERPOLATED DATA, "9"S MISSING DATA

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ARB SOUTHEAST DESERT STUDY WINDS ALOFT
LOCATION: S FORK SANTA ANA RVR (010) DATE: 7/30/81 GROUND ELEVATION: 1920 METERS

RELEASE TIME(PDT)	1639		1800		2206	
HEIGHT (M AGL)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)
0	200	5.0	225	1.0	90	0.5
53	304	3.7	293	3.9	119	1.4
159	311	7.5	285	4.7	128	4.1
263	306*	7.3	287	4.4	127	2.4
365	306*	7.3	292	6.3	141	1.2
466	299	6.5	297	6.0	320	0.4
565	295	5.3	296	4.9	325	1.4
662	294	3.8	306	4.7	31	0.5
758	274	3.8	278	1.4	92	1.3
852	258	4.7	205	0.8	152	3.0
944	209	3.4	24	1.2	140	4.0
1035	189	3.3	2	1.6	140	4.6
1125	184	2.8	5	1.4	147	4.4
1215	161	2.6	16	0.7	153	4.2
1305	156	2.7	64	0.8	161	3.9
1395	292	0.4	84	0.7	174	3.5
1485	68	0.9	109	0.6	179	3.9
1575	74	1.0	108	0.8	185	3.9
1665	55	1.3	108	1.3	188	4.6
1755	51	1.0	90	1.3	195	5.0
1845	40	1.8	85	1.8	197	4.9
1935	58	3.6	104	1.9	202	5.3
2025	67	3.7	120	2.1	197	5.5
2115	95	4.0	123	2.0	182	6.5
2205	100	3.1	123	1.9	211	3.1
2295	120	4.6	164	2.4	228	1.9
2385	143	5.0	189	2.4	257	2.0
2475	181	3.7	204	3.4	270	1.6
2565	212	3.4	197	4.2	276	1.6
2655	245	3.4	222	2.8	237	2.3
2745	251	3.2	250	2.7	228	3.3
2835	238	3.8	240	2.9	232	3.0
2925	235	4.0	242	4.0	238	2.2
3015	245	3.3	246	3.3	246	2.6
3105	242	3.3	255	3.5	248	3.1
3195	237	3.3	244	3.4	239	3.2
3285	228	4.1	240	3.8	240	4.1
3375	216	4.7	229	4.8	245	5.4
3465	210	4.8	216	4.7	233	5.9
3555	217	4.5	213	5.2	231	5.7
3645	230	5.4	226	5.6	229	5.3
3735	235	6.1	237	6.4	230	5.4
3825	234	5.9	242	7.0	238	6.0
3915	234	6.2	243	6.8	999	99.9
4005	234	6.2	241	6.2	999	99.9
4095	230	6.2	242	6.2	999	99.9
4185	234	6.1	243	6.1	999	99.9
4275	235	6.4	238	6.5	999	99.9
4365	232	5.9	242	6.3	999	99.9

"*" DENOTES INTERPOLATED DATA; "9"S MISSING DATA

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ARB SOUTH EAST DESERT

RELEASE SITE = SANTA ANA RIVER

SITE ELEVATION = 1920 (M)

07/30/81 1503 (PDT) 07/30/81 2035 (PDT)

HEIGHT (M AGL)	WIND DIR (DEG)	WIND SPEED (M/S)	HEIGHT (M AGL)	WIND DIR (DEG)	WIND SPEED (M/S)
63	301	3.9	44	124	1.1
187	317	7.5	133	114	1.5
302	307	7.8	215	112	3.1
413	300	8.6	287	131	.6
561	291	7.9	361	154	.1
	---	---	433	344	1.0
691	287	7.3	515	001	1.9
774	259	6.8	598	359	1.6
867	262	5.6	665	171	.8
969	227	4.3	758	143	1.1
1051	211	3.5	805	081	.6
1129	202	4.8	873	070	1.1
1232	217	3.0	945	070	1.0
1332	203	3.1	1013	073	1.0
1415	205	3.4	1082	052	.6
1514	180	3.2	1162	059	.4
1635	189	4.1	1247	196	.3
1737	168	4.6	1322	171	.5
1827	150	4.2	1397	164	1.3
1947	139	3.9	1478	177	2.4
2084	117	5.1	1566	180	2.5
2175	106	6.1	1647	156	3.0
2227	091	4.9	1730	183	2.4
2306	095	4.9	1807	171	3.1
2404	080	5.6	1878	175	3.3
2494	086	5.0	1952	184	3.3
2567	122	5.0	2018	194	3.4
2689	141	3.9	2087	207	4.7
2772	162	3.1	2158	216	4.9
2830	195	3.0	2227	209	6.0
2892	234	4.3	2335	164	5.5
2957	189	4.1		---	---
3029	246	3.9	2439	185	3.2
3110	253	3.8	2513	189	3.1
3192	243	4.2	2596	209	2.3
3278	239	4.6	2672	209	2.1
3368	247	3.8	2751	195	2.9
3457	252	3.5	2834	248	1.1
3544	251	3.5	2904	295	3.2
3633	241	3.9	2978	230	3.0
3713	231	4.1	3050	258	2.8
3788	226	4.9	3117	258	3.2
3869	221	5.2	3187	249	3.5
3946	216	5.5	3255	244	3.7
4025	215	5.2			
4100	216	4.5			

4163	* 222	5.5
4263	* 228	5.4

* = WIDE CALCULATIONS INCLUDE SINGLE-THEODOLITE DATA.

ARB SOUTHEAST DESERT STUDY WINDS ALOFT
LOCATION: S FORK SANTA ANA RVR (010) DATE: 7/31/81 GROUND ELEVATION: 1920 METERS

RELEASE TIME(PDT)	0		800		1203		1400		1800	
HEIGHT (M AGL)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)
0	0	0.0	0	0.0	290	4.0	290	5.0	290	2.5
53	127	2.0	105	1.8	310	5.9	301	5.7	298	6.5
159	117	3.9	38	0.7	310*	5.3	302	7.1	300	5.7
263	102	0.4	315	0.5	310*	5.3	316	4.1	295	5.8
365	316*	1.0	292	0.6	296	3.4	319	3.5	291	5.5
466	316*	1.0	321	2.1	300	3.1	323	2.4	294	4.2
565	253	2.6	307	1.2	307	1.1	295	3.9	258	3.2
662	239	3.2	267	0.6	296	2.3	258*	3.7	244	3.2
758	217	1.6	169	3.1	251	1.1	258*	3.7	230	3.9
852	181	1.3	183	4.5	256	1.0	216	2.1	232	5.4
944	186	1.9	177	4.7	265	0.6	242	1.2	220	5.7
1035	165	1.7	185	4.7	68	0.4	222	0.9	214	5.3
1125	155	2.1	194	5.2	208	3.2	168	0.3	203	4.3
1215	162	1.9	189	5.9	194	3.7	164	2.1	178	2.9
1305	177	2.1	183	7.7	177	5.0	182	2.4	150	2.8
1395	181	3.1	196	8.2	195	4.7	183	3.7	97	3.9
1485	196	3.8	185	7.6	185	5.6	180	3.4	100	4.4
1575	203	4.9	184	7.9	181	6.5	179	4.1	107	3.6
1665	187	6.7	189	7.7	177	5.3	198	3.9	85	2.5
1755	194	7.4	196	6.1	193	6.8	231	3.3	100	1.6
1845	198	7.4	193	5.1	203	5.4	226	3.4	204	1.7
1935	199	6.5	192	4.2	196	3.3	210	2.8	240	3.5
2025	186	7.8	178	3.1	200	1.9	201	0.8	254	4.8
2115	999	99.9	162	2.3	198	1.3	192	1.1	248	4.9
2205	999	99.9	152	2.8	164	1.0	186	2.0	247	5.3
2295	999	99.9	153	2.3	152	1.8	181	2.8	239	4.6
2385	999	99.9	171	1.9	171	2.3	174	4.5	234	4.3
2475	999	99.9	193	1.1	170	2.8	167	4.9	232	3.5
2565	999	99.9	218	1.2	167	2.6	175	4.7	231	3.4
2655	999	99.9	285	0.7	169	3.0	178	4.2	223	3.3
2745	999	99.9	254	1.2	163	3.2	181	4.1	211	3.6
2835	999	99.9	231	1.4	172	3.6	175	3.6	194	3.3
2925	999	99.9	222	1.1	172	3.6	165	3.4	188	3.2
3015	999	99.9	232	1.2	168	2.5	175	3.1	185	3.2
3105	999	99.9	274	1.0	145	2.8	185	2.7	177	3.3
3195	999	99.9	279	1.0	137	2.7	192	2.9	163	3.2
3285	999	99.9	303	2.0	135	2.6	203	2.8	164	3.4
3375	999	99.9	292	0.8	135	2.4	221	3.7	171	3.7
3465	999	99.9	228	0.6	139	2.4	230	4.0	195	3.8
3555	999	99.9	174	1.1	148	2.7	239*	5.0	204	3.9
3645	999	99.9	159	1.6	163	3.6	239*	5.0	209	4.3
3735	999	99.9	177	2.8	185	3.8	239	5.3	225	4.6
3825	999	99.9	203	4.0	205	3.7	238	5.1	229	5.2
3915	999	99.9	216	4.4	217	4.1	240	5.7	233	5.8
4005	999	99.9	226	4.4	225	5.3	215	5.9	223	7.7
4095	999	99.9	232	4.8	234	5.4	230	6.2	231	10.0
4185	999	99.9	229	5.1	235	6.0	224	7.7	229	10.7
4275	999	99.9	234	4.9	236	5.6	225	9.5	227	11.0
4365	999	99.9	238	5.8	236	5.7	225	8.1	225	10.6

"*" DENOTES INTERPOLATED DATA, "9"S MISSING DATA

ARB SOUTHEAST DESERT STUDY WINDS ALOFT
LOCATION: S FORK SANTA ANA RVR (010) DATE: 7/31/81 GROUND ELEVATION: 1920 METERS

RELEASE TIME(PDT) HEIGHT (M AGL)	1933 WIND DIRECTION (DEG TRUE)	1933 WIND SPEED (M/S)	2030 WIND DIRECTION (DEG TRUE)	2030 WIND SPEED (M/S)
0	0	0.0	0	0.0
53	246	1.0	132	1.9
159	296	2.0	123	3.5
263	286	1.8	123	2.3
365	302	2.1	112	2.8
466	324	3.0	108	2.4
565	336	3.1	125	1.3
662	305	1.2	176	2.5
758	999	99.9	178	4.2
852	999	99.9	191	4.0
944	999	99.9	181	4.1
1035	190*	3.6	168	3.5
1125	190*	3.6	167	3.8
1215	172	2.6	165	4.3
1305	150	2.6	155	3.8
1395	132	3.6	158	3.5
1485	999	99.9	142	3.6
1575	999	99.9	154	3.1
1665	999	99.9	162	3.2
1755	999	99.9	164	2.0
1845	999	99.9	168	2.4
1935	999	99.9	172	2.8
2025	999	99.9	211	1.7
2115	999	99.9	282	2.0

"*" DENOTES INTERPOLATED DATA, "9"S MISSING DATA

WINDS ALOFT (SINGLE AND DOUBLE THEODOLITE DATA)

ARB SOUTH EAST DESERT

RELEASE SITE = SANTA ANA RIVER

SITE ELEVATION = 1929 (M)

07/31/81 0647 (PDT)			07/31/81 1000 (PDT)			07/31/81 1600 (PDT)		
HEIGHT (M AGL)	WIND DIR (DEG)	WIND SPEED (M/S)	HEIGHT (M AGL)	WIND DIR (DEG)	WIND SPEED (M/S)	HEIGHT (M AGL)	WIND DIR (DEG)	WIND SPEED (M/S)
38	121	1.3	66	300	5.1	62	308	7.2
114	128	3.7	177	307	6.5	220	309	7.2
190	123	2.4	291	319	6.1		---	---
264	172	1.2	402	299	3.1	420	291	9.3
338	201	.4	496	273	1.4		---	---
416	313	.5	605	191	.7	547	264	7.5
496	303	.9	711	220	3.4	605	255	7.2
575	326	.7	865	205	5.3	689	242	7.0
648	346	.4		---	---	786	240	5.3
745	027	.9		---	---	884	240	7.2
860	174	1.7	1008	163	5.8	984	225	4.8
969	170	1.6	1087	183	5.6	1095	222	5.2
1076	184	4.0	1164	181	5.7	1220	223	5.4
1186	190	6.1	1247	182	7.0	1348	201	5.7
1307	192	9.3	1356	191	6.6	1461	189	4.5
1426	189	10.1	1480	189	6.3	1589	195	4.1
1540	181	9.5	1600	185	5.0	1721	140	3.2
1651	175	8.8	1709	175	4.9	1824	125	4.0
1753	173	9.0	1830	185	7.7	1924	125	3.5
1839	176	9.2	1948	177	8.9	2040	124	2.9
1908	179	9.6	2052	183	10.9	2128	108	4.6
1961	182	10.2	2166	186	8.0	2208	118	4.0
2005	186	10.5	2281	189	8.7	2302	125	3.3
2062	192	9.1	2386	202	6.5	2389	166	2.8
2141	203	5.4	2474	202	5.8	2471	190	3.3
2219	219	3.6	2555	203	3.9	2555	236	3.7
2294	212	2.5	2634	154	2.6	2642	246	5.2
2379	175	3.0	2719	157	2.5	2731	248	5.0
2463	150	2.4	2818	186	2.2	2820	248	3.3
2537	133	2.3	2942	209	2.3	2909	226	2.9
2602	132	1.6	3057	159	.5	2993	198	3.8
2658	084	1.6	3159	175	1.9	3069	199	4.4
2706	076	1.6	3255	107	1.5	3158	196	5.3
2766	154	2.2	3336	100	1.8	3241	183	4.6
2833	176	1.6	3422	111	1.7	3318	181	4.9
2896	204	1.7	3510	165	2.0	3401	178	5.7
2965	211	2.3	3591	150	1.5	3475	182	4.3
3033	215	3.1	3666	143	1.2	3555	192	4.6
3101	223	3.2	3744	145	1.5	3644	192	4.9
3170	232	2.6	3824	127	1.1	3724	171	4.4
3240	229	2.1	3913	148	1.6	3805	170	5.0
3308	251	2.2	3994	090	1.0	3895	156	5.1
3372	252	2.0	4072	142	2.1	3973	151	5.3
3436	266	3.0	4159	134	2.3	4048	159	4.6
3498	215	1.9	4248	156	4.3	4140	174	5.1
3555	233	1.-	4345	152	4.9	4227	182	4.2

3614 * 252	1.9	4439 * 175	4.9	4361 * 186	4.4
3681 * 264	2.1	4537 * 192	5.1	4375 * 190	4.2

* = WIND CALCULATIONS INCLUDE SINGLE-THEODOLITE DATA.

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ARB SOUTHEAST DESERT STUDY WINDS ALOFT

LOCATION: TWENTY NINE PALMS (011) DATE: 7/30/81 GROUND ELEVATION: 609 METERS

RELEASE TIME(PDT)	1425		1605		1818		2023		2221	
HEIGHT (M AGL)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)
0	0	0.0	225	3.5	225	3.5	0	0.0	225	2.0
53	33	3.3	241	5.3	243	7.2	232	9.8	210	4.5
159	20	3.0	240	4.9	242	11.3	241*	10.6	216	3.8
263	38	2.7	250	5.2	239	11.2	241*	10.6	219	3.0
365	56	2.8	259	2.4	245	9.5	253	11.8	234	2.2
466	57	1.4	254	3.7	245	7.9	254	11.7	236	2.6
565	30	1.3	251	4.1	254	5.6	254	11.1	228	2.1
662	66	3.3	263	3.4	257	5.6	263	10.1	264	1.6
758	85	2.1	266	3.4	249	4.3	264	11.9	306	1.0
852	63	1.4	272	4.0	262	6.1	251	9.4	294	1.8
944	55	1.7	287	4.2	262	6.9	294	9.6	302	2.2
1035	999	99.9	303	4.1	283	4.1	287	5.6	314	2.2
1125	999	99.9	307	3.8	279	5.6	284	5.6	333	1.4
1215	999	99.9	322	2.3	279	4.0	282	6.5	341	1.3
1305	999	99.9	291	1.0	263	1.8	287	6.4	344	1.1
1395	999	99.9	231	0.7	204	1.2	311	3.2	352	0.7
1485	999	99.9	262	1.1	171	1.7	81	2.6	360	0.6
1575	999	99.9	210	0.4	194	1.5	86	2.5	84	0.3
1665	999	99.9	226	1.2	190	1.3	86	2.3	136	1.5
1755	999	99.9	220	1.4	168	1.0	99	3.4	146	2.2
1845	999	99.9	211	2.3	194	1.2	111	2.4	168	1.7
1935	999	99.9	248	2.0	175	0.7	106	2.3	163	1.6
2025	999	99.9	248	3.0	165	0.5	90	2.1	169	1.4
2115	999	99.9	244	3.3	216	0.3	72	1.6	206	1.7
2205	999	99.9	246	3.7	304	0.8	29	1.9	218	1.6
2295	999	99.9	247	3.6	306	2.4	12	1.4	230	1.7
2385	999	99.9	252	4.4	331	7.6	8	2.1	220	3.1
2475	999	99.9	261	4.3	197	2.6	341	2.1	209	4.5
2565	999	99.9	273	4.5	332	3.1	356	2.0	199	4.9
2655	999	99.9	274	4.4	331	3.4	8	2.3	181	4.9
2745	999	99.9	269	2.9	332	2.9	2	2.4	180	5.9
2835	999	99.9	237	2.0	316	3.2	343	2.9	188	7.2
2925	999	99.9	227	1.8	307	3.0	33	3.3	999	99.9
3015	999	99.9	244	2.5	301	3.5	269	2.4	999	99.9
3105	999	99.9	216	3.2	301	4.4	356	5.0	999	99.9
3195	999	99.9	220	4.7	287	5.1	357	3.2	999	99.9
3285	999	99.9	218	4.8	280	5.0	341	3.5	999	99.9
3375	999	99.9	209	4.4	274	5.9	339	3.7	999	99.9
3465	999	99.9	206	5.1	265	3.3	336	3.2	999	99.9
3555	999	99.9	197	5.2	240	2.1	323	2.9	999	99.9
3645	999	99.9	207	4.3	209	2.5	999	99.9	999	99.9
3735	999	99.9	227	3.0	186	4.0	999	99.9	999	99.9
3825	999	99.9	238	2.9	190	3.9	999	99.9	999	99.9
3915	999	99.9	236	2.4	213	3.2	999	99.9	999	99.9
4005	999	99.9	250	2.8	239	2.8	999	99.9	999	99.9
4095	999	99.9	241	2.4	237	3.9	999	99.9	999	99.9
4185	999	99.9	237	2.9	245	4.2	999	99.9	999	99.9
4275	999	99.9	236	2.9	241	4.4	999	99.9	999	99.9
4365	999	99.9	236	2.9	249	3.7	999	99.9	999	99.9

"*" DENOTES INTERPOLATED DATA, "9"S MISSING DATA

ARB SOUTHEAST DESERT STUDY WINDS ALOFT
LOCATION: TWENTY NINE PALMS (011) DATE: 7/31/81 GROUND ELEVATION: 609 METERS

RELEASE TIME(PDT)	8		806		1007		1207		1413	
HEIGHT (M AGL)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)
0	0	0.0	315	2.0	0	0.0	315	1.5	225	2.0
53	83*	2.2	322	2.5	37	1.9	73	1.4	245	4.1
159	83	2.2	334	5.0	81	1.3	84	1.5	248	7.8
263	101	1.8	332	5.3	77	0.6	53	0.7	246	5.0
365	191	1.7	313	3.9	22	1.0	152	1.2	238	4.9
466	213	2.6	304	2.5	54	0.2	130	1.6	244	4.2
565	212	3.0	230	1.2	149	1.7	157	1.2	262	3.4
662	240	2.4	286	0.7	146	1.3	178	1.7	274	3.1
758	214	3.6	167	0.9	165	3.4	196	2.0	264	2.8
852	210	4.4	205	2.5	174	5.0	195	2.2	258	2.4
944	209	4.2	220	3.8	183	4.8	205	2.4	241	1.3
1035	208	3.8	217	4.3	196	4.0	210	2.3	241	1.4
1125	191	2.1	222	5.0	201	5.7	208	2.6	283	2.3
1215	187	1.6	215	4.9	209	5.6	205	3.7	269	2.1
1305	165	1.2	211	6.2	224	4.7	197	4.0	235	1.9
1395	153	1.3	215	6.6	220	5.0	204	3.5	245	2.2
1485	157	1.5	219	7.2	225	5.5	213	4.2	226	2.7
1575	159	1.8	218	7.9	228	7.4	214	4.8	212	3.0
1665	147	3.0	218	8.6	225	7.3	221	5.8	208	3.0
1755	151	3.5	216	8.6	222	7.7	217	6.0	208	3.1
1845	158	3.5	219	8.7	223	7.5	209	6.5	208	3.8
1935	160	3.2	220	9.0	224	8.0	214	9.0	201	4.0
2025	166	3.4	220	9.3	223	9.6	214	9.1	205	4.3
2115	180	3.1	224	7.9	227	9.4	208	9.0	205	5.1
2205	188	3.9	230	8.0	227	9.9	207	9.1	215	6.8
2295	185	4.1	230	7.7	231	9.3	208	8.8	225	6.7
2385	176	5.7	231	8.1	224	9.7	211	9.2	222	6.5
2475	176	5.1	221	8.1	219	9.9	214	9.6	220	6.5
2565	170	6.0	210	8.3	215	9.5	213	10.0	219	6.9
2655	179	6.6	201	7.8	213	9.5	226	7.6	224	8.3
2745	176	7.4	197	8.9	209	9.4	226	4.6	224	8.0
2835	169	8.1	205	8.6	204	8.6	202	3.9	223	7.6
2925	173	6.1	206	8.1	202	8.3	196	2.3	229	7.4
3015	180	5.3	209	8.9	202	9.3	183	2.4	227	6.2
3105	180	4.7	209	8.5	203	8.8	164	2.2	213	3.8
3195	197	2.9	205	9.7	203	9.9	162	3.6	178	2.3
3285	236	2.1	200	10.3	201	9.4	163	4.2	145	2.3
3375	243	2.5	207	10.3	201	9.7	175	4.1	166	2.6
3465	239	1.9	207	9.6	203	10.9	167	4.4	157	3.3
3555	211	2.0	190	7.6	213	11.3	175	4.6	161	3.8
3645	230	1.9	198	6.1	211	9.4	177	5.2	152	3.3
3735	999	99.9	193	5.2	217	8.5	162	4.5	130	2.7
3825	999	99.9	178	3.4	224	6.8	154	3.2	127	2.4
3915	999	99.9	182	3.1	225	6.5	142	2.8	138	2.4
4005	999	99.9	139	1.8	212	6.3	146	3.4	146	2.8
4095	999	99.9	147	0.9	201	5.1	148	3.2	133	2.1
4185	999	99.9	143	0.9	189	3.9	154	2.7	158	1.2
4275	999	99.9	280	0.5	148	2.3	160	1.5	231	1.1
4365	999	99.9	215	1.1	193	5.0	237	1.5	278	0.9

"*" DENOTES INTERPOLATED DATA, "9"S MISSING DATA

ARB SOUTHEAST DESERT STUDY WINDS ALOFT
LOCATION: TWENTY NINE PALMS (011) DATE: 7/31/81 GROUND ELEVATION: 609 METERS

RELEASE TIME(PDT)	1611		1803		1930	
HEIGHT (M AGL)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)
0	0	0.0	225	2.0	225	2.0
53	250	6.4	230	3.2	198	5.6
159	248	10.9	225	5.4	217	4.0
263	249	12.2	231	6.1	220	4.4
365	248	13.6	232	8.0	218	6.0
466	249	16.8	227	5.0	226	6.0
565	251	15.9	242	3.1	225	5.0
662	253	16.4	234	4.0	238	4.5
758	249	10.8	232	5.3	253	3.1
852	251	7.2	230	4.5	281	3.0
944	250	4.9	239	3.5	244	3.4
1035	257	3.4	241	4.0	238	2.6
1125	91	0.6	256	2.9	267	2.4
1215	287	2.5	246	3.2	263	2.0
1305	245	10.1	242	3.3	257	2.0
1395	244	11.9	252	2.6	255	2.4
1485	246	12.4	260	3.3	266	2.5
1575	246	14.0	268	3.7	272	2.5
1665	245	12.6	278	3.2	276	2.4
1755	246	13.1	283	2.9	299	2.3
1845	244	12.3	277	3.8	290	2.5
1935	241	8.5	278	4.1	292	3.1
2025	244	5.7	290	4.2	298	3.2
2115	278	1.6	288	4.0	300	3.5
2205	248	2.6	290	4.3	300	3.6
2295	193	1.9	300	3.4	293	3.7
2385	196	3.5	293	3.3	288	3.7
2475	208	5.8	288	3.4	254	1.4
2565	200	6.3	287	3.3	281	0.3
2655	195	6.6	273	3.7	97	0.7
2745	195	6.2	256	3.9	204	0.5
2835	190	6.5	253	3.9	248	1.4
2925	207	4.6	300	2.6	243	1.6
3015	238	7.7	262	2.2	256	2.7
3105	238	9.0	236	2.3	280	2.0
3195	241	7.7	221	2.6	259	1.8
3285	245	6.3	228	2.8	250	2.1
3375	264	5.1	242	3.9	239	2.5
3465	267	3.5	258	3.8	210	2.3
3555	277	3.6	258	3.8	199	2.2
3645	267	4.8	251	3.4	171	1.8
3735	263	3.0	192	1.9	155	1.2
3825	250	4.2	161	2.9	184	0.4
3915	250	4.1	146	2.3	249	0.4
4005	250	4.0	146	2.7	258	1.1
4095	256	2.5	122	2.8	259	1.1
4185	243	3.8	129	1.7	244	1.7
4275	243	2.2	134	1.0	239	1.0
4365	234	3.7	153	0.5	267	1.8

"*" DENOTES INTERPOLATED DATA, "9"S MISSING DATA

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ARB SOUTHEAST DESERT STUDY WINDS ALOFT
LOCATION: REDLANDS (022) DATE: 7/30/81 GROUND ELEVATION: 411 METERS

RELEASE TIME(PDT)	958		1410		1604		1800		2036	
HEIGHT (M AGL)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)
0	270	2.0	290	4.0	247	3.0	247	4.0	270	2.0
53	293	2.4	295	6.4	252	4.3	245	6.7	275	4.0
159	279	2.4	285	6.6	275	3.5	245	6.5	267	6.1
263	270	2.4	252	3.1	269	4.0	256	8.5	280	6.2
365	331	2.4	237	3.0	274	4.8	269	9.0	287	7.0
466	16	2.1	243	3.0	275	6.3	281	5.9	311	5.5
565	30	2.9	224	1.6	279	5.8	317	3.9	354	5.7
662	311	1.8	116	0.4	281	3.3	336	3.7	342	3.2
758	292	3.1	282	0.3	243	2.2	65	2.2	333	3.8
852	309	2.2	238	1.4	235	2.0	114	1.0	10	2.8
944	272	1.3	234	1.8	240	2.8	160	1.3	17	1.8
1035	251	3.0	220	1.7	246	3.9	191	2.0	245	1.3
1125	260	2.0	203	2.6	198	1.7	193	2.5	242	2.3
1215	211	5.8	181	3.7	217	2.7	182	2.4	246	2.5
1305	346	1.3	183	2.9	218	2.7	167	3.4	234	2.2
1395	288	0.3	187	4.1	231	2.5	187	1.9	208	1.7
1485	266	5.7	164	3.5	240	2.9	223	2.2	165	1.6
1575	121	6.0	203	3.7	237	3.0	219	3.3	206	1.8
1665	182	3.3	223	3.5	221	3.3	217	3.3	189	3.0
1755	181	3.4	217	4.8	228	4.2	203	3.0	188	3.7
1845	183	3.7	210	4.7	219	4.8	207	3.6	211	3.5
1935	185	6.5	215	5.3	237	4.1	190	4.8	248	3.7
2025	196	3.5	209	6.5	230	3.3	205	3.6	192	3.7
2115	195	6.1	201	6.3	185	6.8	203	5.2	214	6.1
2205	193	6.8	198	5.7	195	5.7	203	5.9	217	5.8
2295	198	5.8	188	7.9	200	6.6	200	4.8	211	6.3
2385	187	6.6	180	7.9	193	8.1	204	5.0	203	6.1
2475	187	5.7	180	11.7	204	7.2	218	4.3	201	5.1
2565	184	6.0	185	8.0	202	6.8	205	4.7	204	6.0
2655	180	6.0	182	7.7	198	6.3	209	4.7	201	4.9
2745	169	6.7	171	8.4	181	5.7	207	4.1	194	5.4
2835	170	6.1	199	6.4	175	5.7	215	2.4	205	2.6
2925	176	6.8	164	5.6	185	6.2	215	8.4	180	5.3
3015	180	5.6	158	5.3	183	6.3	214	5.5	193	4.4
3105	176	7.1	999	99.9	191	5.2	203	3.0	198	6.0
3195	186	6.7	999	99.9	197	5.0	201	3.4	202	5.9
3285	161	6.6	999	99.9	201	6.0	212	4.1	205	5.5
3375	167	7.6	999	99.9	202	6.1	220	5.0	195	4.9
3465	168	6.9	999	99.9	196	5.3	220	4.7	999	99.9
3555	179	6.3	999	99.9	198	6.5	243	3.6	999	99.9
3645	173	6.7	999	99.9	206	5.8	221	2.9	999	99.9
3735	999	99.9	999	99.9	204	8.5	326	0.2	999	99.9
3825	999	99.9	999	99.9	999	99.9	346	2.8	999	99.9
3915	999	99.9	999	99.9	999	99.9	329	2.4	999	99.9
4005	999	99.9	999	99.9	999	99.9	342	4.7	999	99.9
4095	999	99.9	999	99.9	999	99.9	310	4.9	999	99.9

"*" DENOTES INTERPOLATED DATA, "9"S MISSING DATA

ARB SOUTHEAST DESERT STUDY
LOCATION: PALM SPRINGS (008) WINDS ALOFT
DATE: 8/ 3/81 GROUND ELEVATION: 170 METERS

RELEASE TIME(PDT)	1410		1607		1758		2006		2218	
HEIGHT (M AGL)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)
0	999	99.9	999	99.9	999	99.9	999	99.9	999	99.9
53	334*	2.4	310	7.1	308	8.9	319	13.3	319	6.3
159	334	2.4	317	4.8	315	8.6	319	14.5	295	3.9
263	343	2.9	297*	3.3	319	7.1	999	99.9	249	3.5
365	342	1.5	297*	3.3	324	5.3	999	99.9	216	3.5
466	7	1.8	241	0.2	308	3.0	999	99.9	194	2.7
565	44	1.3	158	1.3	11	1.6	999	99.9	174	1.8
662	334	1.2	176	1.1	120	1.8	999	99.9	156	1.4
758	332	1.0	210	0.9	129	0.7	999	99.9	81	5.6
852	356	0.6	186	1.1	124	1.5	999	99.9	233	3.0
944	117	1.2	185	2.7	171	2.6	999	99.9	128	0.6
1035	166	3.4	184	3.8	171	2.3	999	99.9	52	0.7
1125	193	5.0	188	5.2	190	2.2	999	99.9	30	0.8
1215	198	5.2	189	5.2	189	2.2	999	99.9	319	1.8
1305	201	5.1	191	5.3	202	2.4	999	99.9	294	4.0
1395	206	5.7	196	5.7	199	3.1	999	99.9	315	4.7
1485	205	6.0	195	5.7	213	4.0	999	99.9	313	3.7
1575	206	5.7	203	5.4	226	2.9	999	99.9	324	3.3
1665	210	6.1	202	4.9	221	1.8	999	99.9	329	3.0
1755	215	6.6	211	5.0	220	0.9	999	99.9	330	2.8
1845	224	6.3	225	3.6	320	0.9	999	99.9	346	2.0
1935	251*	4.5	234	2.4	340	1.9	999	99.9	38	1.4
2025	251*	4.5	267	1.4	332	2.0	999	99.9	32	0.7
2115	247	3.9	277	2.2	308	2.9	999	99.9	228	0.3
2205	240	2.4	281	3.8	303	3.0	999	99.9	257	1.5
2295	272	2.4	284	3.7	304	2.2	999	99.9	242	1.9
2385	274	3.0	282	4.3	322	2.0	999	99.9	225	2.6
2475	296	2.2	270	5.5	332	1.8	999	99.9	251	3.6
2565	279	1.9	266	5.3	355	2.1	999	99.9	248	5.0
2655	258	2.7	272	5.7	360	1.8	999	99.9	231	3.4
2745	255	2.6	277	5.4	348	2.0	999	99.9	266	5.7
2835	266	2.0	280	5.3	333	2.2	999	99.9	270	4.3
2925	253	3.4	280	4.8	309	2.1	999	99.9	284	3.3
3015	245	5.0	270	4.8	294	2.8	999	99.9	299	2.7
3105	239	6.1	258	3.5	288	3.4	999	99.9	308	2.6
3195	238	6.4	258	3.2	283	4.0	999	99.9	305	1.8
3285	247	7.3	256	2.8	278	4.0	999	99.9	322	1.5
3375	253	6.8	233	2.5	280	4.4	999	99.9	317	2.0
3465	263	6.3	233	1.7	280	3.5	999	99.9	295	5.0
3555	273	4.7	259	2.4	267	2.9	999	99.9	999	99.9
3645	278	4.0	268	2.5	265	2.6	999	99.9	999	99.9
3735	269	2.7	263	2.0	269	2.6	999	99.9	999	99.9
3825	262	1.2	301	2.5	307	3.5	999	99.9	999	99.9
3915	242	0.7	306	2.6	323	3.3	999	99.9	999	99.9
4005	242	0.2	306	3.9	325	3.4	999	99.9	999	99.9
4095	180	0.2	307	3.8	325	3.0	999	99.9	999	99.9
4185	155	1.1	307	3.7	328	3.5	999	99.9	999	99.9
4275	242	0.4	322	3.3	320	4.1	999	99.9	999	99.9
4365	264	2.3	331	3.1	315	4.4	999	99.9	999	99.9

"*" DENOTES INTERPOLATED DATA, "9"S MISSING DATA

ARB SOUTHEAST DESERT STUDY WINDS ALOFT
LOCATION: PALM SPRINGS (008) DATE: 8/ 4/81 GROUND ELEVATION: 170 METERS

RELEASE TIME(PDT)	5		206		404		600		614	
HEIGHT (M AGL)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)
0	999	99.9	0	0.0	999	99.9	999	99.9	999	99.9
53	326	5.2	311	3.6	160	1.7	314*	0.7	292	1.1
159	293*	1.8	313	4.2	334	2.2	314	0.7	333	2.5
263	293*	1.8	302	3.7	218	0.8	163	1.2	189	0.9
365	187*	2.6	280	2.0	189	2.9	70	2.6	147	1.5
466	187*	2.6	197	0.5	174	3.2	188	4.4	174	1.5
565	191	3.0	197	1.0	163	3.0	171	2.8	169	2.4
662	188	3.3	189	1.4	145	3.3	162	3.2	152	2.4
758	182	1.5	156	1.4	156	2.7	159	2.4	155	2.3
852	139	1.7	173	1.8	171	2.8	154	2.1	169	2.1
944	148	2.1	180	1.6	159	2.5	155	2.7	167	2.4
1035	161	2.7	160	1.0	148	2.6	143	3.1	140	3.3
1125	133	2.9	116	1.0	139	2.8	124	3.0	121	2.8
1215	131	1.3	105	0.9	132	2.9	121	2.8	122	2.7
1305	181	0.9	136	1.1	138	3.3	121	2.3	115	2.2
1395	194	0.7	157	0.8	137	2.7	160	1.5	102	1.6
1485	212	1.0	196	0.2	132	2.1	999	99.9	206	0.5
1575	328	2.0	203	1.0	64	0.8	999	99.9	168	1.3
1665	335	1.7	185	1.5	357	0.3	999	99.9	139	2.2
1755	999	99.9	197	1.7	333	0.2	999	99.9	154	2.0
1845	999	99.9	211	1.9	130	1.1	999	99.9	149	2.2
1935	999	99.9	203	1.7	152	1.5	999	99.9	161	1.8
2025	152	1.5	203	1.5	168	1.7	999	99.9	173	1.4
2115	155*	1.5	188	1.8	205	1.4	999	99.9	156	2.4
2205	155*	1.5	189	2.6	257	0.9	999	99.9	159	2.7
2295	155	3.7	203	3.4	268	1.8	999	99.9	186	1.3
2385	163	2.6	232	2.7	273	2.0	999	99.9	227	1.1
2475	207	2.9	264	3.3	265	0.8	999	99.9	261	2.3
2565	999	99.9	263	3.4	251	2.1	999	99.9	257	2.7
2655	999	99.9	250	2.7	235	2.1	999	99.9	258	3.2
2745	999	99.9	243	3.5	272	2.1	999	99.9	241	2.7
2835	999	99.9	242	2.8	282	2.2	999	99.9	232	2.7
2925	999	99.9	255	2.7	282	3.0	999	99.9	228	3.6
3015	999	99.9	255	3.9	273	3.1	999	99.9	228	4.0
3105	999	99.9	262	3.8	270	2.7	999	99.9	232	3.5
3195	999	99.9	46	8.7	999	99.9	999	99.9	238	3.4
3285	999	99.9	241	13.8	999	99.9	999	99.9	246	3.8
3375	999	99.9	289	2.7	999	99.9	999	99.9	238	3.8
3465	999	99.9	284	2.3	999	99.9	999	99.9	235	3.8
3555	999	99.9	999	99.9	999	99.9	999	99.9	249	4.0
3645	999	99.9	999	99.9	999	99.9	999	99.9	262	3.2
3735	999	99.9	999	99.9	999	99.9	999	99.9	280	2.8
3825	999	99.9	999	99.9	999	99.9	999	99.9	270	2.7
3915	999	99.9	999	99.9	999	99.9	999	99.9	267	3.4
4005	999	99.9	999	99.9	999	99.9	999	99.9	260	4.0
4095	999	99.9	999	99.9	999	99.9	999	99.9	262	3.6
4185	999	99.9	999	99.9	999	99.9	999	99.9	266	3.8
4275	999	99.9	999	99.9	999	99.9	999	99.9	277	3.5
4365	999	99.9	999	99.9	999	99.9	999	99.9	279	3.5

"*" DENOTES INTERPOLATED DATA, "9"S MISSING DATA

ARB SOUTHEAST DESERT STUCY WINDS ALOFT

LOCATION: PALM SPRINGS (008) DATE: 8/ 4/81 GROUND ELEVATION: 170 METERS

RELEASE TIME(PDT)	816		1000		1203		1405		1600	
HEIGHT (M AGL)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)
0	0	0.0	999	99.9	999	99.9	0	0.0	999	99.9
53	113	0.6	153	0.3	151	1.8	141	1.5	125	2.3
159	320	1.7	118	0.2	156	1.4	117	1.9	120	1.9
263	332	1.4	142	0.4	172	1.1	125	2.4	107	1.8
365	171	1.3	193	0.8	173	1.3	123	2.6	79	2.0
466	196	2.9	175	0.8	163	1.6	143	1.5	138	1.2
565	181	1.6	123	1.1	154	1.6	152	1.7	184	1.2
662	130	2.5	82	0.5	140	3.0	127	1.3	202	0.8
758	126	3.1	287	1.0	136	3.4	38	0.6	209	0.7
852	129	2.4	183	2.5	138	3.0	66	1.5	75	0.3
944	146	2.0	176	3.3	124	2.9	359	2.1	52	1.4
1035	142	2.6	174	3.8	129	2.5	355	2.4	45	1.5
1125	136	2.3	164	2.9	137	2.1	25	2.4	54	1.4
1215	114	2.1	152	2.7	155	1.1	349	3.0	23	1.6
1305	127	2.3	140	3.1	242	0.4	1	3.3	3	2.6
1395	137	2.1	140	4.0	261	0.8	353	2.6	339	3.6
1485	146	2.5	138	1.7	265	1.3	31	2.3	322	3.3
1575	144	3.0	152	2.0	218	0.6	63	1.5	272	2.3
1665	131	2.8	152	2.3	232	0.6	94	2.0	228	2.2
1755	140	3.5	152	2.9	268	0.9	135	0.4	223	2.2
1845	142	3.6	160	3.4	284	1.8	197	0.3	211	2.3
1935	151	4.6	160	2.8	298	1.9	340	0.1	241	0.8
2025	153	3.5	192	2.0	309	1.0	270	1.3	244	0.7
2115	154	2.2	198	1.8	206	0.5	262	1.1	204	0.6
2205	161	2.1	211	2.2	81	0.2	257	1.3	275	0.9
2295	167	2.8	240	2.0	27	0.5	230	1.3	294	1.5
2385	171	3.1	254	1.2	4	0.4	242	1.1	303	2.2
2475	188	1.3	292	1.8	66	0.2	276	1.0	311	2.0
2565	188	0.9	240	2.3	199	2.0	297	2.4	292	1.7
2655	200	1.0	220	3.4	222	3.0	312	3.2	289	1.8
2745	204	1.0	224	2.6	217	3.2	233	4.3	305	2.2
2835	304	0.2	232	3.7	216	3.2	222	3.8	321	2.9
2925	288	1.3	210	3.3	221	3.4	232	4.9	317	2.6
3015	223	1.0	216	3.8	209	3.7	251	3.0	330	2.0
3105	227	1.9	213	3.5	200	3.6	281	2.5	348	1.0
3195	225	3.4	213	3.8	199	3.5	336	1.8	341	0.7
3285	233	3.4	208	4.3	202	4.0	336	1.7	317	8.8
3375	234	4.0	211	4.3	218	4.3	315	1.0	131	8.2
3465	222	4.4	217	3.4	230	3.5	290	1.2	96	0.9
3555	228	3.7	239	2.3	230	2.9	255	2.7	115	0.6
3645	232	4.5	273	2.0	221	1.8	252	3.8	107	0.7
3735	221	4.1	267	2.1	232	1.7	246	4.5	63	1.8
3825	228	4.1	261	3.4	228	2.2	239	5.1	66	2.5
3915	224	4.5	260	3.8	243	1.9	239	5.0	55	2.8
4005	226	4.2	262	3.7	244	1.5	241	5.0	46	4.1
4095	246	3.1	278	3.0	264	1.1	243	3.9	38	4.5
4185	283	2.0	272	2.7	306	0.6	272	2.0	46	4.4
4275	291	2.6	281	2.6	304	1.0	310	1.7	46	4.8
4365	297	3.3	285	2.8	252	0.6	283	1.6	54	5.1

"*" DENOTES INTERPOLATED DATA, "9"S MISSING DATA

ARB SOUTHEAST DESERT STUDY WINDS ALOFT
LOCATION: PALM SPRINGS (008) DATE: 8/ 4/81 GROUND ELEVATION: 170 METERS

RELEASE TIME(PDT)	1759		2003		2029	
HEIGHT (M AGL)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)
0	999	99.9	999	99.9	999	99.9
53	192	1.1	283	2.2	303	1.4
159	280	1.5	308	1.8	172	1.6
263	238	1.0	163	0.8	165	2.6
365	215	1.5	223	1.8	166	2.4
466	240	1.1	252	2.5	175	2.9
565	228	1.2	228	2.5	180	3.4
662	223	1.0	205	3.0	182	4.1
758	222	1.0	204	3.1	187	3.7
852	253	1.0	192	1.8	180	3.5
944	265	1.3	182	2.0	168	2.9
1035	235	1.9	173	2.1	156	2.4
1125	221	2.7	162	1.9	136	1.8
1215	252	2.8	163	1.9	135	2.0
1305	199	1.9	163	2.3	133	2.4
1395	269	1.6	160	2.8	139	2.9
1485	261	1.1	161	3.2	150	2.9
1575	289	0.4	999	99.9	153	3.2
1665	321	0.5	999	99.9	168	3.9
1755	321	0.5	999	99.9	193	1.5
1845	316	1.3	999	99.9	266	0.5
1935	322	2.1	999	99.9	316	1.1
2025	319	2.6	999	99.9	318	1.8
2115	306	2.9	999	99.9	313	2.4
2205	283	2.1	999	99.9	329	2.9
2295	294	1.8	999	99.9	350	3.0
2385	329	1.8	999	99.9	358	3.3
2475	360	1.5	999	99.9	360	3.4
2565	50	1.7	999	99.9	12	3.6
2655	329	0.9	999	99.9	12	3.7
2745	60	1.0	999	99.9	4	4.2
2835	67	1.0	999	99.9	2	4.9
2925	82	1.8	999	99.9	351	5.2
3015	103	1.3	999	99.9	999	99.9
3105	130	1.5	999	99.9	999	99.9
3195	151	1.0	999	99.9	999	99.9
3285	162	1.2	999	99.9	999	99.9
3375	111	1.1	999	99.9	999	99.9
3465	68	1.8	999	99.9	999	99.9
3555	57	3.0	999	99.9	999	99.9
3645	46	3.9	999	99.9	999	99.9
3735	35	4.3	999	99.9	999	99.9
3825	32	4.5	999	99.9	999	99.9
3915	38	5.2	999	99.9	999	99.9
4005	48	5.0	999	99.9	999	99.9
4095	56	5.3	999	99.9	999	99.9
4185	58	5.6	999	99.9	999	99.9
4275	52	5.6	999	99.9	999	99.9
4365	52	5.6	999	99.9	999	99.9

"**" DENOTES INTERPOLATED DATA, "99"S MISSING DATA

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ARB SOUTHEAST DESERT STUDY WINDS ALOFT

LOCATION: BRAWLEY (012) DATE: 8/ 3/81 GROUND ELEVATION: -34 METERS

RELEASE TIME(PDT)	1508		1806		1936		2200	
HEIGHT (M AGL)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)
0	180	2.0	180	1.0	270	3.5	250	3.5
53	119	1.3	124	2.2	252	6.6	255	9.2
159	110	2.3	155	3.5	244	10.7	263	11.2
263	130	2.3	168	3.2	247	11.8	263	12.1
365	158	2.8	167	3.5	252	11.5	272	11.7
466	178	1.4	174	3.0	256	10.7	276	15.1
565	255*	1.9	179	3.8	263	10.6	279	13.2
662	255*	1.9	193	3.3	265	10.7	269	12.3
758	272	2.4	202	2.9	265	10.3	268	11.9
852	265	3.3	212	2.8	265	9.6	267	11.8
944	274	3.7	211	3.0	267	10.2	263	9.5
1035	276	4.2	206	4.0	267	10.7	268	8.1
1125	272	4.3	207	3.7	271	8.1	270	6.1
1215	266	4.1	208	4.6	267	7.8	276	5.8
1305	266	4.4	208	4.3	267	7.6	263	5.4
1395	270	4.6	216	7.3	267	6.6	246	5.4
1485	268	5.0	216	8.7	263	5.5	249	6.8
1575	265	5.3	219	8.6	275	1.1	242	6.8
1665	265	5.9	222	9.6	265	3.3	224	4.3
1755	265	6.7	227	9.9	261	3.8	230	5.8
1845	266	7.4	228	7.8	261	4.4	205	6.7
1935	265	7.6	233	8.1	999	99.9	199	9.0
2025	267	7.9	245	6.5	999	99.9	198	10.1
2115	262	8.3	235	9.6	999	99.9	200	10.3
2205	254	7.0	251	7.1	999	99.9	206	11.2
2295	253	7.4	250	8.1	999	99.9	202	11.7
2385	251	7.1	261	7.3	999	99.9	204	12.2
2475	256	6.7	261	7.8	999	99.9	210	11.1
2565	254	7.0	257	8.7	999	99.9	221	11.2
2655	248	8.8	254	8.4	999	99.9	223	9.8
2745	240	9.7	252	8.5	999	99.9	225	5.7
2835	237	9.8	248	9.8	999	99.9	255	4.1
2925	234	9.2	247	10.1	999	99.9	278	3.1
3015	237	9.4	252	7.5	999	99.9	999	99.9
3105	233	9.3	265	5.7	999	99.9	999	99.9
3195	230	9.0	296	3.3	999	99.9	999	99.9
3285	236	9.0	275	4.0	999	99.9	999	99.9
3375	242	9.1	296	2.7	999	99.9	999	99.9
3465	237	7.9	315	2.4	999	99.9	999	99.9
3555	236	8.1	278	1.5	999	99.9	999	99.9
3645	241	5.4	264	2.1	999	99.9	999	99.9
3735	245	6.3	301	2.3	999	99.9	999	99.9
3825	244	4.4	295	1.6	999	99.9	999	99.9
3915	256	3.4	306	2.2	999	99.9	999	99.9
4005	256	3.4	329	2.1	999	99.9	999	99.9
4095	270	3.5	311	2.2	999	99.9	999	99.9
4185	303	3.7	315	2.5	999	99.9	999	99.9
4275	305	3.7	320	3.2	999	99.9	999	99.9
4365	275	4.4	322	3.2	999	99.9	999	99.9

"*" DENOTES INTERPOLATED DATA, "9"S MISSING DATA

[illegible] (SINGLE AND DOUBLE THEODOLITE DATA) PAGE 1

ARB SOUTH EAST DESERT

RELEASE SITE = WEST LAKE

SITE ELEVATION = -34 (M)

08/03/81 1652 (PDT) 08/03/81 2046 (PDT)

HEIGHT (M AGL)	WIND DIR (DEG)	WIND SPEED (M/S)	HEIGHT (M AGL)	WIND DIR (DEG)	WIND SPEED (M/S)
53 *	160	1.8	53 *	251	10.1
159 *	137	1.4	159 *	260	14.5
263 *	160	1.4	263 *	261	15.3
365 *	186	1.4	365 *	267	13.7
465 *	182	2.0	465 *	276	12.9
564 *	179	2.9	564 *	278	12.7
661 *	180	2.9			
757 *	185	2.3			
851 *	201	3.0			
944 *	217	3.5			
1035 *	234	3.8			
1125 *	237	4.6			
1215 *	240	5.6			
1305 *	238	6.5			
1395 *	238	6.5			
1485 *	239	6.9			
1575 *	239	7.4			
1665 *	243	7.8			
1755 *	247	7.8			
1845 *	248	8.0			
1935 *	250	8.1			
2025 *	253	8.3			
2115 *	257	8.6			
2205 *	259	8.7			
2295 *	258	8.9			
2385 *	258	10.2			
2475 *	257	10.7			
2565 *	256	11.3			
2655 *	248	10.8			
2745 *	245	7.8			
2835 *	250	3.9			
2925 *	258	3.5			
3015 *	248	3.6			
3105 *	247	3.3			
3195 *	251	3.1			
3285 *	242	2.6			
3375 *	223	2.1			
3465 *	239	1.4			
3555 *	288	1.6			
3645 *	301	1.2			
3735 *	288	3.2			
3825 *	278	3.7			
3915 *	284	3.7			
4005 *	292	3.7			
4095 *	277	4.0			
4185 *	267	4.[illegible]			

[illegible]

[illegible]

* = [illegible]

ARB SOUTHEAST DESERT STUDY WINDS ALOFT
LOCATION: BRAWLEY (012) DATE: 8/ 4/81 GROUND ELEVATION: -34 METERS

RELEASE TIME(PDT)	0		401		622		1005		1040	
HEIGHT (M AGL)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)
0	250	2.5	180	1.0	90	1.0	0	0.0	0	0.0
53	263	7.5	206	2.0	120	1.0	311	0.8	267	0.5
159	286	11.8	318	2.7	274	3.3	303	2.2	220	0.9
263	288	11.1	314	5.4	264	3.7	301	3.3	241	0.7
365	283	9.7	307	6.6	243	3.5	283	4.1	245	0.7
466	279	10.1	305	8.7	250	6.1	999	99.9	178	1.6
565	277	9.1	299	8.9	259	6.2	999	99.9	189	1.8
662	272	7.8	300	8.4	260	5.8	999	99.9	186	2.0
758	261	6.3	294	7.1	257	6.6	999	99.9	189	1.4
852	275	5.0	284	5.7	252	6.5	999	99.9	222	1.0
944	259	4.7	284	7.3	253	6.5	999	99.9	184	1.6
1035	261	4.1	277	7.5	258	6.4	252	1.6	185	2.3
1125	237	4.0	272	7.7	263	6.1	999	99.9	202	3.4
1215	234	4.8	251	6.1	253	5.1	999	99.9	193	3.7
1305	224	5.0	250	7.1	241	3.7	999	99.9	184	3.3
1395	226	5.6	244	7.3	231	4.3	999	99.9	185	3.1
1485	227	6.9	235	7.6	225	4.7	999	99.9	180	3.4
1575	218	7.5	227	7.0	219	4.9	999	99.9	184	4.3
1665	209	7.5	225	7.2	219	5.2	999	99.9	192	4.9
1755	210	9.0	222	7.8	218	5.5	999	99.9	193	6.2
1845	206	9.1	212	7.4	223	5.3	999	99.9	196	6.6
1935	202	9.4	214	7.8	221	2.9	999	99.9	198	6.5
2025	203	10.5	214	8.1	226	2.7	999	99.9	205	6.1
2115	206	10.5	215	7.5	228	3.3	999	99.9	201	5.2
2205	210	10.8	221	7.4	238	3.5	999	99.9	190	5.0
2295	215	10.4	226	6.9	246	3.8	999	99.9	194	4.9
2385	223	9.3	234	5.8	257	3.5	999	99.9	204	4.3
2475	235	8.3	245	4.9	265	2.2	999	99.9	208	4.1
2565	999	99.9	251	5.4	351	0.6	999	99.9	205	4.8
2655	999	99.9	247	4.8	107	0.9	999	99.9	202	4.6
2745	999	99.9	250	4.0	157	1.6	999	99.9	203	4.3
2835	999	99.9	259	3.3	174	2.3	999	99.9	244	4.2
2925	999	99.9	74	0.2	193	3.5	999	99.9	194	2.9
3015	999	99.9	84	1.6	206	3.3	999	99.9	236	4.1
3105	999	99.9	110	2.0	216	4.8	999	99.9	243	3.4
3195	999	99.9	115	3.0	215	4.9	999	99.9	232	1.9
3285	38	2.5	122	3.4	222	3.3	999	99.9	220	1.2
3375	999	99.9	137	4.0	261	1.8	999	99.9	172	1.2
3465	999	99.9	151	3.1	311	2.0	999	99.9	170	1.2
3555	999	99.9	176	4.0	316	2.2	999	99.9	74	0.5
3645	999	99.9	202	4.0	345	1.9	999	99.9	6	0.8
3735	324	0.7	188	3.0	334	1.4	999	99.9	312	1.3
3825	323	0.4	223	2.9	339	1.2	999	99.9	358	1.5
3915	21	1.0	282	1.0	303	0.5	999	99.9	33	1.0
4005	360	1.9	294	2.0	193	0.3	999	99.9	64	2.0
4095	27	3.9	282	1.6	78	0.8	999	99.9	65	2.7
4185	16	3.6	291	0.9	77	0.9	999	99.9	42	3.0
4275	9	4.3	0	0.0	51	2.4	999	99.9	23	2.8
4365	2	4.0	148	0.6	43	3.4	999	99.9	35	2.6

"*" DENOTES INTERPOLATED DATA, "9"S MISSING DATA

ARB SOUTHEAST DESERT STUDY WINDS ALOFT

LOCATION: BRAWLEY (012) DATE: 8/ 4/81 GROUND ELEVATION: -34 METERS

RELEASE TIME(PDT)	1200		1600		1800		1925	
HEIGHT (M AGL)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)
0	135	1.0	225	2.5	180	3.5	180	1.0
53	166	2.4	175	4.2	172	4.1	169	4.1
159	179	2.5	177	5.1	168	4.2	170	4.9
263	182	2.9	171	4.2	167	4.3	169	4.2
365	172	2.4	180	4.3	167	4.1	169	4.1
466	156	2.7	170	4.3	162	4.0	157	3.5
565	152	3.4	178	4.3	156	3.6	147	3.0
662	157	3.7	180	7.0	160	2.7	155	2.9
758	176	3.5	165	1.2	164	2.4	167	2.8
852	170	2.4	166	2.9	191	1.8	191	2.4
944	216	1.7	160	4.3	182	1.4	236	2.5
1035	202	4.2	165	3.6	180	0.8	234	2.0
1125	196	5.8	166	3.8	202	1.1	252	1.6
1215	193	5.5	168	3.6	215	1.9	262	1.4
1305	200	3.3	149	1.9	329	4.3	258	2.0
1395	201	3.1	125	1.5	201	4.0	269	1.4
1485	201	2.9	207	0.8	301	3.4	269	1.6
1575	196	3.4	274	2.5	294	4.1	255	2.1
1665	192	4.4	266	3.7	294	4.5	248	2.1
1755	202	4.3	269	4.1	295	4.8	260	2.9
1845	216	4.8	272	5.1	293	4.8	262	3.2
1935	219	5.5	273	6.8	292	4.8	999	99.9
2025	210	5.9	266	6.8	284	5.4	999	99.9
2115	203	6.5	270	7.2	282	5.5	999	99.9
2205	194	6.2	272	7.0	276	6.6	999	99.9
2295	191	6.5	267	6.8	272	6.9	999	99.9
2385	199	6.2	271	5.2	270	7.3	999	99.9
2475	205	5.4	252	4.7	265	5.5	999	99.9
2565	201	4.6	240	3.4	255	3.4	999	99.9
2655	222	4.3	242	2.9	240	2.1	999	99.9
2745	216	4.1	249	3.0	232	1.6	999	99.9
2835	222	4.8	253	2.8	249	1.2	999	99.9
2925	213	4.0	272	2.6	249	0.4	999	99.9
3015	193	3.4	187	1.8	141	0.8	999	99.9
3105	212	3.5	244	1.4	45	1.2	999	99.9
3195	224	3.2	252	1.8	115	1.4	999	99.9
3285	221	2.5	179	1.3	5	2.4	999	99.9
3375	200	6.8	151	0.7	86	2.0	999	99.9
3465	23	3.0	245	0.5	20	1.5	999	99.9
3555	174	1.8	280	0.6	37	1.6	999	99.9
3645	165	1.8	322	0.5	71	1.9	999	99.9
3735	145	1.6	327	0.7	64	3.1	999	99.9
3825	99	1.0	347	0.4	37	4.6	999	99.9
3915	56	1.6	72	1.5	48	4.0	999	99.9
4005	356	1.4	64	2.5	52	4.0	999	99.9
4095	357	1.4	45	3.1	66	5.2	999	99.9
4185	32	0.9	19	4.0	63	4.9	999	99.9
4275	50	1.8	21	4.0	70	4.7	999	99.9
4365	42	2.8	45	3.3	69	5.1	999	99.9

"*" DENOTES INTERPOLATED DATA, "9"S MISSING DATA

...LOW MEAN (SLANT AND DOUBLE DOPPLER) DATA

AREA SOUTHEAST OREGON

RELEASE SITE = JESS LAKE

SITE ELEVATION = 4340 (F)

08/04/81 0232 (PDT)			08/04/81 0800 (PDT)			08/04/81 1350 (PDT)		
HEIGHT (M AGL)	WIND DIR (DEG)	WIND SPEED (M/S)	HEIGHT (M AGL)	WIND DIR (DEG)	WIND SPEED (M/S)	HEIGHT (M AGL)	WIND DIR (DEG)	WIND SPEED (M/S)
41 *	311	2.0	37 *	185	2.0	73 *	186	2.6
121 *	288	5.3	112 *	280	2.5	213 *	199	3.0
198 *	302	7.4	188 *	296	5.6	347 *	193	3.1
266 *	304	8.1	261 *	292	6.4	464 *	172	2.9
339 *	296	8.5	331 *	285	6.1	570 *	162	2.8
426 *	296	7.6	402 *	280	5.8	683 *	161	4.0
511 *	290	7.8	466 *	269	4.8	790 *	140	5.6
588 *	287	8.0	531 *	281	6.2	877 *	136	4.6
671 *	285	10.0	605 *	278	6.5	951 *	134	4.8
758 *	274	6.2	684 *	277	6.5	1042 *	167	4.5
859 *	273	6.5	761 *	255	5.2	1131 *	180	3.8
917 *	272	5.7	837 *	248	5.2	1202 *	177	3.4
1000 *	266	7.1	912 *	255	4.2	1278 *	180	3.6
1090 *	259	6.6	989 *	267	4.4	1351 *	191	2.9
1185 *	245	7.0	1072 *	265	4.3	1427 *	202	3.8
1271 *	221	6.5	1154 *	258	5.1	1506 *	209	5.7
1350 *	221	9.5	1242 *	257	5.7	1578 *	206	5.9
1441 *	219	10.0	1332 *	241	4.1	1651 *	215	3.7
1534 *	215	9.8	1421 *	237	5.2	1723 *	221	4.4
1627 *	216	9.4	1508 *	224	4.4	1796 *	223	5.0
1714 *	206	9.1	1594 *	218	4.3	1872 *	225	5.1
1792 *	205	12.3	1652 *	213	4.6	1951 *	210	5.7
1852 *	201	12.4	1722 *	210	5.3	2025 *	209	5.3
1908 *	205	11.1	1803 *	199	4.8	2095 *	203	5.3
1974 *	204	10.7	1882 *	197	4.4	2161 *	199	4.9
2046 *	212	10.5	1951 *	188	3.4	2233 *	199	6.1
2117 *	237	7.8	2024 *	208	4.0	2308 *	207	5.5
2184 *	210	8.7	2106 *	196	4.0	2378 *	202	5.0
2256 *	208	10.2	2179 *	187	4.3	2453 *	189	3.7
2332 *	256	4.7	2250 *	196	4.4	2524 *	182	2.8
2408 *	260	5.0	2330 *	199	3.9	2592 *	199	2.1
2488 *	279	4.7	2415 *	232	3.3	2666 *	211	2.5
2567 *	296	3.0	2485 *	177	2.0	2740 *	219	2.1
2649 *	318	2.5	2547 *	183	2.1	2801 *	240	1.8
2738 *	309	1.9	2627 *	192	3.1	2865 *	224	3.0
2825 *	007	2.1	2712 *	177	3.2	2941 *	232	2.8
2904 *	035	1.8	2788 *	177	3.3	3012 *	252	2.4
2985 *	065	1.1	2869 *	179	3.6	3081 *	230	3.7
3054 *	062	2.1	2992 *	179	4.4	3156 *	209	1.9
3124 *	119	.3		---	---	3236 *	196	2.4
3201 *	203	1.3	3118 *	296	4.6	3315 *	198	2.1
3277 *	135	.0	3204 *	235	4.1	3383 *	216	2.5
3357 *	133	.0	3269 *	214	4.6	3451 *	203	1.9
3397 *	279	1.2	3353 *	215	4.3	3518 *	311	.9
3475 *	285	2.1	3402 *	222	4.4	3593 *	217	.4
3500 *	320	2.1	3532 *	255	2.2	3672 *	224	.8

3662 *	303	2.7	3606 *	259	2.6	3747 *	214	1.8
	---	---	3685 *	280	1.2	3822 *	196	.9

* = WIND CALCULATIONS INCLUDE SINGLE-THEODOLITE DATA.

ARB SOUTHEAST DESERT STUDY — WINDS ALOFT

LOCATION: BANNING (016) DATE: 8/ 3/81 GROUND ELEVATION: 670 METERS

RELEASE TIME(PDT)	1400		1609		1817		2007		2202	
HEIGHT (M AGL)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)
0	247	3.0	225	4.0	225	5.0	225	4.0	225	5.0
53	258	5.6	230	5.7	209	7.6	220	5.8	239	6.8
159	259	8.4	229	6.4	216	9.2	238	9.2	257	8.9
263	258	8.8	232	6.0	226	9.9	246	8.7	258	8.3
365	256	4.9	233	6.4	236	8.7	259	8.6	262	9.7
466	263	4.3	314	1.9	244	10.8	269	9.1	252	8.6
565	291	2.8	249	9.0	257	6.9	274	9.1	231	8.3
662	270	2.4	256	6.8	248	12.6	269	9.5	243	8.4
758	280	3.4	260	7.2	258	10.4	259	9.7	259	9.5
852	266	4.1	309	3.4	264	10.7	258	10.1	254	8.2
944	267	5.3	254	9.7	276	8.3	254	9.1	262	8.7
1035	258	5.5	261	16.2	290	3.7	241	9.7	255	8.6
1125	260	4.8	267	11.8	313	3.2	227	9.0	256	7.8
1215	285	3.4	268	10.3	295	3.5	232	7.9	279	6.7
1305	278	3.6	263	11.4	279	4.0	247	6.7	279	6.4
1395	268	4.2	262	8.3	274	4.6	259	7.3	272	7.1
1485	273	3.9	263	6.0	275	5.9	251	6.5	266	6.9
1575	256	4.4	288	4.0	265	6.6	251	6.3	272	6.9
1665	244	4.6	282	3.5	265	7.1	262	5.6	275	6.2
1755	272	3.4	268	4.3	256	5.9	264	6.2	278	6.2
1845	286	3.5	280	4.3	256	6.4	267	6.1	278	5.3
1935	292	3.2	292	4.2	263	6.5	262	6.7	273	5.0
2025	277	4.6	296	4.5	283	5.0	274	6.9	264	4.7
2115	270	5.7	289	4.7	274	5.2	276	5.1	248	5.5
2205	258	5.1	265	5.5	289	2.5	277	5.9	227	4.3
2295	266	4.7	295	1.5	289	1.5	272	4.6	249	5.2
2385	261	4.8	333	1.4	285	0.6	294	4.3	239	3.6
2475	268	4.4	292	1.2	291	0.5	280	2.6	237	1.7
2565	255	4.9	346	1.9	216	0.4	274	2.3	254	3.9
2655	263	5.4	298	2.5	268	2.8	303	0.5	264	6.3
2745	268	4.9	278	2.7	261	4.0	277	2.1	263	4.6
2835	265	3.9	269	3.9	257	4.6	238	1.0	258	6.2
2925	252	3.4	269	3.8	260	5.9	257	0.9	268	4.5
3015	273	2.2	258	5.2	253	4.5	245	3.4	265	6.2
3105	285	1.6	261	5.1	267	3.8	257	3.2	259	4.3
3195	282	0.9	270	7.4	251	3.0	262	4.0	250	5.2
3285	338	0.8	272	6.0	267	3.7	263	6.7	273	3.2
3375	313	1.8	272	3.6	257	4.3	254	6.7	268	5.1
3465	292	2.5	272	3.6	262	4.3	262	9.7	259	5.0
3555	294	3.1	243	3.8	257	4.2	261	6.9	999	99.9
3645	308	4.3	250	2.7	291	4.0	999	99.9	999	99.9

*** DENOTES INTERPOLATED DATA, 999S MISSING DATA

ARB SOUTHEAST DESERT STUDY — WINDS ALOFT

LOCATION: ONTARIC (023) DATE: 8/ 3/81 GROUND ELEVATION: 304 METERS

RELEASE TIME(PDT)	555		800		1017		1155	
HEIGHT (M AGL)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)
0	0	0.0	90	1.0	225	2.0	225	2.0
53	109	1.3	107	2.2	249	1.4	217	1.5
159	205	0.2	99	3.1	248	1.2	237	1.1
263	281	0.9	104	3.3	233	1.2	255	2.0
365	208	0.8	83	3.3	181	1.0	244	3.0
466	172	0.6	121	1.9	125	0.9	265	2.1
565	179	2.4	132	3.9	150	0.3	262	2.0
662	158	0.4	129	1.9	138	0.6	254	1.4
758	125	0.2	82	1.5	168	0.9	259	1.4
852	150	1.0	123	1.0	206	0.5	281	1.6
944	208	2.9	161	1.0	213	0.8	284	1.8
1035	220	1.3	206	0.5	204	2.9	223	2.5
1125	272	1.8	307	0.3	207	3.6	193	3.4
1215	258	3.3	279	1.6	229	2.5	211	2.0
1305	266	3.6	267	3.1	259	2.1	195	1.9
1395	281	4.5	230	3.8	274	2.6	244	2.8
1485	270	5.3	262	4.6	252	4.2	258	3.8
1575	265	6.0	274	4.5	256	5.0	253	4.2
1665	259	7.1	287	4.5	254	4.4	252	3.4
1755	259	7.1	279	5.1	256	3.7	260	3.5
1845	260	7.0	263	5.9	260	3.4	257	3.6
1935	263	7.5	251	7.3	265	3.0	259	3.4
2025	262	7.3	253	7.5	265	3.4	266	2.9
2115	258	8.2	255	7.1	270	3.4	286	2.8
2205	250	7.8	254	8.1	290	2.6	307	2.5
2295	247	7.7	251	6.3	296	3.1	305	2.5
2385	249	8.6	256	8.5	282	3.8	272	2.7
2475	256	7.1	256	6.6	275	3.7	262	3.3
2565	259	6.7	250	7.7	273	4.2	251	3.2
2655	273	6.1	247	8.1	264	4.3	255	2.7
2745	260	5.6	249	7.0	257	3.9	270	2.3
2835	999	99.9	246	6.4	264	3.3	999	99.9
2925	999	99.9	999	99.9	277	2.7	999	99.9
3015	999	99.9	999	99.9	276	3.0	999	99.9
3105	999	99.9	999	99.9	262	3.7	999	99.9

"**" DENOTES INTERPOLATED DATA, "9"S MISSING DATA

ARB SOUTHEAST DESERT STUDY — WINDS ALOFT

LOCATION: INDIO (024) DATE: 8/ 4/81 GROUND ELEVATION: 0 METERS

RELEASE TIME(PDT)	600		800		1030		1200	
HEIGHT (M AGL)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)
0	270	5.0	270	3.0	270	2.0	180	2.0
53	307	8.7	286	5.0	207	2.0	131	1.1
159	313	14.6	303	7.3	255	2.3	151	1.1
263	322	17.4	309	7.8	276	2.2	154	1.9
365	313	10.2	323	8.3	275	1.7	184	1.9
466	310	7.4	320	6.6	275	1.7	179	1.7
565	301	4.3	321	2.8	324	3.3	160	2.6
662	262	1.1	283	2.8	359	2.9	145	2.9
758	187	1.7	282	0.6	81	1.5	133	2.7
852	293	1.4	4	1.4	118	2.1	104	2.5
944	340	0.7	354	3.3	113	2.3	91	2.9
1035	284	0.2	13	5.4	115	1.9	87	2.8
1125	341	1.2	36	4.4	112	2.3	93	3.7
1215	316	1.5	74	3.7	109	1.6	102	3.8
1305	353	2.7	89	3.9	0	0.0	108	3.0
1395	336	2.9	113	3.5	0	0.0	118	1.8
1485	32	2.7	130	4.0	109	9.2	154	0.1
1575	24	1.8	199	6.0	142	1.4	245	1.8
1665	59	1.4	117	4.1	160	1.4	238	2.4
1755	86	1.1	88	7.7	183	1.9	255	3.3
1845	98	0.7	120	2.7	229	2.0	254	2.7
1935	140	0.2	140	2.9	232	2.5	209	1.9
2025	68	1.8	152	2.9	219	2.1	208	2.7
2115	73	2.5	151	3.0	194	2.7	210	2.2
2205	116	2.8	161	3.5	207	2.5	232	2.3
2295	999	99.9	170	2.7	215	3.1	212	2.6
2385	999	99.9	180	3.7	216	3.6	183	2.6
2475	999	99.9	187	2.3	220	2.8	196	2.1
2565	999	99.9	212	2.9	215	1.5	212	2.2
2655	999	99.9	229	4.5	221	2.5	203	2.5
2745	999	99.9	241	2.9	201	3.1	212	3.4
2835	999	99.9	248	3.9	999	99.9	209	3.9
2925	999	99.9	229	1.9	999	99.9	220	3.7
3015	999	99.9	237	4.6	999	99.9	999	99.9
3105	999	99.9	201	2.9	999	99.9	999	99.9
3195	999	99.9	188	3.3	999	99.9	999	99.9
3285	999	99.9	192	4.1	999	99.9	999	99.9
3375	999	99.9	157	5.8	999	99.9	999	99.9
3465	999	99.9	265	3.9	999	99.9	999	99.9
3555	999	99.9	192	3.2	999	99.9	999	99.9
3645	999	99.9	193	3.5	999	99.9	999	99.9
3735	999	99.9	198	3.5	999	99.9	999	99.9

"0" DENOTES INTERPOLATED DATA, "9"S MISSING DATA

ARB SOUTHEAST DESERT STUDY WINDS ALOFT

LOCATION: BRAWLEY (012) DATE: 8/11/81 GROUND ELEVATION: -34 METERS

RELEASE TIME(PDT)	614		758		952	
HEIGHT (M AGL)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)
0	290	0.0	290	0.0	90	0.0
53	311	1.7	305	2.0	84	1.7
159	72*	3.0	80*	3.6	95	2.2
263	72*	3.0	80*	3.6	104	2.1
365	100	4.7	88	4.0	111	2.6
466	67	5.0	96	3.2	104	3.0
565	128	8.3	102	2.2	102	4.4
662	105	6.9	101	5.2	126	5.6
758	999	99.9	104	7.9	148	6.0
852	999	99.9	115	7.2	156	6.1
944	999	99.9	123	7.5	146	5.2
1035	999	99.9	131	6.7	135	4.8
1125	999	99.9	138	6.5	132	4.5
1215	999	99.9	141	5.7	129	4.5
1305	999	99.9	139	5.1	122	3.6
1395	999	99.9	132	4.3	117	3.8
1485	999	99.9	140	2.0	97	3.1
1575	999	99.9	14	1.6	73	2.7
1665	999	99.9	301	1.2	34	2.2
1755	999	99.9	348	2.6	24	2.9
1845	999	99.9	353	3.2	30	3.2
1935	999	99.9	342	3.5	13	2.0
2025	999	99.9	343	2.4	342	2.7
2115	999	99.9	194	0.3	329	3.1
2205	999	99.9	186	1.7	342	2.2
2295	999	99.9	197	4.5	334	0.7
2385	999	99.9	216	4.6	271	2.5
2475	999	99.9	219	5.9	187	1.5
2565	999	99.9	218	7.1	263	3.5
2655	999	99.9	217	6.3	275	3.1
2745	999	99.9	222	6.1	269	3.6
2835	999	99.9	225	5.4	256	5.2
2925	999	99.9	234	5.7	258	6.9
3015	999	99.9	235	5.8	261	7.3
3105	999	99.9	238	8.9	254	7.0
3195	999	99.9	244	8.7	253	8.2
3285	999	99.9	241	7.4	252	8.4
3375	999	99.9	250	6.9	256	7.9
3465	999	99.9	256	7.4	256	8.3
3555	999	99.9	258	8.4	259	8.7
3645	999	99.9	263	8.5	261	9.4

"*" DENOTES INTERPOLATED DATA. "9"S MISSING DATA

ARR SOUTHEAST DESERT STUDY WINDS ALOFT
LOCATION: SALTON SEA W SHORE (013) DATE: 8/11/81 GROUND ELEVATION: -68 METERS

RELEASE TIME(PDT)	808		1000		1158		1359		1600	
HEIGHT (M AGL)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)
0	999	99.9	999	99.9	999	99.9	999	99.9	999	99.9
53	177	3.8	117	3.7	106	5.4	95	2.8	113	2.5
159	161	3.9	123	3.8	101	5.0	123	4.6	139	3.5
263	160	4.1	133	3.3	98	2.5	115	4.2	143	2.8
365	159	4.9	134	3.3	125	1.6	111	4.5	153	2.3
466	151	5.2	144	3.2	134	1.2	110	4.8	146	2.1
565	156	4.5	140	2.4	118	0.6	103	4.3	126	2.3
662	164	3.6	169	1.5	142	1.4	87	3.3	109	2.5
758	185	3.7	164	3.3	149	2.3	100	2.8	100	2.5
852	182	3.6	172	3.1	134	2.8	106	2.5	63	2.6
944	166	3.7	162	4.0	133	3.3	103	2.7	42	2.0
1035	150	4.3	171	3.8	137	2.6	89	1.6	27	1.8
1125	140	5.7	167	3.0	128	2.1	78	1.3	39	1.5
1215	150	6.3	163	1.9	121	1.7	22	0.2	344	1.2
1305	161	4.2	149	2.2	93	1.4	305	0.8	312	0.9
1395	165	2.4	161	1.1	76	1.7	288	1.2	272	1.0
1485	174	1.8	175	0.5	72	0.8	319	2.5	279	0.6
1575	219	1.3	287	0.2	255	0.4	324	2.5	237	0.7
1665	259	1.1	308	1.5	275	1.6	311	2.1	282	1.4
1755	305	1.8	258	5.1	299	1.4	274	0.9	296	1.7
1845	305	3.7	349	1.4	280	3.9	305	1.2	317	2.4
1935	291	3.3	274	3.9	286	4.6	293	2.1	325	1.9
2025	275	3.5	261	4.2	290	4.1	295	3.4	316	1.3
2115	274	5.2	262	3.8	292	4.3	306	4.8	304	1.5
2205	259	4.5	258	3.9	286	3.6	999	99.9	304	2.3
2295	258	4.8	253	4.4	285	3.2	999	99.9	293	3.6
2385	256	5.5	252	4.6	282	5.5	999	99.9	309	2.9
2475	244	5.2	249	4.8	999	99.9	999	99.9	317	5.2
2565	247	6.0	254	5.4	999	99.9	999	99.9	328	5.4
2655	267	4.8	259	6.2	999	99.9	999	99.9	326	7.4
2745	241	8.9	260	7.2	999	99.9	999	99.9	324	7.1
2835	264	8.0	256	8.1	999	99.9	999	99.9	324	6.6
2925	264	8.0	999	99.9	999	99.9	999	99.9	340	6.3
3015	264	8.1	999	99.9	999	99.9	999	99.9	350	4.4
3105	280	7.7	999	99.9	999	99.9	999	99.9	360	4.9
3195	297	7.5	999	99.9	999	99.9	999	99.9	16	4.8
3285	307	6.4	999	99.9	999	99.9	999	99.9	26	5.4
3375	322	7.0	999	99.9	999	99.9	999	99.9	15	5.6
3465	329	6.6	999	99.9	999	99.9	999	99.9	7	5.4
3555	334	6.3	999	99.9	999	99.9	999	99.9	359	5.8
3645	338	6.1	999	99.9	999	99.9	999	99.9	355	4.8
3735	351	5.1	999	99.9	999	99.9	999	99.9	346	4.4
3825	360	4.8	999	99.9	999	99.9	999	99.9	340	5.3
3915	357	4.0	999	99.9	999	99.9	999	99.9	338	5.2
4005	3	3.1	999	99.9	999	99.9	999	99.9	334	5.5
4095	354	3.3	999	99.9	999	99.9	999	99.9	327	6.3
4185	345	3.8	999	99.9	999	99.9	999	99.9	324	5.4
4275	343	3.7	999	99.9	999	99.9	999	99.9	319	6.7
4365	338	3.3	999	99.9	999	99.9	999	99.9	320	6.3

"*" DENOTES INTERPOLATED DATA, "9"S MISSING DATA

ARB SOUTHEAST DESERT STUDY WINDS ALOFT
LOCATION: SALTON SEA W SHORE (013) DATE: 8/11/81 GROUND ELEVATION: -68 METERS

RELEASE TIME(PDT)	1800	
HEIGHT (M AGL)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)
0	999	99.9
53	85	2.2
159	115	1.3
263	168*	2.0
365	168*	2.0
466	181	1.9
565	165	1.2
662	109	1.4
758	96	1.4
852	106	1.2
944	135	0.7
1035	256	0.8
1125	276	0.8
1215	284	0.5
1305	264	1.1
1395	272	1.7
1485	259	2.5
1575	250	2.1
1665	256	2.1
1755	286	2.1
1845	285	3.0
1935	300	3.5
2025	318	4.2
2115	322	4.1
2205	332	5.4
2295	340	5.9
2385	338	6.5
2475	334	7.1
2565	328	6.3
2655	328	6.4
2745	334	4.7
2835	349	3.5
2925	360	3.4
3015	355	3.5
3105	350	4.7
3195	355	5.6
3285	349	5.2
3375	349	5.1
3465	353	7.1
3555	355	5.5
3645	352	6.6
3735	350	7.3
3825	347	6.8
3915	342	6.6
4005	339	5.2
4095	329	4.9
4185	327	4.2
4275	325	3.8
4365	322	3.9

"*" DENOTES INTERPOLATED DATA, "9"S MISSING DATA

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ARB SOUTHEAST DESERT STUDY WINDS ALOFT
LOCATION: BRAWLEY AIRPORT (014) DATE: 8/11/81 GROUND ELEVATION: -39 METERS

RELEASE TIME(PDT)	2042		2200	
HEIGHT (M AGL)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)
0	999	99.9	999	99.9
53	0	0.0	274	1.6
159	0	0.0	260*	4.7
263	199	3.7	260*	4.7
365	208	1.8	198	6.7
466	203	1.3	232	6.0
565	208	1.1	246	3.6
662	196	0.9	222	2.8
758	178	1.0	218	2.3
852	167	0.9	225	1.2
944	999	99.9	193	1.0
1035	999	99.9	174	1.3
1125	999	99.9	172	1.7
1215	999	99.9	166	2.2
1305	999	99.9	158	2.0
1395	999	99.9	116	1.5
1485	999	99.9	60	0.5
1575	999	99.9	40	1.2
1665	999	99.9	3	3.7
1755	999	99.9	335	1.7
1845	999	99.9	344	2.4
1935	999	99.9	349	4.8
2025	999	99.9	336	3.2
2115	999	99.9	332	3.7
2205	999	99.9	338	3.8
2295	999	99.9	349	2.4
2385	999	99.9	134	0.5
2475	999	99.9	10	9.2
2565	999	99.9	5	4.7
2655	999	99.9	7	4.8
2745	999	99.9	7*	5.6
2835	999	99.9	7*	5.6
2925	999	99.9	22*	4.9
3015	999	99.9	22*	4.9
3105	999	99.9	20*	4.6
3195	999	99.9	20*	4.6
3285	999	99.9	25*	5.6
3375	999	99.9	25*	5.6

"*" DENOTES INTERPOLATED DATA, "9"S MISSING DATA

ARB SOUTHEAST DESERT STUDY WINDS ALOFT
LOCATION: BRAWLEY AIRPORT (014) DATE: 8/12/81 GROUND ELEVATION: -39 METERS

RELEASE TIME(PDT)	0		36		200		405		558	
HEIGHT (M AGL)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)
0	999	99.9	999	99.9	999	99.9	999	99.9	999	99.9
53	241	5.3	261*	5.2	147	5.5	328*	2.5	151	4.3
159	242	7.5	260	5.2	34	1.5	328	2.5	302	1.3
263	237	6.0	247	5.4	999	99.9	334	3.8	306	5.2
365	221	4.6	231	3.8	999	99.9	313	1.9	304	6.3
466	200	4.1	211	3.2	999	99.9	344	1.4	301	7.6
565	195	3.8	197	2.9	999	99.9	339	2.5	299	5.6
662	999	99.9	165	2.7	999	99.9	336	3.1	299	4.0
758	999	99.9	179	2.7	216	2.4	332	3.7	302	6.2
852	999	99.9	192	2.4	188	2.1	322	3.0	299	4.7
944	999	99.9	203	2.0	181	2.3	316	1.4	310	3.1
1035	999	99.9	218	0.9	177	2.5	269	1.3	306	2.5
1125	999	99.9	249	0.9	180	3.0	268	2.5	233	5.9
1215	999	99.9	220	1.4	183	2.9	247	3.0	344	5.0
1305	999	99.9	207	1.8	224	1.2	231	3.2	261	4.2
1395	999	99.9	233	1.3	232	1.2	240	2.3	247	3.8
1485	999	99.9	264	1.3	230	1.7	243	3.1	261	3.0
1575	999	99.9	290	1.3	239	1.3	262	2.3	277	2.8
1665	999	99.9	301	1.5	258	0.9	290	2.3	285	2.9
1755	999	99.9	307	2.0	266	1.0	294	2.9	294	3.1
1845	999	99.9	322	1.7	310	0.7	297	2.5	320	3.6
1935	999	99.9	5	1.0	357	1.0	301	1.5	331	3.6
2025	999	99.9	56	0.2	167	0.1	198	0.6	330	2.8
2115	999	99.9	133	0.5	109	1.7	162	1.2	327	2.2
2205	999	99.9	150	1.3	116	2.8	164	1.8	305	1.6
2295	999	99.9	124	2.6	109	4.4	130	1.0	279	1.5
2385	999	99.9	115	3.8	95	3.2	112	1.5	254	0.7
2475	999	99.9	112	3.5	102	2.5	84	1.0	314	0.4
2565	999	99.9	98	3.2	93	2.6	84	0.8	295	0.6
2655	999	99.9	88	2.8	85	3.5	128	1.2	331	0.2
2745	999	99.9	61	3.2	71	5.4	133	1.5	307	0.7
2835	999	99.9	56	3.8	82	4.9	120	1.2	295	0.9
2925	999	99.9	67	6.9	78	4.1	83	1.5	253	0.7
3015	999	99.9	53	5.6	58	3.2	83	2.1	173	0.3
3105	999	99.9	43	5.2	116	3.8	93	2.6	124	0.9
3195	999	99.9	37	7.6	21	7.8	999	99.9	153	0.5
3285	999	99.9	39*	5.1	999	99.9	999	99.9	223	0.5
3375	999	99.9	39*	5.1	999	99.9	999	99.9	44	0.6
3465	999	99.9	999	99.9	999	99.9	999	99.9	52	1.3
3555	999	99.9	999	99.9	999	99.9	999	99.9	36	1.9
3645	999	99.9	999	99.9	999	99.9	999	99.9	23	2.4
3735	999	99.9	999	99.9	999	99.9	999	99.9	20	2.9
3825	999	99.9	999	99.9	999	99.9	999	99.9	19	3.3
3915	999	99.9	999	99.9	999	99.9	999	99.9	10	3.3
4005	999	99.9	999	99.9	999	99.9	999	99.9	12	3.2
4095	999	99.9	999	99.9	999	99.9	999	99.9	24	2.6
4185	999	99.9	999	99.9	999	99.9	999	99.9	13	2.0
4275	999	99.9	999	99.9	999	99.9	999	99.9	46	2.0
4365	999	99.9	999	99.9	999	99.9	999	99.9	50	1.8

"*" DENOTES INTERPOLATED DATA, "9"S MISSING DATA

ARB SOUTHEAST DESERT STUDY WINDS ALOFT
LOCATION: BRAWLEY AIRPORT (014) DATE: 8/12/81 GROUND ELEVATION: -39 METERS

RELEASE TIME(PDT) 800

HEIGHT (M AGL)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)
0	999	99.9
53	141	2.6
159	215	1.3
263	280	2.3
365	281	2.9
466	293	3.8
565	301	2.9
662	314	3.0
758	339	2.7
852	353	3.3
944	346	2.6
1035	333	2.4
1125	330	2.5
1215	341	2.6
1305	349	1.9
1395	334	1.0
1485	269	0.7
1575	242	0.7
1665	266	0.9
1755	312	1.0
1845	340	0.8
1935	15	1.8
2025	13	1.7
2115	347	0.9
2205	262	0.8
2295	282	1.3
2385	267	1.0
2475	253	1.3
2565	268	1.1
2655	245	0.9
2745	188	1.5
2835	188	1.8
2925	220	1.9
3015	216	1.7
3105	196	1.6
3195	191	1.6
3285	175	1.0
3375	342	0.1
3465	18	0.1
3555	302	0.7
3645	253	0.6
3735	224	1.1
3825	183	1.1
3915	140	1.6
4005	136	2.2
4095	122	2.6
4185	129	2.9
4275	142	1.9
4365	182	1.6

"*" DENOTES INTERPOLATED DATA, "9"S MISSING DATA

ARB SOUTHEAST DESERT STUDY WINDS ALOFT
LOCATION: INDIC (024) DATE: 8/11/81 GROUND ELEVATION: 0 METERS

RELEASE TIME(PDT)	831		1004		1206		1402		1602	
HEIGHT (M AGL)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)
0	70	0.0	135	3.0	155	3.0	155	3.0	155	4.0
53	153	2.4	116	3.2	164	5.9	165	4.2	166	4.6
159	189	1.5	109	3.5	163	5.1	163	4.7	166	5.1
263	162	1.9	120	3.2	161	3.4	172	4.5	171	4.9
365	147	1.8	140	2.1	144	2.7	170	3.8	170	4.1
466	129	1.2	137	2.7	147	0.8	161	5.2	165	3.8
565	130	2.0	165	2.6	165	1.1	165	4.0	153	3.1
662	136	3.3	159	4.2	124	1.1	156	3.8	112	2.1
758	139	4.0	154	4.9	161	1.5	162	4.8	116	2.7
852	144	4.6	152	6.1	171	1.9	149	3.9	83	0.8
944	145	5.4	153	6.4	138	0.8	159	3.8	145	1.9
1035	145	6.2	154	5.6	51	0.6	161	3.5	150	2.0
1125	146	5.7	159	4.3	337	0.6	170	2.4	255	0.9
1215	139	5.2	157	4.0	283	0.8	199	1.7	343	1.5
1305	137	4.6	147	2.5	249	1.5	344	0.6	318	2.6
1395	152	4.0	162	2.6	256	2.7	999	99.9	302	2.2
1485	147	4.1	184	1.8	259	4.1	999	99.9	308	2.2
1575	148	4.0	242	2.2	266	3.6	999	99.9	325	3.1
1665	154	4.6	246	3.9	265	3.4	999	99.9	332	2.9
1755	167	3.7	256	4.8	277	4.2	999	99.9	340	3.0
1845	203	1.7	263	4.9	279	5.7	999	99.9	342	3.0
1935	241	3.4	269	5.2	282	6.1	999	99.9	334	3.4
2025	245	5.4	274	6.8	289	5.3	999	99.9	320	3.1
2115	248	5.5	268	6.3	287	5.0	999	99.9	319	3.2
2205	254	6.0	268	6.8	300	4.5	999	99.9	315	3.5
2295	245	6.7	279	6.0	308	4.3	999	99.9	312	4.3
2385	999	99.9	288	5.6	320	5.0	999	99.9	311	3.8
2475	999	99.9	272	6.5	319	5.5	999	99.9	312	3.3
2565	999	99.9	291	8.6	325	4.7	999	99.9	324	3.2
2655	999	99.9	298	3.4	322	4.7	999	99.9	340	3.0
2745	999	99.9	321	5.9	343	5.1	999	99.9	353	3.5
2835	999	99.9	336	5.5	999	99.9	999	99.9	999	99.9
2925	999	99.9	344	4.8	999	99.9	999	99.9	999	99.9
3015	999	99.9	345	5.7	999	99.9	999	99.9	999	99.9
3105	999	99.9	350	5.7	999	99.9	999	99.9	999	99.9
3195	999	99.9	355	5.2	999	99.9	999	99.9	999	99.9
3285	999	99.9	6	5.3	999	99.9	999	99.9	999	99.9
3375	999	99.9	12	4.7	999	99.9	999	99.9	999	99.9
3465	999	99.9	23	4.5	999	99.9	999	99.9	999	99.9
3555	999	99.9	33	4.1	999	99.9	999	99.9	999	99.9
3645	999	99.9	36	3.5	999	99.9	999	99.9	999	99.9
3735	999	99.9	30	2.5	999	99.9	999	99.9	999	99.9
3825	999	99.9	12	1.8	999	99.9	999	99.9	999	99.9

"0" DENOTES INTERPOLATED DATA, "9"S MISSING DATA

ARB SOUTHEAST DESERT STUDY WINDS ALOFT
LOCATION: INDIO (024) DATE: 8/11/81 GROUND ELEVATION: 0 METERS

RELEASE TIME(PDT)	1801		2018	
HEIGHT (M AGL)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)	WIND DIRECTION (DEG TRUE)	WIND SPEED (M/S)
0	135	4.0	25	3.0
53	145	4.5	21	2.8
159	146	4.6	7	3.5
263	152	4.3	30	2.7
365	150	3.4	27	2.1
466	145	3.0	18	1.4
565	158	2.7	20	2.0
662	160	2.2	5	3.3
758	173	1.6	7	4.7
852	172	0.8	11	2.0
944	213	0.5	9	1.3
1035	340	0.4	132	0.2
1125	356	1.8	254	0.5
1215	331	3.3	301	0.4
1305	323	4.3	9	0.6
1395	316	5.9	28	1.4
1485	320	5.0	57	1.5
1575	329	4.1	95	0.9
1665	336	2.2	113	0.9
1755	347	1.4	60	0.9
1845	326	1.5	69	2.1
1935	309	1.7	59	1.8
2025	325	1.7	144	1.0
2115	321	1.9	151	1.4
2205	331	1.7	198	1.8
2295	339	2.0	208	2.5
2385	341	2.7	198	1.5
2475	355	3.0	158	1.2
2565	5	3.2	152	1.3
2655	7	4.0	150	0.9
2745	343	3.5	173	0.6

"*" DENOTES INTERPOLATED DATA. "9"S MISSING DATA

2.3 TEMPERATURE SOUNDINGS

2.3.1 Airsondes

Airsonde packages were released several times daily during each test period. Model AS-PT Airsondes from Atmospheric Instrumentation Research Company were used to provide the vertical temperature profile. Airsondes transmit the temperature and pressure to a base station which logs the data on a tape cassette and directly to a printer at a rate of about 12 times per minute.

The temperature sensor consists of a bead thermister. The range is -50° to $+50^{o}$ C. The precision is $^{+}0.5^{o}$C with a resolution of 0.1^{o}C. An aneroid capacitance sensor is used to determine changes in barometric pressure. It has a range of 1050 to 300 millibars with a precision of 3.0 millibars. The resolution is 1.0 millibar.

2.3.2 T-sondes

An Aeromet Model TSR-2 receiver and T-sondes were provided by the EPA, Las Vegas for use in the program accompanied by the caveat that the system had not been operationally used with much success. MRI personnel released T-sondes during several tests in conjunction with pibal observations. Performance was marginal. The signal received was excessively noisy and attempts to improve this condition by positioning the antenna in various configurations were only partially successful. Only when a clean trace was recorded on the strip chart were the data used. As a consequence, data recovery was very low. In many instances, however, the data were adequate to determine inversion and stability characteristics.

2.3.3 Data Reduction

Airsondes

The temperature as a function of pressure which had been logged on cassette in the field was further processed to provide temperature as a function of height (via the hydrostatic equation). In those instances when recorder failure occurred, the data were entered into the computer directly from the printer tape. The reduced data were quality checked by a meteorologist.

T-sonde

The temperature was taken directly from a strip chart every 30 seconds and assigned a height according to standard pibal ascention rate tables. The reduced data, plotted as a function of altitude, were reviewed by a meteorologist.

2.3.4 Data Tape Format

The temperature data have been transcribed to 9-track magnetic tape for transmission to the CARB. Tape density is 800 bpi, parity is odd, and unlabeled. The data are written in 80 character ASCII records, unblocked.

Column No.	Format	Parameter
1-3	A3	Site Identifier (Refer to Table 2-1)
4-8	I5	Site Elevation (ft-msl)
10	A1	Reporting units M = meters F = feet
11	A1	Reference Elevation M = msl A = agl
13-14	I2	Year
15-17	I3	Julian Day
19-22	I4	Observation Time
23-25	A3	Time Zone
26-31	I6	Height of Observation
33-39	F7.1	Atmospheric Pressure (mb) (Airsonde only)
41-46	F6.1	Temperature (Deg. C)
47-80	blank	

2.3.5 Temperature Data Plots

Plots of the temperature data as a function of height above ground follow in this section. There is one graph per day which may include several temperature soundings. The sounding times are given in the legend. The thin lines depict the dry-adiabatic lapse rate which has been included to aid the reader in discerning atmospheric stability.

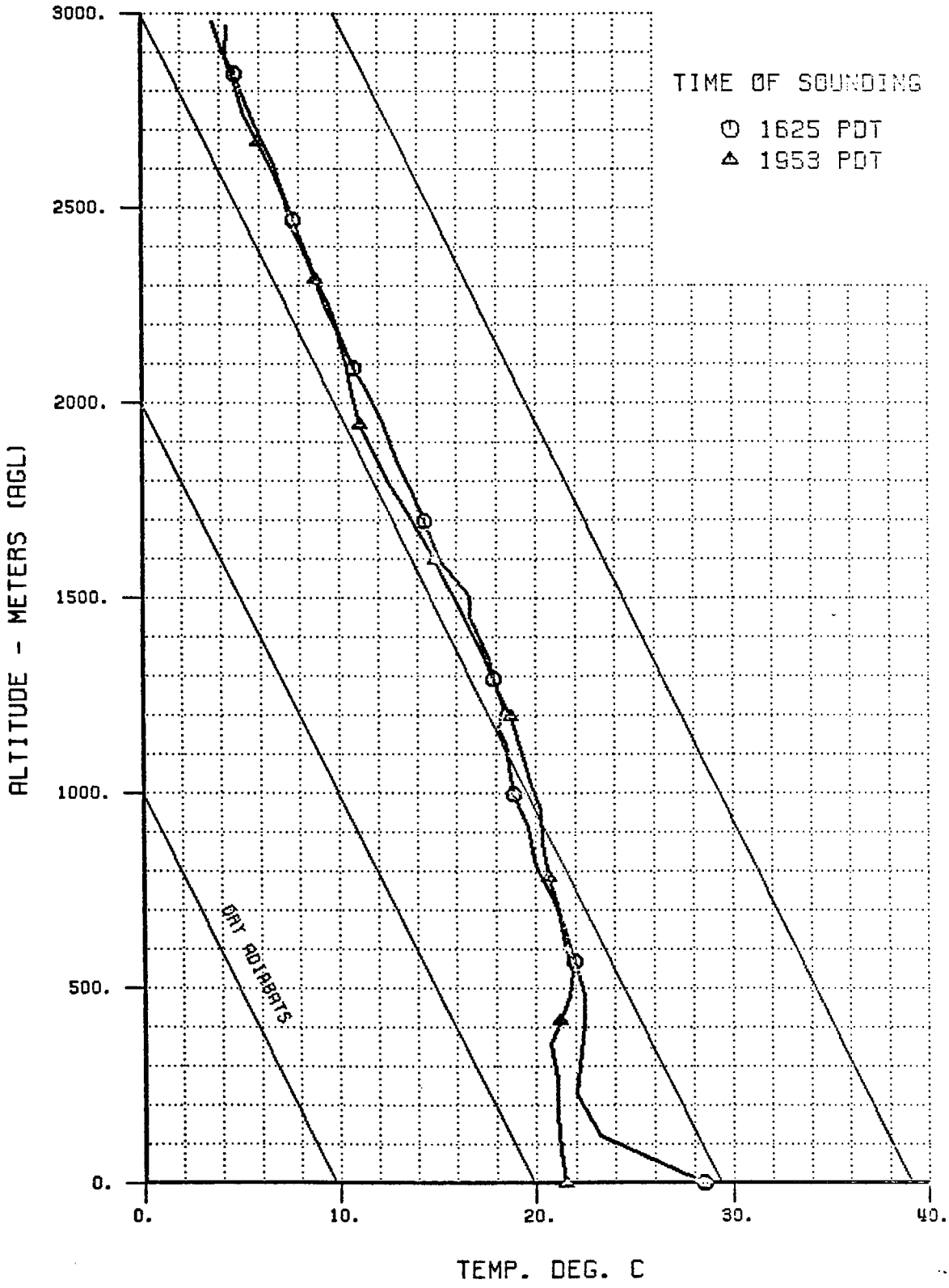
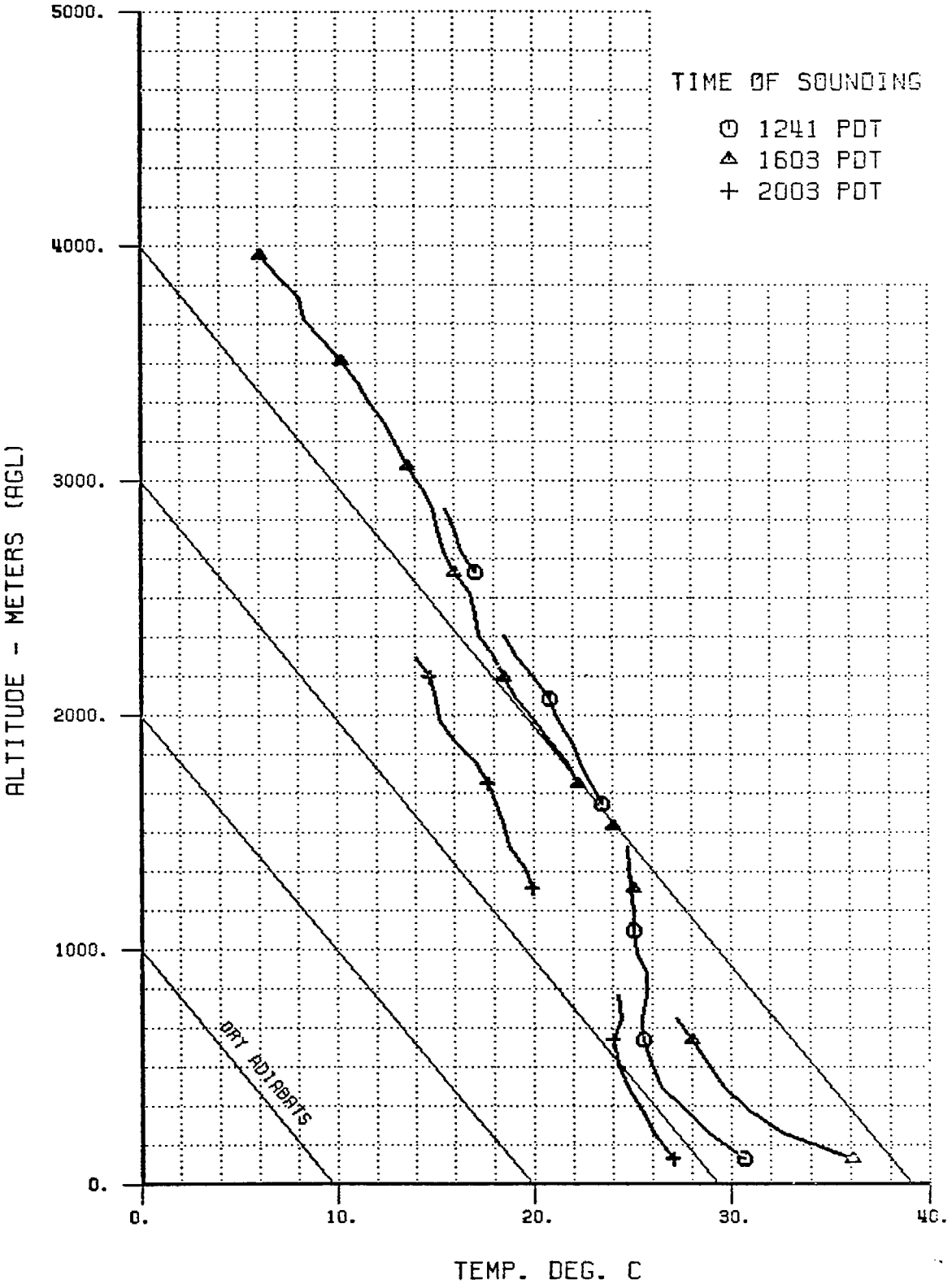


Figure 2-9. Temperature Sounding



LOCATION: SAN BERNARDINO
DATE: 7/ 9/81

Figure 2-10. Temperature Sounding

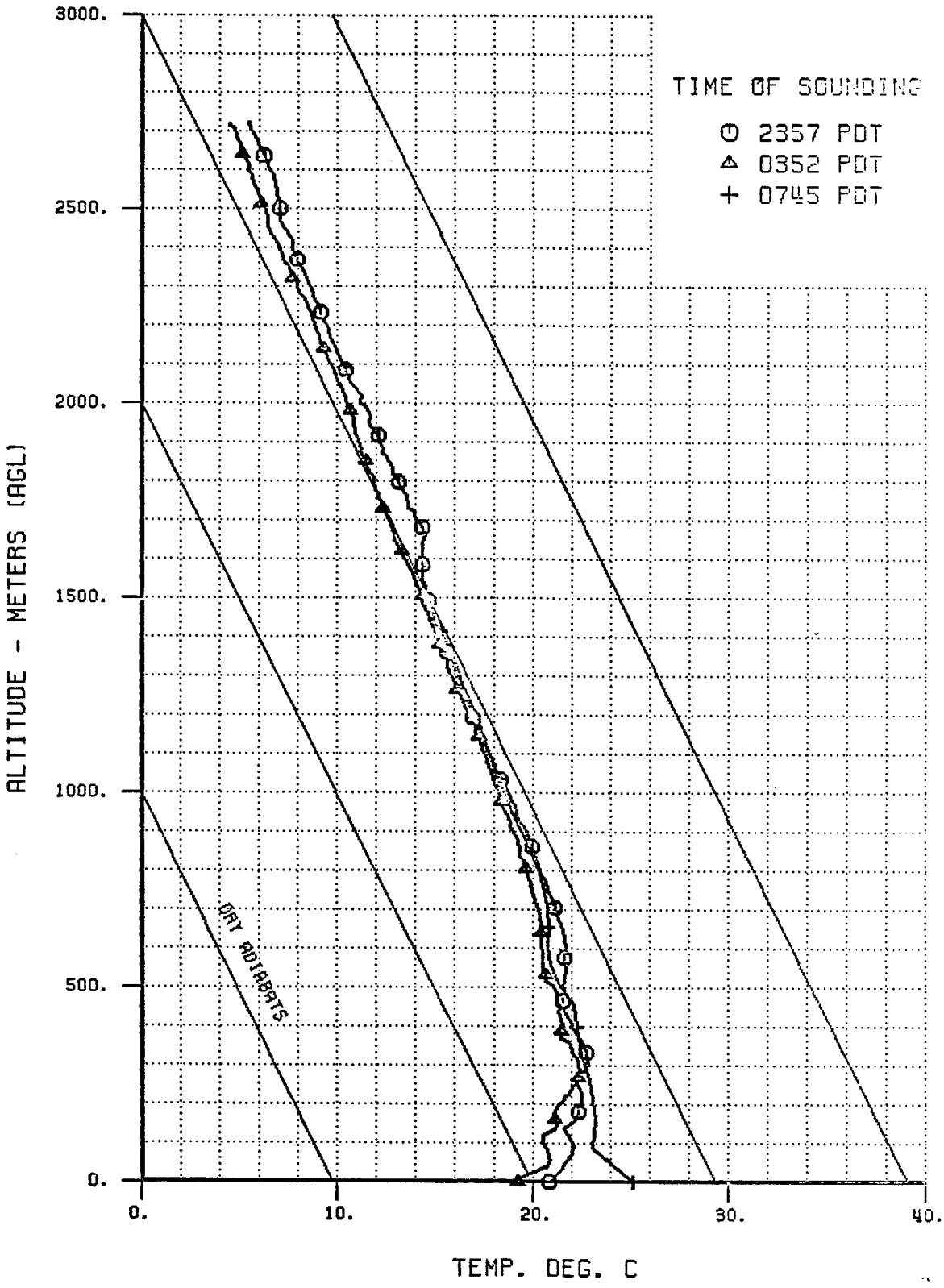


Figure 2-11. Temperature Sounding

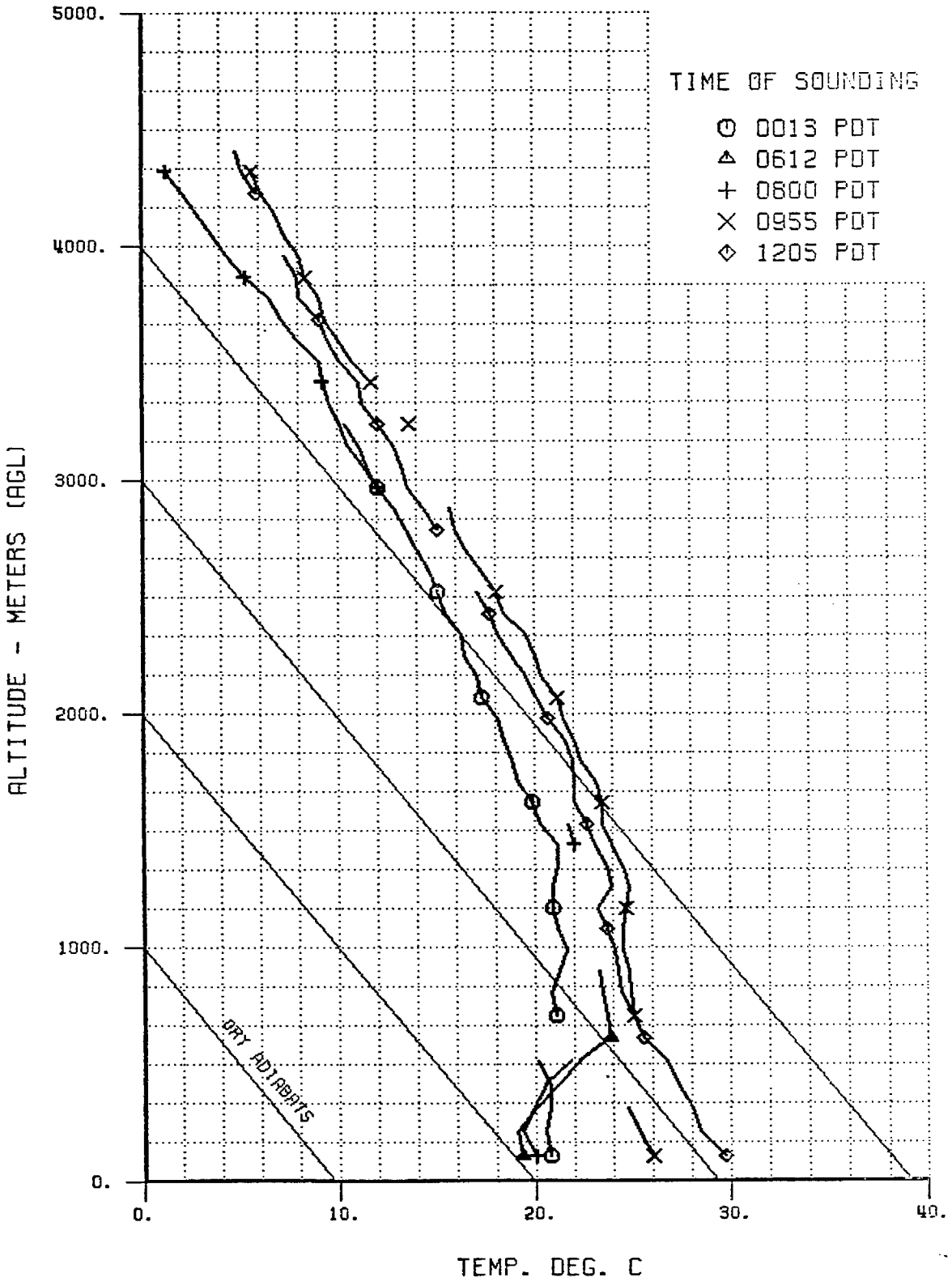


Figure 2-12. Temperature Sounding

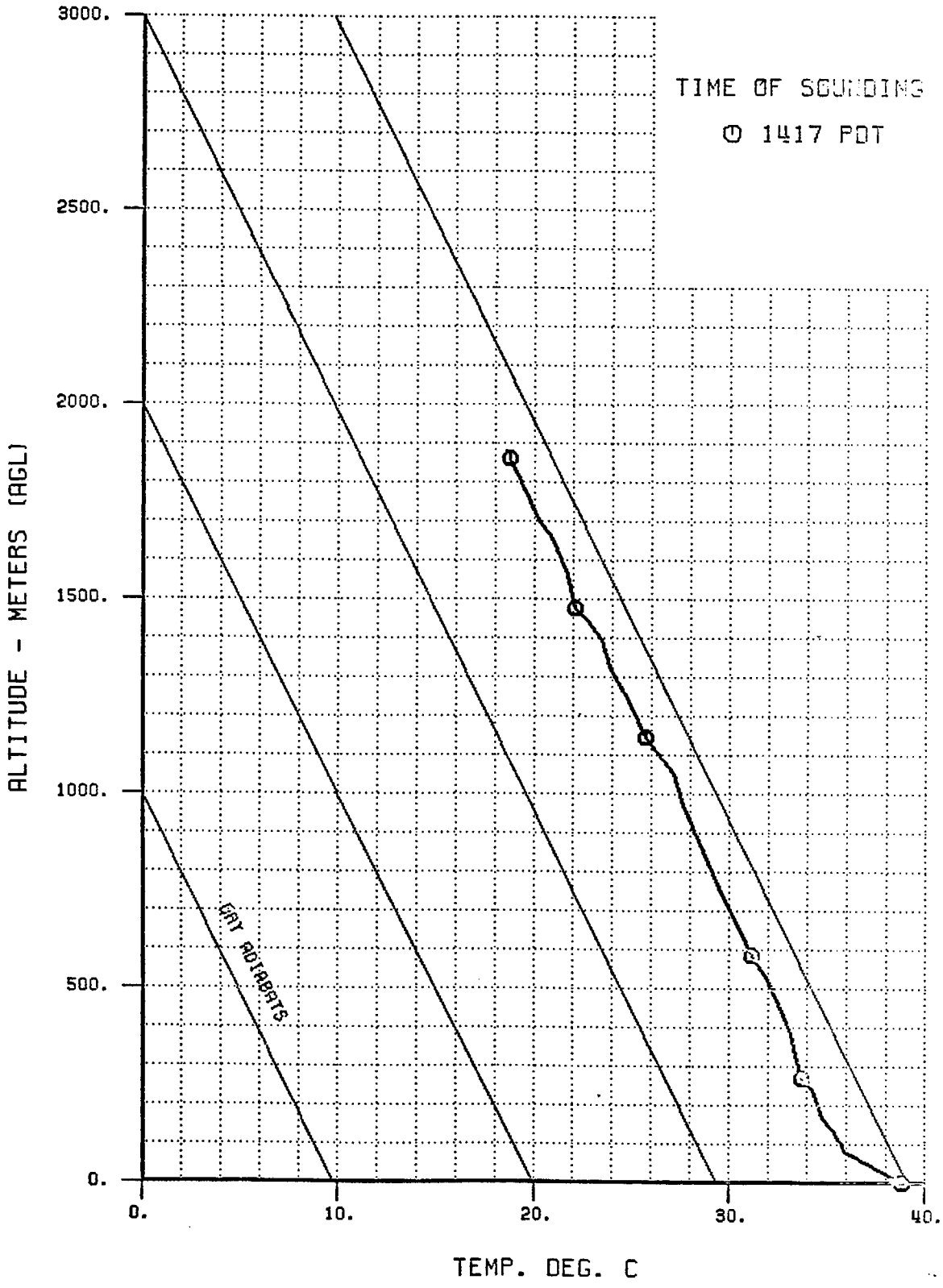
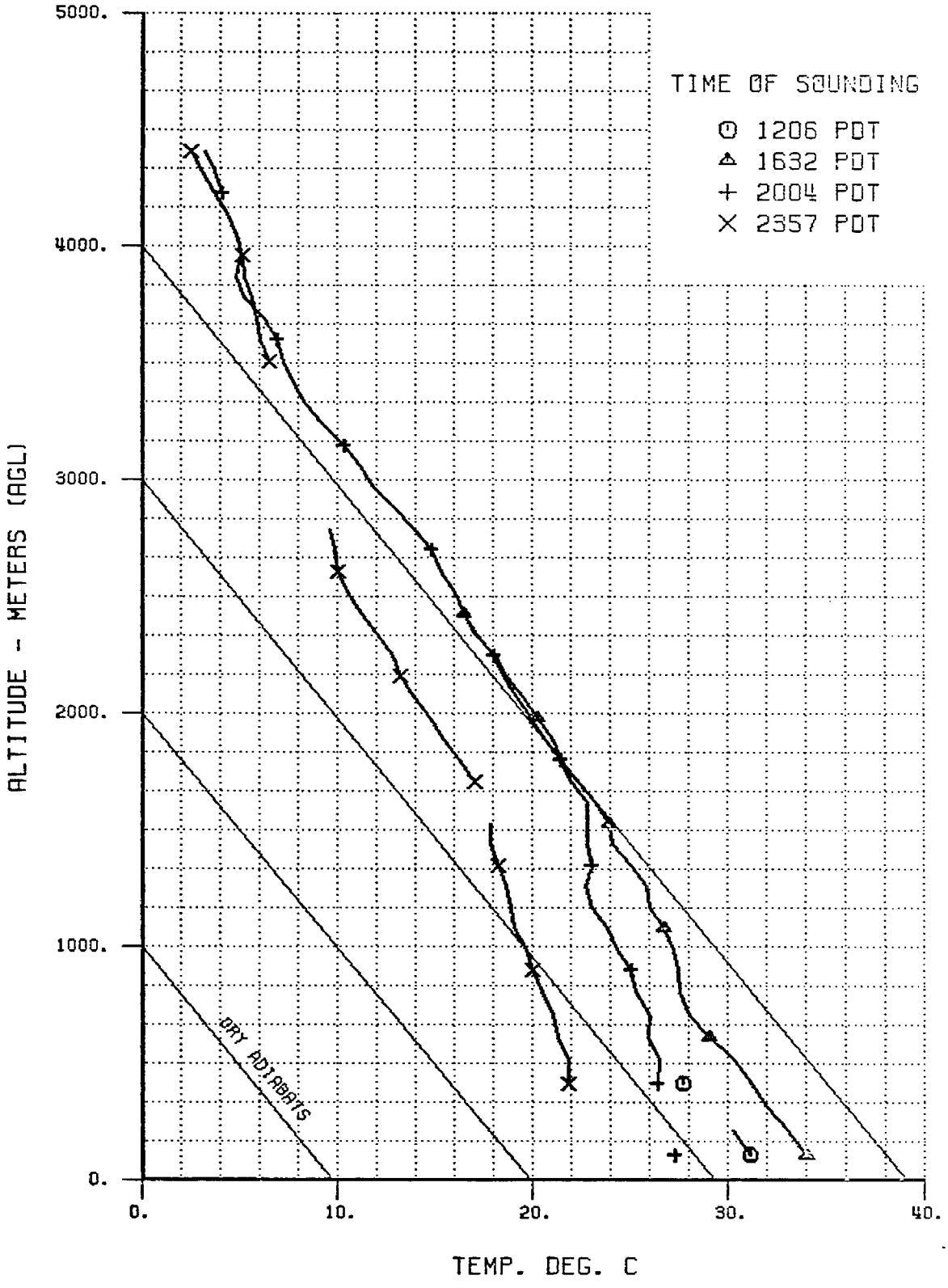


Figure 2-13. Temperature Sounding



LOCATION: ACTON
DATE: 7/14/81

Figure 2-14. Temperature Sounding

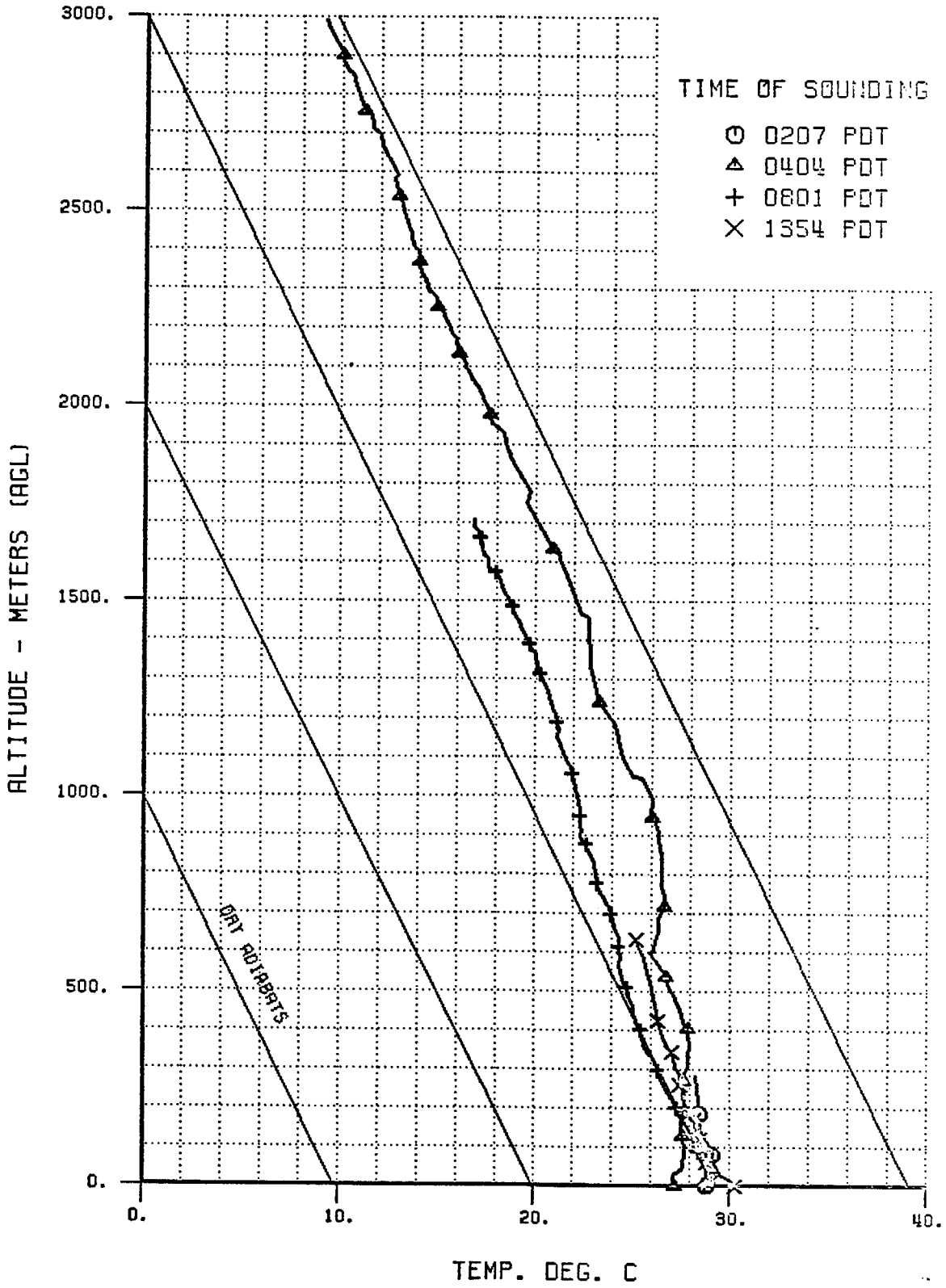


Figure 2-15. Temperature Sounding

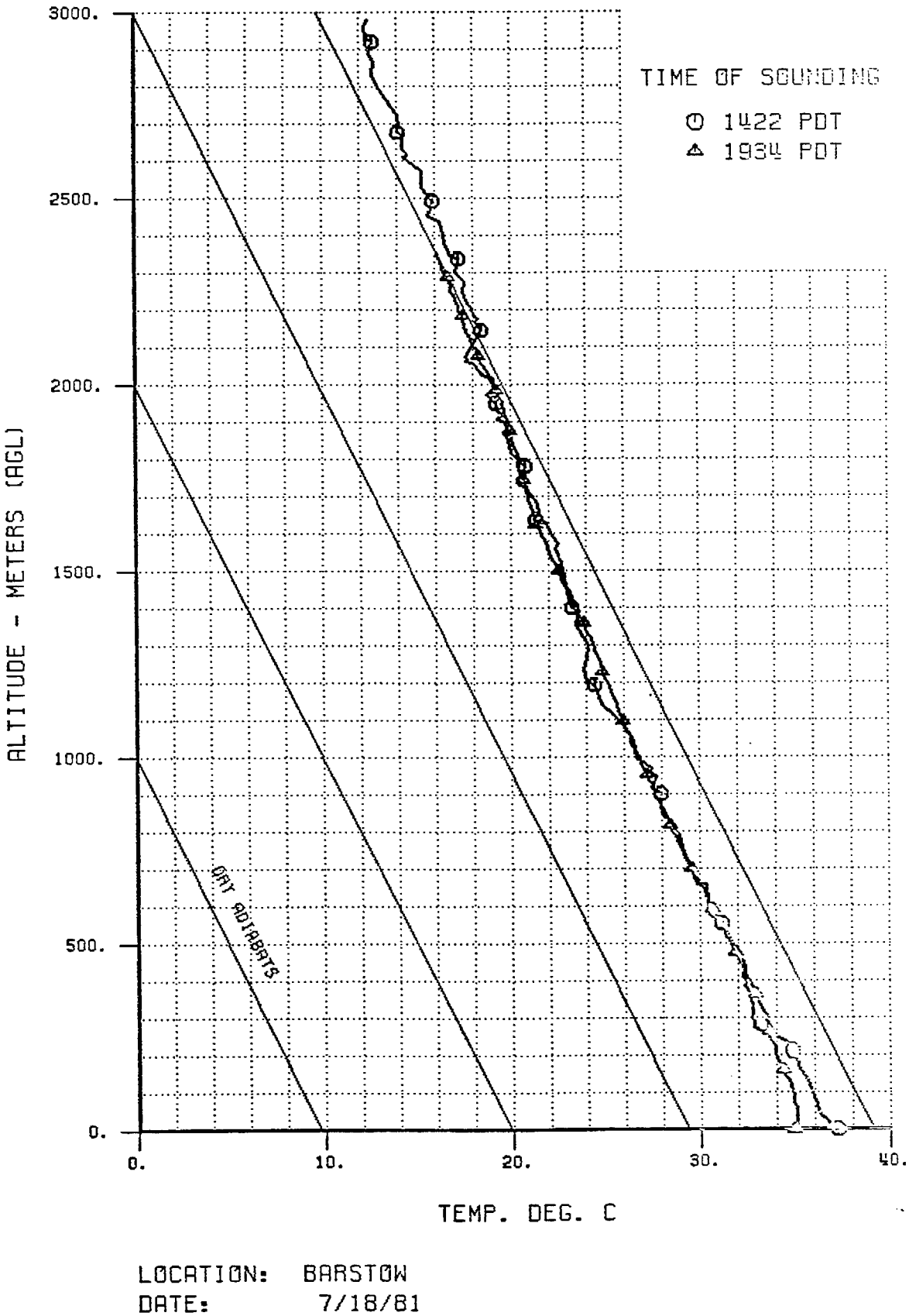
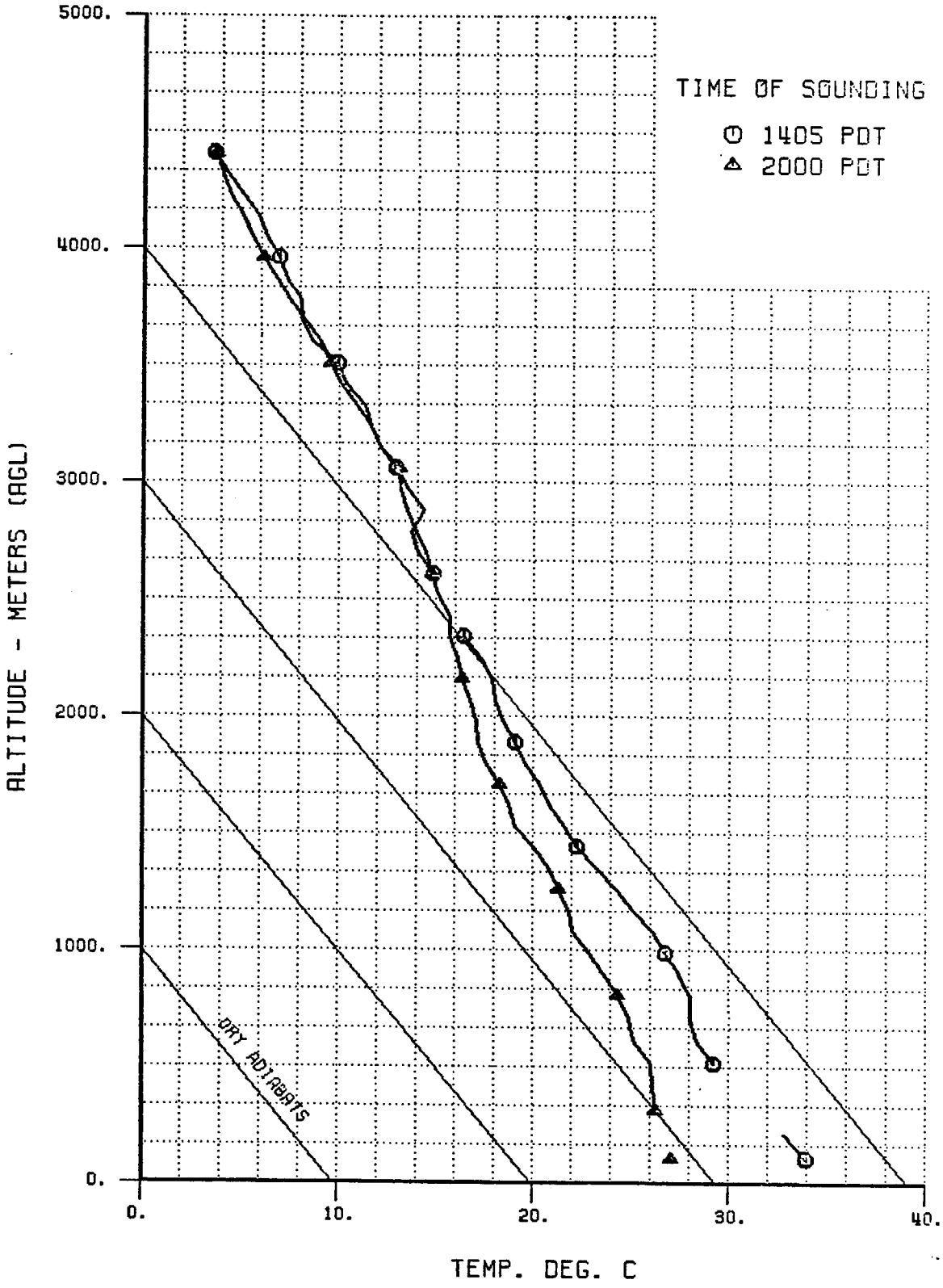


Figure 2-16. Temperature Sounding



LOCATION: VICTORVILLE
DATE: 7/18/81

Figure 2-17. Temperature Sounding

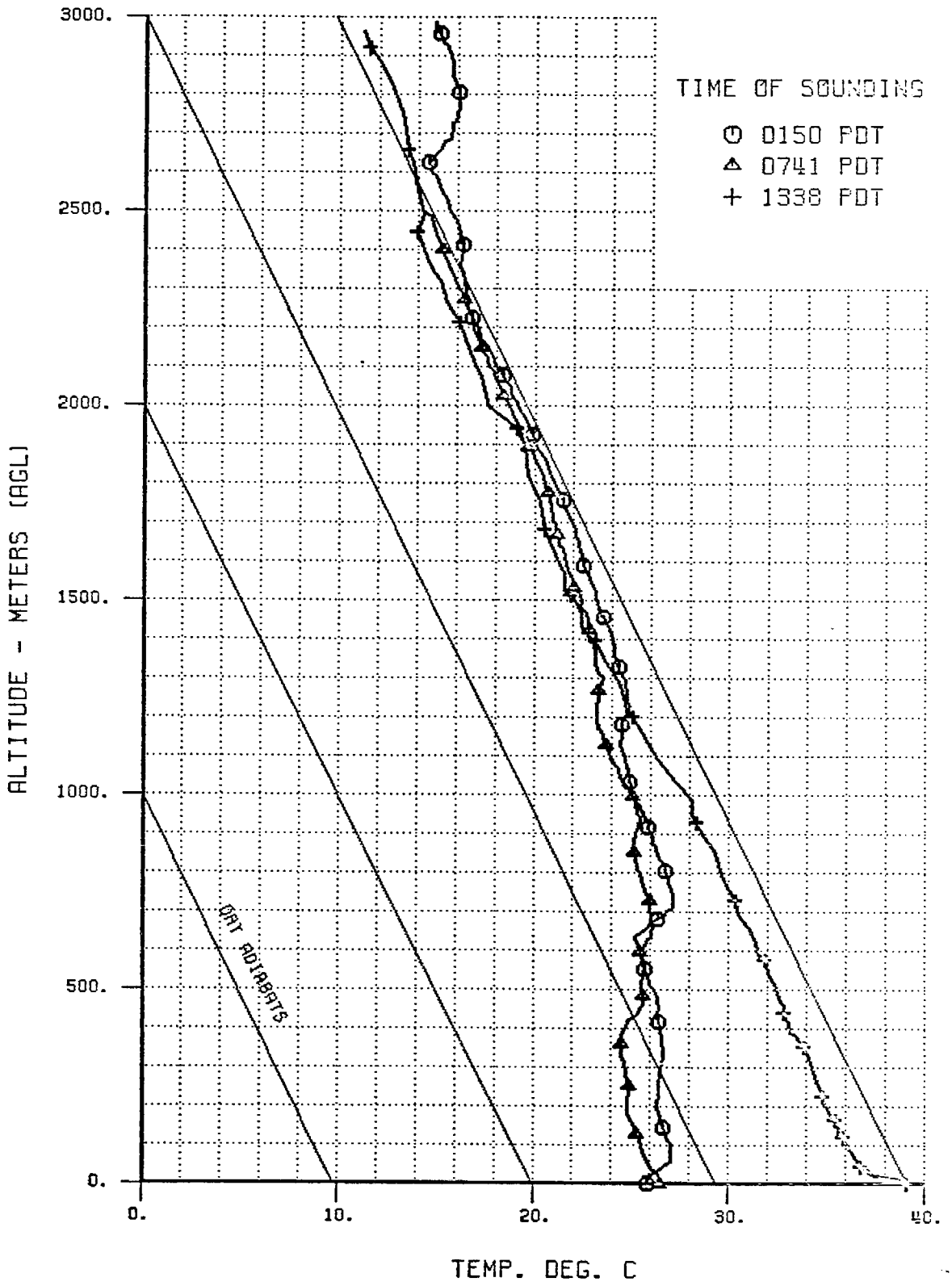
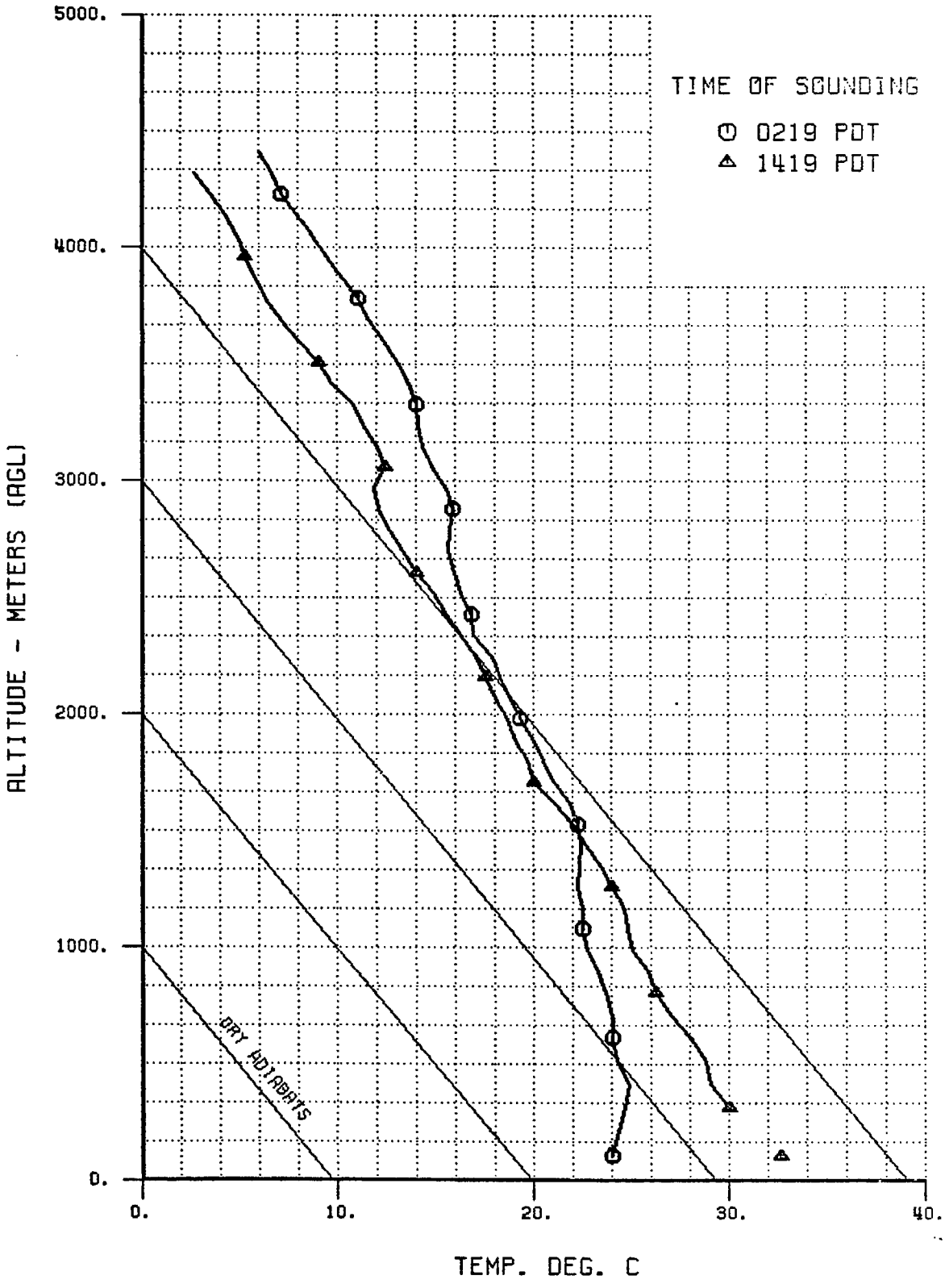
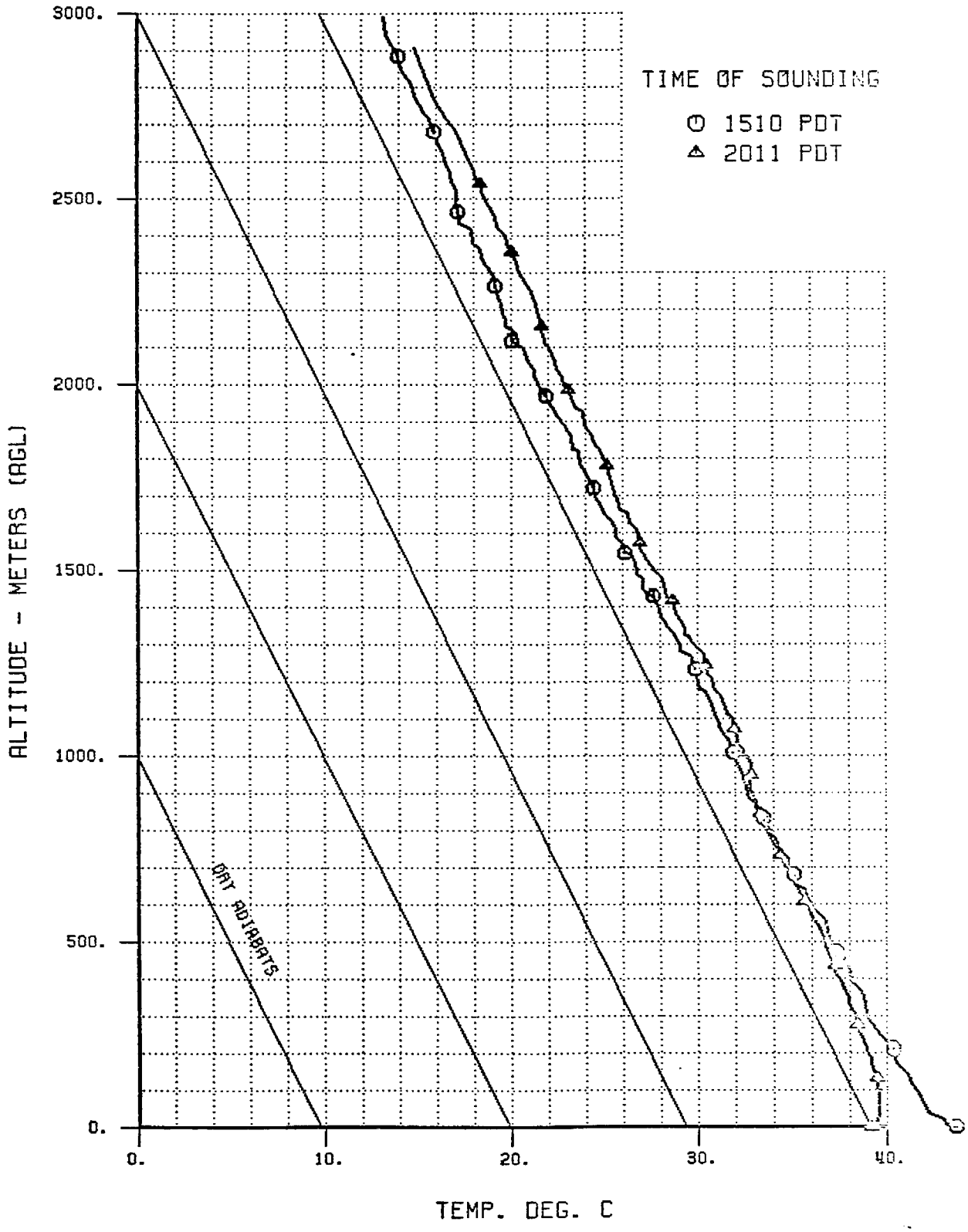


Figure 2-18. Temperature Sounding



LOCATION: VICTORVILLE
DATE: 7/19/81

Figure 2-19. Temperature Sounding



LOCATION: DESERT CENTER
DATE: 7/22/81

Figure 2-20. Temperature Sounding

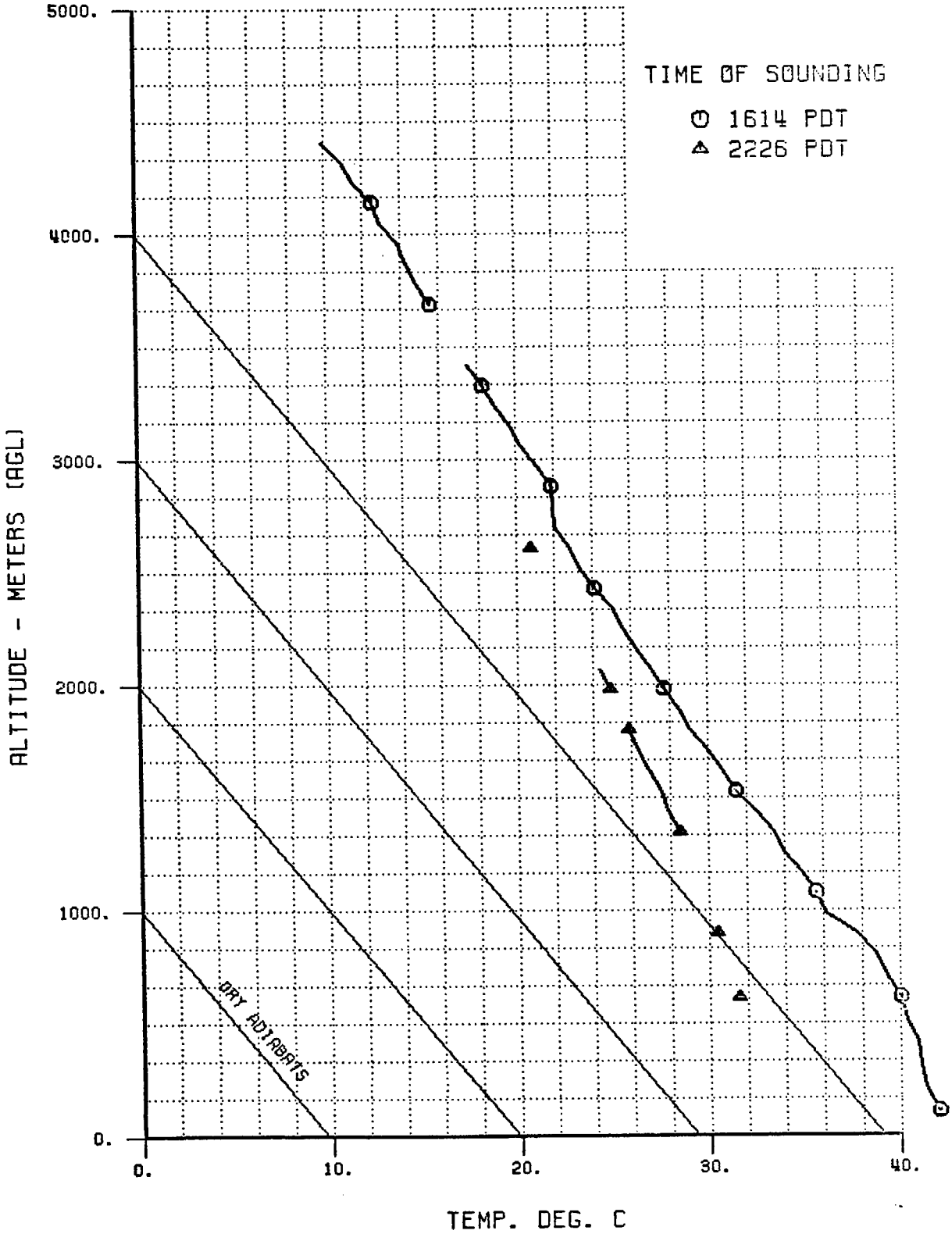
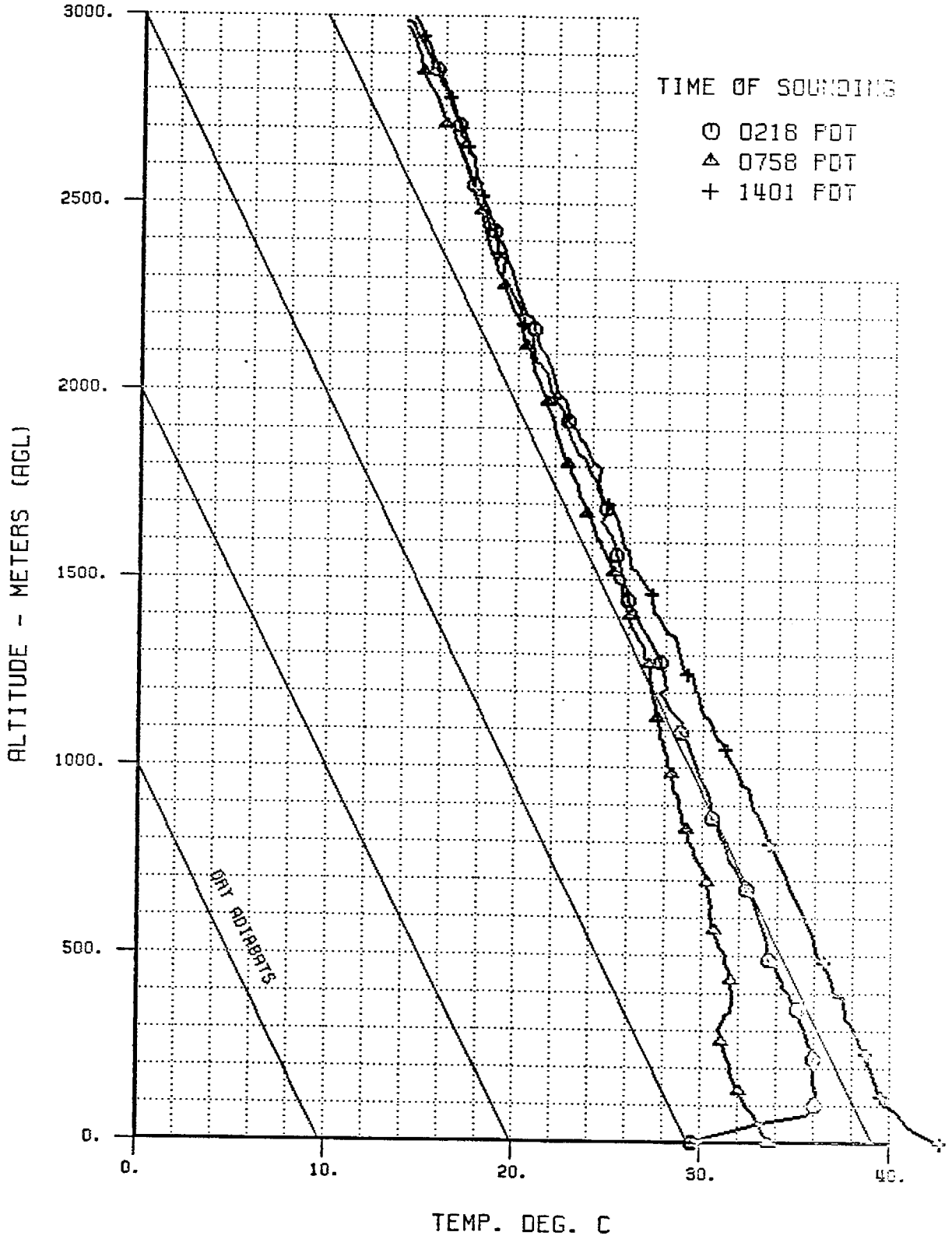
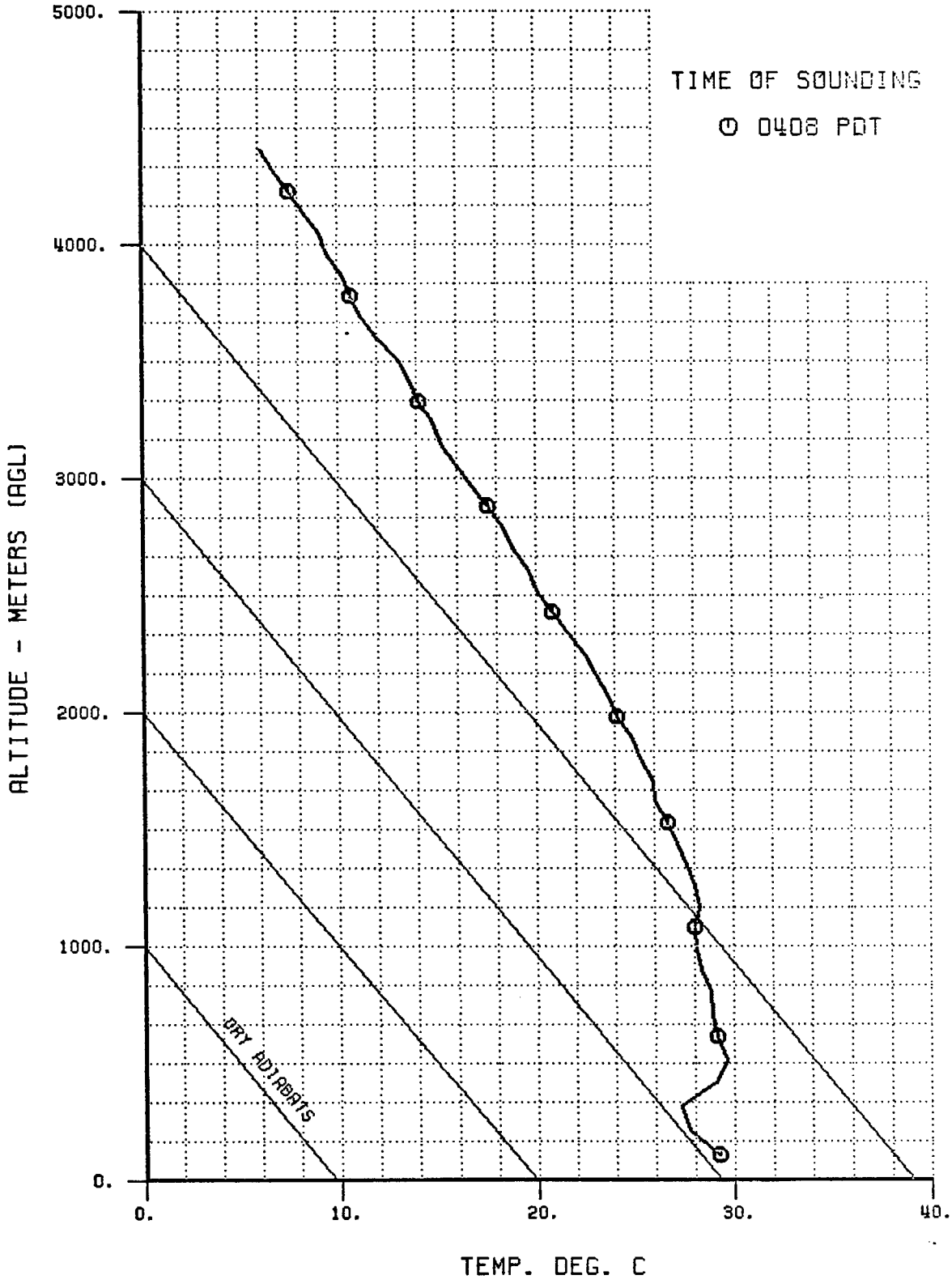


Figure 2-21. Temperature Sounding



LOCATION: DESERT CENTER
DATE: 7/23/81

Figure 2-22. Temperature Sounding



LOCATION: PALM SPRINGS
DATE: 7/23/81

Figure 2-23. Temperature Sounding

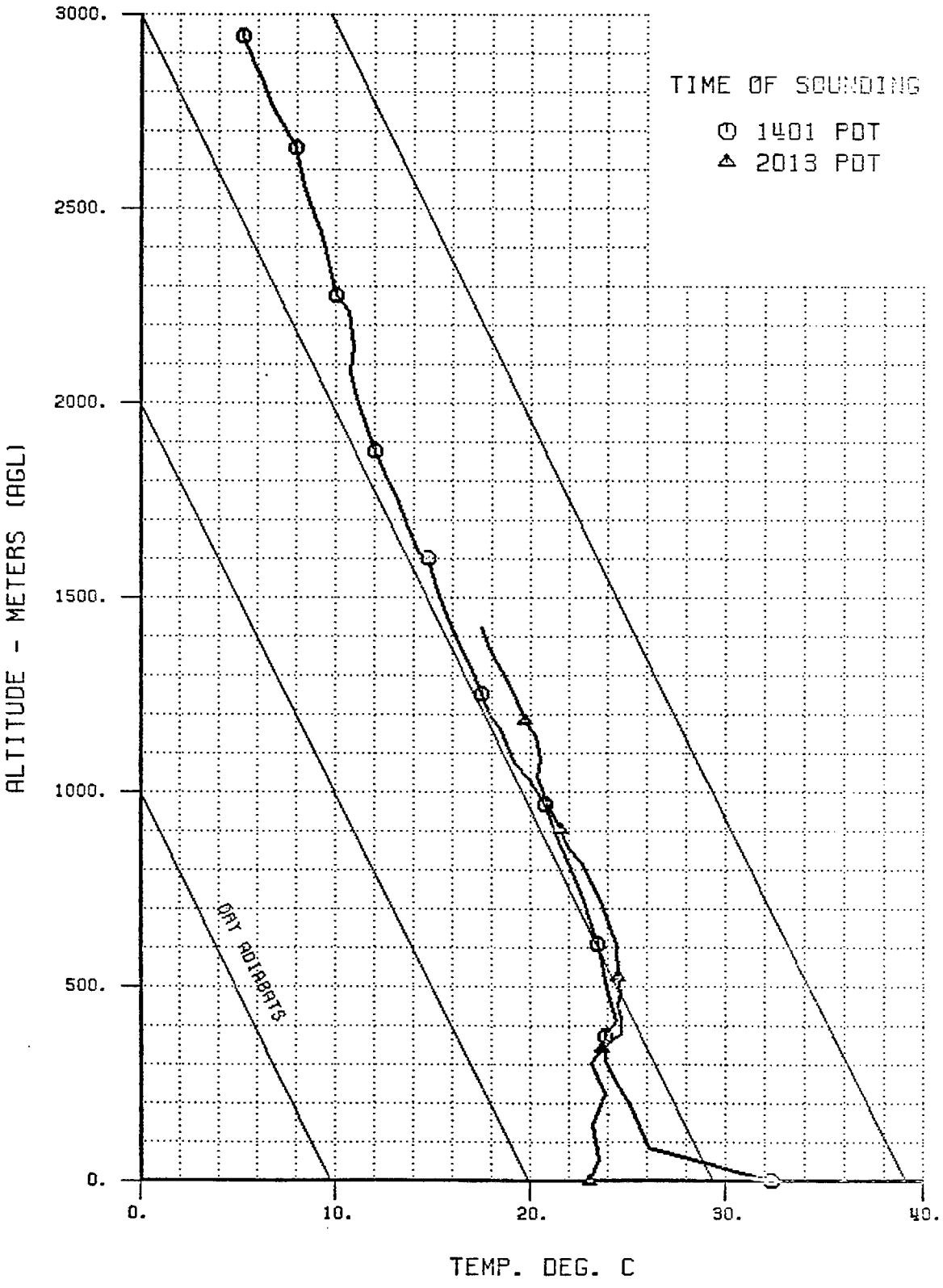


Figure 2-24. Temperature Sounding

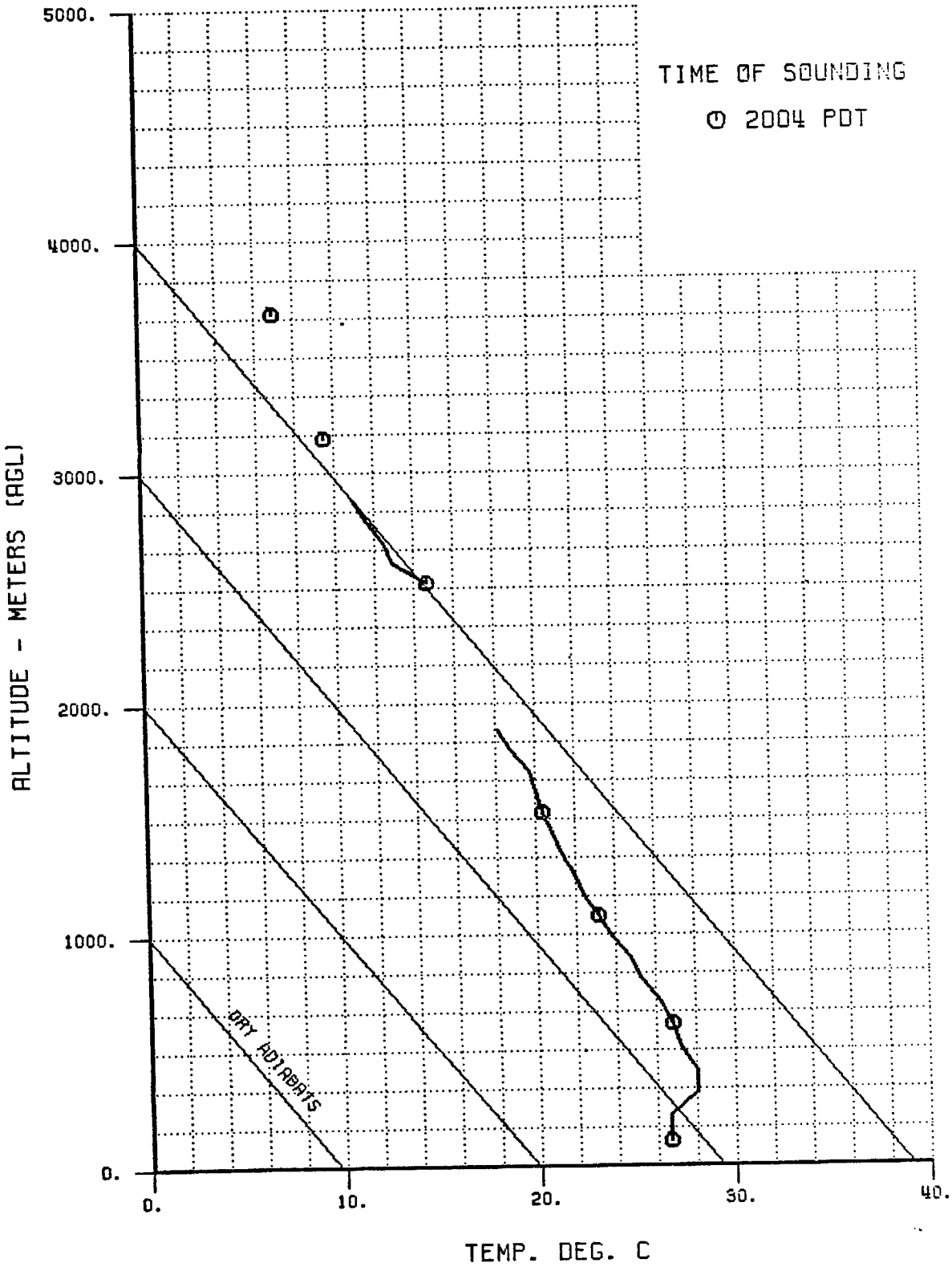


Figure 2-25. Temperature Sounding

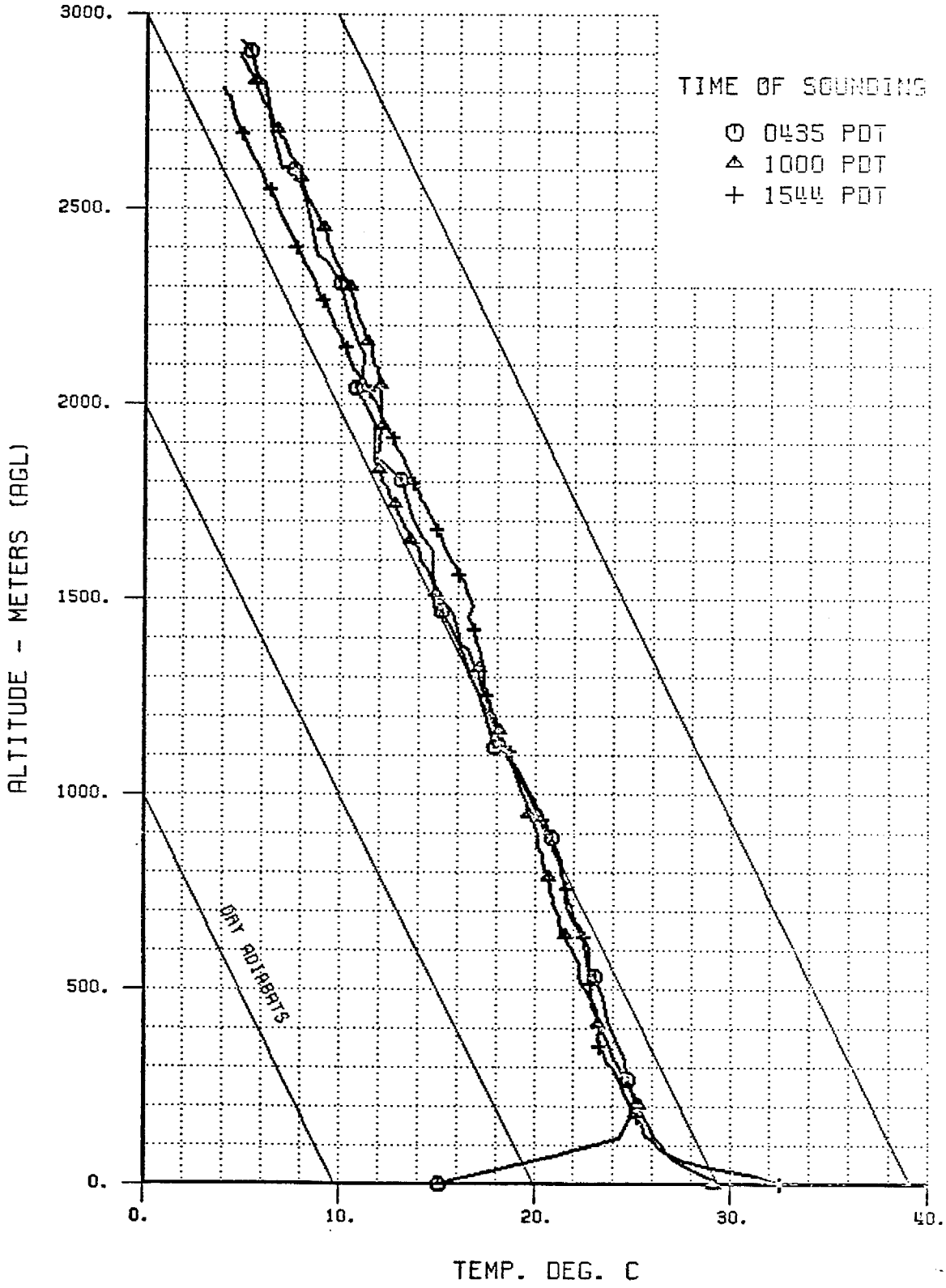
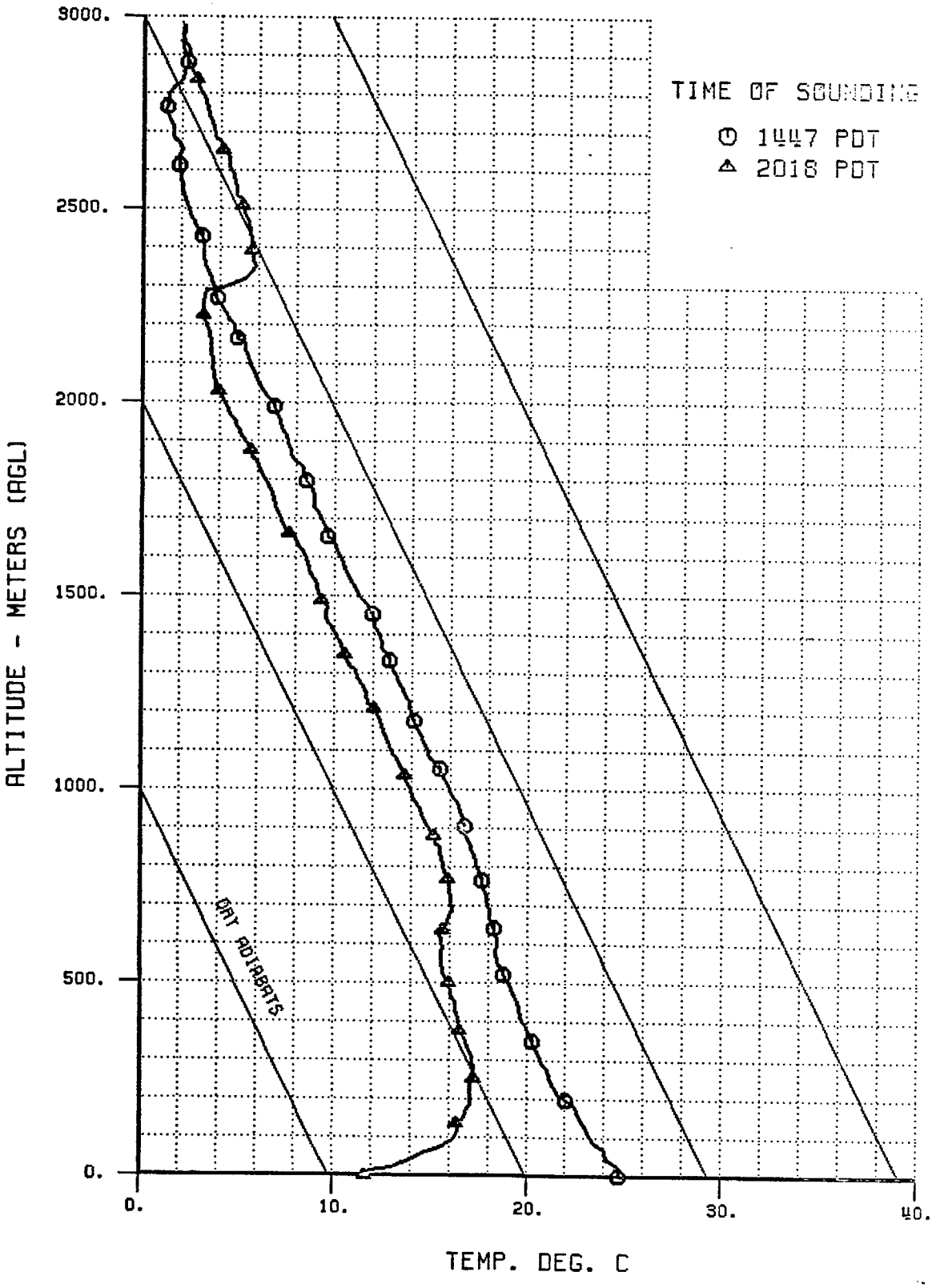


Figure 2-26. Temperature Sounding



LOCATION: SANTA ANA RIVER
DATE: 7/30/81

Figure 2-27. Temperature Sounding

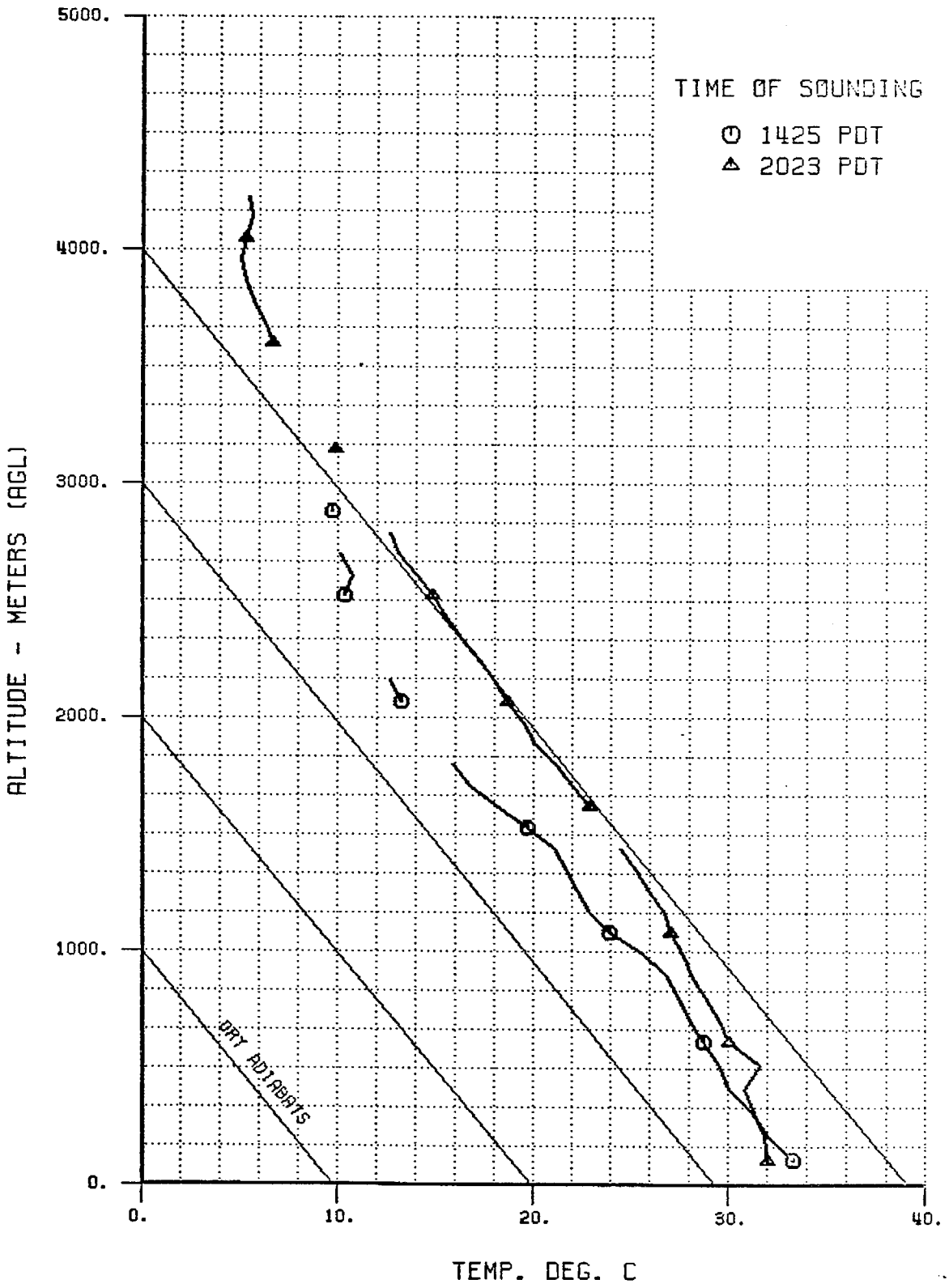


Figure 2-28. Temperature Sounding

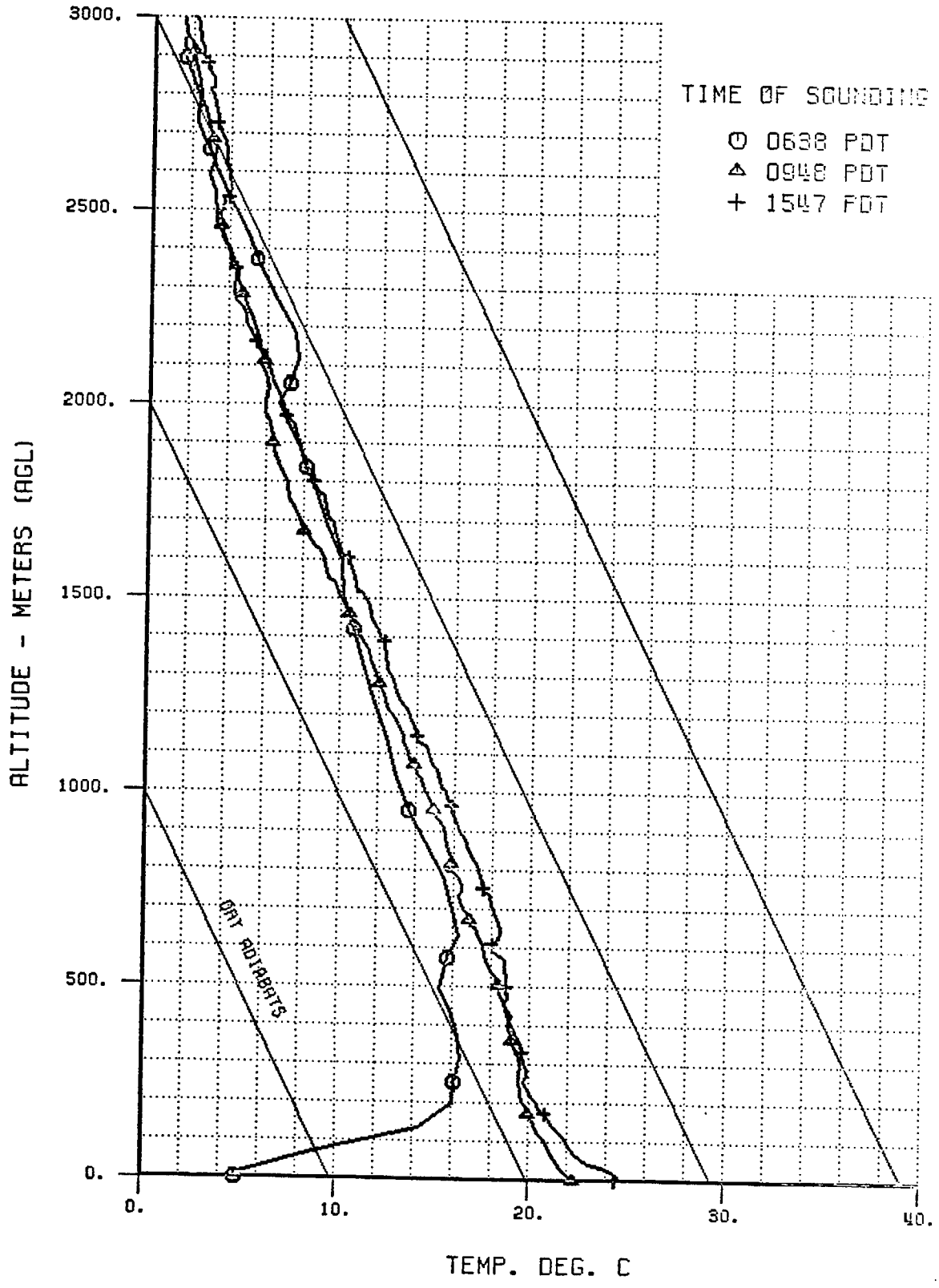
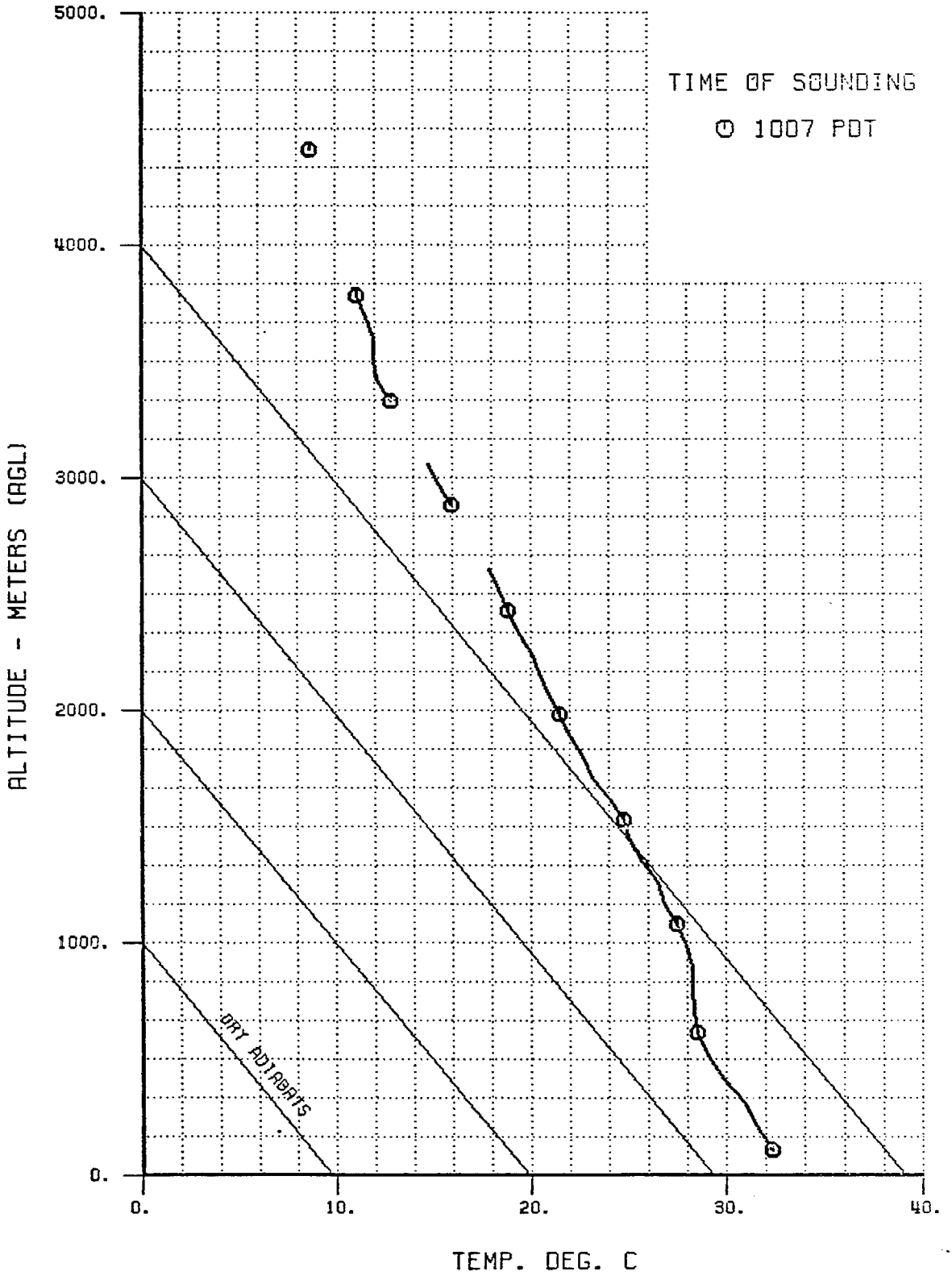


Figure 2-29. Temperature Sounding



LOCATION: 29 PALMS
DATE: 7/31/81

Figure 2-30. Temperature Sounding

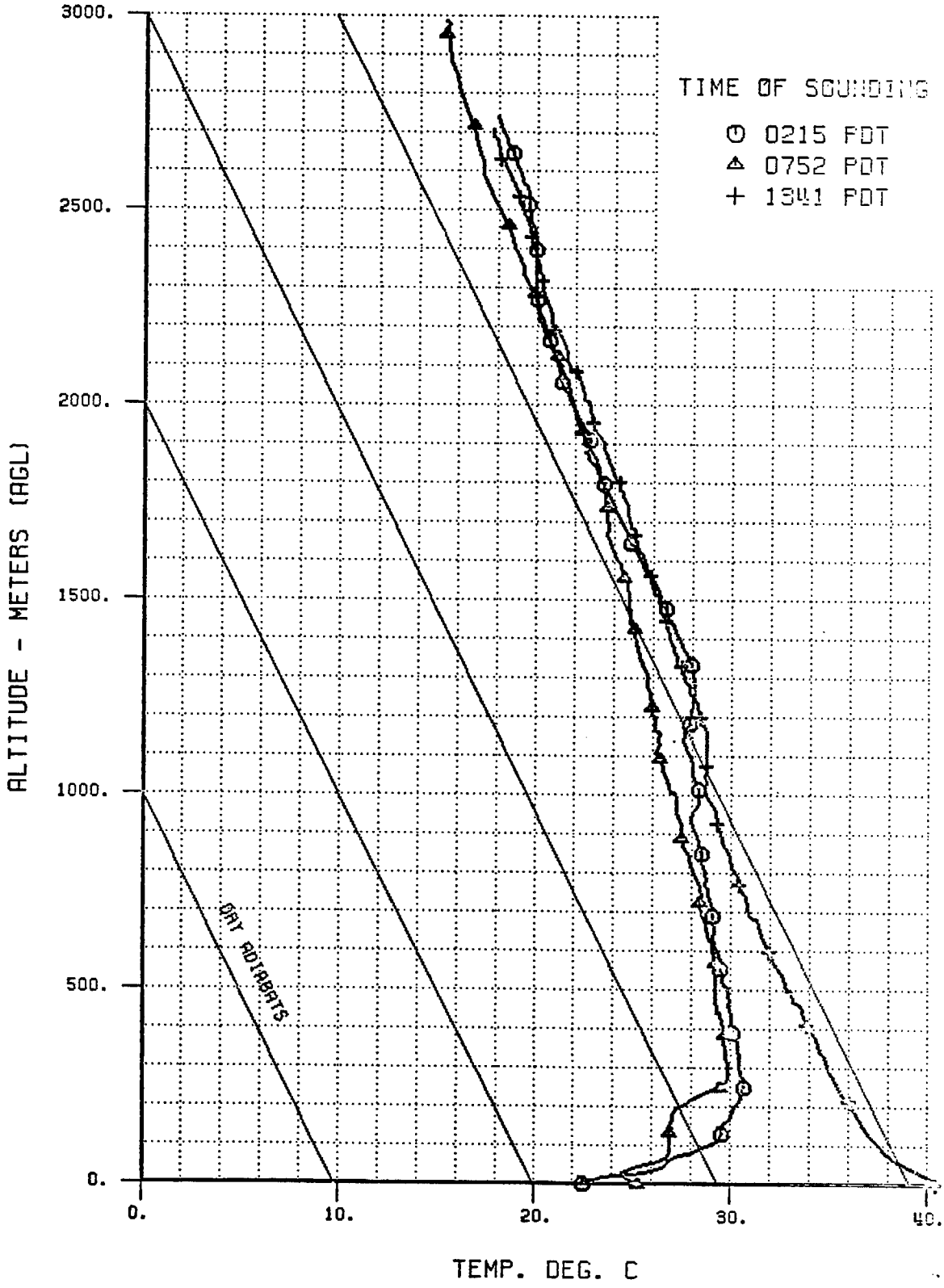


Figure 2-31. Temperature Sounding

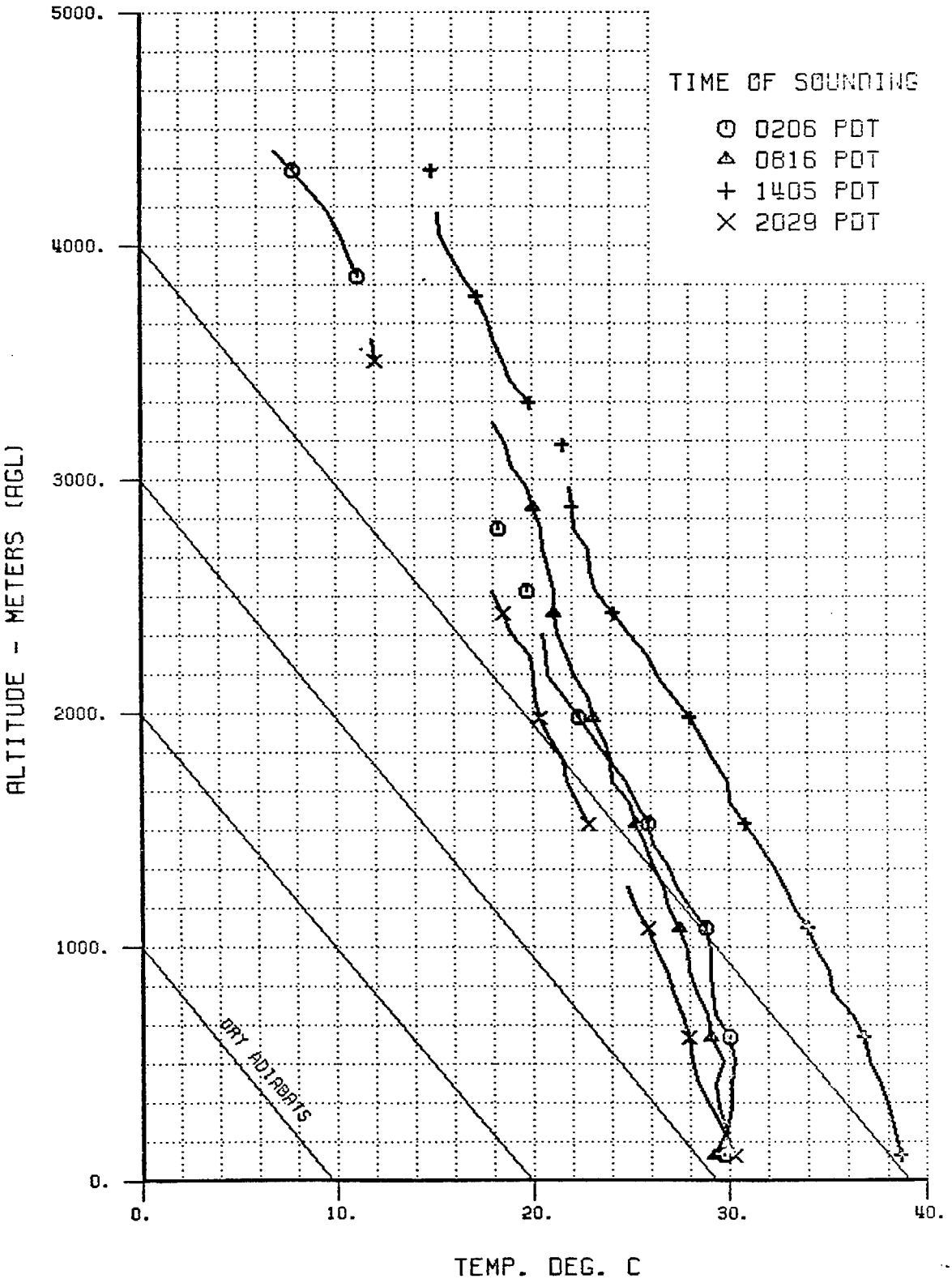


Figure 2-32. Temperature Sounding

3. SURFACE METEOROLOGICAL AND AIR QUALITY MEASUREMENTS

To supplement existing data resources, ozone and b_{scat} (atmospheric scattering extinction coefficient) were continuously monitored during the field study at Edwards Air Force Base and at Mt. Wilson. Surface wind and temperature were also measured at Mt. Wilson. Adequate meteorological coverage was already provided for at Edwards AFB. Short-term surface wind measurements were also taken from the tracer release locations when data were otherwise unavailable. In Section 3.2, the air quality data are discussed and likewise the meteorology data in Section 3.3. Hourly averages and summary statistics are included.

3.1 SITE DESCRIPTIONS AND PERIODS OF OBSERVATION

The locations of the surface monitoring sites are shown on Figure 3-1. Edwards AFB is located in the Mojave Desert about 65 mi north of downtown Los Angeles. The equipment was sited at a little used test facility south of the Operations Building. Mt. Wilson is atop the San Gabriel mountains about 22 mi northeast of downtown Los Angeles. The equipment was sited at the observatory. Table 3-1 lists the coordinates, site elevation and period of observations.

3.2 AIR QUALITY DATA

Ozone was measured by ultraviolet (UV) absorption photometry. The instruments used were Dasibi model 1003AH. The scattering extinction coefficient was measured by single-wavelength integrating nephelometers. The instruments used were MRI model 1569 (high sensitivity) modified to alternately cycle ambient and filtered air, thus allowing correction for instrument drift.

3.2.1 Performance Audit and Calibration

In situ, multipoint calibrations were performed by MRI on the ozone monitors after installation in the field and once during the project. The ozone calibrations utilized a Dasibi Model 1003AH and an ozone source. The Dasibi was used as a reference ozone monitor. The output of the ozone source was sampled simultaneously by the reference monitor and the unit being calibrated. The accuracy of that transfer standard is traceable to suitable ozone standards. Comparison of the response of the transfer standard to the monitoring instruments for differing outputs of the ozone source provides multiple calibration points.

The nephelometers were calibrated at a single point with Freon 12 on a similar schedule.

All sites were audited by CARB personnel during the field study.

Table 3-1
Southeast Desert Study
Surface Meteorological and Air Quality Monitoring Operational Summary

Site	Location	Elevation (m)	Parameters Measured Wind	O_3	b_{scat}	Period of Operation	Comments
1	Mt. Wilson 34°13.5'N 118°03.7'W	1524	x	x	x	1 July-12 Aug 1981	
2	Edwards AFB 34°53.4'N 117°52.3'W	696		x	x	1 July-12 Aug 1981	
18	Cajon Junction 34°28.8'N 117°28.5'W	945	x			18 July 1981	Test 3 Tracer Release Site
20	Fontana 34°03.7'N 117°27.3'W	305	x			22 July 1981	Test 4 Tracer Release Site
21	Carson 34°03.7'N 118°15.5'W	23	x			30 July 1981	Test 6 Tracer Release Site
23	Ontario 34°01.7 117°33.5'W	304	x			3 Aug 1981	Test 7 Tracer Release Site
24	Indio 33°43.3'N 116°13.5'W	0	x			4 Aug 1981	Test 7 Tracer Release Site
25	Sylmar 34°18.7'N 118°27.5'W	305	x			14 July 1981	Test 2 Tracer Release Site
26	E. Garden Grove 33°47.0'N 117°55.0'W	26	x			27 July 1981	Test 5 Tracer Release Site
34	Culver City 34°00.0'N 118°26.4'W	53	x			9 July 1981	Test 1 Tracer Release Site

Mt. Wilson Audits

The 7 July 1981 ARB audit found the ozone monitor to be within 2% of true reading.

The 4 August 1981 ARB audit found the ozone monitor to be -27% of true reading which was attributed to 1) an incorrect span setting, and 2) low flow rate (.7 lpm). The span setting had been reset by the manufacturer when the unit was removed on 15 July for a checkout. When installed back on-site, the span setting was inadvertently not reset for ambient conditions. This incorrect span setting was compensated for during data reduction by the use of the equation and calibration numbers shown in Table 3-2. Using the calibration corrections in the table, the audit results are improved to within 1% of true reading.

Edwards AFB Audits

The ARB audit of 7 July 1981 found the instruments digital readout to be within 5% of true reading. The ARB personnel changed the initial span setting for an unspecified reason on 7 July assuming a $40^{o}C$ temperature. This seemed to MRI personnel to be too high. Using 33° (or the initial span setting) the readings would have been within 1% during the audit.

The 4 August audit and MRI's 30 July audit found the unit to be reading low by 16-17% or outside the acceptable 10% limit. Although the audit flows showed to be low (.8 lpm), the flow meter installed on the instrument showed a 1.2 lpm flow; within recommended limits. Nevertheless, the calibration changed between the first audit and the 30 July calibration. An inspection of the strip chart showed no abrupt changes. As a consequence, the calibration drift was assumed to be linear between 7 July and 30 July. The processing algorithm used is given in Table 3-2. This accounts for the calibrations on 7 July and 30 July and assumes a linear shift between. Using this algorithm, the audit falls within the 10% data quality control limits deemed necessary for the program.

Table 3-2

Calibration Numbers Used for Data Reduction
Ozone - Southeast Desert Study

$$O_3 \text{ (pphm)} = \left(\frac{N}{100} \times 500\right) \times C + I$$

where N = % of chart scale
C = Slope Factor (span)
I = Intersect

Mt. Wilson

7/01/81 - 7/15/81 @ 1600	C = 1.00, I = 0.0
7/16/81 @ 1500 - 8/12/81	C = 1.35, I = 0.0

Edwards AFB

6/30/81 - 7/07/81 @ 1600	C = 1.00, I = 0.0
7/07/81 @ 1900 - 7/30/81 @ 1600	$C = 1.00 + \left[.15\left(\frac{D-188}{24}\right)\right]$, I = 0.0
	D = Julian Day
7/30/81 @ 1600 - 8/12/81	C = 1.15, I = 0.0

3.2.2 Data Reduction

The strip chart data were first transcribed to Hollerith cards in percent of chart scale. Beforehand, the charts were time-hacked and obvious bad data and down periods due either to calibration or equipment failure were flagged as missing. The data were next computer processed with appropriate calibration factors and converted to engineering units. Hourly averages were then computed. The data were next subjected to quality checking for internal consistency and consistency with the entire data set.

Hourly averages are reported as the hour preceeding the data. That is to say, the averages reported for 00 are the average measurements from 00 to 01 hour.

3.2.3 Data Listing

Listings of the surface air quality data are contained herein. All reported hourly averages are derived from the subsequent data hour. There is one report per parameter-month containing hourly averages and associated daily and hourly statistical summaries. The statistical summaries are not included on the data tape.

Table 3-3

Air Quality Data Listing

OZONE (PPHM)

SITE: MT. WILSON

DATE: JULY 1981

BY: METEOROLOGY RESEARCH INC.

CLOCK TIME (PACIFIC DAYLIGHT SAVINGS TIME)

DATE	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	AV.	PEAK
1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	7	5	4	4	4	4	6	12
2	3	3	3	3	3	3	3	3	4	4	5	6	7	9	12	13	12	6	4	3	4	4	4	4	5	13
3	4	4	4	4	4	3	3	4	4	4	5	9	14	22	18	17	14	11	9	8	5	4	4	3	8	22
4	3	6	6	5	4	5	8	7	7	8	10	11	11	14	16	12	13	9	9	8	7	6	5	4	8	16
5	4	7	8	9	8	7	4	3	3	5	7	10	13	16	20	21	12	9	8	8	7	4	3	5	8	21
6	5	5	6	7	7	8	7	7	7	7	9	12	14	17	19	16	9	7	6	4	5	7	7	8	9	19
7	7	7	6	6	7	5	7	7	7	7	8	-	-	15	13	13	13	12	8	8	9	9	8	7	9	15
8	8	8	8	8	8	8	8	7	7	6	7	10	11	13	14	12	10	9	6	3	4	3	2	2	8	14
9	2	2	2	2	2	2	3	3	3	4	6	9	11	11	19	19	16	11	7	5	5	5	5	5	7	19
10	4	4	5	4	4	3	3	4	4	5	7	11	14	18	22	-	18	16	15	10	5	-	-	-	9	22
11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14	-	-	-	-	-	-	-	-	-	-	-	9	8	13	25	18	13	11	11	7	5	5	5	5	10	25
15	6	6	6	5	6	5	6	6	6	6	8	8	10	11	-	-	-	-	-	-	-	-	-	-	7	11
16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24	22	12	7	4	2	3	3	3	9	24
17	4	3	3	6	5	5	6	4	5	5	8	9	10	12	20	23	18	13	12	10	13	11	9	10	9	23
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21	5	5	5	5	5	6	6	5	5	5	5	5	9	9	12	18	19	16	11	9	6	7	10	8	8	19
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24	11	11	11	10	10	8	6	5	5	7	10	13	17	21	22	19	17	8	7	6	6	6	6	7	10	22
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27	6	7	9	9	9	10	10	9	9	9	10	12	13	15	16	17	13	7	8	7	10	8	7	5	10	17
28	6	6	6	7	6	6	6	6	6	7	6	8	8	9	13	9	9	4	5	5	5	5	6	6	7	13
29	6	6	6	6	6	6	6	6	6	6	9	9	-	16	23	24	17	8	6	7	6	6	6	6	9	24
30	6	6	6	6	6	6	6	6	6	7	8	-	11	14	16	20	15	13	8	6	4	4	4	5	8	20
31	6	6	6	6	6	6	5	5	5	6	8	9	11	14	20	19	27	24	16	6	6	5	5	5	10	27
AV	6	6	6	6	6	6	6	6	6	6	8	10	12	15	18	18	16	11	9	7	6	7	6	6		
SD	2	2	2	2	2	2	2	2	2	2	2	2	3	4	4	4	5	4	3	3	3	3	3	3		

OZONE (PPHM)

SITE: MT. WILSON

DATE: AUGUST 1981

BY: METEOROLOGY RESEARCH INC.

CLOCK TIME (PACIFIC DAYLIGHT SAVINGS TIME)

DATE	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	AV.	PEAK
1	5	5	5	5	5	6	6	6	7	7	8	9	11	16	23	29	25	21	16	16	6	7	7	11	11	29
2	7	7	7	8	9	8	8	9	9	8	9	11	12	15	20	23	26	20	18	14	8	5	5	6	11	26
3	5	5	6	6	6	6	6	7	7	8	9	11	14	17	-	-	24	21	19	19	18	18	17	10	12	24
4	7	5	5	5	4	4	5	5	6	8	11	13	16	17	17	21	16	11	14	17	17	18	18	15	11	21
5	11	7	7	6	4	6	6	7	8	9	9	8	8	7	8	8	9	7	6	5	6	5	5	5	7	11
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7	5	6	7	9	9	9	9	8	8	8	10	14	14	14	16	13	13	12	12	12	9	9	9	10	10	16
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11	6	7	7	6	5	5	5	5	4	4	5	5	7	9	11	14	11	9	7	7	6	4	4	4	7	14
12	5	5	5	5	6	6	5	5	5	6	6	-	-	-	-	-	-	-	-	-	-	-	-	-	5	6
13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
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29	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
31	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AV	7	7	7	7	7	7	7	7	7	7	8	10	11	13	15	17	17	13	12	11	9	9	9	9		
SD	3	3	3	2	3	2	2	1	1	1	2	3	3	3	5	7	7	6	5	5	4	5	5	4		

SARDAD VER 01 MOD 00 20-OCT-81 11:22:57 PAGE 1

OZONE (PPHM)

SITE: EDWARDS AFB

DATE: JULY 1981

BY: METEOROLOGY RESEARCH INC.

CLOCK TIME (PACIFIC DAYLIGHT SAVINGS TIME)

DATE	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	AV.	PEAK
1	4	4	4	3	3	3	4	3	6	7	7	7	8	7	8	10	11	11	9	8	7	6	4	4	6	11
2	5	5	4	4	4	4	3	3	4	4	4	4	5	5	6	7	12	11	8	5	4	4	3	3	5	12
3	2	2	1	1	1	1	1	1	2	3	4	4	4	4	4	4	5	5	5	5	5	8	8	5	4	8
4	5	4	3	3	2	2	3	3	5	6	7	8	7	7	7	7	9	13	12	12	11	9	9	9	7	13
5	7	6	6	6	5	4	3	3	4	5	6	6	6	6	7	7	6	8	7	6	6	5	5	5	6	8
6	5	5	5	4	4	3	3	3	4	5	5	5	5	5	6	9	9	10	9	5	5	4	3	3	5	10
7	3	3	4	3	3	3	3	3	4	4	5	5	5	4	4	6	11	-	-	11	10	7	4	4	5	11
8	6	5	4	4	4	4	3	4	5	6	6	5	5	5	6	7	6	7	9	9	7	7	6	6	6	9
9	5	4	3	4	4	3	3	4	5	6	4	4	4	5	6	7	9	10	9	8	7	5	4	4	5	10
10	3	3	3	3	4	3	3	4	6	5	5	4	4	4	6	8	11	11	12	11	9	7	6	5	6	12
11	5	5	4	4	4	4	5	5	-	-	-	-	5	5	5	7	7	7	9	11	10	9	8	7	6	11
12	7	6	6	6	5	4	4	4	5	6	6	6	5	4	5	6	9	11	11	9	8	8	7	7	6	11
13	6	6	5	5	5	5	4	4	5	6	7	7	7	6	5	6	6	10	11	13	10	7	7	6	7	13
14	5	5	5	5	4	4	2	3	4	7	8	8	8	9	10	9	10	12	12	11	7	6	8	8	7	12
15	6	5	4	4	4	6	6	6	6	7	7	7	7	7	6	7	9	14	13	12	12	12	10	8	8	14
16	6	6	6	5	5	5	5	6	7	9	9	9	9	9	10	13	14	16	15	10	6	5	5	5	8	16
17	4	4	5	4	5	5	5	6	7	8	8	8	8	8	9	13	15	16	13	10	8	6	5	4	8	16
18	3	3	3	4	5	4	4	4	6	7	7	7	7	7	7	9	10	9	10	9	8	7	8	7	6	10
19	6	6	6	5	5	5	6	7	7	7	6	7	7	7	7	9	10	8	8	8	8	8	5	5	7	10
20	5	5	5	5	5	4	4	5	7	7	7	6	6	6	7	8	12	12	12	10	8	7	5	4	7	12
21	4	4	4	5	5	5	5	6	7	8	9	8	8	9	11	12	12	12	14	11	9	8	8	6	8	14
22	6	7	7	7	7	7	7	7	8	8	8	9	9	9	10	9	7	8	11	11	10	9	8	7	8	11
23	7	8	8	9	9	9	9	7	7	8	7	6	7	7	9	11	13	11	9	14	13	12	11	9	9	14
24	10	9	9	9	9	9	10	9	8	8	7	7	6	8	11	14	18	16	15	14	12	9	9	8	10	18
25	7	7	7	7	7	7	7	7	8	8	7	7	7	8	10	11	11	13	14	13	11	10	9	9	9	14
26	9	8	8	7	7	7	7	7	7	7	7	7	7	7	8	9	10	11	12	10	9	9	7	6	8	12
27	6	4	5	5	5	5	5	6	6	7	-	8	8	9	8	9	11	12	12	12	10	9	9	7	8	12
28	9	9	9	8	7	7	6	6	8	9	9	9	8	8	8	10	9	9	9	10	9	7	6	6	8	10
29	6	6	6	7	7	7	7	7	8	9	9	8	7	6	8	8	9	11	13	11	9	8	7	6	8	13
30	6	7	5	5	5	5	5	6	7	7	8	7	7	6	6	7	-	8	10	10	10	9	9	8	7	10
31	8	7	6	5	5	5	6	6	6	7	7	7	7	6	6	8	10	10	10	10	9	9	8	7	7	10
AV	6	5	5	5	5	5	5	5	6	7	7	7	7	7	7	9	10	11	11	10	9	8	7	6		
SD	2	2	2	2	2	2	2	2	2	2	1	2	1	2	2	2	3	3	2	2	2	2	2	2		

OZONE (PPHM)

SITE: EDWARDS AFB

DATE: AUGUST 1981

BY: METEOROLOGY RESEARCH INC.

CLOCK TIME (PACIFIC DAYLIGHT SAVINGS TIME)

DATE	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	AV.	PEAK
1	6	6	5	4	4	5	6	6	7	7	8	8	8	7	7	7	7	6	7	8	9	8	7	7	7	9
2	7	6	6	6	5	5	5	5	6	7	8	7	7	7	8	9	9	9	8	8	6	6	7	7	7	9
3	8	7	6	6	5	4	4	4	5	6	6	6	6	6	6	7	7	8	8	8	8	6	6	6	6	8
4	5	5	5	5	5	4	4	4	4	5	6	7	-	5	-	-	7	7	6	5	4	4	4	4	5	7
5	5	4	3	3	3	2	2	2	3	5	6	6	7	6	7	8	8	9	12	11	5	6	3	2	5	12
6	3	3	2	3	3	2	1	3	4	6	7	5	5	5	7	8	8	10	12	8	8	9	7	6	6	12
7	6	6	6	5	5	5	5	5	8	9	10	8	8	7	7	7	8	11	10	9	8	8	8	7	7	11
8	7	6	6	6	7	6	6	6	7	8	8	7	7	6	6	6	6	11	14	14	13	13	13	12	8	14
9	10	11	10	9	9	8	8	8	10	10	9	8	8	9	10	11	10	9	9	9	9	8	8	7	9	11
10	8	8	7	7	7	6	6	7	7	6	6	6	6	7	9	12	11	10	11	9	9	7	6	6	8	12
11	5	5	4	4	3	4	4	4	5	6	8	9	8	8	8	8	8	8	10	9	7	6	5	5	6	10
12	5	4	4	4	4	4	4	4	4	5	5	5	6	6	7	-	-	-	-	-	-	-	-	-	5	7
13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
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25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
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31	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AV	6	5	5	5	5	5	5	5	6	7	7	7	7	7	7	8	8	9	10	9	8	7	7	6		
SD	2	2	2	2	2	2	2	2	2	2	1	1	1	1	1	2	1	2	2	2	2	2	3	2		

B-SCAT (10-6 X M-1)

SITE: MT. WILSON

DATE: JULY 1981

BY: METEOROLOGY RESEARCH INC.

CLOCK TIME (PACIFIC DAYLIGHT SAVINGS TIME)

DATE	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	AV.	PEAK
1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	1	5	5	6	6	9	7	2	2	12	46	59	72	123	167	167	104	63	56	18	3	1	4	4	39	167
13	5	2	3	0	2	5	1	0	0	7	32	51	108	112	134	123	188	106	26	24	1	2	2	1	39	188
14	0	1	1	1	3	3	0	0	2	1	8	36	32	58	140	130	73	51	39	16	7	5	3	4	26	140
15	25	29	25	25	21	25	23	22	23	21	40	28	42	71	125	62	101	125	55	89	32	20	18	24	45	125
16	30	26	27	23	19	23	19	18	19	20	46	80	132	201	202	236	225	117	59	32	16	11	15	16	67	236
17	7	5	6	4	10	16	24	9	23	20	44	60	84	132	192	228	145	92	80	63	89	54	52	50	62	228
18	63	32	25	14	5	1	1	3	14	38	50	69	187	195	255	203	176	124	64	32	18	11	13	19	67	255
19	36	42	44	32	21	7	1	2	6	10	17	51	75	97	96	112	83	54	45	46	48	49	25	9	42	112
20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22	-	-	-	-	-	-	-	-	-	-	89	99	113	138	152	145	145	176	156	109	76	54	52	52	111	176
23	40	32	29	27	40	40	49	44	37	32	40	51	75	116	144	140	112	123	73	45	33	59	108	111	67	144
24	90	74	57	50	51	44	19	14	12	10	29	60	104	158	201	192	145	109	59	32	12	8	6	7	64	201
25	16	29	32	28	24	22	18	17	20	21	30	50	83	124	143	146	124	100	55	46	39	38	39	40	54	146
26	33	22	10	1	0	0	3	4	10	22	28	44	61	85	109	131	135	113	76	65	18	4	0	1	41	135
27	2	8	23	30	34	38	42	48	44	40	38	-	-	-	-	-	-	-	-	-	-	-	-	-	32	48
28	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30	-	-	-	-	-	-	-	-	-	-	-	88	164	204	245	242	186	69	31	16	0	0	0	0	96	245
31	0	0	0	0	7	10	3	1	9	20	71	102	123	240	279	295	346	250	85	0	5	1	0	0	77	346
AV	25	22	21	17	17	17	15	13	16	20	41	62	97	137	172	170	153	112	63	41	25	20	21	21		
SD	27	21	17	16	16	15	16	16	13	11	20	22	43	53	55	61	68	49	30	29	27	22	29	30		

B-SCAT (10-6 * M-1)

SITE: MT. WILSON

DATE: AUGUST 1981

BY: METEOROLOGY RESEARCH INC.

CLOCK TIME (PACIFIC DAYLIGHT SAVINGS TIME)

DATE	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	AV.	PEAK
1	0	0	7	7	12	17	20	20	30	38	55	55	96	218	322	214	-	-	-	-	-	-	-	-	69	322
2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	-	-	-	-	-	-	-	-	-	-	-	99	139	143	178	210	237	182	123	127	111	110	104	49	139	237
4	12	5	7	5	5	5	5	5	10	61	107	128	166	184	136	209	143	52	85	131	129	141	159	124	84	209
5	81	33	32	32	10	18	19	27	38	43	39	42	43	31	52	45	63	49	24	24	12	10	11	14	33	81
6	14	10	12	10	10	18	20	10	13	21	41	92	105	57	72	113	80	55	27	22	22	22	17	12	36	113
7	10	18	25	28	28	31	31	32	32	39	90	147	114	139	147	84	104	74	80	72	39	32	35	50	62	147
8	43	38	38	31	34	34	35	35	33	81	89	82	69	120	180	223	193	91	79	72	54	62	85	111	80	223
9	99	97	85	66	64	55	58	57	57	51	61	57	53	49	63	66	59	50	51	41	42	33	24	22	57	99
10	19	19	26	27	31	35	29	27	21	23	34	66	90	165	146	51	35	29	30	34	43	32	23	17	44	165
11	30	60	57	33	23	23	24	22	18	17	24	40	52	72	93	133	84	71	47	51	29	18	23	21	44	133
12	20	24	21	21	29	30	21	23	27	41	60	-	-	-	-	-	-	-	-	-	-	-	-	-	29	60
13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
31	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AV	33	30	31	26	25	27	26	26	28	42	60	81	93	118	139	135	111	73	61	64	53	51	53	47		
SD	33	29	24	18	17	14	14	14	14	19	27	36	40	63	79	73	67	45	33	41	40	45	51	43		

B-SCAT (10-6 * M-1)

SITE: EDWARDS AFB

DATE: JULY 1981

BY: METEOROLOGY RESEARCH INC.

CLOCK TIME (PACIFIC DAYLIGHT SAVINGS TIME)

DATE	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	AV.	PEAK
1	79	89	81	56	50	57	61	65	109	100	89	86	82	76	81	109	118	115	91	87	81	78	66	75	83	118
2	84	87	80	80	90	95	90	74	60	48	41	39	41	44	46	56	90	83	44	29	25	25	24	24	58	95
3	30	30	33	32	34	34	34	31	32	27	27	21	22	18	21	20	22	23	16	18	30	89	99	67	34	99
4	68	63	56	58	48	57	49	63	59	64	66	59	46	38	38	42	56	75	78	80	84	73	84	80	62	84
5	78	85	93	93	69	50	44	39	39	43	60	60	59	46	57	53	51	71	63	65	59	49	56	51	60	93
6	55	52	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	54	55
7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	96	105	100	106	83	54	41	84	106
8	60	41	42	37	33	35	33	37	46	49	43	33	20	23	26	40	-	24	37	49	45	58	59	49	40	60
9	40	30	29	33	34	31	33	29	29	27	8	0	0	3	10	20	39	52	56	53	60	55	47	43	32	60
10	26	23	29	22	25	28	31	36	33	27	11	5	7	11	17	40	65	77	78	75	73	66	57	57	38	78
11	63	62	53	45	51	48	43	39	-	-	-	-	7	6	7	19	23	24	49	80	77	76	61	50	44	80
12	55	53	65	43	50	38	31	29	26	26	23	13	8	1	3	12	34	44	45	36	40	35	37	39	33	65
13	42	41	40	37	35	32	25	22	22	26	23	19	18	7	8	10	10	32	43	55	40	41	30	29	29	55
14	25	25	26	37	34	35	34	34	39	54	36	28	22	29	32	25	30	35	56	41	26	28	44	49	34	56
15	33	33	31	33	40	46	48	46	28	30	31	27	24	18	19	29	50	104	133	93	78	83	72	67	50	133
16	50	44	40	36	39	34	32	51	52	53	56	56	52	46	48	67	76	93	119	77	49	194	194	136	71	194
17	61	42	40	45	77	68	56	46	37	33	47	47	42	42	43	65	98	195	194	194	66	49	40	28	69	195
18	19	17	15	22	34	32	32	27	24	44	46	25	25	20	15	25	40	35	47	54	49	45	45	48	33	54
19	51	56	54	54	51	54	57	54	47	44	26	14	14	13	11	11	31	25	23	26	36	36	20	20	35	57
20	29	27	32	37	39	36	34	29	28	31	18	9	4	0	3	7	22	34	47	46	39	32	21	17	26	47
21	17	15	16	29	38	41	44	42	44	42	43	37	33	34	43	59	48	56	67	67	59	61	60	55	44	67
22	53	57	60	62	60	65	63	60	49	40	35	36	37	37	39	47	28	30	48	67	76	78	81	66	53	81
23	61	79	92	90	119	121	121	95	53	34	30	24	22	17	24	45	61	84	44	65	134	138	160	109	76	160
24	115	116	116	114	127	125	140	154	73	44	27	18	13	15	39	70	116	130	118	122	113	93	80	109	91	154
25	83	77	67	79	83	92	86	89	56	42	32	26	20	20	28	54	65	64	100	97	90	95	91	78	67	100
26	74	73	84	77	84	105	115	98	56	38	29	27	27	26	27	38	45	59	80	92	66	96	82	52	65	115
27	61	49	45	46	48	48	46	49	43	34	32	31	31	35	29	30	43	69	86	102	81	80	75	80	53	102
28	102	118	102	103	106	85	73	68	70	66	58	49	33	28	28	30	32	30	38	61	53	34	40	43	60	118
29	47	56	66	58	62	72	67	57	61	63	56	37	20	11	18	23	39	69	101	93	76	76	55	47	55	101
30	45	78	51	49	55	50	48	54	54	47	31	17	13	5	4	10	28	42	62	84	102	95	96	95	51	102
31	89	80	66	50	47	60	77	66	53	37	33	34	26	20	19	32	58	75	80	88	93	105	110	72	61	110
AV	57	57	55	54	57	58	57	55	47	43	38	31	26	24	27	38	51	65	72	73	67	72	68	59		
SD	24	27	26	24	27	27	29	28	18	16	18	19	18	17	18	23	28	38	37	34	27	35	38	28		

B-SCAT (10-6 * M-1)

SITE: EDWARDS AFB

DATE: AUGUST 1981

BY: METEOROLOGY RESEARCH INC.

CLOCK TIME (PACIFIC DAYLIGHT SAVINGS TIME)

DATE	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	AV.	PEAK
1	59	55	60	49	49	65	63	59	52	36	27	28	22	16	14	11	11	10	11	28	68	61	53	48	40	68
2	51	41	40	41	43	42	42	41	43	43	36	26	23	23	26	42	30	32	30	19	17	31	43	52	36	52
3	60	53	46	45	39	35	32	31	25	22	21	20	19	16	18	18	28	32	29	32	23	22	32	27	30	60
4	28	26	25	24	25	30	28	25	24	22	29	24	38	37	29	32	31	36	39	24	22	18	16	18	27	39
5	22	27	29	30	33	35	36	36	40	37	36	30	30	30	30	30	30	30	68	110	88	44	60	52	41	110
6	31	32	43	47	59	64	67	61	57	55	47	36	16	22	23	-	-	-	-	-	-	-	-	-	44	67
7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
31	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AV	42	39	41	39	41	45	45	42	40	36	33	28	25	24	23	27	26	28	35	43	44	35	41	39		
SD	17	13	13	10	12	15	16	15	14	13	9	5	8	8	6	12	8	10	21	38	32	18	17	16		

3.3 WIND AND TEMPERATURE DATA

3.3.1 Data Reduction

Strip charts were first time-hacked and bad data or down periods due to equipment failure were flagged. The charts were next digitized and hourly values determined in the following manner:

- Wind Direction - An average of the values occurring 7.5 minutes before and 7.5 minutes after the half-hour of the hour being reported. Values indicate the direction (true bearings) from which the wind was blowing.

- Wind Speed - Hourly wind run for the hour beginning at the reported time. Values reported in meters per second.

- Temperature - An average of the values occurring 7.5 minutes before and 7.5 minutes after the half-hour of the hour being reported. Units are degrees Fahrenheit.

3.3.2 Data Listing

Listings of the winds from the surface air quality data sites are contained herein. All reported values are derived from the subsequent data hour. For the sites where wind was continuously monitored during the study period, there is one report per parameter-month containing hourly values and associated daily and hourly statistical summaries. The statistical summaries are not included on the data tape. A listing is provided in Table 3-4 for the short-term data measured at the tracer release sites.

Table 3-4

Southeast Desert Surface Winds at Release Sites

GARDEN GROVE
7/27/81 (Test 5)

Time (PDT)	Dir	m/s
05	-	-
06	300	0.3
07	180	0.3
08	360	0.3
09	300	0.5
10	340	0.9
11	330	0.8
12	300	1.2
13	280	1.5

CARSON
7/30/81 (Test 6)

Time (PDT)	Dir	m/s
05	-	-
06	320	0.6
07	260	0.7
08	150	1.0
09	180	0.6
10	360	1.0
11	170	1.5

ONTARIO
8/3/81 (Test 7)

Time (PDT)	Dir	m/s
05	-	-
06	060	1.2
07	120	1.2
08	200	1.1
09	250	1.6
10	270	1.8

INDIO
8/11/81 (Test 8)

Time (PDT)	Dir	m/s
05	-	-
06	300	1.5
07	290	1.2
08	280	1.6
09	280	1.7
10	280	1.2
11	200	0.9
12	210	0.9

MAR VISTA PARK
Culver City
7/9/81

Time (PDT)	Dir	m/s
06	225	0.6
07	195	0.8
08	225	0.9
09	205	1.4
10	235	1.3

SYLMAR
7/14/81

Time (PDT	Dir	m/s
10	220	1.3
11	210	1.7
12	220	1.4
13	210	1.7
14	200	2.1
15	180	3.0

CAJON JUNCTION
7/18/81(Test 3)

Time (PDT)	Dir	m/s
13	130	5.9
14	120	6.8
15	120	7.5
16	120	7.5
17	120	7.0
18	120	6.1
19	130	6.0
20	150	4.0
21	180	3.0
22	220	2.0

FONTANA
7/22/81

Time (PDT)	Dir	m/s
13	250	3.1
14	250	3.4
15	240	4.0
16	240	4.1
17	230	4.1
18	240	4.4
19	250	3.6
20	240	2.7

Table 3-5

Wind and Temperature Data Listing

WIND DIRECTION

SITE: MT. WILSON

DATE: JULY 1981

BY: METEOROLOGY RESEARCH INC.

CLOCK TIME (PACIFIC DAYLIGHT SAVINGS TIME)

DATE	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	-	-	-	-	-	-	-	-	-	-	-	-	-	180	170	185	220	220	230	150	115	155	180	185
9	155	175	205	200	190	190	235	225	195	215	210	195	220	185	195	215	220	245	240	170	170	170	180	170
10	160	170	180	180	185	165	150	190	195	210	225	210	215	210	215	255	260	260	270	320	280	270	130	140
11	205	245	265	255	245	230	235	240	225	240	195	230	225	215	215	235	220	260	270	270	270	265	255	240
12	245	245	240	230	195	205	160	205	250	240	205	215	225	230	215	220	230	235	260	260	255	285	270	285
13	155	255	250	255	255	255	265	255	270	225	240	205	205	205	200	220	220	225	240	255	220	155	165	180
14	165	185	195	205	225	240	255	255	270	220	220	205	210	235	210	235	255	255	260	275	270	270	270	275
15	280	270	280	285	285	280	280	295	45	125	110	170	195	160	150	165	230	215	230	260	270	270	270	270
16	270	270	270	270	265	270	265	270	290	255	205	205	210	210	225	225	225	225	240	255	245	255	255	260
17	250	210	205	220	255	255	260	270	295	255	190	205	215	220	220	220	235	255	260	340	80	75	100	170
18	225	100	85	90	90	90	90	90	155	220	175	170	205	195	195	175	150	155	170	165	145	130	140	155
19	125	110	105	105	130	190	190	200	210	210	225	220	220	210	195	205	205	220	210	145	110	135	175	175
20	175	200	255	240	245	240	250	250	200	285	235	225	220	220	210	245	265	265	275	275	270	265	275	275
21	270	270	275	270	270	270	270	265	265	315	290	290	260	340	250	240	255	265	290	290	275	270	305	305
22	335	315	270	270	270	260	260	40	360	325	240	205	210	215	210	210	225	250	235	260	275	45	35	35
23	10	325	325	320	285	265	265	265	305	65	235	155	210	235	235	250	270	265	265	275	275	210	100	280
24	90	105	225	230	240	245	255	265	295	270	225	205	205	220	215	220	235	245	135	155	190	125	185	275
25	355	310	300	285	285	290	300	325	265	305	95	205	200	160	190	200	155	225	225	210	195	135	110	90
26	145	245	255	260	260	270	255	240	170	150	210	200	210	205	215	220	205	230	115	65	85	105	125	95
27	275	345	330	335	15	345	75	100	100	190	130	130	130	150	145	170	165	175	220	35	190	125	165	95
28	200	300	300	315	335	155	155	130	215	200	180	170	160	160	165	190	185	220	215	210	195	155	145	175
29	185	200	270	265	240	180	165	190	185	205	220	210	215	205	210	220	220	240	265	255	120	165	200	230
30	155	240	245	225	195	190	200	190	185	205	220	205	205	210	215	210	215	245	225	240	185	175	170	165
31	165	175	195	200	185	190	220	205	195	200	215	200	160	155	150	180	220	240	210	115	90	95	135	135

WIND DIRECTION

SITE: MT. WILSON

DATE: AUGUST 1981

BY: METEOROLOGY RESEARCH INC.

CLOCK TIME (PACIFIC DAYLIGHT SAVINGS TIME)

DATE	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	220	265	290	290	275	255	265	270	185	215	215	220	210	200	245	210	255	260	255	305	270	245	160	125
2	150	235	250	245	245	250	255	250	290	190	225	230	225	210	225	220	230	235	220	230	195	215	205	235
3	190	200	240	270	165	180	205	230	215	195	175	200	190	165	195	175	220	150	145	10	255	220	280	335
4	330	310	305	300	275	270	275	290	35	70	25	85	125	135	155	130	135	140	85	80	75	80	75	75
5	75	90	80	75	75	70	225	160	140	145	145	170	180	200	190	175	-	-	-	-	-	-	-	-
6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
31	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

WIND SPEED (TENTHS MPH)

SITE: MT. WILSON

DATE: JULY 1981

BY: METEOROLOGY RESEARCH INC.

CLOCK TIME (PACIFIC DAYLIGHT SAVINGS TIME)

DATE	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	AV.	PEAK
1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	25	25	20	20	20	20	25	40	40	40	28	40
9	40	60	40	40	45	45	10	15	20	15	20	25	20	30	30	25	15	25	15	10	30	50	45	35	29	60
10	35	30	45	55	45	50	45	40	30	25	25	25	25	20	30	35	45	30	20	25	55	35	20	30	34	55
11	30	35	45	35	40	20	30	30	25	20	20	20	25	30	30	35	35	45	80	70	80	85	75	50	41	85
12	60	50	30	15	20	20	30	20	20	20	20	25	25	30	30	30	30	40	55	40	60	35	40	40	33	60
13	15	30	30	45	65	60	60	65	40	20	15	25	25	25	25	25	30	30	30	30	20	35	45	55	35	65
14	50	45	30	25	20	20	35	55	15	15	20	30	30	35	30	25	40	50	45	50	50	60	80	70	39	80
15	40	80	65	65	65	60	45	30	15	25	40	50	45	40	40	35	25	25	35	55	80	85	95	105	52	105
16	110	110	105	105	90	65	85	60	25	25	20	20	25	25	30	30	25	30	40	50	40	45	55	50	53	110
17	35	20	20	25	55	50	50	50	40	20	20	30	35	30	30	30	25	35	35	30	50	50	30	30	34	55
18	20	25	25	45	50	45	30	15	15	15	25	25	20	25	25	30	35	40	45	35	35	35	40	40	31	50
19	40	40	35	45	40	50	55	45	30	25	25	20	20	25	30	30	25	20	15	20	25	30	45	50	33	55
20	40	30	15	30	15	15	25	20	25	20	25	25	25	25	25	30	30	35	30	30	65	80	95	105	36	105
21	105	110	105	95	90	85	80	70	40	30	25	25	20	20	25	35	40	40	45	55	70	65	35	35	56	110
22	35	60	75	70	85	70	50	25	20	25	20	25	20	20	20	20	20	20	25	30	30	25	25	30	35	85
23	40	40	45	50	50	70	80	70	30	20	15	20	20	25	35	40	35	40	45	55	55	35	35	20	40	80
24	35	25	20	20	20	30	75	60	40	25	20	20	25	25	25	20	20	15	20	25	40	30	35	30	29	75
25	35	40	65	65	70	65	65	35	20	20	20	20	25	25	30	25	30	25	20	20	25	35	40	35	36	70
26	25	25	60	60	45	50	30	15	15	25	20	25	25	25	25	25	20	20	10	20	50	40	30	20	29	60
27	25	30	40	45	25	40	30	20	30	20	30	40	45	45	40	35	30	25	10	20	15	20	10	10	28	45
28	15	30	35	25	25	25	30	25	25	20	25	40	45	55	55	40	30	25	30	25	30	40	30	30	31	55
29	50	20	35	30	25	20	30	35	40	30	25	25	30	35	25	30	25	25	30	20	25	30	25	15	28	50
30	25	20	25	15	20	20	15	25	30	25	25	25	25	30	30	25	25	20	15	20	45	55	45	50	27	55
31	45	45	35	35	50	45	15	10	15	20	20	25	35	40	30	35	20	20	15	25	50	40	35	35	31	50
AV	41	43	45	45	46	44	43	36	26	22	23	27	28	30	30	30	28	29	30	33	44	45	44	42		
SD	24	26	24	24	23	20	22	19	9	4	5	7	8	9	7	6	7	9	17	15	19	18	22	24		

WIND SPEED (TENTHS MPH)

SITE: MT. WILSON

DATE: AUGUST 1981

BY: METEOROLOGY RESEARCH INC.

CLOCK TIME (PACIFIC DAYLIGHT SAVINGS TIME)

DATE	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	AV.	PEAK
1	25	25	40	40	50	45	45	30	20	20	25	25	25	30	30	30	40	35	25	30	35	25	20	25	31	50
2	25	20	40	45	55	65	70	60	35	20	25	25	30	30	30	30	25	30	15	15	20	10	20	20	32	70
3	40	30	30	40	20	25	20	15	15	15	20	20	25	30	25	25	20	20	15	10	15	20	30	35	23	40
4	35	45	50	60	75	70	55	25	30	25	35	35	45	40	35	30	35	35	40	50	50	70	60	55	45	75
5	55	40	40	45	50	45	35	30	50	50	45	50	55	60	55	-	-	-	-	-	-	-	-	-	47	60
6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
31	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AV	36	32	40	46	50	50	45	32	30	26	30	31	36	38	35	29	30	30	24	26	30	31	33	34		
SD	12	10	7	8	20	18	19	17	14	14	10	12	13	13	12	3	9	7	12	18	16	27	19	15		

TEMPERATURE (F)

SITE: MT. WILSON

DATE: JULY 1981

BY: METEOROLOGY RESEARCH INC.

CLOCK TIME (PACIFIC DAYLIGHT SAVINGS TIME)

DATE	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	AV.	PEAK
1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
3	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
4	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
6	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
7	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
8	–	–	–	–	–	–	–	–	–	–	–	–	–	80	78	79	80	80	79	77	70	69	68	68	75	80
9	67	67	68	68	69	70	69	75	78	81	82	82	81	79	81	82	81	81	80	80	74	73	73	72	76	82
10	71	71	71	70	70	70	72	74	77	80	82	81	80	80	79	80	79	80	80	77	72	70	67	67	75	82
11	68	67	68	66	66	66	68	72	75	79	81	80	80	80	80	81	80	79	77	77	73	72	72	71	74	81
12	72	72	70	70	69	68	70	77	79	80	83	81	80	80	80	80	80	80	76	75	71	70	70	70	75	83
13	68	68	67	67	68	68	69	70	72	79	81	80	80	81	81	81	81	80	79	78	71	70	70	72	74	81
14	71	71	70	70	70	70	73	77	81	84	85	87	85	83	85	83	82	80	79	79	75	74	74	74	78	87
15	68	67	67	66	66	66	67	69	72	77	80	80	80	79	78	78	77	76	73	70	66	65	65	65	72	80
16	68	67	67	66	66	66	67	69	72	77	80	80	80	80	79	79	78	76	73	71	67	66	66	66	72	80
17	66	65	65	66	66	66	67	69	72	78	81	79	77	79	81	80	80	78	76	73	70	68	65	65	72	81
18	66	64	65	65	66	68	69	77	80	83	83	81	82	82	82	82	80	78	78	78	72	73	71	71	75	83
19	70	70	69	70	70	73	76	78	80	84	86	88	88	87	85	86	85	87	87	84	76	74	76	76	79	88
20	75	75	70	72	71	71	75	81	83	87	91	91	90	89	90	90	90	89	88	79	79	78	78	78	82	91
21	78	78	78	78	77	76	76	77	76	79	79	81	83	82	87	87	84	83	83	80	76	76	73	72	79	87
22	72	72	72	71	71	72	73	75	78	80	84	82	82	84	84	82	84	85	83	80	75	73	72	72	77	85
23	72	72	72	73	72	73	73	75	78	85	88	89	89	88	86	87	87	85	83	80	76	74	72	73	79	89
24	73	71	70	70	70	69	73	75	79	83	87	88	85	83	82	83	85	83	81	79	74	72	73	73	78	88
25	73	70	70	71	70	70	70	72	77	78	83	82	81	79	78	81	78	78	76	73	66	65	64	64	74	83
26	64	65	65	68	66	65	66	74	76	77	77	77	79	79	78	79	79	77	77	72	69	70	68	68	72	79
27	69	69	69	69	69	70	72	77	80	83	83	83	82	82	82	81	83	80	83	78	73	70	70	70	76	83
28	69	73	72	72	72	70	73	79	82	85	86	84	82	82	83	85	86	84	81	80	73	73	71	69	78	86
29	72	70	69	69	69	69	73	77	77	82	83	82	82	79	80	79	80	79	79	78	70	70	68	65	75	83
30	66	66	66	65	66	66	64	72	75	79	81	81	80	80	80	80	80	79	79	77	70	69	68	68	73	81
31	68	68	67	68	66	65	64	73	77	78	80	80	76	77	77	77	79	78	77	73	67	66	63	65	72	80
AV	70	69	69	69	69	69	70	75	77	81	83	83	82	81	82	82	82	81	79	77	72	71	70	70		
SD	3	3	3	3	3	3	4	3	3	3	3	4	3	3	3	3	3	3	4	3	3	3	4	4		

TEMPERATURE (F)

SITE: MT. WILSON

DATE: AUGUST 1981

BY: METEOROLOGY RESEARCH INC.

CLOCK TIME (PACIFIC DAYLIGHT SAVINGS TIME)

DATE	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	AV.	PEAK
1	65	65	68	68	67	66	65	69	73	77	76	78	77	79	78	78	79	79	78	72	69	67	67	68	72	79
2	66	65	66	66	67	66	65	68	70	76	81	81	80	79	80	79	79	76	77	75	69	63	65	63	72	81
3	66	64	62	64	61	63	62	69	74	76	78	79	79	77	79	78	78	76	74	71	66	64	65	66	70	79
4	64	65	66	66	66	67	66	70	73	78	77	77	78	78	79	78	77	76	75	73	68	70	69	70	72	79
5	69	70	72	71	72	73	70	74	77	79	81	81	83	83	84	83	-	-	-	-	-	-	-	-	76	84
6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
31	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AV	66	66	67	67	67	67	66	70	73	77	79	79	79	79	80	79	78	77	76	73	68	66	67	67		
SD	2	2	4	3	4	4	3	2	3	1	2	2	2	2	2	2	1	2	2	2	1	3	2	3		

3.4 DATA TAPE FORMAT

The surface air quality and meteorological data have been transcribed to a 9-track magnetic tape for transmission to the CARB. Tape density is 800 bpi, tape parity odd, and tape unlabeled. The data are written in 80 character ASCII records, unblocked. The record format is as follows:

Column No.	Format	Parameter
1-3	I3	Julian Day
4-5	I2	Year
6-7	I2	Site ID (Refer to Table 3-1)
8	A1	Parameter Designator B = b_{scat} D = Wind Direction V = Velocity (m/s) Z = Ozone (pphm) T = Temperature (^{o}F)
9-80	24I3	Hourly averages in units indicated above 999 = missing data

There is one record per parameter day.